In Gold We Trust Report

May 17, 2024

The New Gold Playbook

incrementum

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& Mark J. Valek

We would like to express our gratitude to our Premium Partners for supporting the *In Gold We Trust* report 2024

Details about our Premium Partners can be found on page 417 ff.

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Introduction

I knew from my own experience about the mysterious attraction of the 'royal game', the only one of all games devised by man that sovereignly eludes any tyranny of chance and assigns its palms of victory solely to the mind, or rather to a certain form of mental talent.

Stefan Zweig, Chess: A Novel

- **The showdown in the gold price that we announced in our last *In Gold We Trust* report has come to pass. The gold price broke through its long-term resistances and has set new all-time highs. Gold is now entering *terra incognita*.**
- **According to the old gold playbook, the gold price should have fallen significantly in an environment of sharply rising real interest rates. This and several other laws seem to have been suspended recently.**
- **In the new gold playbook, Western financial investors are no longer the marginal buyers. Central banks and the steadily growing demand from emerging markets – especially China – have for the first time been able to more than compensate for weak demand from the West.**
- **While there was a *gold drain* to the US in the 1960s, the global East is currently experiencing a veritable *gold gain*.**
- **The new gold playbook is a consequence of the seismic shifts that are taking place in macroeconomics, geopolitics, and increasingly also in the world's monetary architecture.**
- **While central banks and investors in the emerging markets are increasingly learning to appreciate gold, Western financial investors continue to act according to the old playbook. A second wave of inflation or the overdue US recession could prompt them to rethink their approach.**
- **In view of the reorganization of the international economic and geopolitical structure, the reaching of the limits of debt sustainability, and possible further waves of inflation, we are convinced that it is advisable to consider increasing the percentage of both *safe-haven gold* and *performance gold* in portfolios.**

Chess is life.
Bobby Fischer

Small changes sometimes have a big impact. At the end of the 15th century, for example, a far-reaching change was made to the rules of chess. The queen, which until then had only been allowed to move one square diagonally, was given freedom of movement and could now move any number of squares diagonally as well as vertically and horizontally. Thus, the queen was considerably upgraded among the six different chess pieces and became the most powerful piece.[1] The change in the rules meant that chess players had to adapt a new playbook. **Chess remained chess, and yet it became a completely different game.**

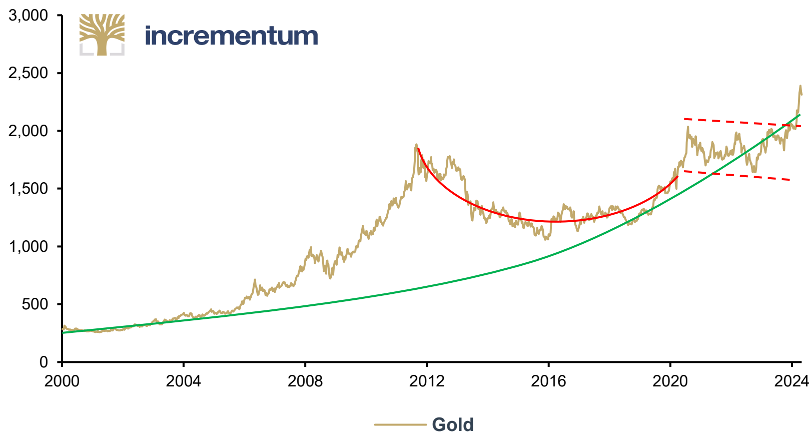
Sports is human life in microcosm.
Howard Cosell

Comparably far-reaching changes are currently taking place on the gold market. The rules of the gold game are changing on many levels. **That's why we want to take an in-depth look at the global upheavals in this 18th edition of the *In Gold We Trust* report and introduce you to the new gold playbook.**

Avoiding risk is no safer in the long run than outright exposure. The fearful are caught as often as the bold.
Garry Kasparov

The fundamental changes manifested themselves not least in the spectacular gold price performance in the spring. The showdown in the gold price that we predicted last year has come to pass. The gold price broke through its long-term resistance and soared to unprecedented heights. **Gold and gold investors are now entering *terra incognita*.**

Gold Cup-and-Handle Formation, in USD, 01/2000–04/2024



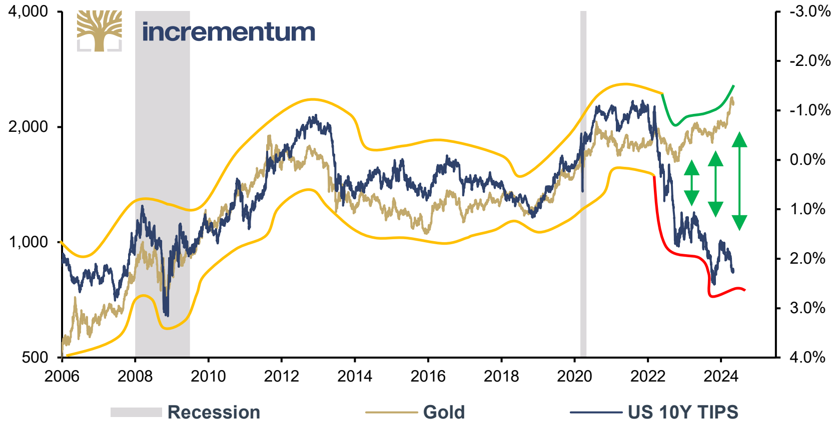
Source: Reuters Eikon, Incrementum AG

A paradigm shift takes place when a question is asked that cannot be answered within the current paradigm.
Joel A. Barker

What is remarkable is that all of this is happening in an environment in which, according to the previous playbook, the gold price should actually have fallen. The collapse of the correlation between the gold price and real interest rates raises many questions. In the old paradigm, it was unthinkable that the gold price would trend firmer during a phase of sharply rising real interest rates.

[1] Like the queen, the bishop's ability to move has also been extended. Originally the bishop could only jump two squares diagonally, but after the rule change it could move any number of squares diagonally. This change increased the range and effectiveness of the bishop. After the rule change, the pawns could also move two squares forward in the starting position instead of always making only one move forward.

Gold (lhs, log), and US 10Y TIPS (rhs, inverted), 01/2006–04/2024



Source: Reuters Eikon, Incrementum AG

Gold has separated from real rates since the Fed began hiking rates, as there is nothing more bullish for gold than rate hikes that increase the solvency risk of a sovereign, especially when that sovereign is the reserve currency issuer.
Luke Gromen

This longtime pattern is not the only one that can no longer be used to explain the gold price trend. **There is considerable evidence that the old set of rules has become outdated in essential aspects, indicating that it is time to adopt the new gold playbook.**

Before we take a closer look at the details, the first question is: What is a playbook? ChatGPT provided us with the following answer:

> *A playbook is a comprehensive document or guide that outlines a set of strategies, procedures, or tactics to accomplish specific goals or objectives. It is commonly used in various fields such as business, sports, military, and politics. Playbooks provide step-by-step instructions, best practices, and tips for executing tasks efficiently and effectively. … Overall, a playbook serves as a reference tool to help individuals or teams navigate complex situations and achieve success.*

Tempora mutantur, nos et mutamur in illis – Times change, and we change in them.
Ovid

We are convinced that gold will experience the same substantial revaluation under the new playbook as the queen did in the game of chess. Gold is no longer a marginal figure, just another investment opportunity among many, but is increasingly standing out from the spectrum of investment instruments.

The New Gold Playbook

The most surprising thing about this new gold bull market is how surprising it's been.
Brien Lundin

What is the root of the fundamental changes in the gold market? Structural changes have taken place at various levels in recent years. A decade of zero and negative interest rate policies has atomized all risk premiums and provided a systemic incentive for excessive debt. The situation has been exacerbated by the Covid-19 measures and the massive costs of the green transformation, which are estimated to run at least USD 100trn by 2050 – almost the equivalent of the world's annual GDP. Since the beginning of the Ukraine war, there has also been a vast increase in military spending. Adjusted for inflation, global military spending rose by 6.8% to USD 2.44trn in the previous year. This is the largest increase since 2009.

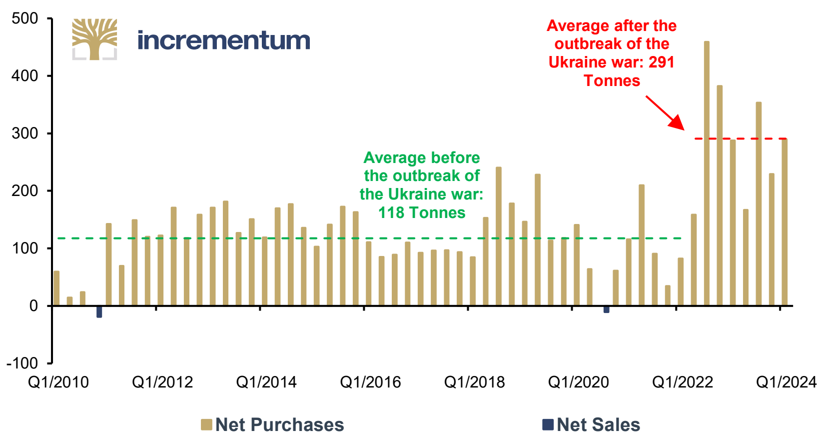
We have addressed and analyzed these complex changes affecting the gold market in detail in previous *In Gold We Trust* reports, such as in 2020 in "The Dawning of a Golden Decade", in 2021 in "Monetary Climate Change", in 2022 in "Stagflation 2.0" and, last but not least, last year in "Showdown".

The geopolitical showdown

In March of 2022, gold got scarce.
Doug Pollitt

Amid one of the most challenging geopolitical tensions in decades, there is a return to gold as a neutral reserve asset. This is particularly evident in the record gold purchases by central banks. In the *In Gold We Trust* report 2022, "Stagflation 2.0", we pointed out that the sanctioning of Russian currency reserves by the US and the EU would "go down in monetary history".[2] And furthermore that "gold, as a neutral monetary reserve, will emerge as one of the beneficiaries of the troubling conflict between East and West". As expected, one of the consequences of the momentous sanctions decision of February 26, 2022, is that international central banks have massively accelerated their gold purchases.

Global Central Bank Gold Purchases, in Tonnes, Q1/2010–Q1/2024



Source: World Gold Council, Incrementum AG

The freezing of Russian currency reserves impressively demonstrated to the world that **debt-based currency reserves are ultimately just a promise and can**

[2] "Introduction: of Wolves and Bears," *In Gold We Trust* report 2022, p. 9

be converted into worthless database entries in a moment in the event of a conflict. The uniqueness of gold as a neutral reserve currency without counterparty risk is now being rediscovered. The structural increase in central bank demand is a key piece of the new playbook, mainly because central bank demand is relatively less price sensitive. **One could say that central banks have put a floor under the gold price.**

What if October 7th 2023 proves to be the same trigger point for a world war just as June 28th 1914 did. The next thing you know, Austria-Hungary declares war on Serbia and this triggers a series of cascading events that drags the entire continent into a war.
Dave Rosenberg

Now, the geopolitical showdown is entering its next round. While the war in Ukraine continues to rage, the Middle East has become an additional arena of extraordinary geopolitical tension as a result of Hamas' terrorist attack on Israel on October 7, 2023. The aggravated situation in the Middle East is a key pressure point in the complex network of international relations, with China and Russia on one side and the West on the other. The former are showing support for Iran and its allies, challenging the strength of the West's traditional alliance with Israel. **The following words by Zbigniew Brzezinski from his 1997 book *The Grand Chessboard* could prove prophetic:**

> *Potentially, the most dangerous scenario would be a grand coalition of China, Russia, and perhaps Iran, an 'antihegemonic' coalition united not by ideology but by complementary grievances. It would be reminiscent in scale and scope of the challenge once posed by the Sino-Soviet bloc, though this time China would likely be the leader and Russia the follower.*

Emerging markets (up-)rising

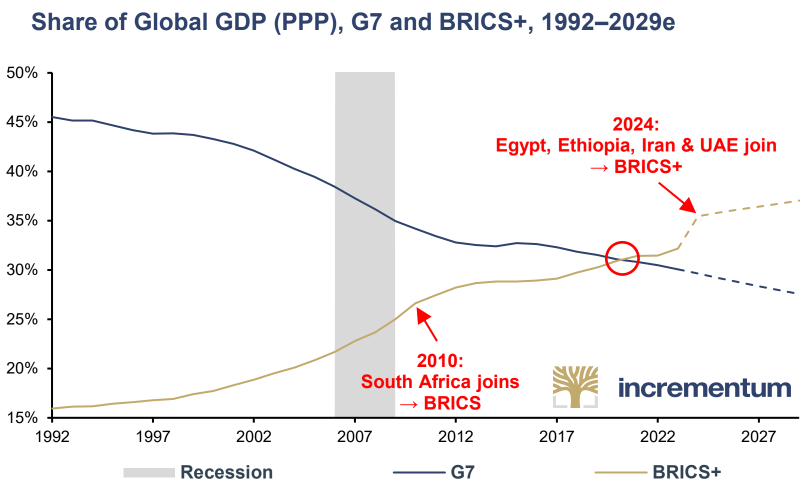
Rising incomes are one of the biggest single drivers of long-term gold demand.
World Gold Council

In 2024, around half of global GDP will be generated by emerging markets, compared to just 19% in 2000. Two-thirds of global GDP growth in the last 10 years was generated by the emerging markets. The majority of emerging markets have a much greater penchant for gold than the industrialized nations. This will feed a natural, long-term growth in demand for gold.

Chimerica does not work anymore and Eurussia does not work either. Instead, 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 increasing economic and political importance of emerging countries has been apparent for many years. It seems that dissatisfaction with the prevailing international order is growing day by day. Various international institutions, which are largely dominated by the West, are increasingly being called into question, while the alliance around the BRICS states is experiencing strong growth.

At the beginning of this year, four new member states were admitted to BRICS: Egypt, Ethiopia, Iran and the United Arab Emirates. Saudi Arabia, which is gaining geopolitical influence, is also likely to join the alliance but has not yet officially confirmed its acceptance of the invitation to join BRICS+. **The hesitation shows that joining is seen as a historic decision.** Including Saudi Arabia, the BRICS+ would account for 43% of global oil production and 44% of global oil reserves.



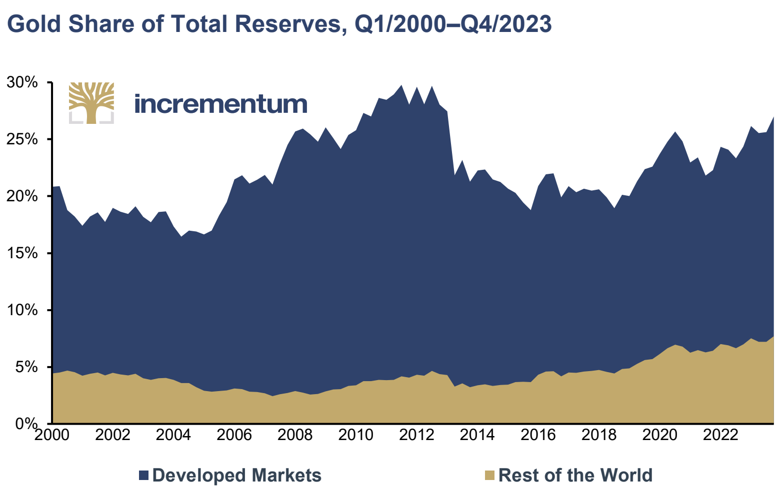
Source: Acorn MC Ltd, World Economic Outlook, Reuters Eikon, Incrementum AG

We choose our development paths independently, jointly defend our right to development, and march in tandem toward modernization.
Xi Jinping

For years, the BRICS+ countries have had a considerable trade and current account surplus with the West. A steadily increasing share of gold in the currency reserves of emerging economies is the manifestation of this development. This is similar to the situation after the Second World War, when Europe, especially Germany and France, successively increased their gold reserves as a result of high current account surpluses. In contrast, US gold reserves fell to almost one quarter, or just over 8,000 tonnes, as a result of the *gold drain*. **While the US experienced a *gold drain* in the 1960s, there are currently signs of a *gold gain* in the emerging markets.**[3]

Source: World Bank

The renaissance of gold is also reflected in the fact that the World Bank published a "Gold Investing Handbook for Asset Managers" at the end of February. It explicitly cites several studies that impressively confirm the properties of gold as a diversifier, particularly in the event of downward volatility. **Central banks are recommended to hold up to 22% gold.**[4]



Source: World Gold Council, Incrementum AG

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[3] See "The Rise of Eastern Gold Markets: An Impending Showdown with the West," *In Gold We Trust* report 2023 ; "From West to East: Gold's Flow into the 'Strong Hands' of Asia," *In Gold We Trust* report 2020
[4] We have published an in-depth analysis of this astonishing World Bank study on X.

Among the central banks, the PBoC in particular is continuously expanding its gold reserves. Including March, purchases have been registered for 18 consecutive months. The chart below shows that the low point of gold prices in 2022 fell in the same month in which the Chinese central bank's gold purchases picked up speed.

PBoC Gold Reserves (lhs), in Tonnes, and Gold (rhs), in USD, 01/2020–04/2024

Source: World Gold Council, Reuters Eikon, Incrementum AG

We are the Saudi Arabia of dollars.
Luke Gromen

Loyal readers know that we have been analyzing the ongoing process of de-dollarization for many years.[5] The term *de-dollarization* is naturally interpreted in different ways. To clarify: We do not believe that this process will lead to the US dollar being replaced by another fiat currency as the world's reserve currency. Among the "blind" fiat currencies, the "one-eyed" US dollar is king for the time being. In the competition between the BRICS+ and the US dollar team, the latter has recently been able to score a success. Argentina, under its new libertarian president Javier Milei, has decided to turn down the invitation to join BRICS+ and instead tie itself more closely to the US dollar and to NATO.

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

The BRICS+ countries are likely to launch the next round of this ongoing competition at their annual conference, which will take place in Russia at the end of October. Numerous countries, from Kuwait to Venezuela, Thailand, Kazakhstan, and Nigeria are considered candidates for membership. Among the countries that have expressed an initial interest in BRICS+ membership are two countries with geopolitical explosiveness: Turkey, a NATO member country, and Mexico, a direct neighbor to the US.

There are many indications that the bipolar global order that has begun to emerge in recent years is continuing to take shape. Back in March 2022, Zoltan Pozsar's article "Bretton Woods III" gave a stimulating impetus to this debate about a new global monetary order. He concluded his remarks with the following prediction: "From the Bretton Woods era backed by gold bullion, to Bretton Woods II backed by inside money (Treasuries with

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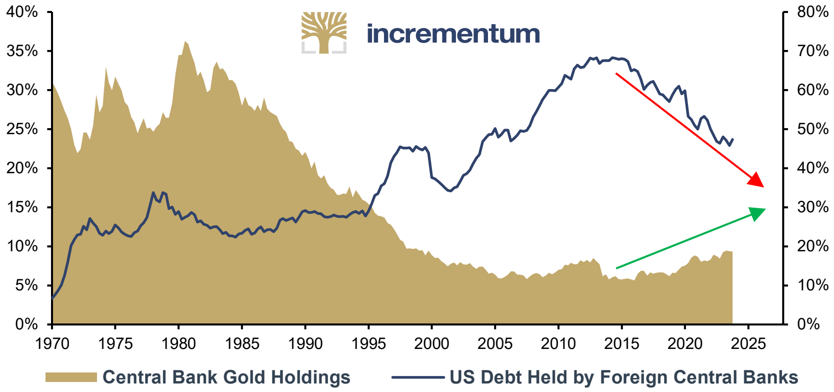
[5] *See,* i.a. "De-Dollarization: The Final Showdown?," *In Gold We Trust* report 2023; "A New International Order Emerges," *In Gold We Trust* report 2022; "De-Dollarization 2021: Europe Buys Gold, China Opens a Digital Front," *In Gold We Trust* report 2021; "De-Dollarization 2020 – The Endgame Has Begun," *In Gold We Trust* report 2020

unhedgeable confiscation risks), to Bretton Woods III backed by outside money (gold bullion and other commodities)."[6]

No one knows exactly where this journey will take us. However, there is no question that we are irrevocably on the road to a new global (monetary) order. **For state actors such as central banks and sovereign wealth funds, gold is increasingly becoming the golden queen on the geo-economic chessboard.**

US Debt Held by Foreign Central Banks (lhs), as % of Total Debt, and Central Bank Gold Holdings (rhs), as % of Currency Reserves, Q1/1970–Q4/2023



Source: Crescat Capital, Reuters Eikon, Incrementum AG

Private investors from the emerging markets are rushing into gold

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

It is not only state actors in emerging markets that are experiencing gold fever but also private individuals. Loyal readers will be familiar with our theory that gold has always moved out of countries where the capital stock is being depleted and into countries where capital is being built up, where the economy is prospering and the volume of savings is increasing. The Romans had already experienced this more than 2,000 years ago, when the Chinese and Indians only accepted gold in exchange for spices and silk and not Roman goods.

In terms of annual physical demand for gold, the share of emerging markets has risen to 70% over the past five years. China and India have accounted for more than half of this. The formative historical experience of financial repression, with an unstable monetary system and the associated loss of purchasing power – apart from cultural and religious aspects – is likely to be the decisive factor for the higher basic demand for gold. The following chart shows how high the correlation between the economic development of the emerging markets – measured by the MSCI Emerging Markets – and the gold price has become. However, the chart also shows that since 2022 the correlation has decreased, and a divergence has occurred.

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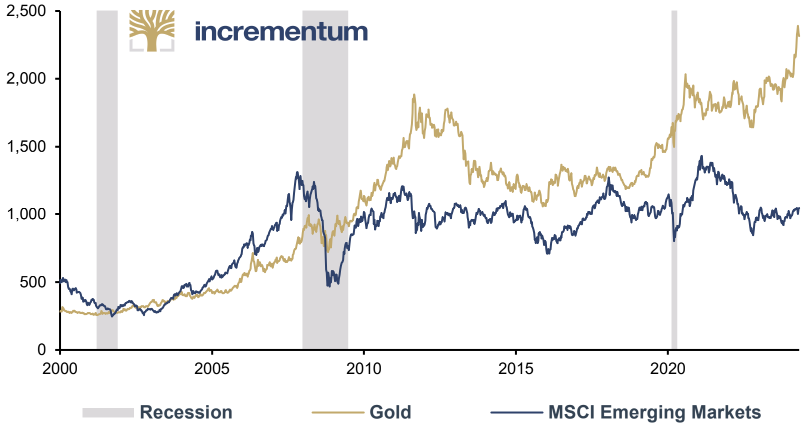
[6] *See* also "Exclusive Interview with Zoltan Pozsar: Adapting to the New World Order," *In Gold We Trust* report 2023

Gold, in USD, and MSCI Emerging Markets, in USD, 01/2000–04/2024



Source: Reuters Eikon, Incrementum AG

The simplified formula can therefore be stated as follows: If you want to bet on long-term growth in emerging markets, you should bet on gold as well. Or, as Louis-Vincent Gave put it: "Gold is a low-beta emerging market proxy."

Gold fever in China

One of the most important factors behind the recent gold boom is undoubtedly the enormous demand from China. Chinese demand for gold is no longer being fueled solely by the PBoC, but increasingly also by Chinese private investors. The financial situation in China could be summarized as "shrinking pool of investment opportunities meets high liquidity".

Understanding that China plays the long game is one of the most important insights you can have about what lies ahead. China's leaders know where they want to be five and ten years out.
Stephen Leeb

Now that the Chinese real estate market, traditionally used for retirement provision, has hit turbulence, there is a substantial need for alternatives. Chinese bonds and savings accounts are also becoming less attractive in view of the ongoing decline in interest rates, while Chinese equities have been trending sideways (volatile) since 2016. Despite a rally of 15% from February to the end of April, the leading Chinese stock indices are still well below their historical highs.

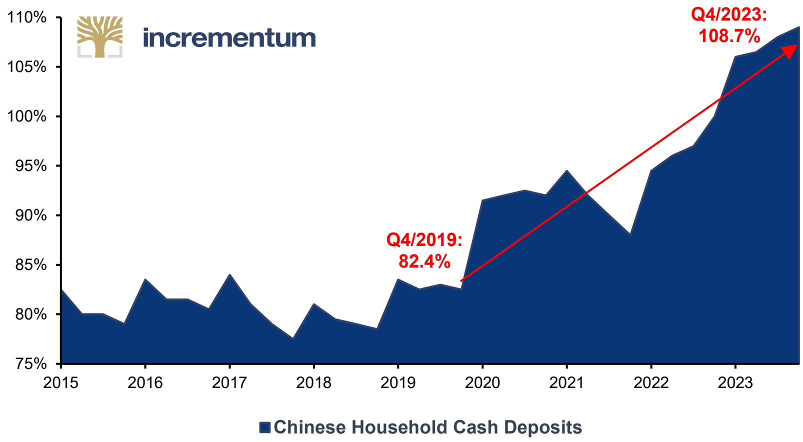
Gold (lhs), in CNY, and Shanghai Composite (rhs), in CNY, 01/2006–04/2024

Source: Reuters Eikon, Incrementum AG

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

These uncertainty factors combined with continued high liquidity – **the Chinese population's cash holdings are at a record high** – create superior conditions for investing in gold. In addition, it is worth noting how the Chinese horoscope influences the investment culture. 2024 is under the sign of the dragon, which symbolizes vitality, power and dominance in the Chinese zodiac. This boosts the appreciation of solid, stable investments such as gold.

Chinese Household Cash Deposits, as % of GDP, Q1/2015–Q4/2023

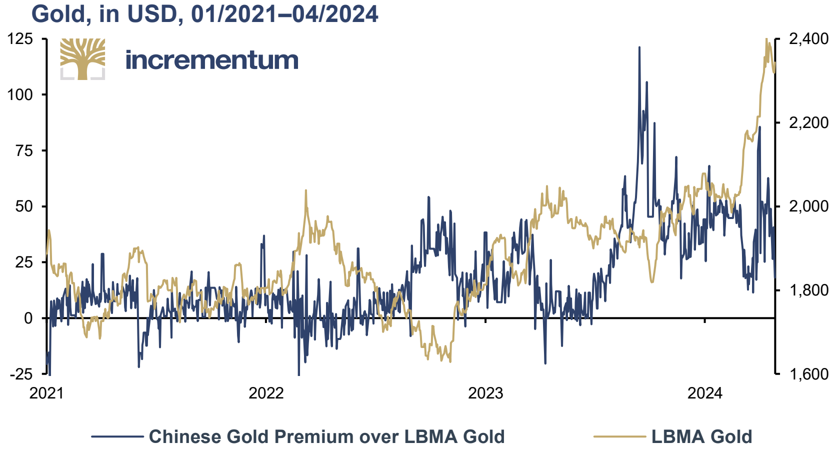


Source: Longview Economics, Macrobond, Incrementum AG

There's no fever like Chinese gold fever.
Fred Hickey

The enormous Chinese appetite for gold can be seen in the premium for Chinese gold compared to LBMA prices. The high domestic demand in China is also being fueled by China's youth, who have recently discovered gold beans as an investment opportunity. In addition, import restrictions or tariffs on gold imports could keep prices in China artificially high. Another reason is likely to be China's withdrawal from the LBMA gold auctions last year, which may have restricted the volume of gold flowing into China.

Chinese Gold Premium over LBMA Gold (lhs), in USD, and LBMA Gold, in USD, 01/2021–04/2024



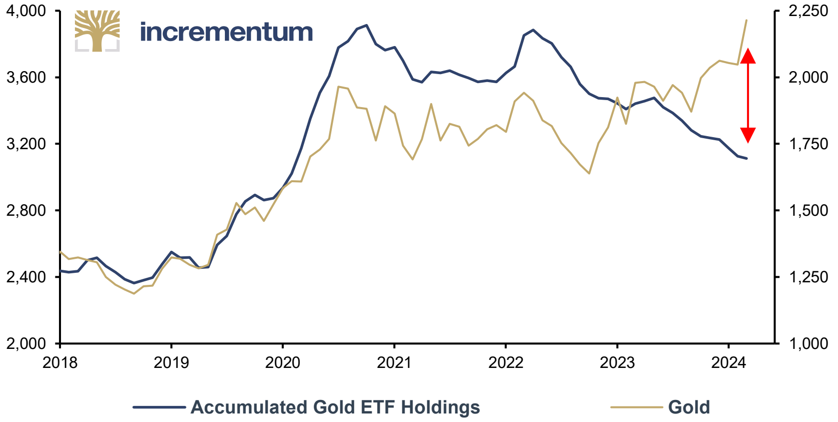
Source: World Gold Council, Incrementum AG

The marginal actor on the gold market moves from West to East

Don't buy gold. Own gold. When you buy something, it's usually a trade. When you own something, it's a very different mindset …The price? That will take care of itself.
Grant Williams

The picture in the West is very different from that in the emerging markets. The once strong link between investor demand from the West and the gold price has dissolved in recent quarters. In view of gold's record run, one would have expected ETFs to register record inflows. First, things turn out differently, and second, they unfold contrary to expectations: Since April 2022, there was a net outflow of around 760 tonnes of gold from ETFs. **According to the old gold playbook, gold should be at around USD 1,700 in view of the fall in ETF holdings.**

Accumulated Gold ETF Holdings (lhs), in Tonnes, and Gold (rhs), in USD, 01/2018–03/2024



Source: World Gold Council, Incrementum AG

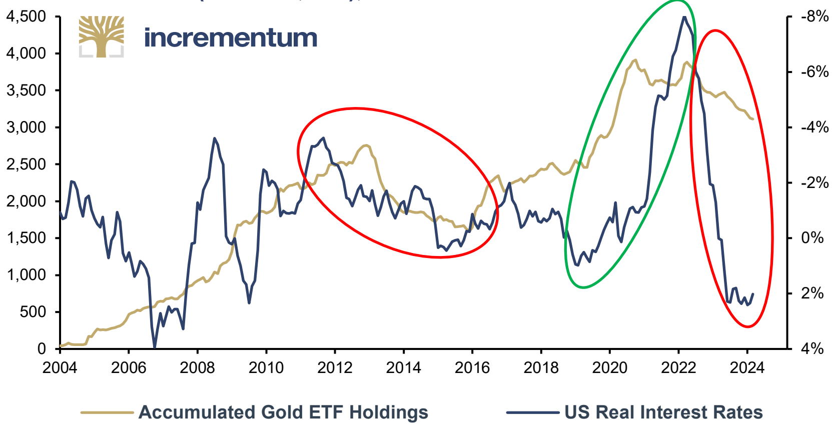
Be prepared.
The Girl Scout motto

Consequently, a key element of the new gold playbook is that the Western financial investor is no longer the marginal buyer or seller of gold.[7] The significant demand from central banks and private Asian investors is the main reason why the price of gold has been able to thrive even in an environment of rising real interest rates.

How can the declining interest of Western financial investors in gold actually be explained? In our opinion, it seems that Western investors are stubbornly sticking to the old playbook for gold: rising real interest rates translate into a lower gold price and therefore lead to net-negative gold sales.

[7] *See*, among others, "The Rise of Eastern Gold Markets: An Impending Showdown with the West," *In Gold We Trust* report 2023; "From West to East: Gold's Flow into the 'Strong Hands' of Asia," *In Gold We Trust* report 2020

Accumulated Gold ETF Holdings (lhs), in Tonnes, and US Real Interest Rates (inverted, rhs), 01/2004–03/2024



Source: World Gold Council, Incrementum AG

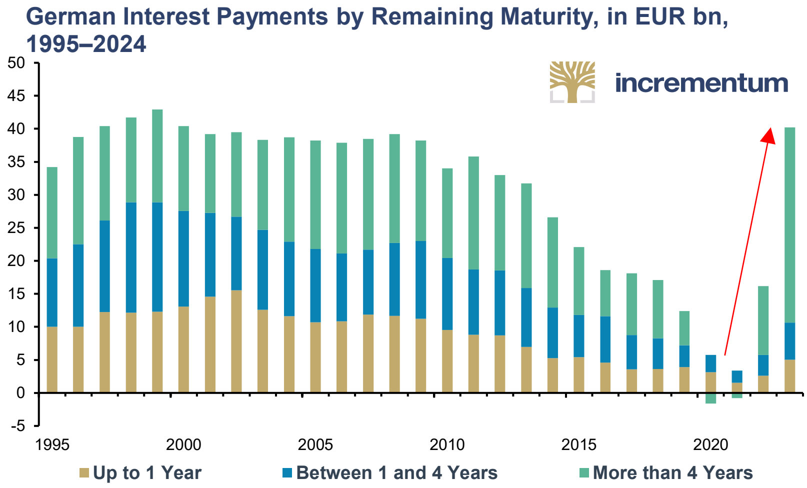
A reduction in gold ETF holdings when real interest rates rise is certainly a rational decision from the point of view of the players in the West, provided they assume that:

1. they are not exposed to increased counterparty risks and therefore have no need for a default-proof asset;
2. real interest rates will remain positive in the future and a second wave of inflation will not occur;
3. they suffer opportunity costs if they underweight traditional asset classes such as equities and bonds or even "concrete gold" (=real estate) at the expense of gold.

In our opinion, all three assumptions should be questioned – and that sooner rather than later:

Assumption 1:
Even if counterparty risk is generally ignored when investing in Western government bonds, the sharp rise in government interest payments in particular is causing growing unease. Any remnants of budgetary common sense have been completely thrown overboard, most recently in the context of Covid-19 policy.

This *monetary climate change* – as we called it in the *In Gold We Trust* report 2021 – has continued even after the end of the pandemic. However, this budgetary nonchalance is now taking place in an environment of sharply rising interest rates and no longer one of low or even negative interest rates. Around 10 times as much had to be spent on interest payments for German federal debt in 2023 than in 2021.



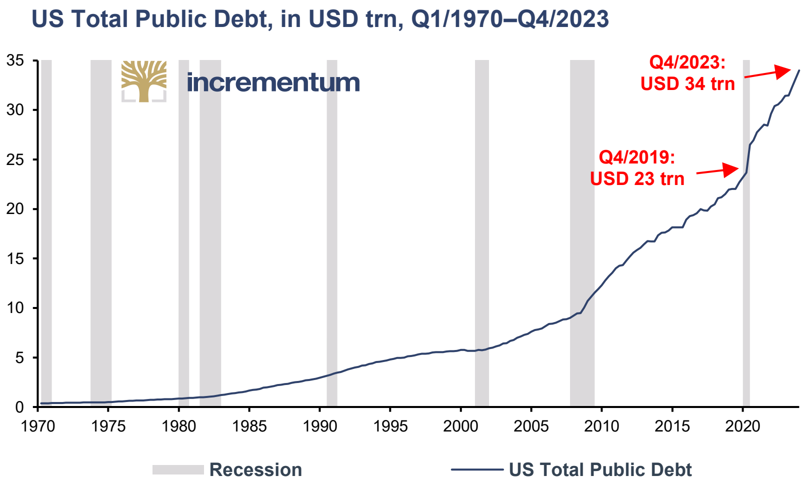
Source: German Financial Agency, Incrementum AG

The only way you can finance a deficit is by inflation. You cannot raise this amount by genuine borrowing. ... A large government deficit is a certain way to inflation.
Friedrich A. von Hayek

An etatist attitude has prevailed in many countries. Fittingly, this year marks the 80th anniversary of the publication of *The Road to Serfdom,* by Friedrich A. Hayek. The Austrian economist famously dedicated this book to socialists of all parties. In addition to exorbitantly expensive projects such as the *Inflation Reduction Act* and the *European Green Deal* and the sharp rise in spending on a social system that is structurally insolvent as a result of ageing and immigration, Western governments are now looking for sources of funding to finance the announced increases in military spending.

Creditors have better memories than debtors.
Benjamin Franklin

In addition, the already precarious budgetary situation of many countries is deteriorating due to the recent surge in interest rates. The significant increase in national debt in the wake of the Covid-19 pandemic and the energy crisis must also be digested. Compared to Q4/2019, i.e. the eve of the pandemic, US debt has risen by USD 11trn – and thus by around a third.



Source: Reuters Eikon, Incrementum AG

Assumption 2:
Historically, overindebtedness has usually led to government financing by central banks, increased financial repression, and the use of inflation taxes. If this were to

happen, real interest rates would fall again due to a new wave of inflation and, obviously, all the arguments would then speak in favor of investing more in gold.

Courtesy of Hedgeye

Assumption 3: In the event of a weakening stock market, the opportunity costs would be low from the perspective of a potential gold investor. A slide in equity markets would probably be expected in the event of a significant slowdown in the US economy, and even more so if the US slipped into recession. Conversely, history has shown that gold has typically been an excellent portfolio component during recessions. We published an extensive analysis of this in the *In Gold We Trust* report 2023.[8]

Performance of the S&P 500 vs. Gold during S&P 500 Bear Markets, 1929–2024

Date of Market High	Date of Market Low	S&P 500	Gold	Gold Relative to S&P500
16.09.1929	01.06.1932	-86.19%	0.29%	86.48%
02.08.1956	22.10.1957	-21.63%	-0.11%	21.52%
12.12.1961	26.06.1962	-27.97%	-0.06%	27.91%
09.02.1966	07.10.1966	-22.18%	0.00%	22.18%
29.11.1968	26.05.1970	-36.06%	-10.50%	25.56%
11.01.1973	03.10.1974	-48.20%	137.47%	185.67%
28.11.1980	09.08.1982	-27.27%	-45.78%	-18.51%
25.08.1987	20.10.1987	-35.94%	1.38%	37.32%
16.07.1990	11.10.1990	-20.36%	6.81%	27.17%
17.07.1998	08.10.1998	-22.29%	1.71%	24.00%
24.03.2000	10.10.2002	-50.50%	11.18%	61.68%
11.10.2007	06.03.2009	-57.69%	25.61%	83.30%
21.09.2018	26.12.2018	-20.21%	5.59%	25.80%
19.02.2020	23.03.2020	-35.41%	-3.63%	31.78%
03.01.2022	**10/12/2022**	-10.90%	5.56%	16.46%
	Mean	**-34.85%**	**9.03%**	**43.89%**
	Median	**-27.97%**	**1.38%**	**29.35%**

Source: Reuters Eikon, Incrementum AG

The biggest piece of M&A in the past 12 months was the merger of the Treasury and the Fed.
Michael Hartnett

Because Western financial investors in particular have not yet realized that there is a new version of the gold playbook, gold remains on everyone's lips but is far from being in all portfolios. It seems that Western investors initially turned down the invitation to the gold party. Now that the party is gaining momentum, they do not want to admit they were party poopers. It could therefore happen that they will only come to this party when it is already in full swing, and then at a much higher "price of admission".

Not being willing to take risks is an extremely risky strategy.
Magnus Carlsen

The low affinity for gold among large sections of the investment community was recently confirmed by a Bank of America study. In fact, 71% of US advisors have little to no gold allocation, i.e. it is less than 1% of their portfolio. We also see a similar lack of interest in gold mining stocks, which have largely lost the trust of investors in view of their disappointing performance.

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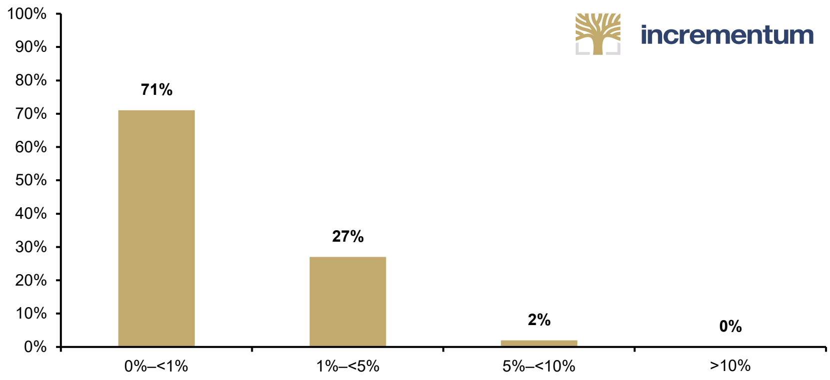
[8] *See* "The Showdown in Monetary Policy," *In Gold We Trust* report 2023

Gold Allocation of Investment Advisors, 2023



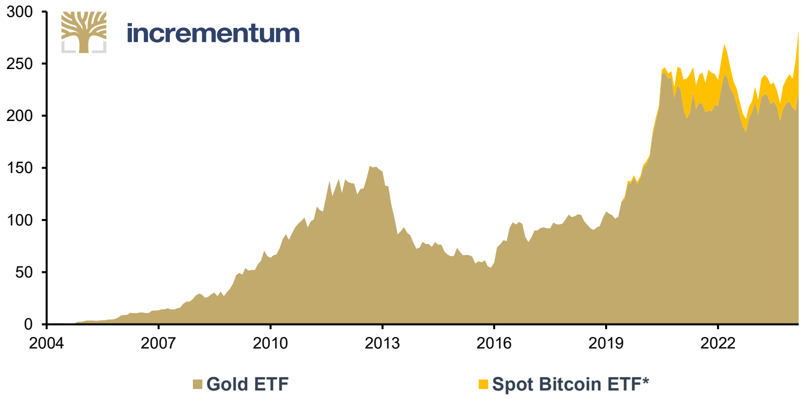
Source: BofA Global Research, Crescat Capital, Incrementum AG

The new gold playbook and the competition from Bitcoin

People that use fiat currency as a store of value, there's a name for them. We call them poor.
Michael Saylor

A key new aspect of the new gold playbook is that Bitcoin has established itself as a serious competitor to gold. The digital currency is challenging the status of the precious metal as the most important non-inflationary store of value.

Gold ETF and Spot Bitcoin ETF Holdings, in USD bn, 01/2004–03/2024

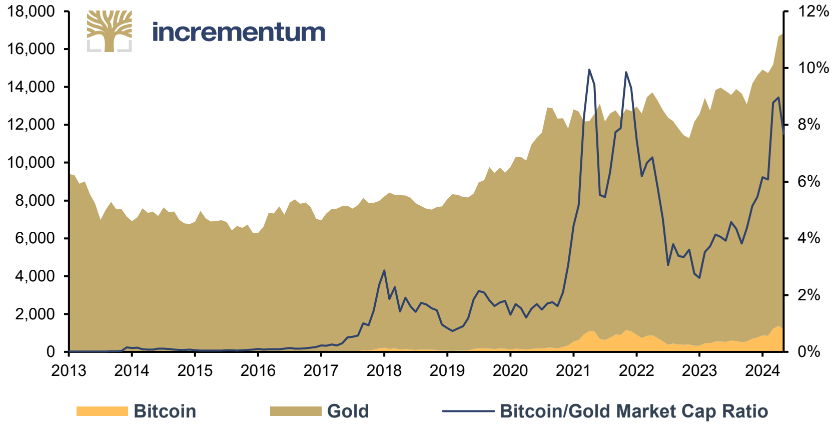


Source: hildobby, Reuters Eikon, Incrementum AG
*GBTC Holdings for the Period prior to Spot Bitcoin ETF Trading (01/11/2024)

Bitcoin is a credit default swap on the everything bubble.
Michaël Roerade

However, there is still a very long way to go before Bitcoin could outstrip gold. As of April 30, the market capitalization of all mined gold was around USD 15.6trn– 212,582 tonnes at a price of USD 2,288 per ounce. For Bitcoin, the current price of USD 60,600 per coin results in a market capitalization of USD 1.2trn. This corresponds to around 7.7% of the market capitalization of gold. Assuming an unchanged gold price, the BTC price would need to nearly triple to, for example, reach 20% of the market capitalization of gold.

Market Cap of Gold and Bitcoin (lhs), in USD bn, and Bitcoin/Gold Market Cap Ratio (rhs), 01/2013–04/2024

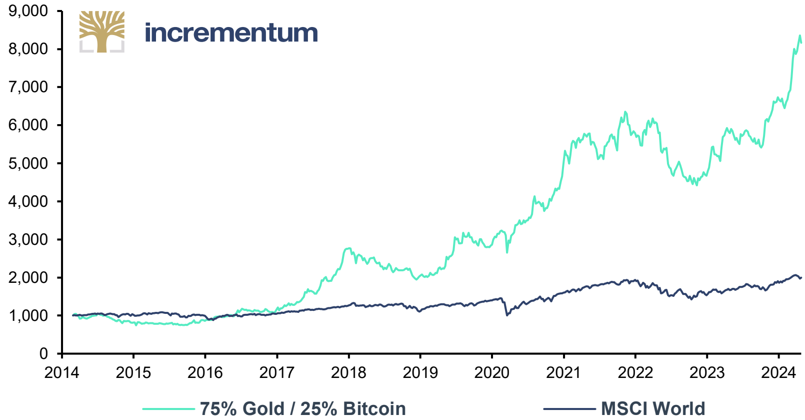


Source: Reuters Eikon, World Gold Council, coinmarketcap.com, Incrementum AG

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

However, the fact that gold has gained new competition in the universe of noninflationary assets need not be detrimental to gold per se. In line with the motto “Competition is good for business”, it is quite conceivable that a critical examination of the unsustainability of the current monetary system could lead more and more investors to realize that, from a portfolio perspective, a combined investment in gold and Bitcoin is superior to the respective individual investments on a risk-adjusted basis. For years, our credo has been: “*Gold for stability, Bitcoin for convexity.*”[9]

75% Gold / 25% Bitcoin*, and MSCI World, 1,000 = 02/2014, 02/2014–04/2024



Source: Reuters Eikon, Incrementum AG
*Weekly Rebalancing

[9] You can find more information on our investment strategies at www.incrementum.li/en/investment-funds/. For Bitcoin enthusiasts, we also offer a quarterly publication, the Bitcoin Compass. You can download it free of charge at www.incrementum.li/en/btc-compass/.

Other Highlights of This Year's *In Gold We Trust* report

- We analyze in detail the specific consequences of the new gold playbook for investment decisions. We also present our adaptation of the 60/40 portfolio, which is derived from the new gold playbook, and the new *Incrementum Active Aurum Signal*. This signal helps to determine the optimal moment to increase the weighting of performance gold. => Chapter "Mastering the new gold playbook"
- In view of the ongoing division of the world into two geopolitical and economic camps, the topic of de-dollarization is no longer just a theoretical consideration but is increasingly manifesting itself in economic policy decisions, international agreements, and everyday life. => Chapter: "Enter the Dragon: De-dollarization and the Eastern Push for Gold"
- We have a stirring discussion with Brent Johnson and Louis-Vincent Gave on the topics of the multipolarity of the global monetary order, the status of the US dollar as global reserve currency, and inflation => Chapter: "Debate between Brent Johnson und Louis-Vincent Gave – From Wedlock to Deadlock: The East-West Divorce"
- The growing importance of non-Western countries is also reflected in the increasing significance of the United Arab Emirates, and Dubai in particular, for the global gold trade => Chapter: "Dubai, the Golden Oasis driving the UAE Gold Market's Growth"
- In another chapter, we explore the question of whether gold is becoming an untouchable metal in the West through subtle stigmatization. In other words, we discuss the question of whether, instead of a legal ban on gold, a mental ban on gold is spreading in Western minds. => Chapter: "The Image Problem of Gold in the West"
- An update on the situation of silver is provided, as gold's "little brother" could especially benefit from the energy transition. => Chapter: "Breakout or Fake-out: Is this Silver's Golden Moment?"
- This year we are also taking a trip into the (distant?) future and into previously unexplored worlds. => Chapter: "Asteroid Mining and Deep-Sea Mining: Science Fiction or the Next Wave of Innovation in the Mining Space?"
- It has become a tradition that the *In Gold We Trust* report devotes a chapter to Bitcoin, the digital gold. This year's chapter focuses on the new Bitcoin playbook after the halving in mid-April and the rapidly approaching absolute scarcity of Bitcoin. We also present our idea of *Freebitcoin*, analogous to *Freegold* => Chapter: "The New Playbook for Bitcoin"
- In addition to the two traditional chapters "Mining Stocks – Fundamental and Technical Situation" and "Technical Analysis", three further chapters in this year's *In Gold We Trust* report deal with different aspects of the performance of gold:
  - "An Alternative Perspective for Framing the Gold Price Based on Fundamentals"
  - "Calendar Anomalies and the Gold Market"
  - "The Valuation and Beta of the Gold Mining Industry"

Thank you very much!

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

"Almost all books on gold are boring", is how Roland Baader begins the foreword to his book *Gold: Last Resort or Catastrophe?*. With our *In Gold We Trust* report, we try to prove the opposite in an informative way: Gold is always interesting, because it reflects the state of the global economy, the monetary architecture, and also society. **Year after year, the *In Gold We Trust* report strives to live up to its reputation as "the gold standard of gold studies" and to be the world's most recognized, most widely read, and most comprehensive analysis of gold.** You, dear readers, are our greatest incentive.

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

Every year, we retreat to our bower for a few weeks to reflect, research facts and figures, and finally write the *In Gold We Trust* report. After all, we not only want to offer you a comprehensive analysis of current developments, but also to present historical, philosophical, and theoretical economic insights on the topic of gold. We are happy to admit that this is somewhat easier for us in years when the price of gold significantly increases.

The degree of one's emotions varies inversely with one's knowledge of the facts – the less you know, the hotter you get.
Bertrand Russell

This 18th edition of the *In Gold We Trust* report features a premiere: For the first time, our newly founded Sound Money Capital AG is acting as publisher. However, the *In Gold We Trust* report continues to be published in cooperation with Incrementum AG. We would like to take this opportunity to thank our partners at Incrementum AG, who support us as experienced sparring partners in matters of market analysis, company valuation and fund management.

We would also like to thank our more than 20 fantastic colleagues on four continents[10] for their energetic and tireless efforts over more than 20,000 hours and countless time zones.

A reputation for integrity is more valuable than all the gold in the world.
Jeffrey Archer

Last but not least, special thanks go to our premium partners.[11] 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 in four languages, we provide our *Monthly Gold Compass* every month as well as ongoing information on our *In Gold We Trust* report homepage at ingoldwetrust.report.

If there is time to reflect, slowing down is likely to be a good idea.
Daniel Kahneman

We believe that dealing with the past is essential to successfully preparing for the future. This examination has led us to the conviction that now is the time for a new gold playbook. We would like to present this to you, our valued readers, as a guide to the topic of gold in the more than 420 pages of the *In Gold We Trust* report 2024.

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10 All colleagues are pictured in the gallery at the end of the *In Gold We Trust* report.
11 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.

Now we invite you on our annual expedition and hope that you enjoy reading our 18th *In Gold We Trust* report as much as we have enjoyed writing it.

With best regards from Liechtenstein,

Ronald-Peter Stöferle and Mark J. Valek


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The Status Quo of Gold

There is no fever like gold fever.

Richard Russell

- **One thing is certain for us: gold has finally broken out of its four-year consolidation phase. A new chapter has been opened in the gold playbook.**
- **Since the "IPO of gold" on August 15, 1971, the average annual increase in the price of gold in US dollars has been 10.0%. The annualized growth rate (CAGR) is 7.8%.**
- **In view of the 25th anniversary of the euro, it is worth taking a look at 25 years of the gold price in euros. In total, gold has gained 772% in this quarter of a century, which corresponds to 8.69% per year. That's impressive for gold, less so for the euro.**
- **It appears that historical patterns are currently changing. The *autonomous rate of increase*, i.e. the rate of increase in the gold price that is independent of exchange rate fluctuations, has transformed. The historically inverse relationship between the US dollar and the gold price could weaken further in the future.**
- **In view of the extremely strong rise in the spring, a short-term phase in which the gold price takes a breather and consolidates would not come as a surprise.**

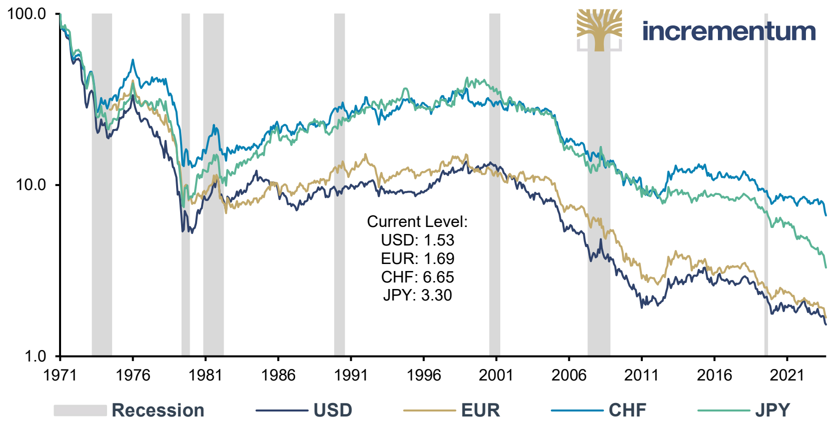
Gold always does what it should do… it just never does it when we think it should.
Richard Russell

In recent years, looking at the gold price chart has been somewhat reminiscent of *Waiting for Go(l)dot*. However, contrary to Samuel Beckett's play, the long-awaited gold price breakout did come at the beginning of March, albeit somewhat unexpectedly. In just a few weeks, the gold price rallied by 15% in US dollar terms to over USD 2,400. Gold reached new all-time highs in succession, with the Swiss franc, the gold standard among fiat currencies, also exceeding the psychologically important CHF 2,000 mark for the first time. **One thing is certain for us: Gold has finally broken out of its four-year consolidation phase. A new chapter has been opened in the gold playbook**.

Nowadays people know the price of everything and the value of nothing.
Oscar Wilde

But as you, dear readers, already know, the value of gold does not actually fluctuate. What does change is the purchasing power of fiat currencies measured in gold. These move to varying degrees, but always as a group in relation to gold, the immovable anchor. **The gold price therefore does not "rise", but the fiat currencies depreciate in relation to gold in the long term, some faster, some a little slower – an insight that is confirmed by the following chart.**

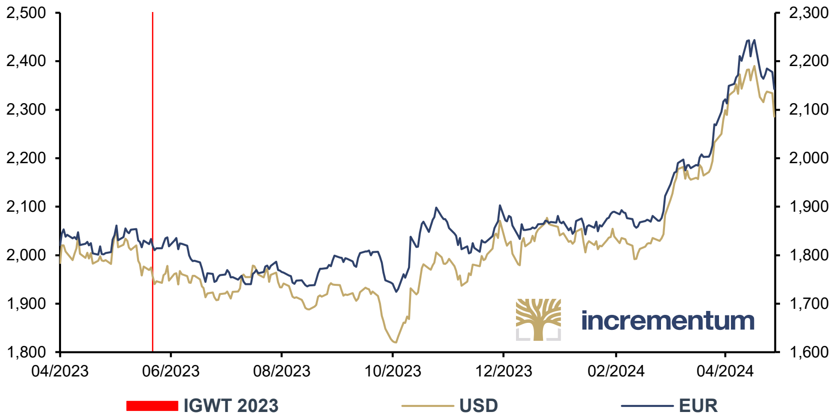
Various Currencies (log), in Gold, 100 = 08/1971, 08/1971–05/2024



Source: Reuters Eikon, Incrementum AG

Let's take a look at the gold price trend in US dollars and euros since our last *In Gold We Trust* report. Shortly after the publication of the last report on May 24, 2023, a correction lasting several months set in. Gold fell to USD 1,820 by the beginning of October. In the wake of a significantly weaker US dollar, budding fantasies of interest rate cuts, and robust demand for central bank gold, a turnaround was then achieved in Q4/2023, which also marked the starting point of the exceptional rally in spring.

Gold, in USD (lhs), and EUR (rhs), 04/2023–04/2024



Source: Reuters Eikon, Incrementum AG

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

Let us now turn to the market breadth of gold, i.e. its performance in different currencies. The calendar year 2023 was clearly positive for gold in all currencies. The average price increase stood at 12%. In the former safe-haven currency, the Japanese yen, the gold price rose by 21.6%. In euro terms, it was up 9.7%, the sixth annual gain in a row. In only 5 out of 25 years has gold recorded a negative performance in euro terms, which relentlessly reveals the manifest weakness of the European single currency. **In the current year 2024, gold is also clearly in positive territory in all the currencies listed.**

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

The average performance in this secular bull market remains impressive. The average annual performance from 2000 to the end of April was 9.2%. Despite significant corrections in the meantime, gold has outperformed practically every other asset class and above all every other currency during this period. One important aspect is often forgotten here, namely the tax burden. After all, profits from gold investments are tax-free in many countries, at least after a certain holding period. This further increases the performance of gold compared to conventionally taxed asset classes.

Gold Performance in Major Currencies, 2000–2024 YTD

Year	USD	EUR	GBP	AUD	CAD	CNY	JPY	CHF	INR	Average
2000	-5.3%	1.2%	2.0%	11.3%	-1.9%	-5.4%	5.8%	-4.2%	1.4%	0.6%
2001	2.4%	8.3%	5.3%	11.4%	8.8%	2.4%	18.0%	5.5%	5.8%	7.6%
2002	24.4%	5.6%	12.2%	13.3%	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%	-1.9%	-1.7%	1.5%	-2.0%	5.6%	0.8%	-3.1%	0.1%	0.5%
2005	18.1%	35.1%	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%	18.5%	29.2%	18.0%	12.0%	22.5%	22.5%	21.8%	16.9%	21.4%
2008	5.4%	10.0%	43.1%	30.5%	28.7%	-1.5%	-14.2%	-0.8%	30.0%	14.6%
2009	24.8%	21.8%	12.9%	-1.6%	7.9%	24.8%	27.9%	21.1%	19.2%	17.6%
2010	29.5%	38.6%	34.2%	13.6%	22.8%	25.1%	13.2%	16.8%	24.8%	24.3%
2011	10.2%	13.9%	10.6%	10.3%	12.7%	5.2%	4.5%	10.7%	30.7%	12.1%
2012	7.1%	5.0%	2.5%	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%	7.3%	7.5%	0.7%	11.6%	9.4%	0.2%	5.6%
2015	-10.4%	-0.1%	-5.3%	0.6%	6.8%	-6.2%	-9.9%	-9.7%	-5.9%	-4.5%
2016	8.5%	12.1%	29.6%	9.6%	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%	8.9%	6.8%	4.1%	-4.2%	-0.8%	7.3%	3.1%
2019	18.3%	21.0%	13.7%	18.8%	12.6%	19.7%	17.2%	16.6%	21.3%	17.7%
2020	25.0%	14.8%	21.3%	14.1%	22.6%	17.2%	18.8%	14.3%	28.0%	19.6%
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	13.1%	9.7%	7.4%	13.1%	10.5%	16.3%	21.6%	2.9%	13.7%	12.0%
2024 YTD	10.8%	14.7%	12.9%	16.6%	15.3%	13.0%	24.0%	21.1%	11.2%	**15.5%**
CAGR	**8.9%**	**8.6%**	**10.0%**	**8.9%**	**8.7%**	**8.3%**	**10.9%**	**6.5%**	**11.9%**	**9.2%**

Source: Reuters Eikon (as of 04/30/2024), Incrementum AG

I love money. I love everything about it. I bought some pretty good stuff. Got me a $300 pair of socks. Got a fur sink. An electric dog polisher. A gasoline powered turtleneck sweater. And, of course, I bought some dumb stuff, too.
Steve Martin

If you look at the development of the gold price in different currencies and over decades, you can see that the performance diverges significantly. In particular, the 1970s and the 2000s and 2010s can be described as golden decades. If you look at the development of real interest rates in US dollars, this development makes perfect sense. The 1970s were characterized by negative real interest rates due to high inflation. That dynamic changed dramatically at the beginning of the 1980s. Then, while zero interest rates were reached for the first time at the end of the 2000s, the relatively low inflation rate in the 2010s meant that real interest rates did not fall any further, although nominal interest rates remained at extremely low levels. **However, this correlation – negative or falling real interest rates = positive gold price environment – is likely to have changed as part of the new gold playbook.**

Gold Performance by Decade in Major Currencies, 1971–2024 YTD

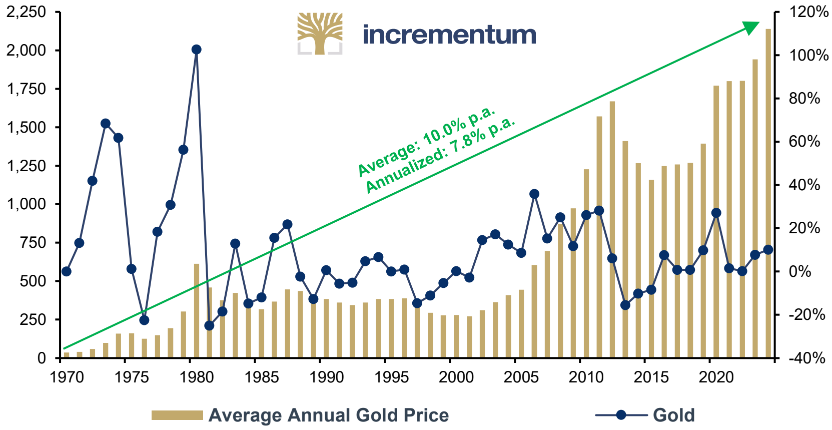
Year	1971–1979	1980–1989	1990–1999	2000–2009	2010–2019	2020–2024 YTD
USD	1,268%	-22%	-26%	281%	38%	51%
EUR	1,256%	-3%	-15%	168%	77%	58%
GBP	1,275%	9%	-28%	280%	69%	60%
CHF	1,098%	-24%	-26%	148%	29%	43%
JPY	1,219%	-53%	-49%	246%	62%	119%
AUD	1,269%	7%	-18%	178%	77%	63%
CAD	1,282%	-23%	-10%	177%	71%	60%
INR	1,274%	30%	33%	307%	113%	76%
RUB	1,296%	-17%	30%	322%	183%	127%
ZAR	1,251%	142%	73%	359%	162%	102%
CNY	1,204%	155%	26%	214%	41%	57%
TRY	1,358%	74%	71%	951%	451%	721%
BRL	1,360%	-24%	72%	268%	219%	95%
ARS	1,356%	68%	-29%	1,348%	2,082%	2,106%

Source: Michael Nicoletos, Bloomberg, Reuters Eikon (as of 04/30/2024), Incrementum AG

Do not save what is left after spending, but spend what is left after saving.
Warren Buffett

Since the "IPO of gold" on August 15, 1971, the average annual increase in the price of gold in US dollars has been 10.0%. The annualized growth rate (CAGR) is 7.8%. **Gold reached a new all-time high last year, with an annual average price of USD 1,942.** Since the beginning of the year, the average gold price has been USD 2,139. The following chart shows that regular accumulation of gold, aka gold saving using the cost-average effect, appears very reasonable.

Annual Average Gold Price, in USD (lhs), and yoy (rhs), 1970–04/2024

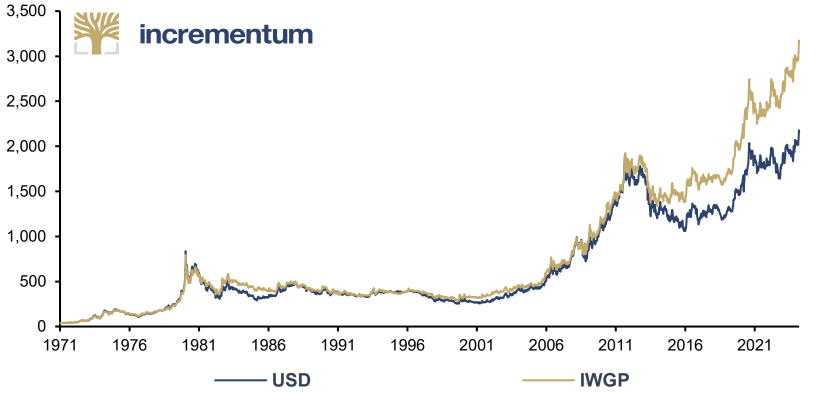


Source: Reuters Eikon, Incrementum AG

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

Let us now return to the current "big picture". **The next chart shows the *Incrementum world gold price*, which we calculate using a basket of 16 currencies weighted according to nominal GDP.** These currencies represent almost 80% of global GDP. Our approach aims to mitigate the distorting effect of currency fluctuations in the valuation of the gold price in a single currency. The chart shows that a gap has opened up between the gold price in US dollars and the global gold price, particularly since 2011/12, and it has gradually widened over time as a result of US dollar strength. Nevertheless, the long-term upward trend for both metrics appears clearly intact.

Gold, in USD, and *Incrementum World Gold Price* (IWGP), 01/1971–04/2024



Source: World Bank, Reuters Eikon, Incrementum AG

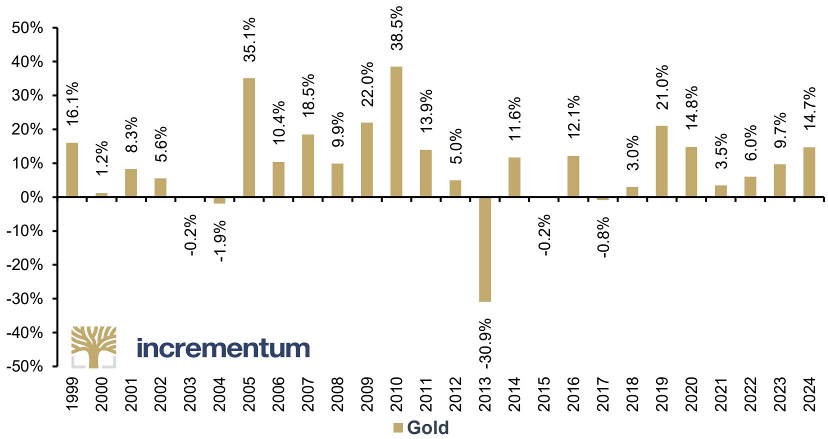
Conclusion

If you don't own gold, you know neither history nor economics. In gold, the sky is not the limit; history is.
Ray Dalio

After several attempts, the gold price has finally reached new all-time highs in USD terms. Now that the previous resistance lines have been overcome, a new chapter has been opened in the gold playbook.

In view of the 25th anniversary of the euro, it is worth taking a look at 25 years of the gold price in euros. In total, gold has gained 772% in this quarter of a century, which corresponds to 8.69% per year. That's impressive for gold, less so for the euro.

Gold, in EUR, 1999–2024 YTD

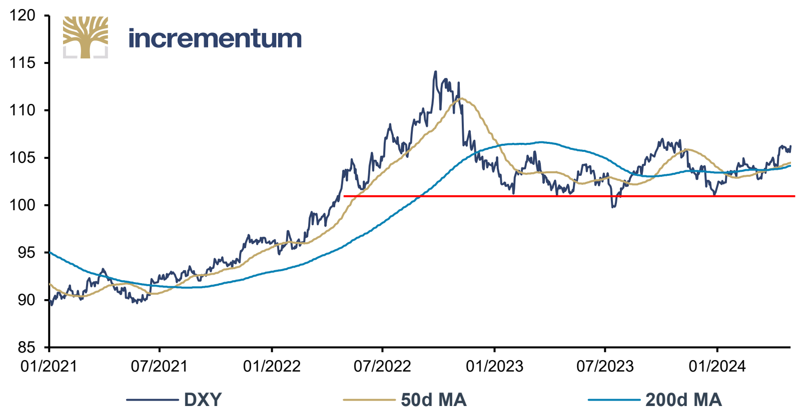


Source: Reuters Eikon (as of 04/30/2024), Incrementum AG

The gold price can go up, it can go down, but gold itself is permanent.
Simon Mikhailovich

A look at the DXY chart continues to show a sideways trend with a slight downward tendency. The support level at 101 held in January 2024, but should this psychologically important mark be breached on the downside, the next major support zone would only be in the 89 area.

DXY, 01/2021–04/2024



Source: Reuters Eikon, Incrementum AG

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

However, our analyses show that the DXY exhibits significant relative strength in election years compared to historical averages. The decoupling of the DXY from the historical averages begins at the start of the second quarter and ends with the presidential election in early November. After that, the greenback tends to weaken.

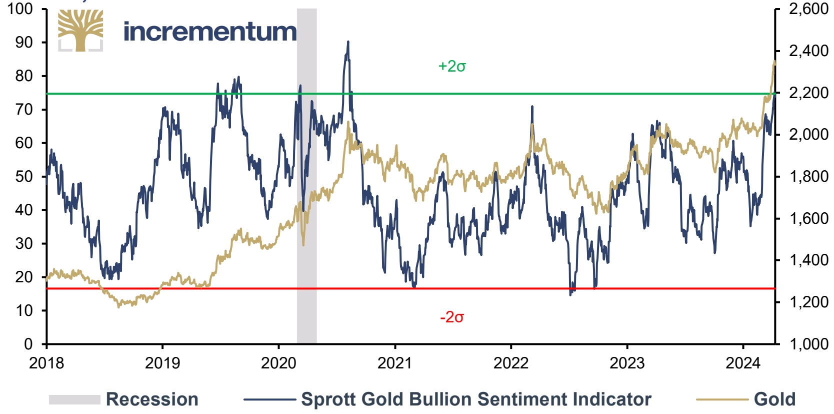
This statistical aspect of the US dollar's strength will please Donald Trump, as he often sharply denounced the US dollar's high exchange rate during his presidency from 2017 to 2021. Should Trump win the election, we should remember statements such as the following, in which Trump alluded to Jerome Powell, who in his opinion was far too hawkish: "We have a gentleman that likes raising interest rates in the Fed; we have a gentleman that loves quantitative tightening in the Fed; we have a gentleman that likes a very strong dollar in the Fed."

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

It also appears that historical patterns are changing. In our opinion, the *autonomous rate of increase*, i.e. the rate of increase in the gold price that is independent of exchange rate fluctuations, has risen. One of the reasons for this is that the influence of emerging markets on gold demand has grown significantly in recent years. In this respect, the historically inverse relationship between the US dollar and the gold price could weaken further in the future. **What is good for the US dollar does not always have to be bad for gold.**

We have always assumed that as soon as the gold price marks new all-time highs in US dollar terms, the next trend phase will be heralded. A new chapter in the gold playbook is now being written. However, in view of the strong rise in the spring, a short-term phase in which the gold price takes a breather and consolidates would not come as a surprise. This view is supported by the Sprott Sentiment Indicator, which is approaching levels indicative of euphoria.

Sprott Gold Bullion Sentiment Indicator (lhs), and Gold (rhs), in USD, 01/2018–04/2024



Source: Sprott Asset Management LP, Reuters Eikon, Incrementum AG

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

Scarcity is the fundamental starting point of all economics, and its most important implication is the notion that everything has an opportunity cost.

Saifedean Ammous

- **US equity market valuations are still far from bargain levels. We continue to find exciting opportunities – particularly in the value segment of the old economy, in Europe and in emerging markets.**
- **The decoupling between gold and bonds that we predicted in previous years has taken place. The bond market and the gold market are sending the same message: inflation is the new reality.**
- **If the relationship between stocks and bonds is permanently reversed, the basis of the 60/40 portfolio – namely a negative correlation between stocks and bonds – would be removed. Could bonds now hand over the sceptre to gold?**
- **The two-year commodity boom has had to pay tribute to the stuttering economic engine, disinflation and rapidly rising interest rates. Nevertheless, there are many indications that the commodity supercycle is only in its early stages.**

Risk more than others think is safe. Dream more than others think is practical.
Howard Schultz

Not only absolute performance but also relative performance – especially compared to stocks, bonds and commodities – is essential for a comprehensive analysis of the gold price trend. Relative performance is particularly important for all those who do not invest in gold as a safe haven asset (= safe-haven gold), but because they are hoping for a high return (= performance gold). In the following pages, we will therefore examine the relative valuation and trend strength of gold compared to other asset classes in order to better understand the opportunity costs of investing in gold. We can say one thing in advance: **The gold bull market is built on a solid foundation.**

Gold Compared to Stocks

> *It's clear that the future will not look like the past and today's conventional investment wisdom will be tomorrow's folly: liquid will be the new illiquid; rapid turnover the new patience; niche strategies the new index trackers. What rose furthest in duration's golden age – government and corporate bonds, public equities, private equity, venture, real estate – will fall furthest with its passing.*
>
> Dylan Grice

NVIDIA is just Taylor Swift for dudes.
Investment Hulk

If there has been one new topic in recent months that has occupied politicians, feature pages and the financial markets alike, it has been the hype surrounding artificial intelligence in general and ChatGPT in particular. However, there seems to be a certain dissonance regarding the effects of artificial intelligence. The predicted consequences range from complete dumbing down of the population, mass extinction, and the end of humanity to a multi-trillion-dollar productivity miracle. We are neither AI experts nor are we writing these lines using ChatGPT; however, we are firmly convinced that the positive consequences of technological progress clearly outweigh the negative ones. In any case, the AI boom surrounding Nvidia & Co. has given the stock markets an additional "This time is different" boost.

The best defense is a good offense, but an even better defense is making sure the other guy thinks you have a good offense.
Mark Twain

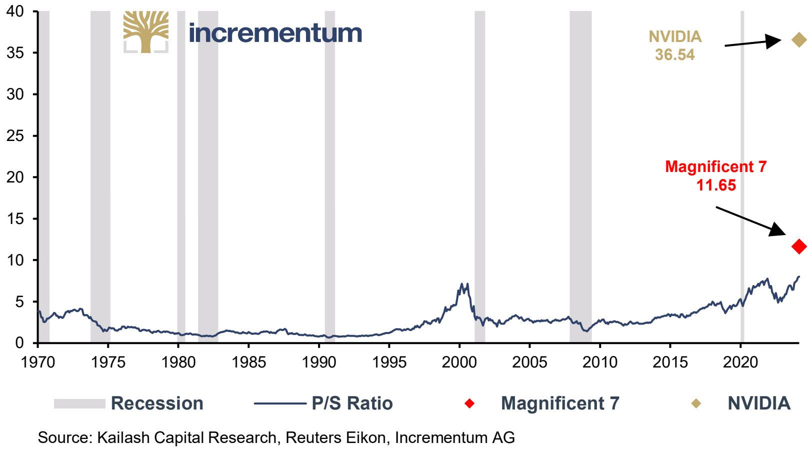
But despite all the AI euphoria, we should not get carried away. Our esteemed friend Peter Frech compares what is happening on the stock markets with the old sports saying "Offense wins games, but defense wins championships", because in investing, avoiding major losses is of paramount importance for above-average long-term performance.[12] However, defensive stocks and sectors are currently as unpopular as Marmite (a – in our opinion horrible – vegan seasoning paste made from yeast extract), outside of British cuisine.

Frech sees considerable parallels in current stock market activity to toddlers playing soccer: The whole pack is running after the ball like a bunch of chickens – no trace of tactical positioning or defensive work. Just like the little ones chasing the ball, many market participants seem to be focused only on

—
[12] *See* Frech, Peter: "Quantex Werte", No. 102, March 2024

potential profits from the hot topic of artificial intelligence – FOMO sends its regards. The only question of interest is when the long-awaited interest rate cuts, which are supposed to give shares an additional boost, will finally come. Only the upside, i.e. the offensive drive towards the goal, counts. Nobody cares about defense anymore, according to Frech.[13]

S&P 500 IT P/S Ratio, 01/1970–03/2024

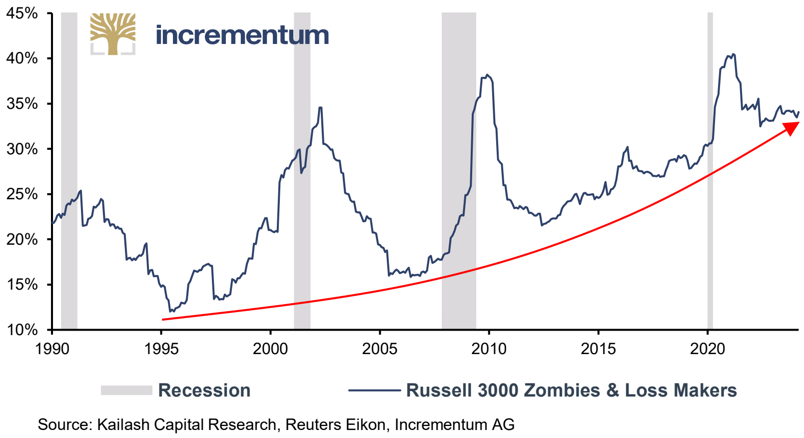


Source: Kailash Capital Research, Reuters Eikon, Incrementum AG

Financialization is profit margin growth without labor productivity growth…. Financialization is the zombiefication of an economy and the oligarchification of a society.
Ben Hunt

Hardly anyone wants to see the warning signs, even in view of the many all-time highs on the stock markets. The proportion of zombie companies is on the rise worldwide and hangs as an albatross around the necks of productive companies.[14] The next chart shows the percentage of all companies in the Russell 3000 that are either recording losses or cannot make interest payments on time. This percentage is currently around one third, and a clear upward trend can be seen since 1995.

Russell 3000 Zombies & Loss Makers (Cannot Turn a Profit or Pay their Interest Expenses), 01/1990–03/2024

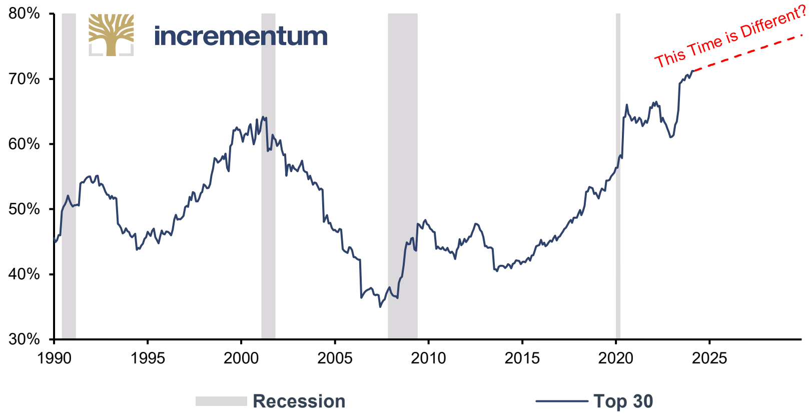


Source: Kailash Capital Research, Reuters Eikon, Incrementum AG

The increasing market concentration is not a sign of strength, either. The chart below shows that just 30 stocks account for around 70% of the market capitalization of the Russell 1000 Index.

[13] *See* Frech, Peter: "Quantex Werte", No. 102, March 2024
[14] A detailed analysis of the zombie economy can be found in: Stöferle, Ronald, Taghizadegan, Rahim and Hochreiter, Gregor: *The Zero Interest Trap*, 2019

Index Weight of the Top 30 Stocks in the Russell 1000, 01/1990–03/2024

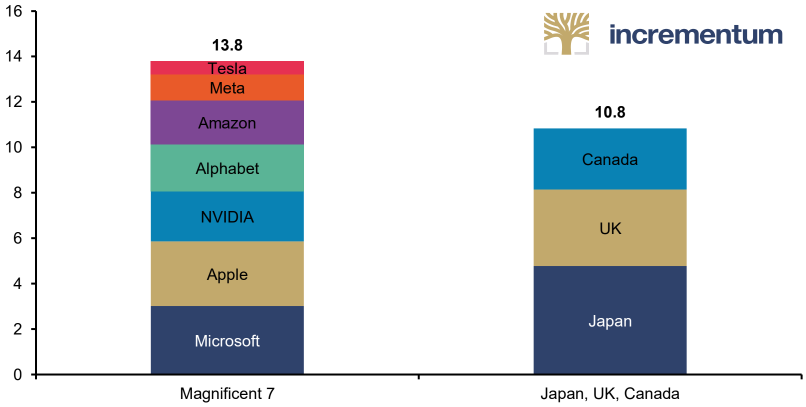


Source: Kailash Capital Research, Reuters Eikon, Incrementum AG

Markets are strongest when they are broad and weakest when they narrow to a handful of blue-chip names.
Bob Farrell's Rule #7

The ten largest US stocks by market capitalization currently account for 13.3% of total global market capitalization. At the previous peak in March 2000, their share was 9.9%. Comparisons in which individual US stocks are worth more than entire countries are commonplace.

Market Capitalization, in USD trn, 04/30/2024



Source: Apollo, companiesmarketcap, Reuters Eikon, Incrementum AG

When inflation peaks, equities bottom.
Marko Papic

But back to the performance figures: Last year's gain of 55.1% in the Nasdaq 100 was the best performance since 1999. The S&P 500 (+26.3%), the Russell 2000 (+16.9%), and the Dow Jones Industrials (+16.2%) also showed remarkable performance, which continued in Q1/2024. The primary trend is pointing upwards, and market breadth has recently improved.

However, the risk/return ratio has undoubtedly deteriorated. Since the low in confidence on October 27, 2023, we have seen a performance in the 99th percentile. Accordingly, sentiment and market positioning have reversed from "sad unto death" to "sky-high". At the end of October 2023, confidence – and therefore investor positioning – was -8 on a scale of -10 to +10. Current sentiment is likely to be +8. It is therefore difficult to imagine how the market can develop a similar momentum in the coming months as it did in Q4/2023 and Q1/2024.

The Fed's idea used to be that it removed the punch bowl before the party got good. Now the Fed's doctrine is that it will only remove the punch bowl after it sees some people staggering around drunk.
Larry Summers

What is the reason for this return to old patterns of behavior? Last year, Anatole Kaletsky aptly spoke of *pessimistic bulls*. He was describing investors who consider themselves to be cautiously pessimistic because they expect a mild recession in the US. In reality, however, they are implicitly optimistic because they hope that this recession will quickly bring inflation down to an acceptable level and force the Federal Reserve to loosen monetary policy. This, they hope, will send bond and share prices soaring.

However, this hope is remarkably 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. It is apparent 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 therefore become more cautious.**

US Stock Market Performance after the Last Rate Hike

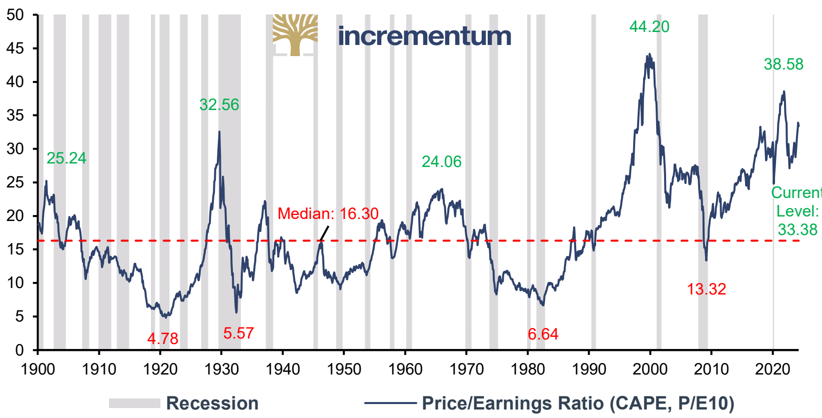
Last Hike	Rate	Last Cut	Rate	Δ S&P 500	Largest Drawdown
05/16/2000	6.50%	06/25/2003	1.00%	-33.47%	48.82%
06/20/2006	5.25%	12/16/2008	0.00%	-26.36%	49.99%
12/19/2018	2.50%	03/16/2020	0.00%	-4.82%	29.53%
07/26/2023	5.50%	?	?	?	?

Source: Reuters Eikon, Incrementum AG

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

US stocks are currently as far away from a favorable valuation as the Bahamas are from the introduction of mandatory snow chains. US stocks ended 2023 with a Shiller P/E ratio of 32.4, which is down from 38.3 at the end of 2021; but we think it is questionable whether this valuation is already enough for a cycle low. **The current Shiller P/E ratio of 33.38 is in the 96th percentile of its 120-year history.** If one believes in a return to the mean, the low is still a long way off, as the median of the last 124 years is 16.3. **For comparison, the current Shiller P/E for European stocks currently trades at 21.2, while Brazil trades at 12.9 and Poland at 10.7.**

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



Source: Yale.edu, Reuters Eikon, Incrementum AG

There is another point that should not go unmentioned. While the last few years were still characterized by the acronym TINA – “There is no alternative” – opportunity costs have risen considerably as a result of the sharp rise in interest rates. **Yields of 5% or more can be achieved with average money market funds.**

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, the earnings estimates on Wall Street still seem too optimistic to us, especially in the event that the currently prevailing Goldilocks scenario is priced out. Should our recession call materialize – late, but nevertheless – it will definitely not be possible to come close to maintaining this level of earnings. During recessions, S&P 500 earnings have fallen by an average of 16.4% over the past 70 years.

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

Understand the money, understand the world.
Tuur Demeester

What does this stock market environment mean for gold? Loyal readers know: For us, developments on the equity markets represent important opportunity costs for gold. **Given the dizzying gains in stocks and gold, the current view of the following chart suggests a broad flight out of fiat currencies and into real assets** – a boom that somewhat reminds us of the crack-up boom that we described at length in the *In Gold We Trust* report 2023.[15] **The end result is typically the loss of trust in a currency, its failure, and the subsequent emergence of a new one.**

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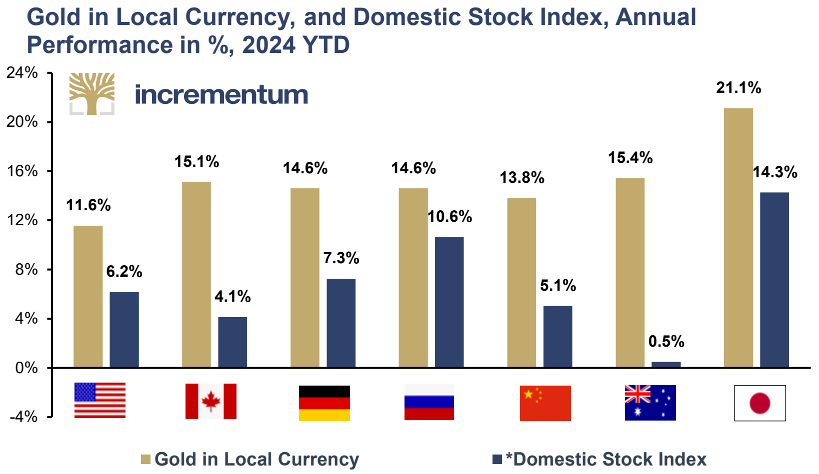
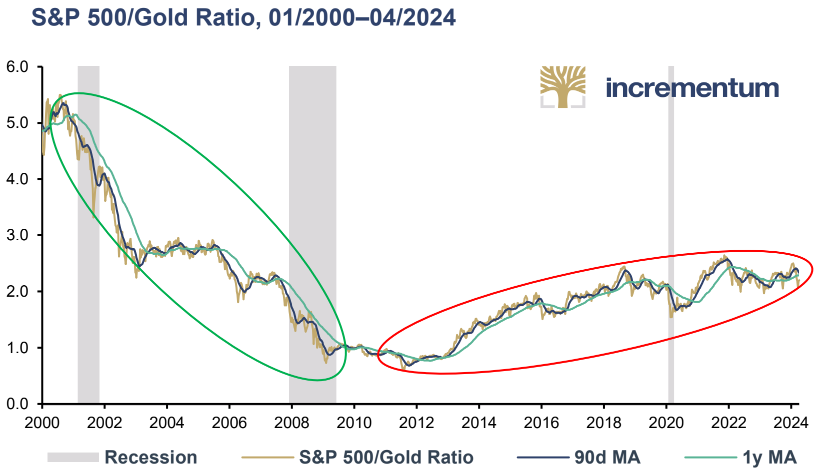
[15] *See* “Crack-Up Boom – The End of a Currency Regime,” *In Gold We Trust* report 2023



Source: Reuters Eikon (as of 05/02/2024), Incrementum AG
* US = S&P 500, CA = TSX Comp., DE = DAX, RU = MOEX, CN = SCI 300, AU = ASX 200, JP = Nikkei 225

When you sit with a nice girl for two hours, you think it's only a minute. But when you sit on a hot stove for a minute, you think it's two hours. That's relativity.
Albert Einstein

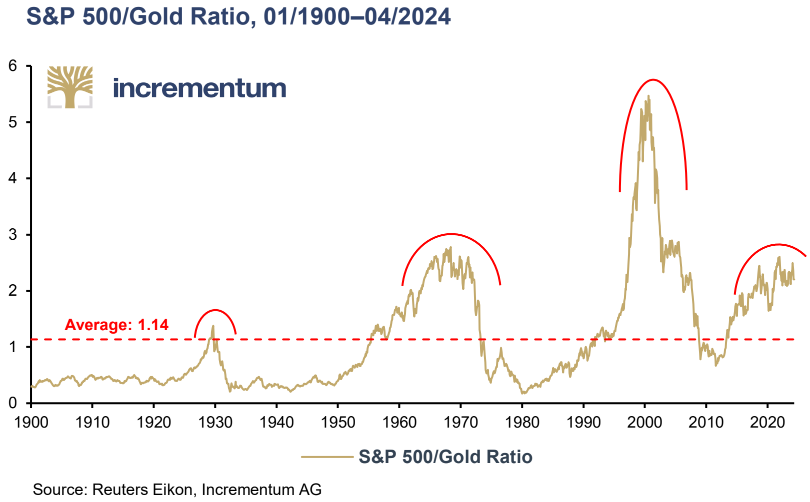
As you, esteemed reader, know, we are big fans of ratio charts, which provide us with an excellent overview of long-term trends and their strength. The following chart shows the S&P 500/gold ratio since 2000. The upward trend, i.e. the falling purchasing power of an ounce of gold measured in shares, lasted from 2011 to the end of 2021. It currently appears that gold is slowly regaining relative strength versus US equities. The ratio recently fell below the 90-day and 1-year lines. The elegance of such charts lies in their ability to illustrate trends that often persist for many years, even decades. It now appears that gold might be commencing a period of long-term outperformance relative to US equities.



Source: Reuters Eikon, Incrementum AG

History is a gallery of pictures in which there are few originals and many copies.
Alexis de Tocqueville

Let's now take a longer-term look at this relationship, namely since 1900. Gold looks clearly undervalued compared to US stocks and may actually have completed a secular turnaround. The uptrend appears to have been broken. The average long-term S&P 500/gold ratio stands at 1.14 but is currently only 2.20. Based on the previous counter-trend rallies, gold could double in value if the S&P 500 remains unchanged.

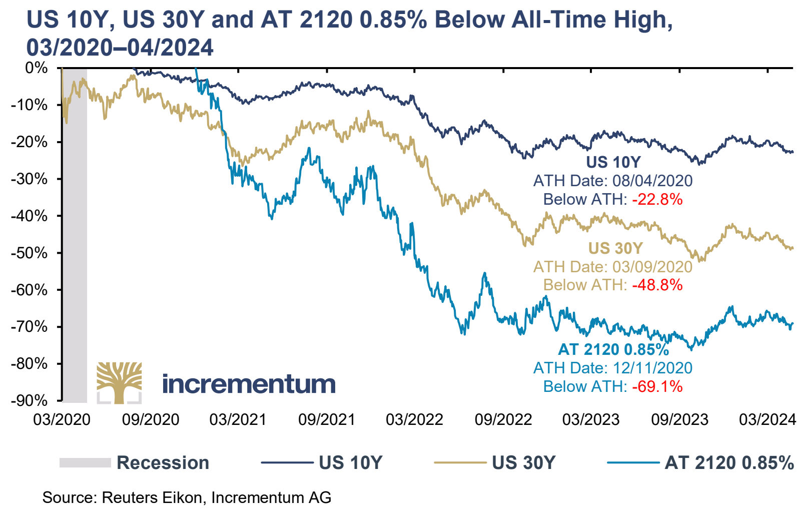


Gold Compared to Bonds

> *The greatest credit event of all would be a recession in which US yields went up, not down.*
> Michael Hartnett

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

One of our central theses of recent years is now being slowly but surely confirmed: (Government) bonds are no longer the antifragile portfolio foundation they have been for the last 40 years. After yields reached a microscopically low level in 2020 and were even negative in some cases, 10-year US Treasuries fell in value by 22.8%, while 30-year bonds even fell by 48.8% from their peak. The frontrunners in the negative sense are naturally the 100-year Austrian bonds, which are down 69.1 % (maturity 2120) from their respective highs.



It almost seems as if the *bond vigilantes* are back. Coined by Ed Yardeni in 1983, the term refers to activist investors who indirectly control government policy by buying and selling government bonds. These “financial sheriffs” send a clear signal against excessive government debt and inflation by driving up interest rates through the sale of bonds. **Today, in a time of financial repression and open central bank interventionism, their role may seem weakened.** But the bond vigilantes are not obsolete – they are adapting to the new market realities and remain an important corrective to fiscal slippage.

Bond vigilantes are like the in-laws who show up uninvited to your fiscal policy party. They're always watching, and if they don't like your cooking, they're not shy about saying so.
Bill Gross

A historical example of the impact of bond vigilantes was the bond market reaction to the overexpansive fiscal policy of the Reagan era in the early 1980s. Higher deficits led to a rise in government bond yields, which ultimately prompted the government to tighten its budget policy. Another example is the European sovereign debt crisis in the early 2010s, when investors questioned the creditworthiness of southern European countries and drastically increased the interest burden for these countries by selling PIIGS bonds.

The bond vigilantes are watching the fiscal and monetary policies very carefully and are ready to take action to protect against inflation.
Ed Yardeni

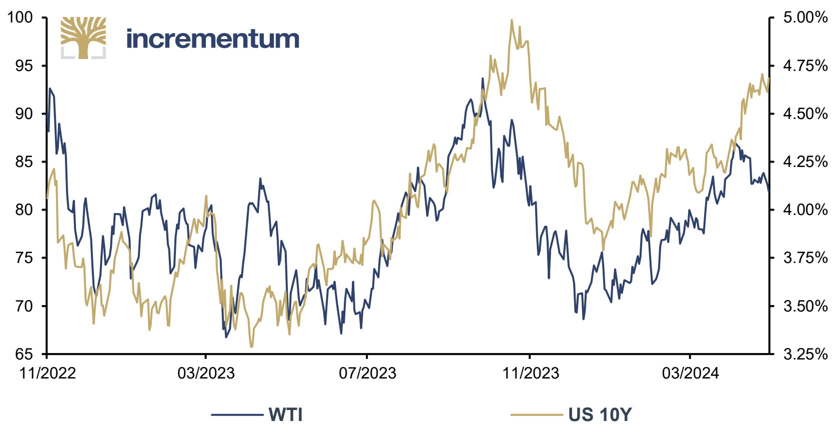
And the playbook is likely to have changed not only for gold but also for bonds. Recently, US government bonds have increasingly exhibited characteristics of traditional risk-on investments. In times of financial unrest, their yields rose – a clear contrast to the previous trading pattern that dominated for decades. This new behavior is reminiscent of the performance of emerging-market government bonds, which are traditionally more sensitive to global risk sentiment. This transformation marks a significant departure from the previous role of USTs as a safe haven, and it requires a rethink in strategic allocation.

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

Even if the last few months have brought some calm to the bond markets, this period of quiet could turn out to be deceptive. The risk factors for falling bond prices appear to be manifold, starting with an acceleration in global growth, driven by a recovery in China and the emerging markets in general, and the associated further wave of inflation. However, lower foreign demand for US government bonds and excessive budget deficits also act as a sword of Damocles, as does the possible re-election of Donald Trump.

The sharp rise in oil prices in recent months could also exert pressure on bond prices. As the chart below shows, we have seen a strong positive correlation between crude oil prices and yields in recent months: Higher oil prices lead to higher yields and vice versa.

WTI (lhs), in USD, and US 10Y (rhs), 11/2022–04/2024



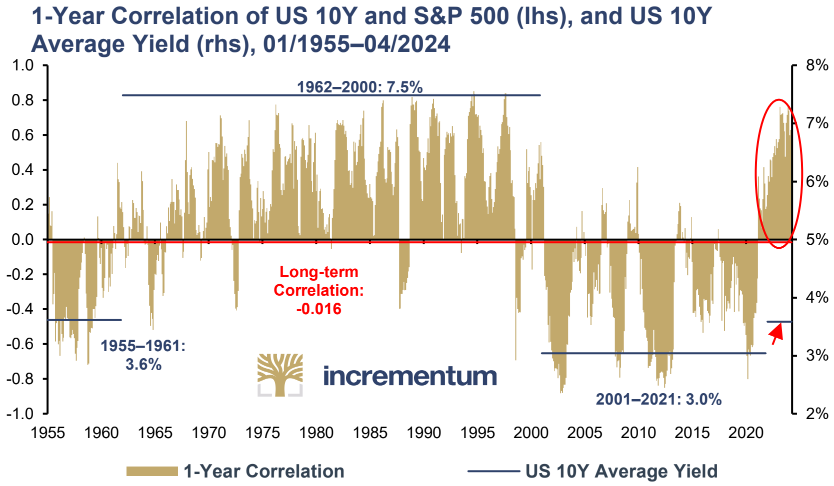
Source: Reuters Eikon, Incrementum AG

What's going on with the bond market? It is not pretty. And if the bond market is ugly, everyone else suffers.
Jim Bianco

As we have already emphasized in previous years: The negative correlation between stocks and bonds, which is taken for granted by the vast majority of asset allocators, is the exception rather than the rule. For example, the correlation between stocks and bonds in the US has been slightly positive in 70 of the last 100 years. The decisive factor for the negative correlation in the last 4 decades was the low inflationary pressure and the decreasing inflation volatility during the Great Moderation.

We can be blind to the obvious, and we are also blind to our blindness.
Daniel Kahneman

The following chart is already a classic in this publication. It shows the one-year rolling correlation between 10-year US government bonds and the S&P 500, as well as the average yield on 10-year Treasuries. It is easy to see that the 1-year correlation has recently turned positive. The correlation coefficient between stocks and bonds in the US has been around -0.02 since 1955.

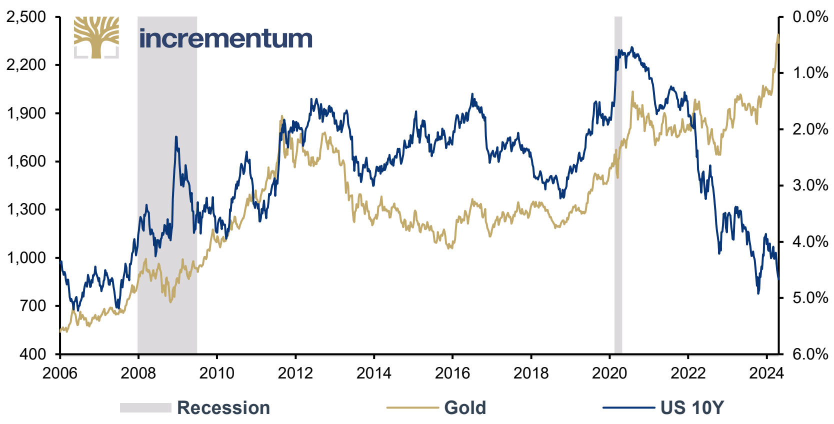


Source: FRB, S&P, BofA Merrill Lynch US Equity & US Quant Strategy, Reuters Eikon, Incrementum AG

Inflation is like kryptonite for bonds.
Jason Zweig

An analysis of individual time periods shows that stocks and bonds tended to be uncorrelated only 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 lower than -0.2. The decoupling between gold and bonds that we announced in previous years has taken place. **The bond market and the gold market are sending the same message: Inflation is the new reality.**

Gold (lhs), in USD, and US 10Y (rhs, inverted), 01/2006–04/2024



Source: Reuters Eikon, Incrementum AG

If the relationship between stocks and bonds now reverses permanently, the basis of the 60/40 portfolio – namely a negative correlation between stocks and bonds – would be removed. **Could bonds now hand over the sceptre to gold?**

Gold and Commodities

> *Since 2020, we have been recommending to our institutional investor clients to start allocating capital to commodity managers. One of the problems with this recommendation is that there aren't any commodity managers left from the carnage in commodities from 2011 to 2020. As such, it has been a challenge to convince real money allocators that they need commodity managers.*
>
> Marko Papic

Sometimes you lose and sometimes the others win.
Otto Rehagel

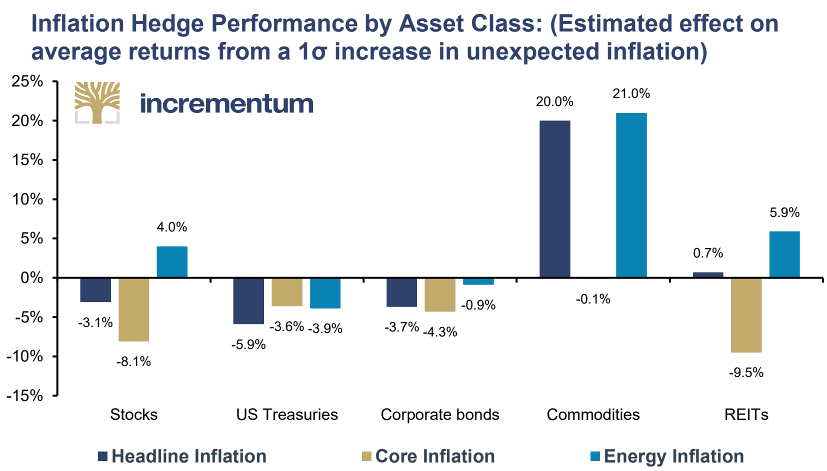
In the previous year, the Bloomberg Commodity Index fell by 12.6%. The two-year commodity boom had to pay tribute to the stuttering economic engines in China and Europe, disinflation, and rapidly rising interest rates. The table below shows the widely differing performance of the commodity subsectors. While the energy subindex lost a quarter of its value, the precious metals subindex recorded a slight gain. **All 5 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	237.95
Date ATH	05/04/2007	08/22/2011	05/29/1997	09/29/2005	10/04/1993	07/02/2008
ATL	53.90	49.66	34.15	15.47	16.21	59.48
Date ATL	11/07/2001	04/02/2001	06/26/2020	04/27/2020	04/13/2020	03/18/2020
YTD	11.1%	9.0%	-5.6%	3.3%	8.1%	3.1%
2023 Performance	-13.7%	4.1%	-9.3%	-25.6%	-6.9%	-12.6%
% Below ATH	-40.6%	-20.6%	-58.9%	-93.9%	-82.0%	-57.3%
% Above ATL	193.9%	390.9%	72.5%	104.9%	46.6%	70.9%

Source: Reuters Eikon (as of 04/30/2024), Incrementum AG

God is not a commodity trader. The evidence suggests that God doesn't even like commodity traders.
Larry Williams, Commodity trader

The study "Getting to the Core: Inflation Risks Within and Across Asset Classes" analyzed the average performance of eight asset classes[16] between 1963 and 2019. **The study shows that commodities act as an effective hedge against inflation, but their effectiveness depends heavily on the type of inflation.** Commodities, as well as stocks, currencies and real estate investment trusts (REITs), prove to be effective hedges against headline and energy inflation, but not against high core inflation. This nuanced understanding challenges the conventional wisdom that commodities provide a blanket hedge against inflation. Instead, their effectiveness depends on the underlying drivers of inflation.



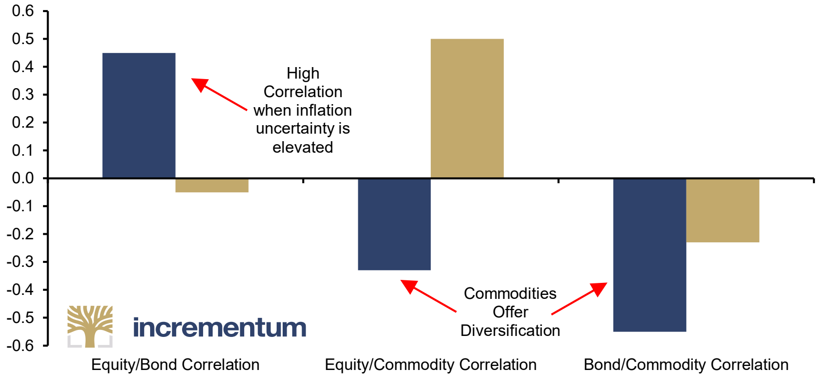
Source: NBER Digest, Incrementum AG

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

Looking at the long-term, historical diversification attributes of commodity investments, the positive case is clear. *AQR Research* has shown in their 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 applies in particular to phases of inflation surprises.

[16] The eight asset classes are: government bonds, corporate bonds and agency bonds, domestic and international stocks, real estate investment trusts (REITs), commodity futures, and currencies.

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



Source: AQR, Incrementum AG

Bull markets begin with the feeling that the market can only go lower. Bear markets begin with the feeling that the market can only go higher.
Peter Atwater

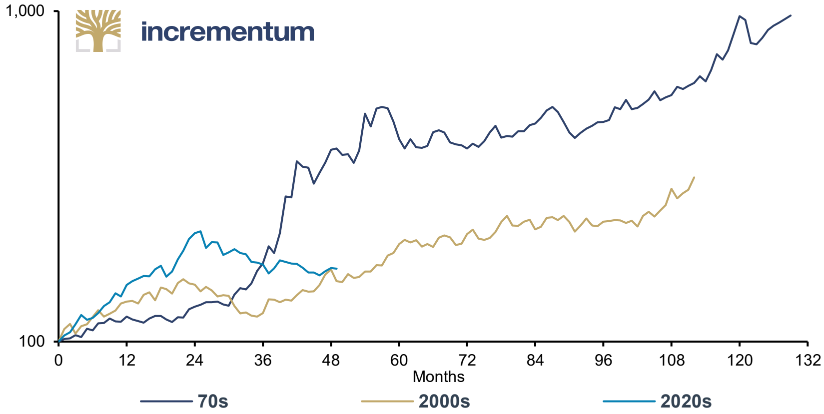
However, in the institutional asset management space, commodities are still as much in demand among institutional investors as fur-lined gloves at the height of summer. It has always been our conviction that commodities – and commodity-sensitive assets in general – must be actively timed but should be a fixed portfolio component in phases of rising inflation. **Our arguments for a commodity supercycle remain largely valid and can be summarized in the following points:**

- Commodities were in a bear market for ten years, which led to an investment backlog and declining production volumes. This structural supply bottleneck hedges the downward price risk.[17]
- The increasing focus on generous fiscal support measures and the energy transition with its enormous need for investment will stimulate the commodities sector more strongly than monetary stimulus via QE.
- Institutional investors are still heavily underweight or not invested at all in commodities. Commodities – and tangible assets in general – will gradually resume their historical role as a safe haven and increasingly be used as satellite investments.
- 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 previously unchallenged status as a reserve currency gradually fades. Historically, the US dollar and commodity prices are strongly negatively correlated (-0.86).
- Decarbonization and climate change: The transition to a greener economy and the increasing demand for green metals meet an inelastic supply.
- Latent inflation concerns will continue to lend a tailwind to commodities.

Taken together, these factors signal an emerging commodity supercycle, driven by structural changes in the economy and politics that will increase demand and tend to limit supply.

[17] *See* "Capex Comeback: A Raging Bull Market for Commodities Beckons," *In Gold We Trust* report 2023

BCOM Supercycles (log), 100 = Start, 01/1970–04/2024

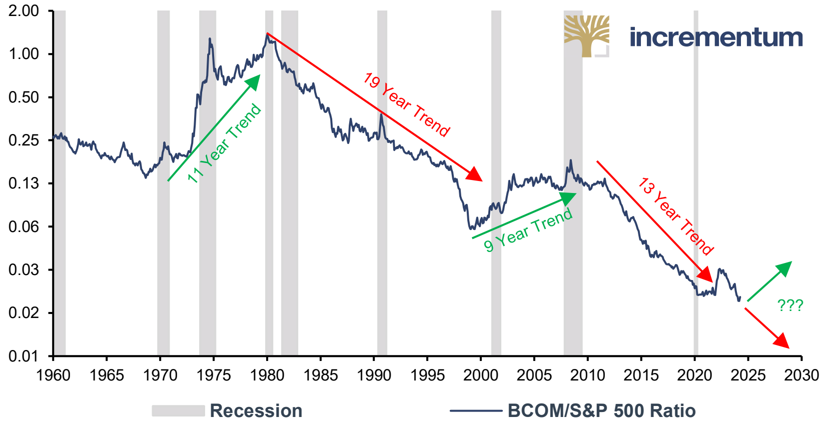


Source: Reuters Eikon, Incrementum AG

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

Let us now take a look at the relative performance of commodities and stocks. The next chart shows the main commodity supercycles. 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 commodity underperformance, which were brought to an end by the major technology bubble. This was followed by 13 years of stocks outperforming commodities and gold, culminating in the Everything Bubble.[18] **We firmly believe that the new gold playbook could now lead to a prolonged period of outperformance of commodities and gold versus stocks and bonds**.

BCOM/S&P 500 Ratio, 01/1960–04/2024



Source: Stifel Research, Reuters Eikon, Incrementum AG

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

While commodities corrected last year, a recovery rally began in Q1/2024. This can also be seen in the next chart. It currently appears that the excessive pessimism of the previous year has been priced out. Nevertheless, the mood is miles away from levels of euphoria, so the initial situation for the commodity sector appears clearly positive.

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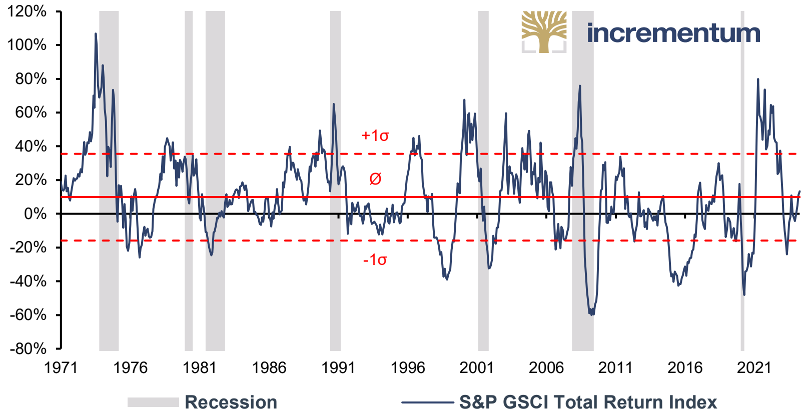
18 *See* Stifel: "Gold – The Next Super Cycle Has Begun", Canada – Portfolio Strategy, February 16, 2023

S&P GSCI Total Return Index, yoy, 01/1971–04/2024



Source: Reuters Eikon, Incrementum AG

Conclusion

> *Many people lost buckets of money investing in both equities and bonds between 1972 and 1982. Today, the markets are where they were in 1970: massively short of energy, short of gold and very long energy 'consumers'. It was not a good idea then. I am not sure it is a great idea now.*
>
> Charles Gave

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

The disinflation of recent quarters should have represented a perfect environment for US bonds. However, if you look at the performance of the TLT Fund, which tracks long-dated US government bonds, it has almost halved in value and looks a long way from bottoming out. Particularly in the event of a second wave of inflation, long-dated bonds would be predestined to cause nasty surprises in institutional portfolios once again. In this respect, we feel confirmed in our assessment that new, golden safe havens are currently being pursued.

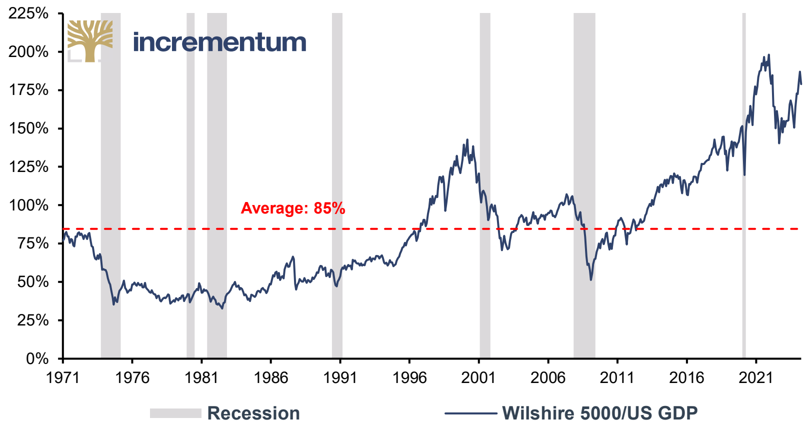
Gold (lhs), in USD, and TLT (rhs), in USD, 01/2003–04/2024

Source: Reuters Eikon, Incrementum AG

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

The valuations of many sectors and individual stocks on the US equity markets are far from bargain levels. At 178% as of April 2024, the Buffett indicator[19] is well above its long-term average of 85% but also well below the high of December 2021, when the indicator exceeded the 200% level for the first time. We continue to find exciting selective opportunities on the equity markets – particularly in the value segment of the old economy, in Europe, and in emerging markets.

Wilshire 5000/US GDP, 01/1971–04/2024

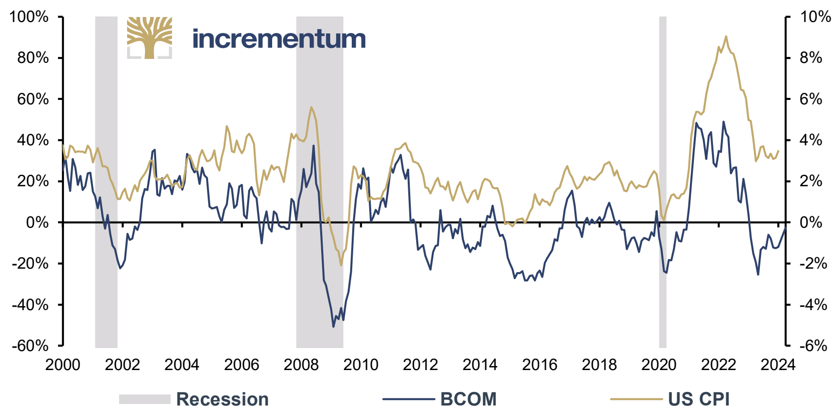


Source: Reuters Eikon, Incrementum AG

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

In commodities, there are many signs that the bull market remains intact. In addition to the capex cycle, which we discussed in detail last year,[20] targeted decarbonization and ESG-compliant investing have become the structural drivers of supply and demand for many commodities. **We firmly believe that the commodity bull market is still in its early stages.**

BCOM (lhs), yoy, and US CPI (rhs, 2 Month Lag), yoy, 01/2000–04/2024



Source: Reuters Eikon, Incrementum AG

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[19] The Buffett indicator is a valuation multiple that compares the capitalization of the US Wilshire 5000 index with US GDP.
[20] *See* "Capex Comeback: A Raging Bull Market for Commodities Beckons," *In Gold We Trust* report 2023

Status Quo of Debt Dynamics

Who should pay for it?
Who ordered that?
Who has so much cash?
Who has so much money?

Jupp Schmitz

- The good times of falling government debt ratios are coming to an end for many ministers of finance. This decline, which was due to special effects caused by the reopening after the Covid-19 pandemic and the inflation wave in previous quarters, is now giving way to the gray everyday life of structurally increasing government debt.
- Particular attention must be paid to the US with its high refinancing requirements and surging deficits – especially in view of its comparatively strong economic growth.
- In the eurozone, it is the two heavyweights France and Italy in particular whose deficits are well above the Maastricht criterion of 3%.
- The longer interest rates remain elevated, the more bonds will have coupons at this higher rate. In the US, it is only a matter of time before interest payments become the largest category in the federal budget.
- Demographic change is exacerbating the national debt problem through lower growth and falling employment rates.
- In terms of overall debt (government, companies, private households), France is the biggest problem child in the EU and Japan globally. Major debt crises – especially in the West – seem inevitable and may be more imminent than generally assumed.

Public Debt Is Reaching Worrying Levels

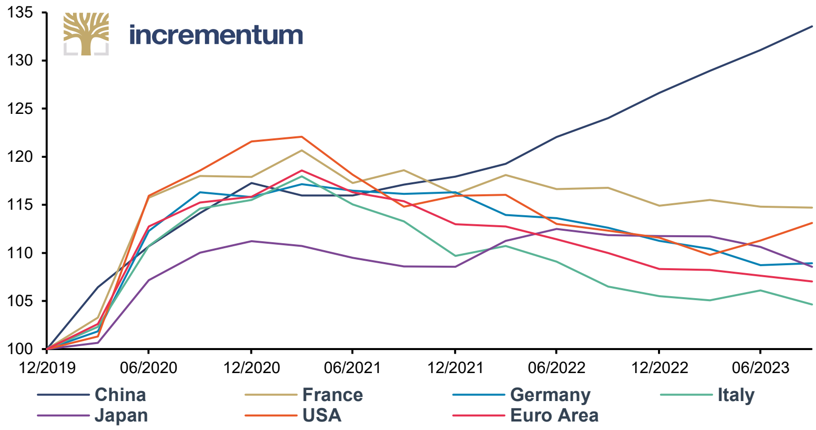
It ain't over till it's over!
Yogi Berra

2022 and 2023 were the good times for the finance ministers. The very high nominal growth due to the striking wave of inflation and the end of the Covid-19 restrictions have noticeably depressed government debt ratios, which had risen sharply as a result of the measures to combat the Covid-19 pandemic.

The US has an acute fiscal problem ("True Interest Expense" > 100% of receipts); if the US wants to avoid a debt spiral, there are only three things big enough to cut that matter - Entitlements, Interest, or Defense - and in an election year, the ONLY thing that can be cut is interest… which requires lower rates.
Luke Gromen

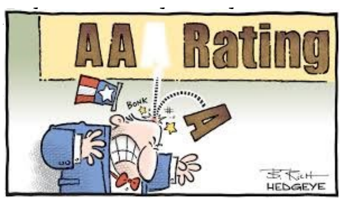
This honeymoon period of nominal growth comes now to an end – or, as we highlighted in the *In Gold We Trust* report 2022 and underlined in the *In Gold We Trust* report 2023: Appearances were deceptive.[21] The decline in government debt ratios was not due to a sustainable consolidation of government budgets but rather to these special circumstances. The gray daily routine of mostly modest growth rates combined with significantly declining inflation and continuing comparatively high deficits and high interest rates on government debt have ended the downward trend in government debt ratios, if they are not already on the rise again.

Public Debt, as % of GDP, 100 = Q4/2019, Q4/2019–Q3/2023



Source: BIS, Incrementum AG

This reality is reflected in the fact that long-term government bonds worth USD 11.5trn will come onto the market in 2024. This is a remarkable 50% more than before the Covid-19 pandemic. China has overtaken Japan and is now the second largest issuer. The US is the undisputed leader, accounting for 39% of planned offerings. Even though the US stands out positively in terms of economic growth, especially compared to the former industrial engine, Germany, which is stuttering badly, it also stands out in terms of deficit figures, albeit negatively.



Courtesy of Hedgeye

After Standard & Poor's in 2011, Fitch became the second of the three major rating agencies to downgrade the US rating from AAA to AA+, on August 1, 2023. This means that the elite club of countries with top ratings from all three major rating agencies is down to 10 members. US Treasury Secretary Janet Yellen was outraged and described the decision as "puzzling" and "entirely unwarranted". The analysis was "flawed" and "outdated". A sober look at the facts reveals that Fitch's reasoning is understandable and rather restrained. In a nutshell, Fitch stated:

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[21] *See* "The Status Quo of Debt Dynamics," *In Gold We Trust* report 2023; "The Status Quo of Debt Dynamics," *In Gold We Trust* report 2022

The rating downgrade of the United States reflects the expected fiscal deterioration over the next three years, a high and growing general government debt burden, and the erosion of governance relative to 'AA' and 'AAA" rated peers over the last two decades that has manifested in repeated debt limit standoffs and last-minute resolutions.

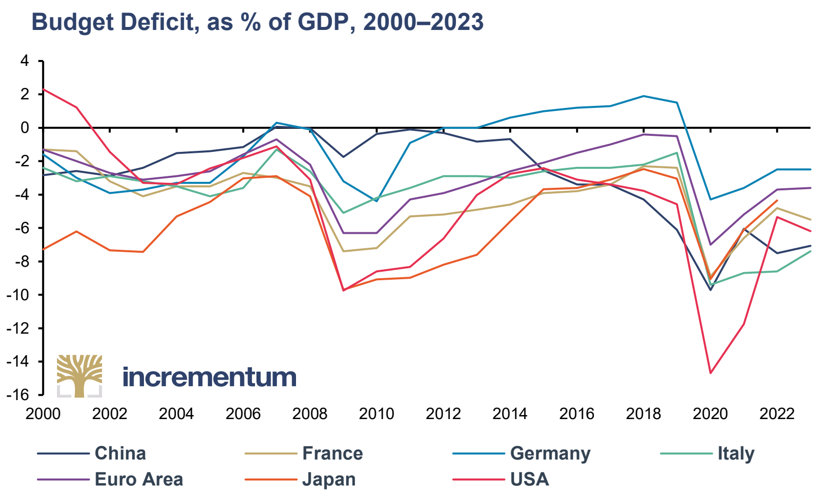
Watching the Republicans and Democrats bicker over the U.S. debt situation is like watching two drunks argue about a bar bill on the Titanic.
Wilhelm Röpke

Despite strong economic growth, the US budget deficit remains at a level that would be considered exceptionally high for some European countries, even during a recession, at 5.6% in the current fiscal year 2024 and 6.1% in fiscal year 2025, as forecast by the CBO. **To put this into perspective: The deficit of USD 1.6trn expected for the 2024 fiscal year is roughly equivalent to the GDP of Spain, the 15th largest economy in the world.**

With this deficit-financed stimulation of demand, Treasury Secretary Janet Yellen is counteracting the Federal Reserve's tightening policy. As an expression of the *monetary climate change* described in our *In Gold We Trust* report 2021, fiscal policy is increasingly taking the reins and has started to dominate monetary policy – usually subtly and indirectly.

Ay Caramba!
Bart Simpson

The continuing very high budget deficit is also due to the fact that tax revenues in the US fell by 7.2% last year despite nominal growth of 6.3%. An *increase* in tax revenues of around 8% would be normal for such growth. In addition, the comparatively high deficit figures reflect the fact that higher inflation rates will not ease the burden on the national budget, at least in the medium term.[22] This is because statutory automatic increases in expenditures, particularly social spending, or increased expenditures due to political pressure – think of the high proportion of pensioners among those entitled to vote – compensate for inflation losses with a certain time lag.



Source: IMF, Incrementum AG

As a result, discussions about the debt ceiling and the funding of US federal agencies, aka shutdowns, are on the political agenda. The impending shutdown at the end of January/beginning of February was only resolved for a few weeks after tough negotiations. At the beginning of March, the

[22] *See* "The Status Quo of Debt Dynamics," *In Gold We Trust* report 2023; "The Status Quo of Debt Dynamics," *In Gold We Trust* report 2022

next round in this drama, with four – but potentially infinite – sequels was already on the agenda. Once again, an agreement was only reached for a few weeks. This ongoing conflict between the White House and Capitol Hill is only likely to be noticeably defused after the elections in November, and only in the highly unlikely scenario that the Democrats win a secure majority in both chambers and hold the presidency.

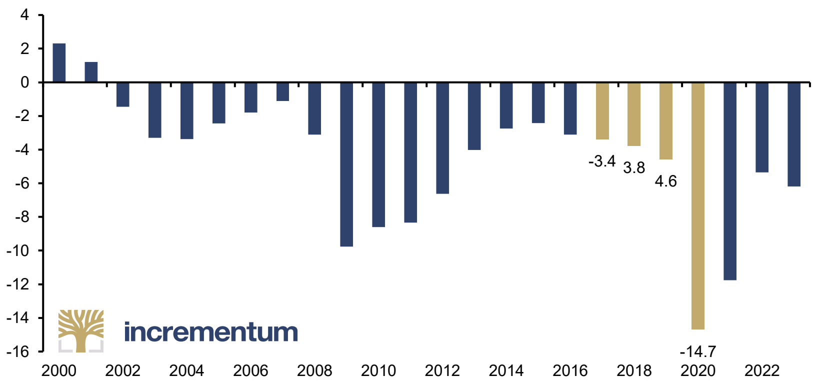
I'm the king of debt. I'm great with debt. Nobody knows debt better than me.
Donald Trump

In any other scenario, the political haggling will continue, even with a Republican unified government, with Donald Trump as US President. Trump's words and deeds are the antithesis of fiscal prudence. At an election event in the run-up to the South Carolina primary, Trump made the following announcement in his typically hyperbolic manner: "You're all getting the biggest tax cuts because we're doing additional cuts and a brand new Trump economic boom like you've never seen before".

All people are born alike - except Republicans and Democrats.
Groucho Marx

In his first term in office, Donald Trump had already significantly reduced taxes, particularly for companies, and showed that he is for anything, but the fiscal restraint usually promulgated by the Republicans. On average, the budget deficit in Donald Trump's first term in office was 9%.

US Surplus/Deficit, as % of GDP, 2000–2023

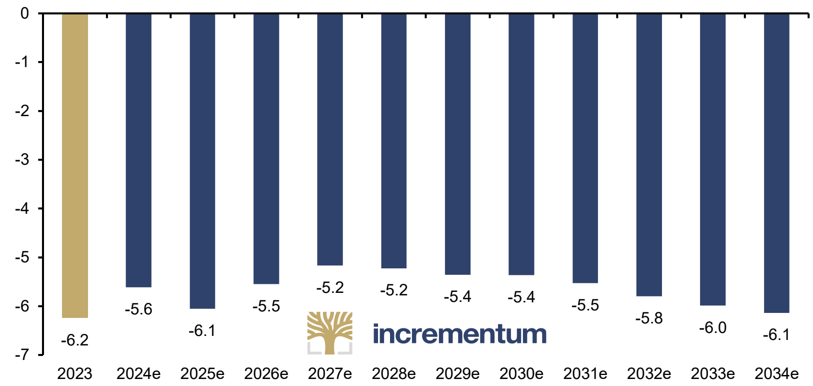


Source: Federal Reserve St. Louis, Incrementum AG

The US budget deficit remains worryingly high

The deficit is the symptom, but spending is the disease.
Jeb Hensarling

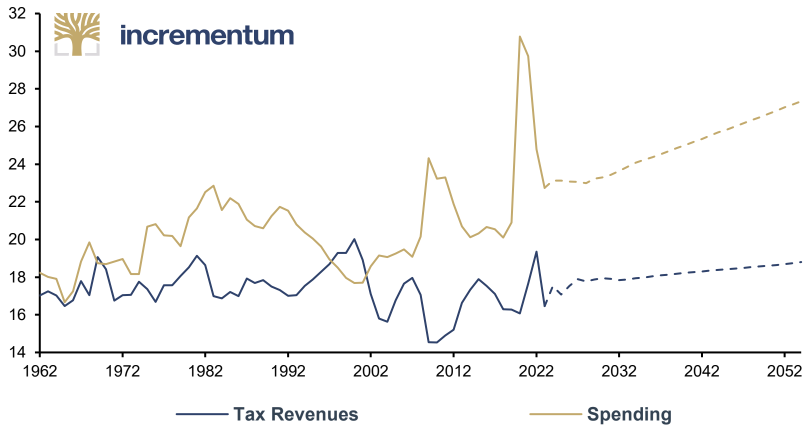
Deficit forecasts by the Congressional Budget Office (CBO) for the coming years and decades have one thing in common: They are very high. For historical context: Over the last fifty years, the US budget deficit averaged 3.7% of GDP. In the next 10 years, deficits are expected to be at least 5.2% on average. Since the Second World War, the US deficit has never been this high for more than five years in a row. In contrast, there have only been four years of budget surpluses, three of which were during Bill Clinton's second term in office. Since then, one deficit has followed another.



Source: CBO, Incrementum AG

Tackling debt and deficits today helps avoid more painful adjustments later.
Vitor Gaspar, IMF

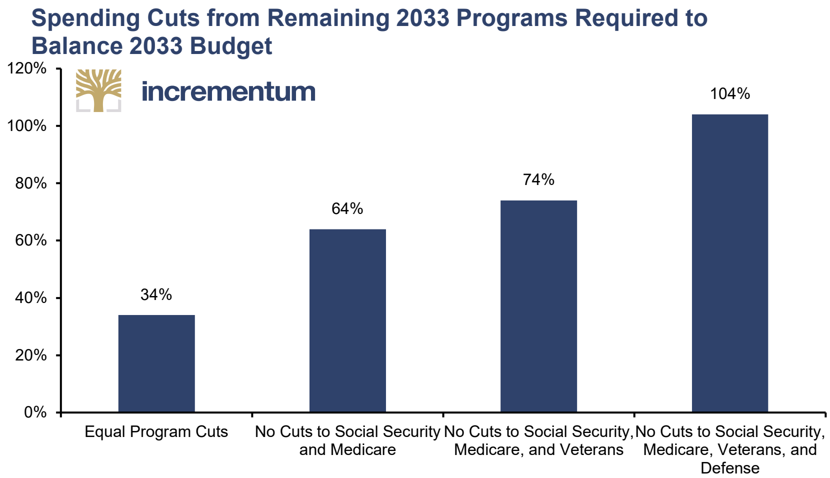
In view of this starting position, achieving a balanced budget is almost impossible even with substantial expenditure cuts. This is because, according to the CBO forecast, significant increases in expenditures are to be expected in the coming years, with only a slight increase in tax revenue. The CBO thus assumes the continued effect of *Hauser's Law*, i.e. the empirical observation that federal taxes have fluctuated around 19.5% of GDP since the Second World War, regardless of how high the nominal marginal tax rates were.



Source: CBO, Incrementum AG

Washington has become addicted to spending, deficits, and debt, and they're charging the credit card and planning to send the bill to younger and future generations of Americans… That's irresponsible. It's unethical, and it's immoral, and it needs to stop.
David M. Walker, Former US Comptroller General

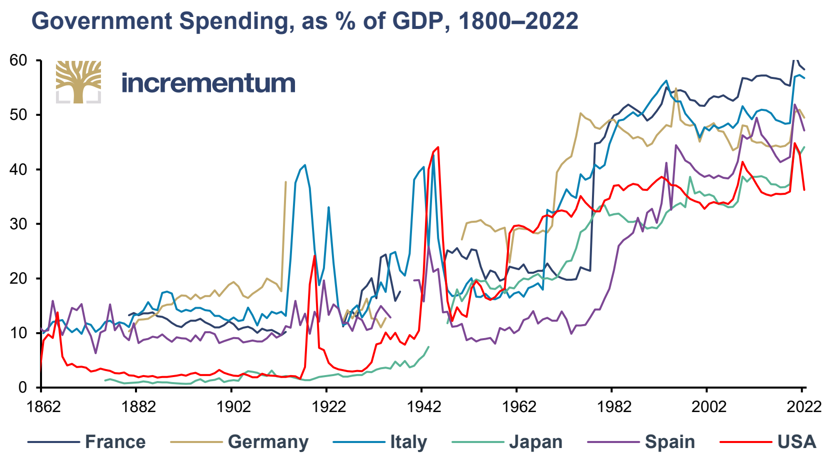
The cuts required to consolidate the budget would be significant and politically extremely sensitive. Contrary to popular belief, the US has a very well-developed social welfare system. This is reflected in the expenditure structure of the US federal budget for 2023: In the last fiscal year, around 21% of expenditure was earmarked for pensions, aka *Social Security*, and just under 14% and around 10% for the two healthcare programs *Medicare* and *Medicaid* respectively. Together, these and the other social programs alone account for more than 60% of total expenditure at the federal level. Accordingly, the GDP share of these expenditures will also rise sharply in coming decades. The CBO assumes that the *Old-Age and Survivors' Insurance Trust Fund* (OASI), i.e. the fund financed by payroll taxes from which pension payments are made, will be exhausted in 2033. As soon as the OASI fund is emptied, the Social Security Administration will only be allowed to spend as much as it takes in. 70 million retirees would have to cope with an immediate 23% cut in their scheduled benefits, equivalent to USD 7,092 in today's US dollars. The ageing of the population is also a fact in the US, and with it the ageing of the politically significant median voter.



Source: Brian Riedl, Incrementum AG

Socialism begins with a state quota of 50 percent.
Helmut Kohl

However, according to IMF data, the share of US government expenditure is at a historical high of 36.3% of GDP, apart from the two short-term peaks during the global financial crisis and the Covid-19 pandemic. Since 2000, there has been a clear upward trend again, following the decline in the 1990s. **In an international comparison, however, the US government expenditure ratio is still on the lower side: In 2022 it was 58.3% in France, 56.7% in Italy, 52.8% in Austria, 49.5% in Germany, and 44% in Japan.**



Source: IMF, Incrementum AG

And a large part of expenditures are *mandatory* by law. Social spending has been inflation-indexed since 1975, which is why it is not possible to significantly reduce the debt burden through higher inflation.[23] And social spending has increased notably over the decades.

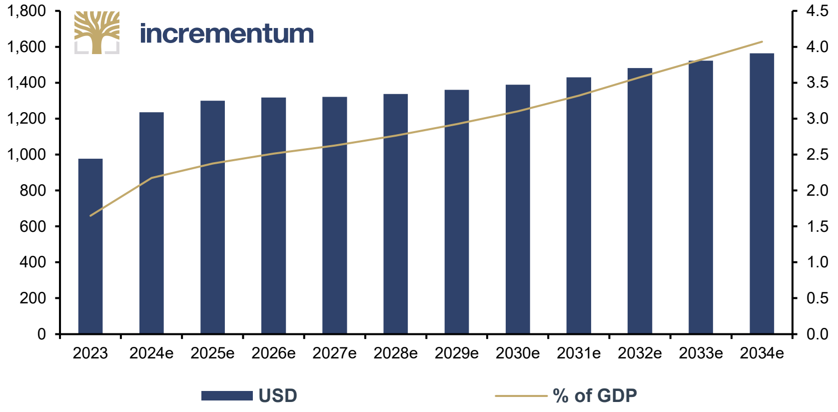
[23] We have examined the myth of debt reduction through higher inflation rates in "The Status Quo of Debt Dynamics," *In Gold We Trust* report 2022

Interest payments are tying up more and more government spending

"Higher for Longer" is Janet's problem, not Jay's.
David Rosenberg

Another driver of this development is the sharp rise in interest payments on government debt. In 2024, they are likely to exceed the USD 1trn mark for the first time if interest payments on intragovernmental debt are included. Even without including intragovernmental debt,[24] interest expenses have exploded in the past two years, from USD 1bn per day (2021) to USD 1.8bn (2023), almost doubling in just two years. In 2024, interest payments threaten to rise by a further 32%, or USD 2.4bn per day, to around USD 880bn per year. In 2029, the USD 1trn mark is likely to be reached, and by 2034 it could be USD 1.6trn per year or USD 4.5bn per day.

US Net Interest Expenditure, in USD bn (lhs), and as % of GDP (rhs), 2023–2034e



Source: CBO, Incrementum AG

I remain just one thing, and one thing only, and that is a clown. It places me on a far higher plane than any politician.
Charlie Chaplin

Before the Covid-19 pandemic, the USD 1trn mark for the total deficit was still considered to be the threshold that, if exceeded, would pose a lasting threat to the financial stability of the US. And to put into perspective how few politicians are likely to have the interest payment factor on their radar: While the nominal national debt skyrocketed by 425% between 2000 and 2021, the interest burden only increased by 51% due to the low interest rate level in the past two decades.

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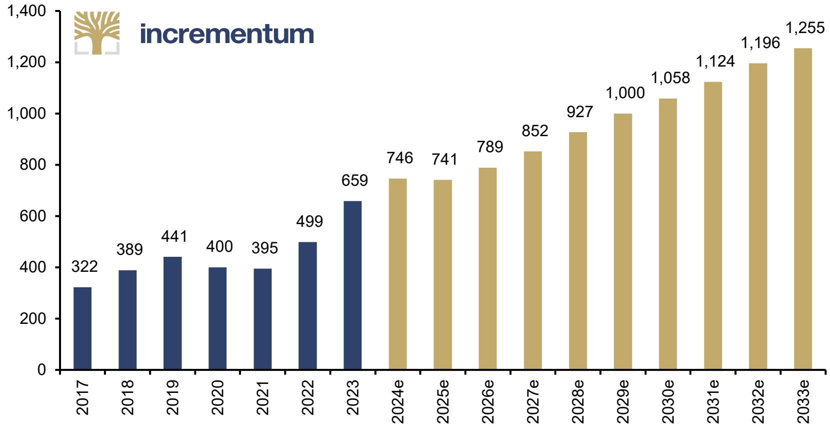
[24] *Intragovernmental debt* refers to debt held by US authorities such as the Social Security Trust Fund. This contrasts with US federal *debt held by the public.* This includes individuals, companies, state or local governments, Federal Reserve banks and foreign governments. This debt currently accounts for around 100% of GDP, while intragovernmental debt accounts for over 20% of GDP. *Total federal debt* in the US is therefore over 120% of GDP. In contrast to the usual method of calculation, the US figures only include the debt of the federal government, while otherwise public debt includes the debt of federal, state and local governments as well as social security.

US Interest Expenditure (2023 Inflation Adjusted), in USD bn, 2017–2033e



Source: Brian Riedl, CBO, Incrementum AG

It seems unlikely that yields are going to go back to being as low as they were before the pandemic.
Janet Yellen

For these projections, the CBO assumes a maximum interest rate on US government debt of 3.2%. This assumption corresponds exactly to the current level of 3.22% (March 2024). An additional increase in interest rates of just one percentage point would increase interest payments by a total of USD 2.8trn over the next 10 years. That is almost double the current overall deficit.

Under certain circumstances, interest expenses could even consume the entirety of federal tax revenues by the early 2050s, namely if interest rates on the US national debt gradually rise to 6%. But even with a more moderate increase to 4%, almost 50% of federal tax revenues would have to be spent on interest alone by 2053, a level that has been already seen both in the mid-1980s and the early 1990s. Interest payments are expected to rise from 10% of federal spending last year to 23% by 2053. **Sooner or later, interest payments will become the largest expenditure category of the US federal budget.**

We've had 15 years of Disneyland that has destroyed the economic structure. Think about it: no interest rates. So anyone who's 40 years old today has no experience in markets. Zero. They don't know what time-value of money is.
Nassim Taleb

Because all these facts are generally known – at least in broad outline – Nassim Taleb classifies a US debt crisis as a *white swan*, i.e. an event that is very likely to occur, rather than a *black swan*, a rare and unpredictable event.[25] However, this does not mean that the consequences of a US debt crisis would not be severe. The fact that the US Congress raises the debt ceiling time and time again will sooner or later cause a debt spiral in the US and, according to Taleb, a debt spiral is like a death spiral.

Financing the US debt as future Herculean task

The financing of US federal debt will be an enormous challenge and will leave its mark on markets. In 2024 alone, the financing requirement will amount to around USD 10trn. USD 8.6trn of old government debt will have to be refinanced, plus the budget deficit for the current year, which is likely to reach around USD 1.4trn.
However, the US is not alone in its short-term financing needs. According to the OECD's latest *Global Debt Report*, 40% of all government bonds and 37% of all corporate bonds will need to be refinanced in the next three years.

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[25] See "White, Gray and Black Swans," *In Gold We Trust* report 2017

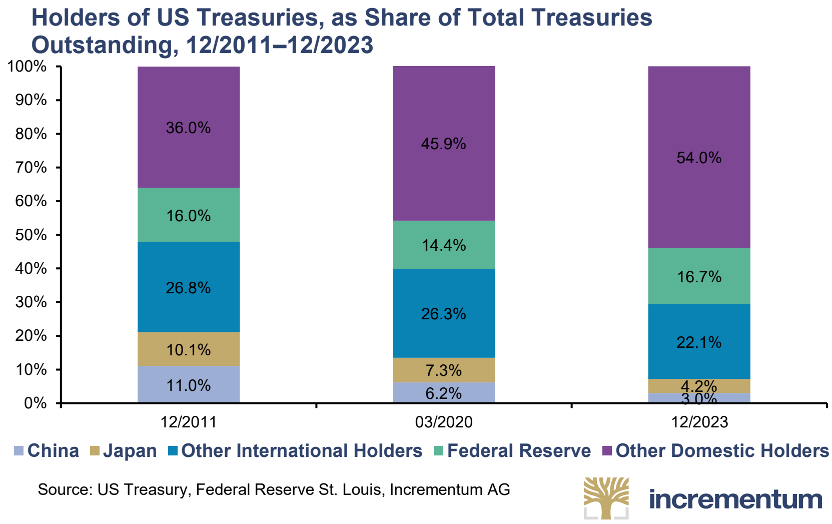
Around a third of Italy's government bonds will mature by 2026, around 25% of Spain's, and around 20% of France's. In total, the OECD expects government bond issues of USD 15.8trn for the current year.

Only God knows when the tipping point is going to occur, and God's not telling us.
David M. Walker, Former US Comptroller General

The continuation of QT makes it even more difficult to finance government debt, as it reduces demand for bonds. With the current *passive QT* (i.e. maturing bonds are not renewed), demand falls less sharply than if QT were tightened to *active QT*, when central banks would sell bonds on the secondary market.[26] However, such a tightening is not under discussion. Both forms of QT exert an upward pressure on yields, the passive QT a weaker one, the active QT a stronger one.[27] US government debt held by the Federal Reserve has fallen from its high of USD 6.3trn (Q1/2022) or almost 21% (Q3/2021) to USD 5.2trn or 15.4% by the end of 2023. During the Covid-19 pandemic, the Federal Reserve's share of US government debt jumped from 14.5% to as much as 26.5%.

Relax Luther, it's much worse than you think.
Tom Cruise, Mission Impossible

The deepening geopolitical tensions are also having a negative impact. The proportion of US government bonds held by foreigners has been falling steadily for years. This demand gap is therefore being covered by domestic buyers – with the exception of the Federal Reserve.



I am not worried about the deficit. It is big enough to take care of itself.
Ronald Reagan

In an eye-opening interview with the *Financial Times* at the end of March, CBO Director Philip Swagel warned that the US, in view of its rapidly rising debt, could end up in a situation like the UK in September 2022 under short-term Prime Minister Lizz Truss: "[T]he fact that we already have so much debt means that any further surprise could really have a similar effect on us that that surprise had on the UK." Following the announcement of significant tax cuts on September 23, 2022, the yield on 30-year UK gilts shot up by around 170 basis points in three days. The intraday spread of 127 basis points for the 30-year gilt exceeded the annual spread for 30-year gilts in all but four of the last 27 years. This caused major difficulties for UK pension funds, which is why the Bank of England had to intervene.

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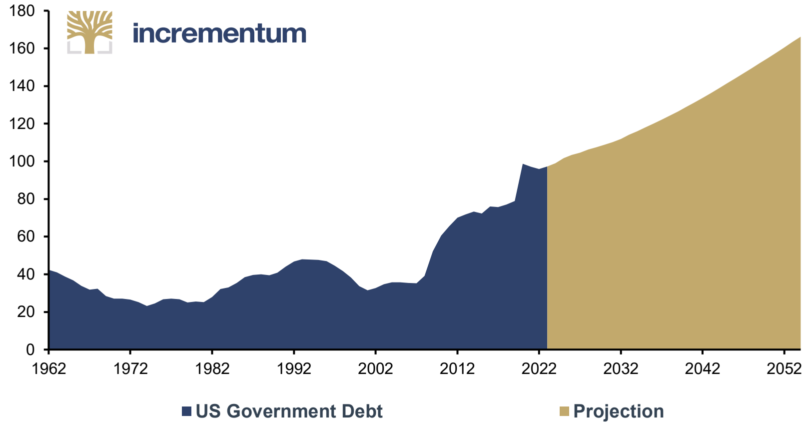
[26] *See* also "The Status Quo of the Inflation Trend" in this *In Gold We Trust* report
[27] For studies that prove the interest rate-lowering effect of QE, see Ihrig, Jane et al.: "Expectations about the Federal Reserve's Balance Sheet and the Term Structure of Interest Rates," *International Journal of Central Banking*, March 2018; Bernanke, Ben: "The New Tools of Monetary Policy," *American Economic Association Presidential Address*, January 4, 2020

We need to borrow from foreigners, because foreign capital helps keep interest rates low in the US. But there's two sides to it, in that the cash flowing overseas means us losing national income. On the other hand, not having the capital coming in for us to borrow – boy, that would be even worse.
Philip Swagel, CBO

The US has a major competitive advantage in the area of public finance. The US government bond market is by far the most important and most liquid bond market in the world. It is the same size as the government bond markets of China, Japan, the UK, France, Italy and Germany combined. The impact of these deficit and interest rate forecasts on US debt is worrying, even under the unrealistically optimistic assumption that there will be no dramatic disasters in the coming decades, i.e. no major military conflict, no deep and prolonged recession, no financial crisis, no major natural disaster or new pandemic, and that interest rates will remain low by historical standards.

US Goverment Debt, as % of GDP, 1962–2054e



Source: CBO, Incrementum AG

Courtesy of Hedgeye

In the *Financial Report of the United States Government*, the US Treasury Department looks even further into the future. The current forecast horizon extends to the year 2097, almost half a century further into the future than the CBO's projections. By then, the US public debt ratio ("debt held by the public") is expected to swell to 566%. For comparison: The historical high is currently 106% and was reached in 1946, immediately after the end of the Second World War. This record will soon fall.

Demographic change is exacerbating the debt situation

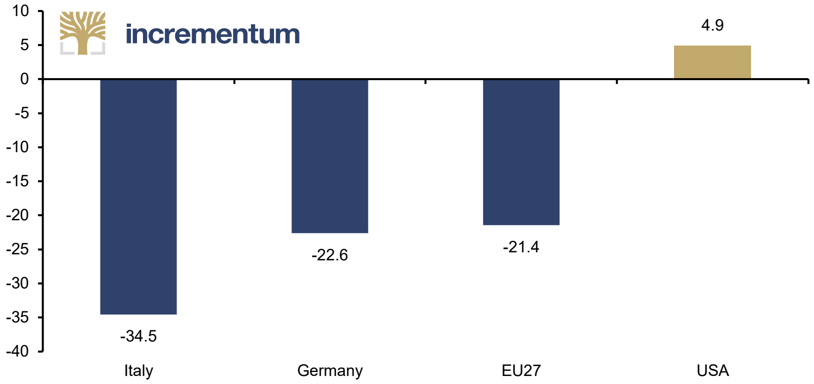
Society will have to choose between austerity, default, or the creation of a government demand-driven reflation. These are the only three options if central bankers fail to boost growth and also inflation.
Russell Napier

Inevitably, the question arises that the German entertainer Jupp Schmitz posed in a well-known German carnival song:

> *Who should pay for it?*
> *Who ordered that?*
> *Who has so much cash?*
> *Who has so much money?*

Debt servicing capacity and thus debt sustainability depend heavily on the ability of an economy to grow. To put it more precisely, they depend on the amount of officially generated income and existing assets that can be taxed. For decades, a growing population and a rising (female) employment rate increased GDP and thus the debt sustainability of countries. This era now seems to be over. Europe is more affected by this development than the US, especially as Europeans also want to reduce their weekly working hours, as the public debates about the introduction of a 4-day week – with full pay compensation – indicate.

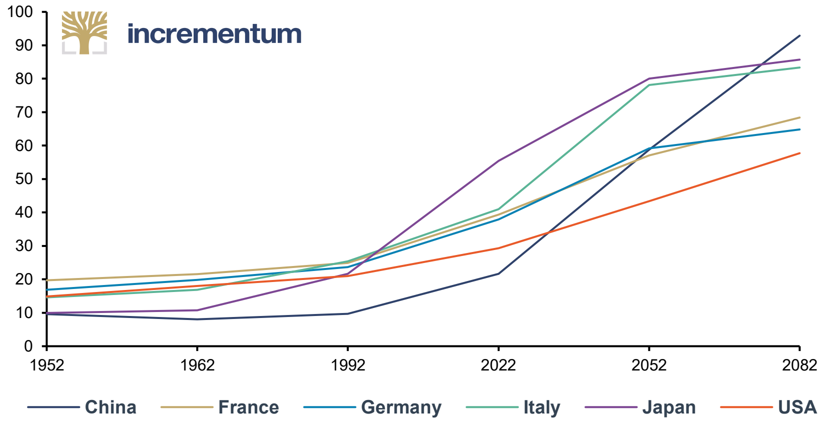
Change in the Working Age Population (20-64), as % of Total, 2022–2062



Source: OECD, Incrementum AG

This effect will be particularly dramatic in the countries most affected by ageing:

Old Age to Working Age Population Ratio, in %, 1952–2082

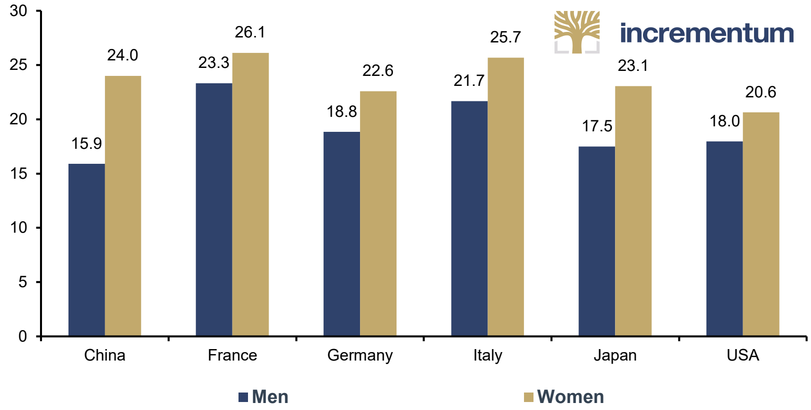


Source: OECD, Incrementum AG

Temporary solutions often become permanent problems.
Craig Bruce

With regard to social security systems, especially those designed as pay-as-you-go systems, an increase in the employment rate, particularly through an increase in female employment and immigration, only have a temporary relieving effect. After all, these people also acquire entitlements, which increases the debt burden in a structurally loss-making system in the medium and long term. Furthermore, the years spent in retirement have risen sharply in recent decades. Slightly offsetting this, the pension reforms of the past 20 years are beginning to show some initial small results. At least the increase in retirement years has slowed down in recent years.

Remaining Life Expectancy at Average Labor Market Exit Age, 2022



Source: OECD, Incrementum AG

Credit is a system whereby a person who can't pay, gets another person who can't pay, to guarantee that he can pay.
Charles Dickens

In a study published in January, Prof. Raffelhüschen, a proven expert in *generational accounting*, calculated that the current immigration flow into Germany is increasing the debt burden, as people with below-average qualifications are immigrating to Germany and into the existing social systems. In his base scenario, the sustainability gap increases from 447% to 497% of GDP. The discounted additional expenditures grow significantly faster than the discounted additional income.

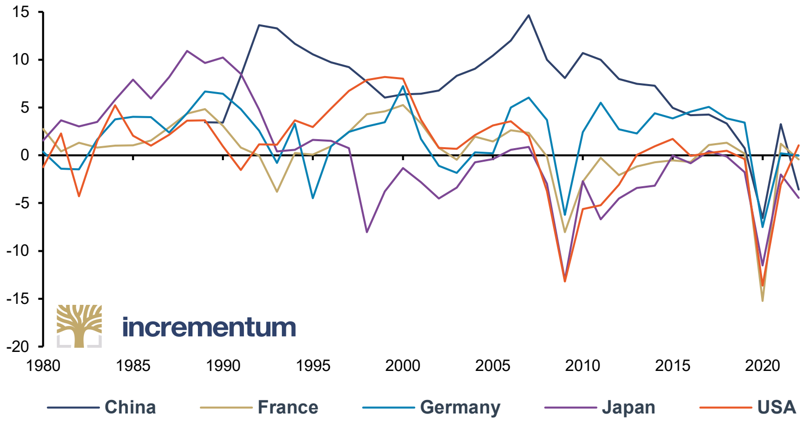
Another recent study, entitled "Mehr Nachhaltigkeit wagen – Die Tragfähigkeit der Sozialversicherung in Deutschland" ("Venturing more sustainability – the sustainability of social insurance in Germany") calculates that social security contributions will rise by more than 25% from the current level of 40.9% to over 50% in 2050 if no countermeasures are taken. However, countermeasures translate into cutting benefits, because with implicit debt included the equation holds that claim = liability. **And the elimination of (implicit) liabilities is always and only accompanied by the elimination of (implicit) receivables.**

The US budget deficit as a GDP growth flashpoint

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

One key reason for the current robust economic growth in the US is the high budget deficit. This has strengthened the purchasing power of US citizens and thus supported consumer demand. After all, private consumption accounts for around 70% of US GDP. However, on closer inspection, the effect of the significantly higher deficit on economic growth is modest, compared to that of Germany, for example. **In other words, the US is buying this short-term growth boost with a significantly higher deficit and thus a higher debt burden in the long term, which will hamper future growth.** At the same time, the loose fiscal policy counteracts the Federal Reserve's fight against inflation.

Government Budget + Real GDP growth, 1980–2022



Source: IMF, Incrementum AG

Politicians and central bankers of monetary sovereign nations simply don't have an incentive to go down that Jenga-tower deflationary collapse route, especially since it was in part due to their policy in the first place that debt was able to get so high.
Lyn Alden

It would be entirely wrong to assume that high budget deficits will lead to permanently higher real growth. A comprehensive study on constitutionally enshrined fiscal rules, such as the debt brake currently being hotly debated in Germany, entitled "Fiscal Rules: Historical, Modern, and Sub-National Growth Effect", shows that such deficit ceilings increase real GDP per capita by 18% in the long term.[28] The data set spans from 1789 to 2015 and thus covers very divergent historical episodes.

Excessive deficit financing is therefore a short-term flash in the pan in terms of growth, with negative long-term consequences. Yet, many a flash in the pan has saved a government in elections, which is what makes this fiscal and economic growth populism so attractive, both for politicians acting in the short term and for voters thinking in the short term. Current IMF calculations show that budget deficits in election years exceed the deficit forecast by 0.4% of GDP, as the tax burden is lower, and expenditures are higher in election years.

The private sector is creating a miracle a day, even as the stuff that government attempts is failing left and right.
Lew Rockwell

In the long term, the current investment surge in the US industrial sector will have a positive impact on growth momentum in the US and thus on the ability to service the national debt. Growth is clearly benefiting from the continued rise in energy prices in Europe, particularly in Germany, and the active recruitment of companies by the US, including through the Inflation Reduction Act (IRA).

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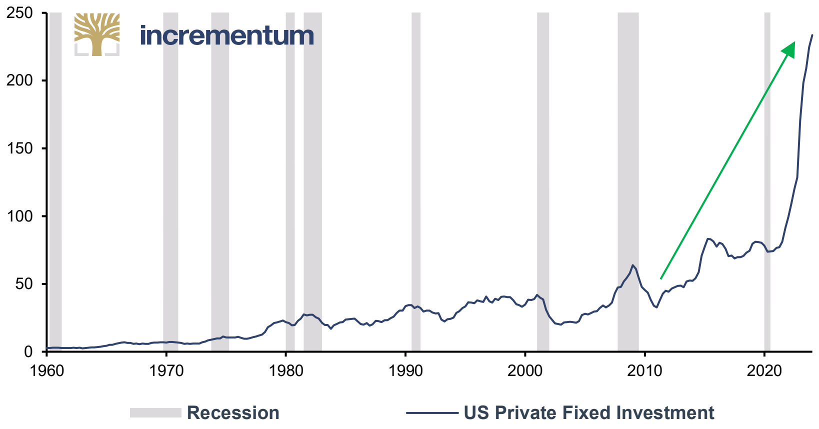
[28] Gründler, Klaus and Potrafke, Niklas: "Fiscal Rules: Historical, Modern, and Sub-National Growth Effect", *CESifo Working Papers*, No. 8305, May 2020

US Private Fixed Investment, in USD bn, 1960–2023



Source: Federal Reserve St. Louis, Incrementum AG

However, an overall view shows that the US economy is being pushed to these peak growth levels largely by the use of economic steroids. For example, the US economy grew by USD 334.5bn in Q4/2023. In the same period, public debt grew by a staggering USD 834.2bn. **This means that every single US dollar of growth was bought with USD 2.50 in new debt. It goes without saying that such growth through debt doping is anything but sustainable.**

The EU is transforming more and more into a debt union – at Germany's expense

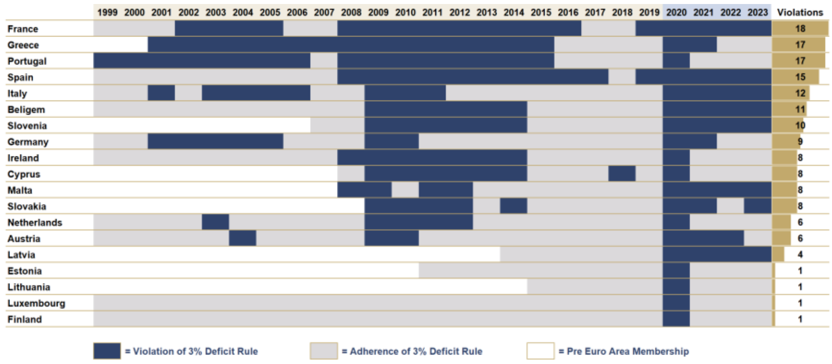
The Maastricht Criteria are perfectly simple to meet – all you need is a small army of accountants and a magic wand.
Jean-Claude Juncker

New debt rules were agreed upon in the EU at the end of April. In principle, the two Maastricht criteria of public debt of no more than 60% of GDP and an annual deficit of no more than 3% of GDP will continue to apply. However, greater account is to be taken of the individual situation of more-indebted countries in their process of debt reduction. It seems unlikely that taking into account the economic situation, which varies from member state to member state, will increase the likelihood of compliance. **Reasons for noncompliance can always be found. You are either disciplined or you are not.**

The Maastricht Criteria? They're more like guidelines anyway.
Mario Draghi

France has the worst track-record with respect to complying with the 3% deficit limit, not the much-maligned Italy. Since 1999, France has only complied with the limit in 7 years, failing to do so in 18 years. Portugal and Greece share second place with 17 breaches each, although Greece only joined the eurozone in 2001 and therefore has found itself on the deficit pillory less often in relative terms. They are followed by Spain with 15 breaches; and Italy, which is often scolded in the media and politically, has 12. Even Germany broke the 3% mark, in 9 out of 25 years, and therefore more than a third of the time. Austria was a paragon with only 6 violations, especially since 3 of the 6 occurred in the years 2020–2023. In these 4 year the EU debt rules were suspended first because of the Covid-19 pandemic and then because of the war in Ukraine. Of the founding eurozone member states, only Luxembourg and Finland fared better with just one breach each.

Euro Area Countries in Violation of 3% Deficit Rule, 1999–2023



Source: Agenda Austria, Incrementum AG

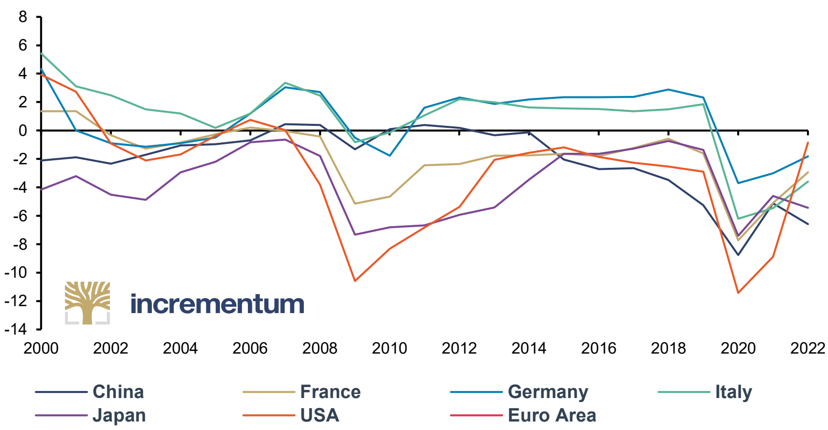
Never doubt the courage of the French. They were the ones who discovered that snails are edible.
Doug Larson

As the yield curve of EU bonds shows, they yield in the range of French debt and thus significantly below those of Italy and slightly below those of Spain, but significantly above German debt instruments. In other words, the communization of debt is to the detriment of Germany, while the Club Med states benefit from it.

When the French owe you money, it's almost an art form. They'll pay you back with such style you'd almost wish you lent them more.
Oscar Wilde

France is the new debt leader in the eurozone. With almost 24% of all government debt in the eurozone, France has replaced Italy as the leader in this debt hit parade. Furthermore, France recently had to significantly increase its deficit forecast for 2024 to 5.1% from 4.4%. The discrepancy is even distinct in the figures for the primary balance. Until the outbreak of the Covid-19 pandemic, Italy always recorded primary surpluses, some of which were significant, with the exception of 2009. France's primary balance, on the other hand, has been in negative territory almost continuously since 2002. **So, while Italy is primarily suffering from the interest burden of its old debts, France is basically living beyond its means, and significantly so.**

Primary Deficit, as % of GDP, 2000–2022



Source: IMF, Incrementum AG

Nonetheless, these debt statistics may be misleadingly low. This stems from the responsibility borne by EU member states for the debts accumulated by the European Union. However, these debts do not (yet) appear in the national debt data. And the amounts are quite considerable. According to a recent study by ZEW, Germany's debt is up to 10% or EUR 262bn higher than officially reported. This corresponds to almost 6% of German GDP.

The attitude has spread throughout Europe that the state must solve all problems with money.
Jürgen Stark, former Chief Economist of the ECB

In conclusion, it can be said that EU government debt is currently facing a quadruple burden: rising interest rates, a decline in the working population due to demographic change, the green transformation of the economy, and the growing desire, at least rhetorically, for a comprehensive rearmament. In some EU countries, but also among top EU officials, there are increasing calls for a switch to a war economy. Whatever the political stance, one thing is clear: No state will be able to shoulder all four burdens at the same time. The result will be significantly higher deficits and rapidly rising debt ratios. Reducing social spending to finance higher defense spending would be political suicide.

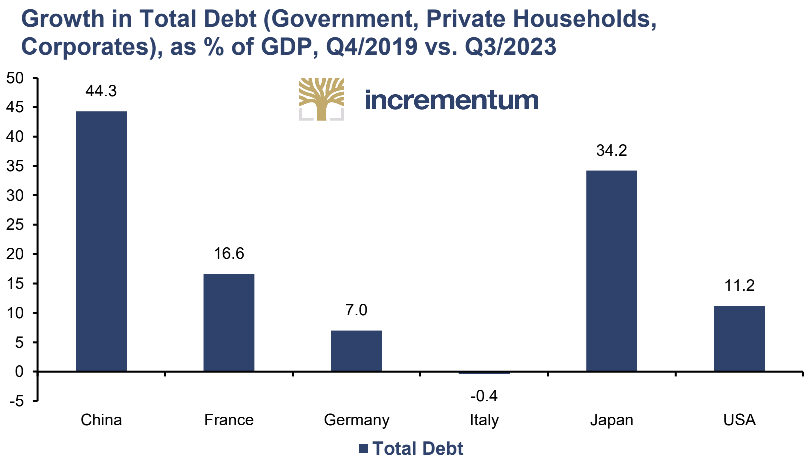
NATO countries must pay MORE, the United States must pay LESS. Very Unfair.
Donald Trump

Yet, not even half of the NATO states meet the binding target of 2% defense spending. According to calculations by the ifo Institute, Germany's defense spending alone has fallen short of this target by EUR 618bn in real terms since the Cold War. This corresponds to an average of EUR 77bn per four-year legislative period that could be spent on other purposes. Enormous upgrades would therefore be necessary on top of the 2% target. German Defense Minister Boris Pistorius (SPD) spoke of up to 3 to 3.5% at the Munich Security Conference in mid-February. The train steaming towards the sovereign debt crisis has clearly picked up speed.

Conclusion

Yeah, when I had Covid all I could eat was fruit. Big bags of pears every day.
Shaun Ryder

The numerous special debt effects seen during the Covid-19 pandemic have now completely subsided. The IMF tellingly titled a blog post in September 2023 "Global Debt Is Returning to its Rising Trend". In particular, a comparison with the end of 2019 makes it clear where we stand in the overall view of trends for public, company, and private household debt:



Source: BIS, Incrementum AG

According to calculations by the Institute of International Finance (IIF), global debt reached a new record high of USD 313trn at the end of 2023. The increase is around 50% above the level 10 years ago. Debt is at a record level in all sectors – companies, private households and the state.

In the seventies, this is the tragic of American culture… That money became everything. And it has poisoned our culture to this day. It's poison.
Jerry Seinfeld

In an interview with the telling title "The Last Mile of the Inflation Fight May Be More Challenging Than People Think", Jim Bianco points to a distributional aspect with explosive social and political force. 90% of all assets are held by the top 10% in the income pyramid. In contrast, 50% of all income earners have no assets but 50% of the debt. This lower half is disproportionately affected by rising interest rates, as they do not benefit from higher-yielding bonds. This is probably also one of the reasons why US President Biden has such a poor approval rating despite strong economic growth and a historically low unemployment rate.

I asked Siri about China and debt, and even she said, "Let's talk about something less complicated, like quantum physics."
Ellen DeGeneres

China and the US may be geopolitical rivals. In terms of debt, however, they share the same predicament. The cocktail of high debt, structurally weakening growth rates, and a dramatically ageing society is a toxic one. China's total debt/GDP has broken through the 300% mark. This means that the debt ratio has more than doubled in the past 20 years. The corporate sector is highly overrepresented, accounting for more than half of the debt at almost 170%. The liquidation of the Evergrande Group, the second largest Chinese real estate company in terms of turnover, is only the tip of the Chinese debt iceberg. The real estate sector, which is responsible for around a quarter of China's GDP, is the major economic – and political – problem child, as Chinese citizens have traditionally used investment apartments as a retirement provision instrument.

Things that have never happened before happen all the time.
Morgan Housel

The topic of a debt crisis is therefore back on the agenda. This time, however, not only in emerging markets. Furthermore, in view of the unbroken upward trend in debt, the rise in fiscal dominance will translate into more political pressure on central banks and take its toll in the form of lower interest rates. This is not an argument for the continuation of the *Great Moderation,* but for its definitive end**. Structurally higher inflation rates are the new normal, and this new reality is a cornerstone of the new gold playbook – more on this in the next chapter.**

Status Quo of Inflation

Inflation – that's the price we pay for those government benefits everybody thought were free.

Ronald Reagan

- **In recent quarters the wave of inflation has finally been abating. However, declaring victory over inflation would be premature and – as history shows – could be fatal.**
- **The contraction of the money supply, the (sharp) fall in producer prices, and the sluggish economy are having a dampening effect on inflation. Contrary to public perception, however, liquidity conditions remain on the loose side.**
- **Geopolitical risks, very high budget deficits in some countries, the green transformation and the elimination of the base effect in energy are the main factors that could trigger a new surge in inflation.**
- **Our – newly redesigned – *Incrementum Inflation Signal* currently signals a neutral inflation tendency for the US.**
- **The inflation rate is likely to remain high in the US, but probably also in the eurozone, in the medium term, i.e. above the inflation target of 2%. The risk of a second wave of inflation is significantly higher than currently discounted by financial markets.**
- **25 years of the euro: The euro has lost nearly 90% of its value against gold in the first quarter of a century of its existence. This hardly qualifies as a favorable track record.**

The last duty of a central banker is to tell the public the truth.
Alan Blinder, Former Federal Reserve Board vice chairman

It is somewhat unusual that we agree with central bankers. But for once, this is now the case. The exception to the rule concerns ECB Executive Board member Isabel Schnabel, who pointed out at the beginning of November 2023 in a lecture with the telling title "The last mile" that the last few meters until the inflation target is reached will be challenging.

At the moment, we are more likely to see inflation too low in the medium term.
Isabel Schnabel, December 2021

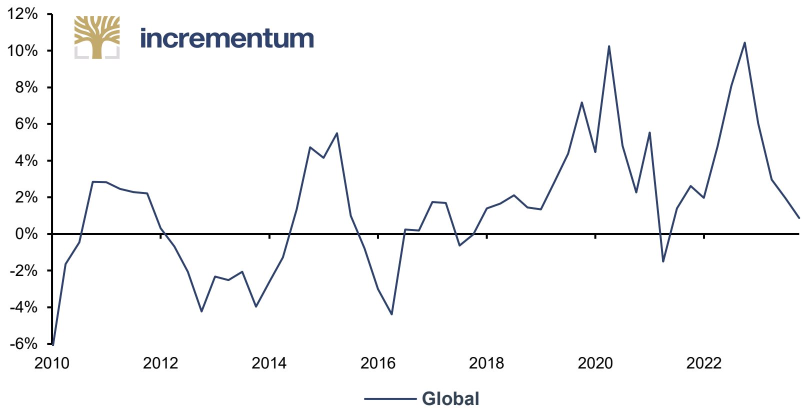
The Pareto principle – which posits that while 80% of a task can be achieved with 20% of the total effort, the remaining 20% demands 80% of the effort – isn't the only factor at play here. Rather, after 40 years of falling inflation rates, the chapter of the Great Moderation has finally closed. **We have entered a new regime characterized by greater inflation volatility and a structurally higher inflation rate.**

Stocktaking

Inflation consists of subsidizing expenditures that give no return with money that does not exist.
Jacques Rueff

But first, let's take a closer look at the status quo. In the US, this is illustrated by the disillusionment that inflation, rather than continuing to fall, has been moving sideways for several months, and has remained significantly above the 2% mark. One is particularly negatively surprised when assessing the monetary situation by looking only at the key interest rate and the central bank's balance sheet total of Western central banks. However, many countries with significant budget deficits are stimulating demand, above all the US, and some central banks in Asia are still pursuing a comparatively loose monetary policy. Global liquidity conditions therefore remain on the loose side, although liquidity growth has weakened significantly in recent quarters.

Non-Bank Lending, yoy, Q1/2010–Q4/2023



Source: BIS, Incrementum AG

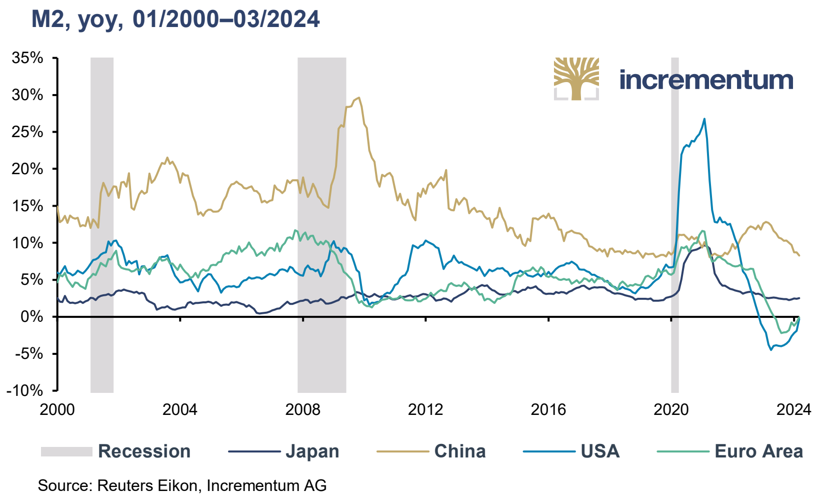
Above all, China and Japan have pumped plenty of liquidity into markets in recent quarters. Japan might have ended its negative interest rate policy, which had been in place since 2016, by raising its key interest rate from -0.1% to just 0% and putting an end to the interest rate cap. However, purchases of government bonds remain more or less at the same level, while purchases of corporate bonds and ETFs have been stopped or are to be discontinued by spring 2025 at the latest.

I never worry about the problem. I worry about the solution.
Shaquille O'Neal

The measures in China are much more liquidity-enhancing. The following is an incomplete list of measures taken by the Chinese government in recent months to address the serious structural problems in the real estate sector and prevent them from spilling over into other areas of the economy:

- Old Xi Jinping speech sparks China monetary easing speculation
- China's central bank governor says there's room to cut banks' reserve requirements
- China may have to resort to a tried-and-tested tactic to power its 'new leap forward'
- China's largest cut to key mortgage rate a 'step in the right direction' to prop up economy ahead of 'two sessions'
- China is ramping up stimulus to boost market confidence – but is it enough?
- China's measures to shore up a shaky economic recovery
- China's measures to shore up a faltering economy, more support expected

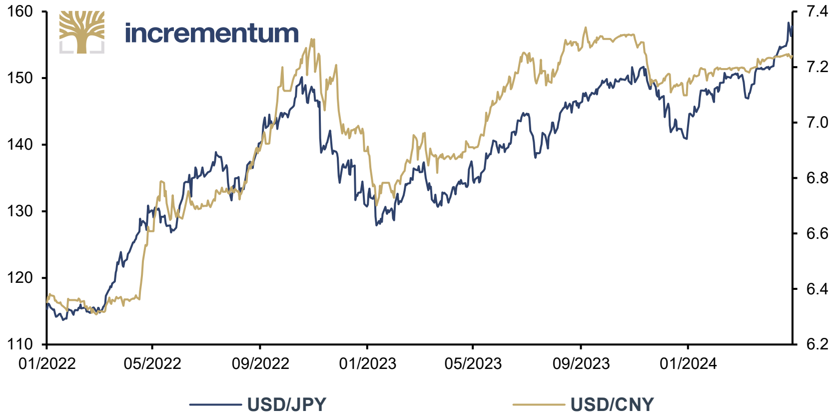
While M2 in the US and the euro area is still shrinking, if now only marginally, M2 growth in Japan, and above all in China, remains clearly positive.



You have companies over in different countries where they devalue their currency and they make it impossible for American companies to compete.
Donald Trump

The extent to which China and Japan have expanded their liquidity compared to the US is reflected in the development of their respective exchange rates. The renminbi has lost 12% of its value against the US dollar since the beginning of 2022, while the Japanese yen has lost more than 25%. Since the start of Abenomics in 2012, the yen is even down around 50% against the US dollar.

USD/JPY (lhs), and USD/CNY (rhs), 01/2022–04/2024

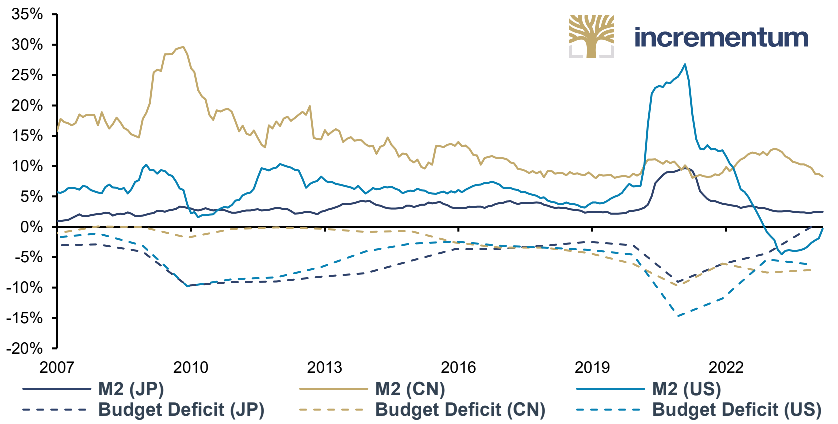


Source: Reuters Eikon, Incrementum AG

Maybe monetary policy isn't all that tight.
Bill Dudley

Fiscal policy also has a counteracting effect in many countries, with significant deficits thwarting the tightening efforts of the central banks. In many countries, fiscal policy has been used to push down the reported inflation rate by reducing tax rates or capping electricity and energy prices, or to compensate for the loss of purchasing power due to inflation through direct transfers.

M2 and Budget Deficit, yoy, 01/2000–03/2024



Source: BIS, Reuters Eikon, Incrementum AG

When we have the ball, they can't score.
Franz Beckenbauer

There are ample signs that we are entering an era of fiscal dominance. In the *In Gold We Trust* report 2021, "Monetary Climate Change", we took an in-depth look at this emerging paradigm shift. It will be fiscal policy[29] that sets the pace for monetary policy and not the other way around. **In other words, while central bankers are practicing catenaccio, the typical Italian defense tactics of earlier times, finance ministers are playing aggressive offensive soccer.**

[29] *See* "Status Quo of Debt Dynamics" in this *In Gold We Trust* report.

The Inflation Beast Has Not yet Been Tamed

Inflation is when less was once more.
Thom Renzie

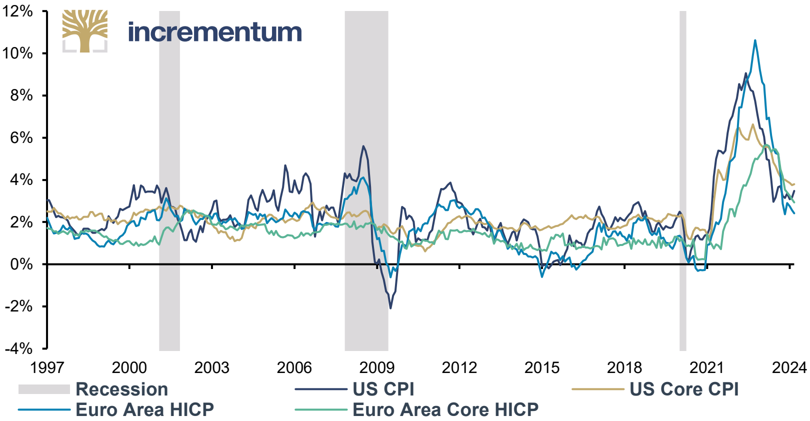
Where do we currently stand with the inflation trend? The first major wave of inflation is over, even if the slowdown is proving much more laborious than many had hoped. We explained in detail in the *In Gold We Trust* report 2023 that disinflationary forces would prevail over the past 12 months.[30] The current wave of inflation peaked in the US in June 2022 at 9.1% and in the eurozone in October 2022 at 10.6%. Then inflation rates went downhill, much faster in the eurozone than in the US.

The eurozone is approaching the inflation target of a symmetrical 2%. Since the revision of the monetary policy strategy in July 2021 the ECB considers upward and downward deviations are considered as equivalent. By now it is already within sight. In the US, overall CPI inflation has been moving sideways above the 3% mark since June 2023.

A common theme is that while inflation is coming down, and that's very good news, the price level is not coming down…So people are still living with high prices. And that's not—that is something that people don't like.
Jerome Powell

However, the situation is different for core inflation, which is used by many central banks to reflect the medium-term nature of the inflation target. The peak was naturally much lower than for headline inflation, as the strongest drivers of this inflation wave were energy and food prices, more so in the eurozone and somewhat less so in the US. Without the relief provided by energy and food prices in recent quarters, inflation remains above the 3% mark in the US, and has only fallen slightly below 3% in the eurozone by March 2024. The slight downward trend in the eurozone continued in April. Stubbornly high inflation in the services sector is a major contributor to this elevated level.

US and Euro Area Core and Headline Inflation, yoy, 01/1997–03/2024



Source: Reuters Eikon, Incrementum AG

The Federal Reserve Bank of Cleveland's *Inflation Nowcasting* estimates the April reading for the CPI at 3.5%, the core CPI at 3.7%, the PCE, as well as the core PCE at 2.7%. In the eurozone, the flash estimate for April, which is usually very close to the officially confirmed value, shows 2.4% for overall inflation and 2.7% for core inflation. The lower inflation rate in combination with the 1 percentage point lower key interest rate is an indicator of the markedly weaker economic development in the eurozone than in the US.

—
30 "The Status Quo of the Inflation Trend," *In Gold We Trust* report 2023

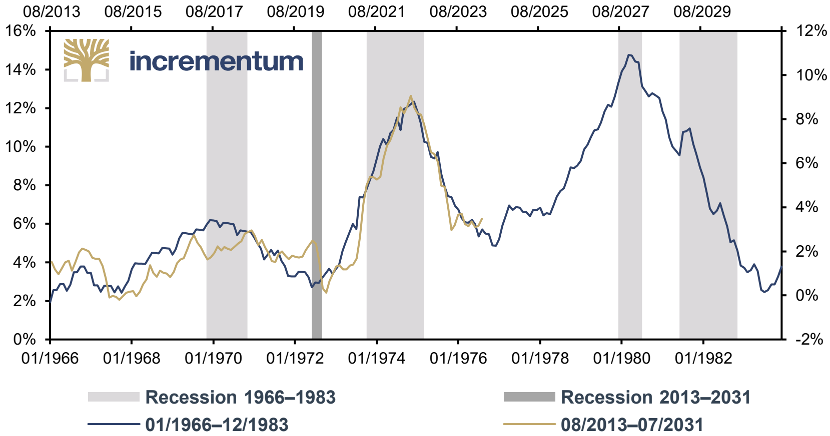
This threat of what I'll call pent-up exuberance is a new upside risk that I think bears scrutiny in coming months.
Raphael Bostic

However, the premature declaration of victory over inflation would be a veritable own goal. In the late 1960s and 1970s, monetary policy made this mistake twice. The first wave of inflation hit the US from 1967 to 1972. It peaked at a rate of 6.4% in February 1970, followed by the second, higher wave of inflation, which peaked at 12.2% in November 1974 and then fell to 5.0% in November and December 1976. But the sharpest rise was yet to come. Triggered by the second oil price shock, the inflation rate shot up again. In March 1980, the still-existing all-time high of 14.6% was reached.

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

As the following chart demonstrates, the parallel to today is astounding – regardless of the different intensity in the present. If history repeats itself in rhyme, the highest wave of inflation is yet to come. Based on the experience of 50 years ago, overall CPI inflation in the US would rise to about 11% around the turn of the year 2027/2028. **In what was then the third wave of inflation, the price of gold increased roughly sevenfold, which would correspond to a fivefold increase given the lower intensity of the current waves of inflation.**

US CPI, yoy, 01/1966–12/1983 (lhs), and 08/2013–07/2031 (rhs)

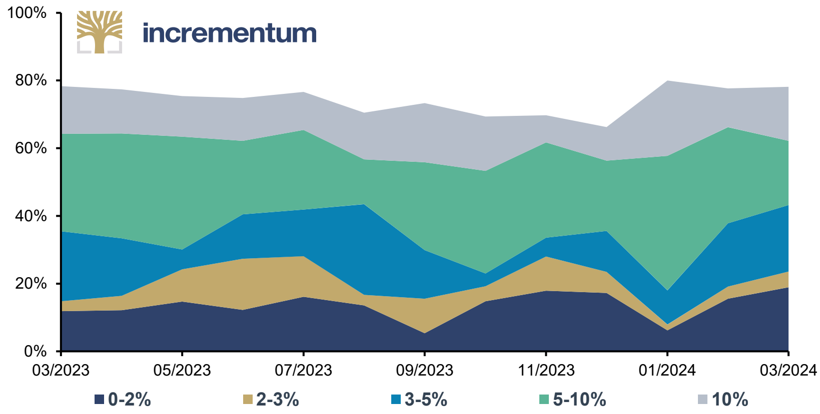


Source: Andreas Steno, Reuters Eikon, Incrementum AG

You can't conquer reality by running away from it.
Og Mandino

The next chart confirms that inflation in the US is not conquered. It displays the percentage of prices included in the basket of goods and services that rise in line with the respective inflation range. It is apparent that inflation in the US continues to be broad-based and to grow significantly faster than 2% in many segments.

US PCE Components by Annual Growth Rate, 03/2023–03/2024

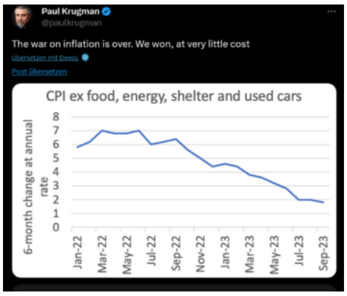


Source: Federal Reserve Dallas, Incrementum AG

Declaring victory over inflation too soon is a guarantee of more inflation

By 2005 or so, it will become clear that the Internet's impact on the economy has been no greater than the fax machine's.
Paul Krugman, 1998

Sometimes economists tend to hold somewhat bizarre views. Paul Krugman, a Nobel Prize winner after all, became a repeat contributor in this category last fall. In 2011, Krugman seriously suggested faking an alien invasion. This imagined threat was to be used to implement a massive Keynesian government spending program to ward off the invasion in order to stimulate the economy, which was still bobbing along after the deep recession following the global financial crisis of 2007/2008. According to Krugman, this collective self-deception would permanently boost prosperity, even if it turned out in retrospect to have been a false alarm.

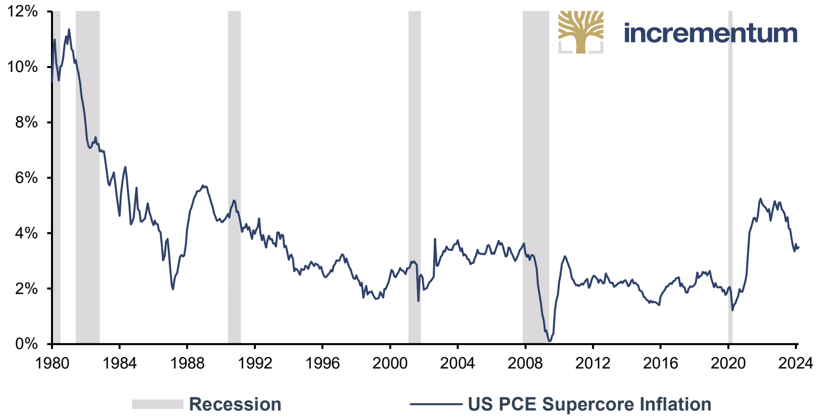


In September 2023, Krugman declared victory over inflation in a tweet. His proclamation of victory was underpinned by a somewhat unconventional inflation calculation, which, based on the inflation indicator now favored by Jerome Powell, could be termed *supersupercore inflation*. In his calculation, Krugman excluded all price drivers from the inflation calculation and then concluded that inflation had been defeated. **This approach says little about the state of the fight against inflation but a great deal about the deplorable state of economics.**

Food is an essential part of a balanced diet.
Frank Lebowitz

But it is currently just *PCE supercore* inflation, i.e. in contrast to Krugman's *supersupercore* inflation including used car prices, that exceeded the 3% mark again in January, after four months only slightly below that mark. In a speech on November 30, 2022, Jerome Powell attributed a special forecasting ability to supercore inflation, i.e. core inflation excluding housing costs. He labelled this as "perhaps the most important category for understanding the future evolution of core inflation". In March, the supercore inflation rate gained again momentum and rose by 4.8% yoy.

PCE Supercore Inflation, yoy, 01/2000–03/2024



Source: Reuters Eikon, Incrementum AG

Celebrate when you're half done, And the finish won't be half as fun.
Lemony Snicket, The Slippery Slope

In sharp contrast, an IMF study published at almost the same time as Paul Krugman's tweet, titled "One Hundred Inflation Shocks: Seven Stylized Facts", warns against prematurely declaring inflation defeated. According to the study, history shows that inflation that got out of control, usually proved to be quite persistent. It usually took years before inflation could be brought back to its original low level. Even after five years, 40% of the countries examined in the study had not yet regained control of inflation. The remaining 60% needed an average of three years to bring inflation back to a normal level.

The seven key messages of the study are:

- *inflation is persistent, especially after a terms-of-trade shock. most unresolved inflation episodes involved "premature celebrations", where inflation initially declined only to plateau at an elevated level or re-accelerate later.*
- *countries that resolved inflation had tighter monetary policy. There is further, weaker evidence for tighter fiscal policy and better inflation anchoring pre-shock.*
- *countries that resolved inflation implemented restrictive policies more consistently over time, as captured by the variance of the policy stance over the post-shock years.*
- *countries that resolved inflation contained nominal exchange rate depreciation.*
- *countries that resolved inflation had lower nominal wage growth. This did not translate into lower real wage growth, as lower nominal wage growth coincided with lower inflation.*
- *countries that resolved inflation experienced lower growth in the short-term but not over the 5-year horizon. This potentially indicates that the benefits of macroeconomic stability and policy credibility over time offset the costs of a tighter policy stance.*[31]

[31] Anil, Ari et al.: "One Hundred Inflation shocks: Seven Stylized Facts", *IMF Working Paper* No. 2023/190, p. 3f.

The risk of waiting a little longer to cut rates is significantly lower than acting too soon. Cutting the policy rate too soon and risking a sustained rebound in inflation is something I want to avoid.
Christopher J. Waller

It seems that the leading central bankers have – so far at least – taken these findings to heart. While the markets on both sides of the Atlantic have already priced in rate cuts for the first half of the year, central bankers have so far remained steadfast. Even if the inflation rate in the eurozone is already close to the 2% mark, albeit initially only on the basis of individual monthly data, the ECB should act more cautiously than the Federal Reserve in view of the results of this study. It was the eurozone that suffered a negative terms-of-trade shock in the wake of the energy crisis. The extent to which nominal wage growth can be kept in check will be shown by wage negotiations, both institutional and individual, in the coming months.

The dire consequences of out-of-control inflation are vividly illustrated in Andrew Dickson White's treatise "Fiat Money Inflation in France", published in 1784:

> *Out of the inflation of prices grew a speculating class; and, in the complete uncertainty as to the future, all business became a game of chance, and all business men, gamblers. In city centers came a quick growth of stock-jobbers and speculators; and these set a debasing fashion in business which spread to the remotest parts of the country. Instead of satisfaction with legitimate profits, came a passion for inordinate gains. Then, too, as values became more and more uncertain, there was no longer any motive for care or economy, but every motive for immediate expenditure and present enjoyment. So came upon the nation the obliteration of thrift. In this mania for yielding to present enjoyment rather than providing for future comfort were the seeds of new growths of wretchedness: luxury, senseless and extravagant, set in: this, too, spread as a fashion. To feed it, there came cheatery in the nation at large and corruption among officials and persons holding trusts. While men set such fashions in private and official business, women set fashions of extravagance in dress and living that added to the incentives to corruption. Faith in moral considerations, or even in good impulses, yielded to general distrust. National honor was thought a fiction cherished only by hypocrites. Patriotism was eaten out by cynicism.*
>
> *[...] such has, to a greater or less degree, always been the result of irredeemable paper, created according to the whim or interest of legislative assemblies rather than based upon standards of value permanent in their nature and agreed upon throughout the entire world.*
>
> *It came by seeking a remedy for a comparatively small evil in an evil infinitely more dangerous. To cure a disease temporary in its character, a corrosive poison was administered, which ate out the vitals of French prosperity. It progressed according to a law in social physics which we may call the "law of accelerating issue and depreciation." It was comparatively easy to refrain from the first issue; it was exceedingly difficult to refrain from the second; to refrain from the third and those following was practically impossible.*
>
> *It brought, as we have seen, commerce and manufactures, the mercantile interest, the agricultural interest, to ruin. It brought on these the same destruction which would come to a Hollander opening the dykes of the sea to*

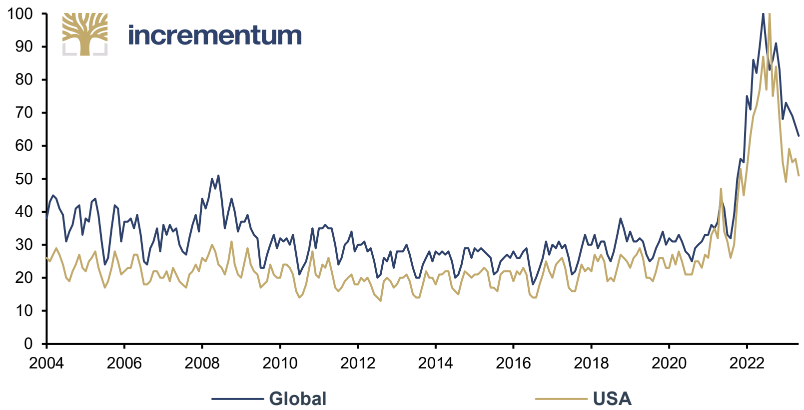
irrigate his garden in a dry summer. It ended in the complete financial, moral and political prostration of France-a prostration from which only a Napoleon could raise it.

Pre-1983, mortgage costs were in the CPI as were car payments pre-1998. Now, price indexes do not include borrowing costs. Thus, when interest rates jumped last year, official inflation did not fully capture the effects it would have on consumer well-being... We show that if we make an effort to reconstruct the CPI of Okun's era – which would have had an inflation peak last year around 18% – we are able to explain 70% of the gap in consumer sentiment we saw last year.
Larry Summers

Back to the present: Larry Summers et al. point out an interesting anomaly in a recently published article entitled "The Cost of Money is Part of the Cost of Living: New Evidence on the Consumer Sentiment Anomaly". Consumer sentiment is significantly worse than the inflation rates would suggest. This is not just a US phenomenon but rather a global one. **The authors argue that this discrepancy stems from the systematic underestimation of inflation rates.** For example, the sharp rise in interest expenses, particularly for real estate financing – the *owner's equivalent rent* (OER), which has been used since 1983, refers to the (notional) rental costs. In addition, car purchases are not included in the inflation calculation. At 26% and 7% respectively, the share of these two items in the inflation basket is considerable. However, if interest expenses are included in the calculation of the inflation rate, 70% of the anomaly can be explained. **Finally, taking into account the sharp rise in interest expenses, the inflation rate shot up to around 18% in November 2022, almost twice as high as the official peak in June 2022.** Almost the entire increase is attributable to the "alternative calculation" of housing costs.

A search query for *inflation* in *Google Trends* illustrates that the topic of inflation continues to be ubiquitous among the population. Although the first wave of inflation has subsided, search queries remain stubbornly at a significantly higher level than before the outbreak of the first wave of inflation.

Google Trends "Inflation", 01/2004–04/2024



Source: Google, Incrementum AG

Doesn't matter WHEN the Fed cuts. It matters WHY the Fed cuts.
Mark Dow

Long story short: Inflation has not yet been defeated, either in the data or in people's minds. Those who celebrate prematurely are in for a rude awakening. It is more than likely – especially in the US – that inflation will rise again and thus remain above the 2% target, and that interest rate cuts will come later than generally assumed. This is not good news for borrowers. And our *Incrementum Inflation Signal* also shows that disinflation – in the US – is over, at least for the moment.

The *Incrementum Inflation Signal*

Essentially, all models are wrong, but some are useful.
George Box

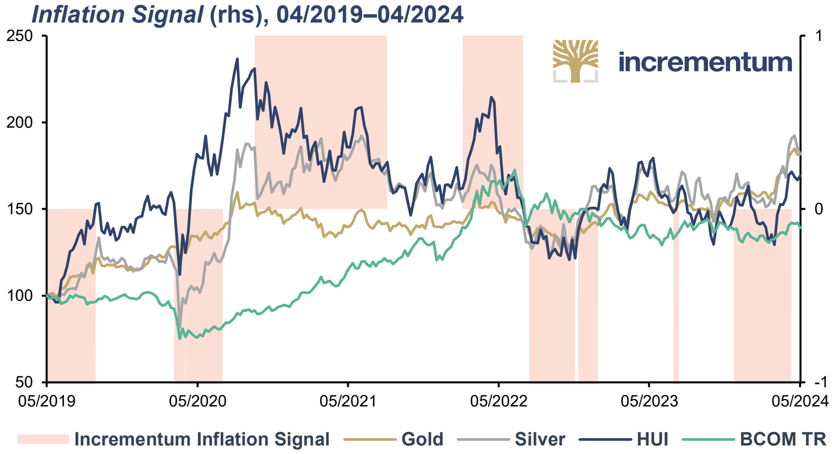
Our *Incrementum Inflation Signal*, a central tool in our inflation protection strategies, has proven its value in recent years by allowing us to better understand the complex dynamics between inflationary and deflationary forces and to accurately predict inflation trends in most cases. However, the signal failed to correctly capture the continuing disinflationary phase throughout 2023. This misjudgment prompted us to critically review and optimize our signal methodology.

You never change things by fighting the existing reality. To change something, build a new model that makes the existing model obsolete.
Buckminster Fuller

The result of our deliberations is a revised version of our inflation signal, which, compared to the original model, considers an expanded range of input factors and utilizes weighting that is more focused on the broad commodity market and inflation precursors. Furthermore, we have simplified the interpretation scale – as we have done in our new proprietary *Incrementum Active Aurum Signal* – by using only three instead of six stages. These adjustments are intended to enable higher precision with reduced signal volatility. **Our expectation that these improvements will lead to a superior signal is supported by the compelling results of the revised inflation signal in backtesting.**

The premature arrival at the trough of the inflationary cycle is currently also indicated by the inflation signal, which now signals a neutral inflation tendency. The disinflationary trend observed in recent months, which was also largely indicated by the signal, is therefore – at least temporarily – a thing of the past, aligning with our assessment and the facts presented throughout this chapter.

Inflation-sensitive Assets (lhs), 100 = 04/2019, and *Incrementum Inflation Signal* (rhs), 04/2019–04/2024



Source: Reuters Eikon, Incrementum AG

Inflationary, Disinflationary, and Deflationary Factors

As in previous years, we want to analyze the most important factors influencing inflation. We will start with those that have a disinflationary or even deflationary effect.

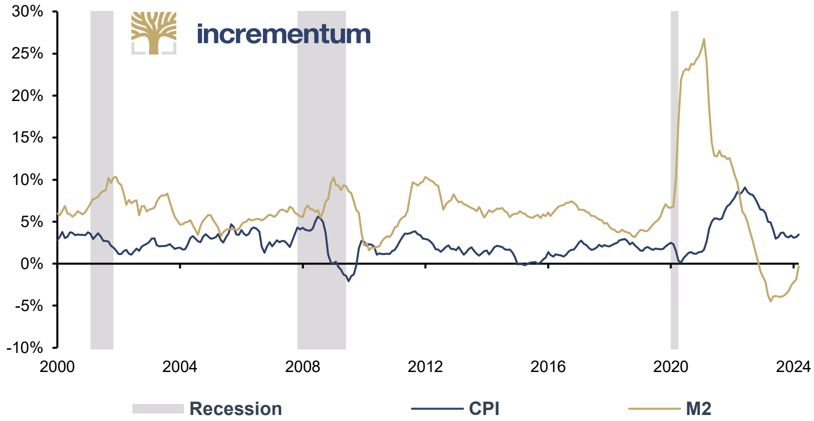
Disinflationary and deflationary factors

The money supply trend points to deflation in the short-run

Historically, whenever US M2 money supply has contracted on an annual basis, there's been a banking crisis, a depression and/or deflation.
Longview Economics

The recent development of the M2 money supply can be described as nothing less than historic. It has been declining in both the US and the eurozone; in the US since December 2022 and in the eurozone since May 2023. However, the rate of contraction has slowed significantly in recent months. And even if the positive correlation with the inflation rate is not very pronounced, the influence of the money supply on the inflation rate cannot be denied.

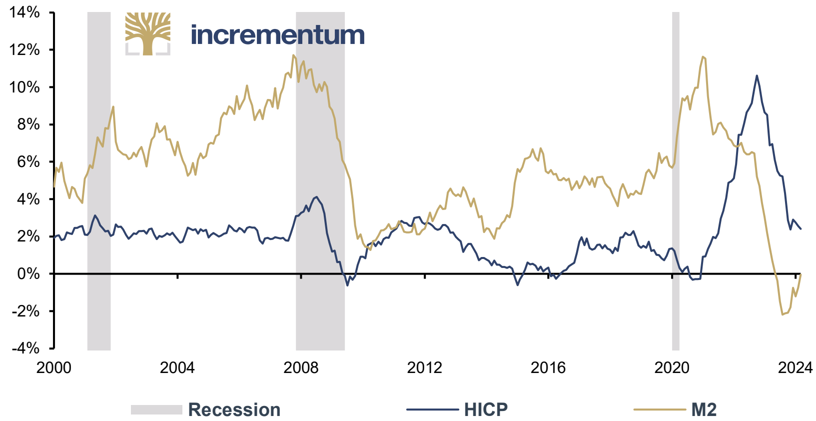
US CPI and M2, yoy, 01/2000–03/2024



Source: Reuters Eikon, Incrementum AG

As in the US, however, money supply growth in the euro area is approaching positive territory again.

Euro Area HICP and M2, yoy, 01/2000–03/2024



Source: Reuters Eikon, Incrementum AG

Central banks continue to reduce the size of their balance sheets

"Fairly soon" is words we use to mean fairly soon.
Jerome Powell

One factor in this negative money supply trend is the continuation of quantitative tightening (QT). The Federal Reserve continued to shrink its balance sheet, reducing its holdings of US Treasuries by USD 60bn every month. Thanks to this *passive QT* – expiring bonds are simply not renewed, but holdings are not actively sold – the Federal Reserve's balance sheet total has already fallen by almost 20%, from just under USD 9trn to less than USD 7.5trn. As per the end of April 2024, 38% of Treasury securities and 27% of MBS that pandemic QE had added, have been removed. At the FOMC meeting in March, Jerome Powell announced that a weakening of the QT would begin "fairly soon", as "[b]y going slower, you can get farther". According to Powell, reducing the balance sheet too quickly could provoke a liquidity crisis like the one in September 2019. Such a liquidity crisis would abruptly end QT and trigger a new round of QE.

t's really to ensure that the process of shrinking the balance sheet down to where we want to get it is a smooth one and doesn't wind up with financial market turmoil, the way it did the last time we did this.
Jerome Powell

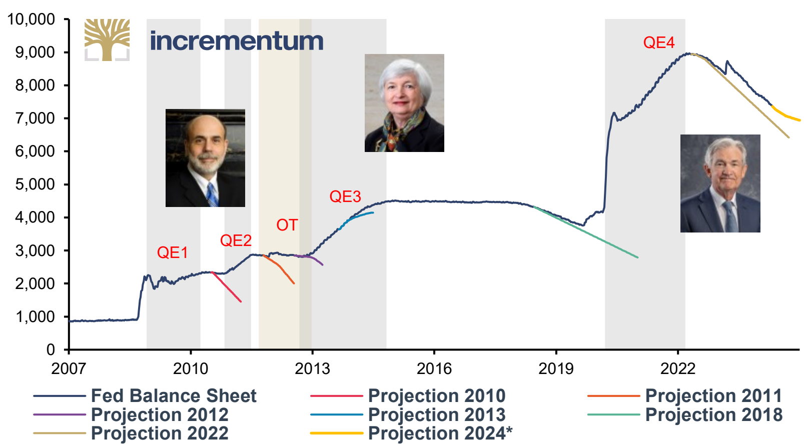
At the following FOMC meeting on May 1, the tapering was actually decided: Instead of USD 95bn per month, the balance sheet will only be reduced by USD 60bn from June, still reducing the MBS holdings by USD 35bn per month but US Treasuries now by only USD 25bn per month. In addition, maturing MBS in excess of USD 35bn billion will no longer be replaced by MBS but by US Treasuries.

As Powell had already announced in March, the main goal is for the Federal Reserve's balance sheet to largely contain only US Treasuries. In other words, the still more than USD 2trn in MBS should vanish from the balance sheet as far as possible. However, with a reduction of USD 35bn per month, as is currently the case, this would take almost 60 months.

An old trick well done is far better than a new trick with no effect.
Harry Houdini

For more than 10 years, we have been documenting the communication regarding central bank policy and its bank balance sheet with the following chart. Clearly, the announced central bank policy was structurally more restrictive than the actual policy. As is so often the case, the central bank balance sheet will initially shrink more slowly and ultimately probably less substantially than initially announced. The Federal Reserve's latest announcement could perhaps even be the first step towards ultimately monetizing government bonds again via a new QE programme.

Fed Balance Sheet Path, in USD bn, 01/2007–12/2024e



Source: Reuters Eikon, Federal Reserve St. Louis, Incrementum AG
*Assumption of QT ending 12/2024

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

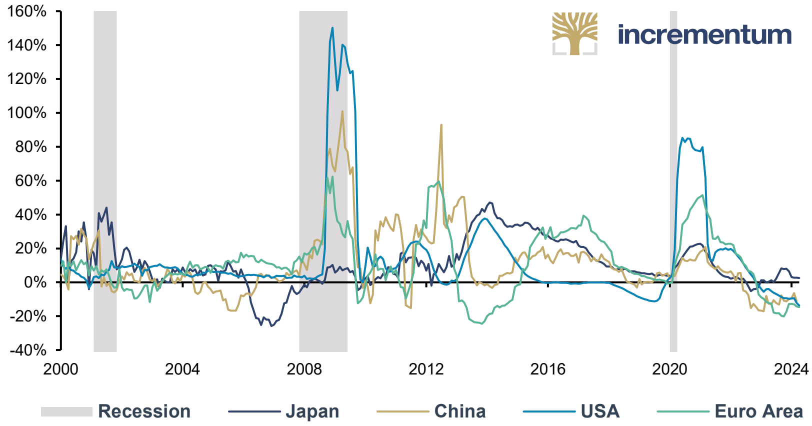
When discussing QT, it is often ignored that any reduction in holdings on the assets side of the balance sheet must necessarily be accompanied by a reduction on the liabilities side, at least if the central bank does not want to report losses. Since the beginning of the interest rate hike cycle, central banks have had to record large losses due to the write-down of their bond portfolios. In combination with the higher interest payments on bank reserves, this has resulted in a loss of USD 114.3bn for the Federal Reserve in 2023, EUR 1.3bn for the ECB, EUR 21.6bn for the Deutsche Bundesbank, and CHF 3.2bn for the Swiss National Bank.

Central banks, the executive arms of government in terms of maintaining the currency, are most effective when their own balance sheets are strong. The question remains whether they can afford what they are doing.
Jonathan Ruffer

Following equally heavy losses, the Swedish Riksbank asked the Swedish Parliament for a financial injection of SEK 43.7 billion (approx. EUR 3.8 billion or USD 4.1 billion) at the end of March in order to strengthen the Riksbank's equity and bring it back into line with the law. **In view of the significant losses of central banks, it can be assumed that similar discussions will also arise in other countries.**

The ECB has also already significantly reduced its balance sheet. From a peak of just under EUR 9trn, the reduction amounts to almost a quarter, taking it to well below EUR 7trn now. A large part of the decline is due to the early termination of the Targeted Longer-Term Refinancing Operations (TLTRO), which were used to secure the liquidity of commercial banks. The portfolio of government bonds purchased as part of the various rounds of QE (APP/PEPP) has until now only been reduced by more than EUR 350bn.

Central Bank Balance Sheet, yoy, 01/2000–03/2024

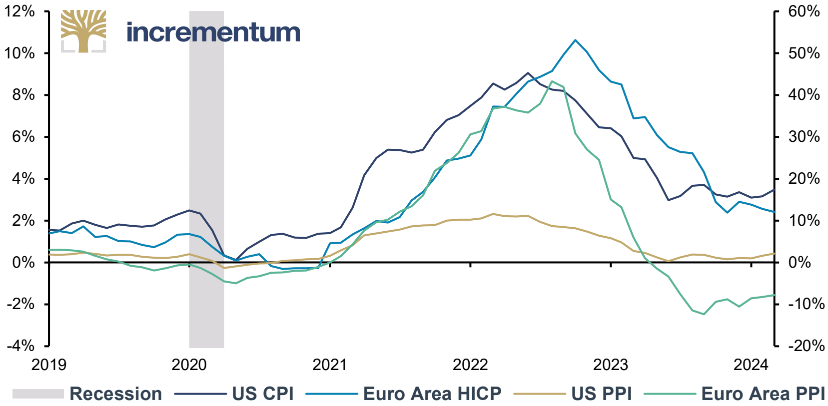


Source: Reuters Eikon, Incrementum AG

Producer prices fall (markedly)

The trend in producer prices has undoubtedly been disinflationary. However, due to the base effect, producer prices will have a stimulative effect on inflation rates starting in summer. The descent from the plateau-like high (US) or the peak (eurozone) will then no longer have a dampening effect on the annual rate of change.

US and Euro Area Headline Inflation (lhs), and PPI (rhs), yoy, 01/2019–03/2024



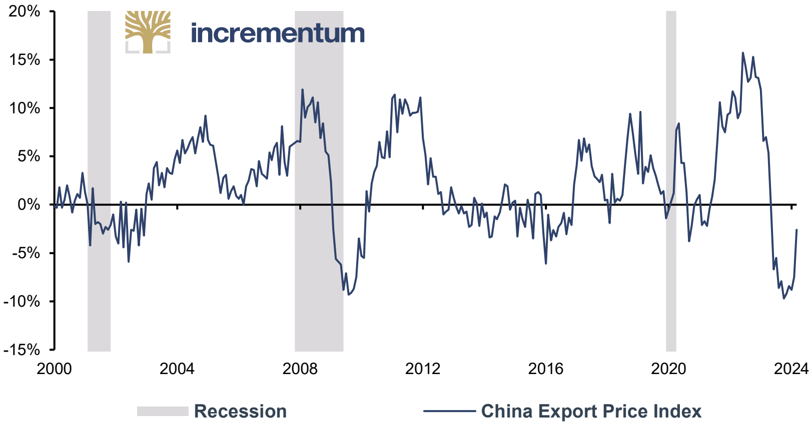
Source: Reuters Eikon, Incrementum AG

China exports deflation

More and more of our imports come from overseas.
George W. Bush

The significant fall in Chinese export prices is having a dampening effect on inflation rates. Therefore, China is exporting lower prices to the rest of the world, which is also a consequence of the significant devaluation of the Chinese renminbi against the US dollar. From the high at the end of February 2022, the renminbi lost almost 15% against the US dollar by the end of March 2024, and more than 4% since the beginning of 2023.

China Export Price Index, yoy, 01/2000–03/2024



Source: Reuters Eikon, Incrementum AG

Under capitalism, people have more cars.
Under communism, they have more parking spaces.
Winston Churchill

In the medium term, however, the price-dampening effect could turn into its opposite if the lower export earnings drive Chinese companies into insolvency and thus reduce product supply. The countless fiscal and monetary stimulus measures enacted by the PBoC and the government, which we have already mentioned, are also likely to push up domestic prices in the medium term. Whether a further weakening of the yuan can offset an increase in export prices remains to be seen.

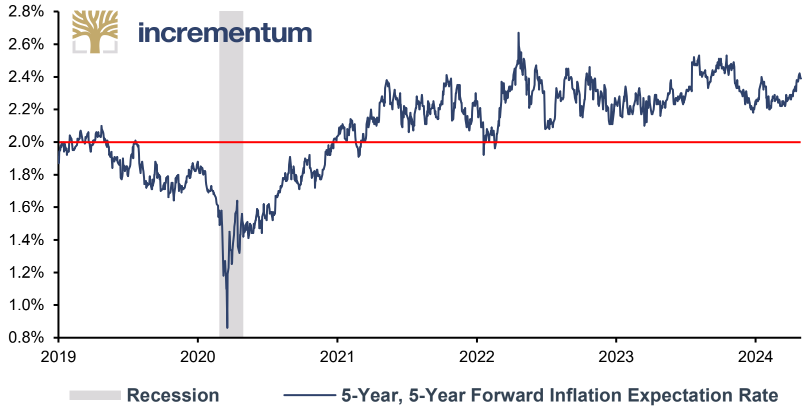
In addition, the marked demographic change in China is having a negative long-term impact on Chinese growth prospects. Having peaked at over 1.42 billion in 2021, China's population is currently forecast to shrink by over 100 million people by 2050. By the end of the century, China's population could shrink to fewer than 800 million people, with even gloomier scenarios assuming fewer than 500 million.

Inflation expectations

Inflation expectations are well anchored when nobody talks about inflation.
James Aitken

Central banks attach great importance to keeping inflation expectations in check. According to prevailing theory, inflation expectations play an important role in the future development of inflation. The 5-year, 5-year forward inflation expectation rate remains stable just slightly above the inflation target of 2% on average. The deanchoring of inflation expectations feared by central bankers has not yet taken place.

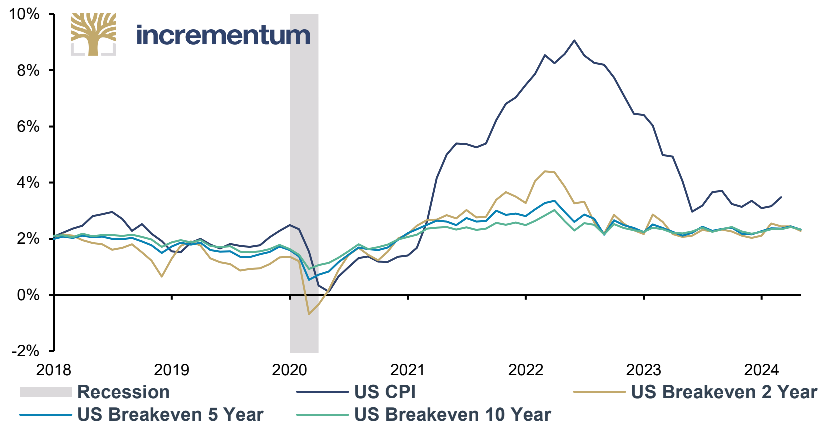
5-Year, 5-Year Forward Inflation Expectation Rate, 01/2019–04/2024



Source: Federal Reserve St. Louis, Incrementum AG

The breakeven rates also indicate that the markets are assuming that the Federal Reserve has not only brought inflation under control but will also keep it under control, albeit slightly above the average target of 2%.

US CPI and Various US Breakeven Rates, yoy, 01/2018–03/2024

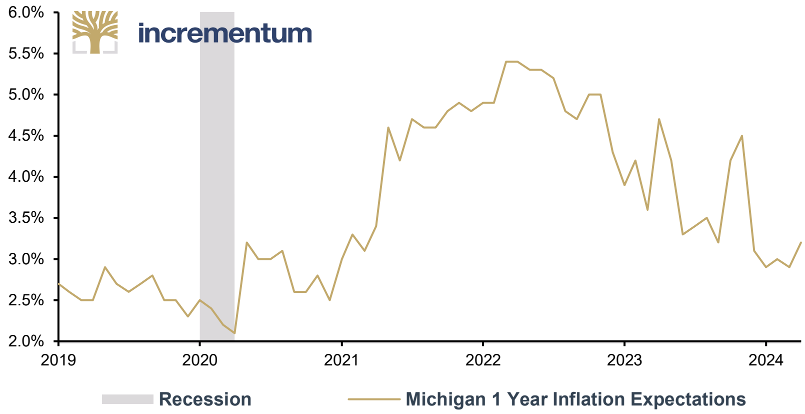


Source: Reuters Eikon, Incrementum AG

People from Michigan are so optimistic, I think because we have to be to survive the winters.
Magic Johnson

Inflation expectations calculated by the University of Michigan also show a clear disinflationary trend, albeit with strong fluctuations and still at a slightly higher level than the 2% average inflation target of the Federal Reserve. However, the latest readings show a renewed rise in inflation expectations.

Michigan 1-Year Inflation Expectations, yoy, 01/2019–04/2024



Source: Reuters Eikon, Incrementum AG

To sum it up: Markets consider the risk of inflation in the US to have been averted, although they expect an inflation rate above the inflation target of 2%.

The stuttering economic engine

I don't see the stag, or the´flation.
Jerome Powell, May 2nd 2024

We chose the title "Stagflation 2.0" for the *In Gold We Trust report* 2022. Two years ago, there were many indications that the inflation wolf would be joined by the recession bear – in fall 2020 we published our special analysis "The Boy Who Cried Wolf: Inflationary Decade Ahead?" We were right about Germany, with the eurozone as a whole only narrowly missing a recession. However, according to our proprietary definition of stagflation – inflation rate above 3%, growth below 1% – the eurozone was in stagflation in 2023 and is now sliding out of stagflation into recession, as the headline inflation rate has been below 3% since October 2023.

In the US, there is – so far – not much sign of the economy stuttering. The fact that the US has not yet slipped into recession certainly comes as a surprise to many, including us. China's figures are disappointing. The hoped-for boost for the global economy following the lifting of all Covid-19 restrictions in January 2023 was short-lived – a brightly blazing flash in the pan.

Real GDP, yoy, 2023–2025e

	2023	2024e	2025e
USA	2.5%	2.7%	1.9%
Euro Area	0.4%	0.8%	1.5%
Germany	-0.3%	0.2%	1.3%
France	0.9%	0.7%	1.4%
Italy	0.9%	0.7%	0.7%
Japan	1.9%	0.9%	1.0%
China	5.2%	4.6%	4.1%

Source: IMF, Incrementum AG

It should be borne in mind that GDP figures reflect the development of overall GDP, which is crucial for calculating inflation. GDP growth per capita, on the other hand, is decisive for individual prosperity. With the continuing influx of refugees and asylum seekers into the US, this population increase is putting much greater pressure on GDP per capita. Meanwhile in Europe, Germany's real GDP is as high as it was at the start of 2019. However, as the population has risen by almost 2%, real GDP per capita has fallen by almost 2% in recent years. On this basis, it is also easy to explain why there is so much dissatisfaction among the population. **The development of GDP per capita is decisive for citizens, whereas a country's GDP figure is first of all a political category, namely that of economic power.**

Inflation-driving factors

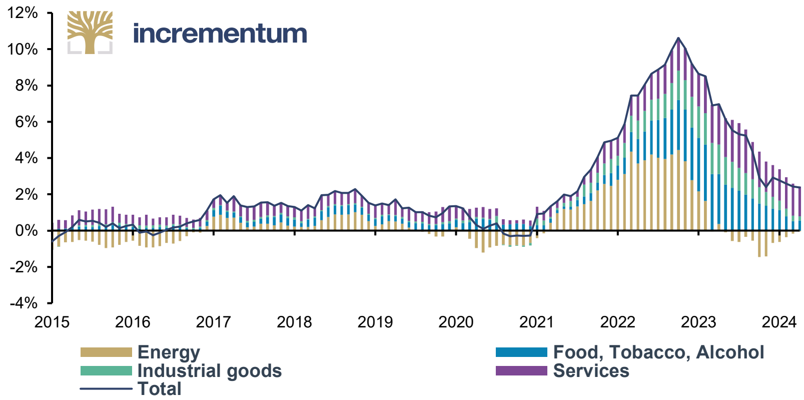
The real danger comes from encouraging or inadvertently tolerating rising inflation and its close cousin of extreme speculation and risk taking, in effect standing by while bubbles and excesses threaten financial markets.
Paul Volcker

At the beginning of this chapter, we pointed out that global financing conditions remain on the loose, expansionary side. The monetary groundwater level on which consumer price inflation - in the negative sense - can thrive is not only abundantly filled, it is being filled even further. The time it takes for monetary expansion to feed through to consumer prices depends on many factors. After all, the additional money supply can initially flow into financial markets or it can temporarily flow into cash holdings. Only when this money is actually spent on consumer goods does the monetary inflation become noticeable as consumer price inflation.

Energy prices and the base effect

Annual rates of change mean that each data point is dropped from the calculation after one year. Any normalization in the price trend then has a dampening effect on the inflation rate for exactly one year. This dampening effect on the inflation rate began in the case of energy prices in November 2022, when inflation began to slow. Since May 2023, the annual rate of change in energy prices has even been in deflationary territory, pulling down the overall inflation rate. As of May, this dampening effect on the inflation rate in the eurozone will finally disappear completely.

Euro Area HICP, Contributions of the Components and Total, 01/2015–04/2024



Source: IHS, Incrementum AG

The most recent *ECB staff macroeconomic projections for the euro area* assume that the elimination of the base effect will raise the energy component of the HICP by a total of 1.1 percentage points by the end of the year. This statistical effect leads directly to a higher reported (overall) inflation rate. It therefore has a direct effect on price inflation.

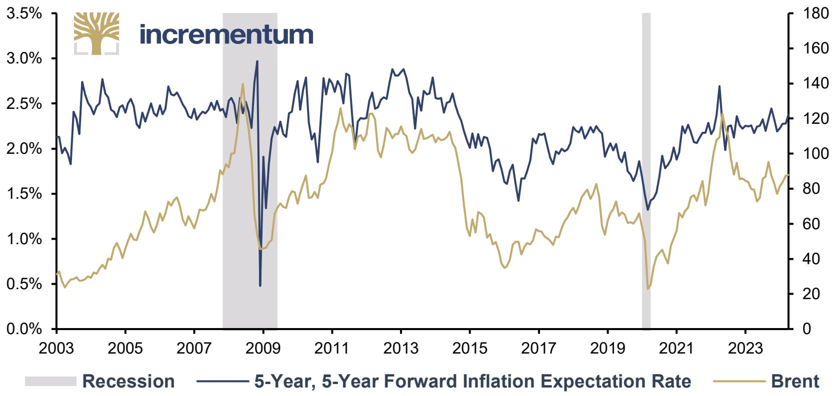
War is inflationary.
Zoltan Pozsar

The worsening geopolitical situation hangs like a sword of Damocles over energy prices and therefore over the further development of inflation. In addition to the war in Ukraine, there is now also the war between Israel and Hamas. The feared conflagration in the Middle East has – so far – been prevented. Nevertheless, the geopolitical risks for the energy markets are higher than they have been for a long time. Comparisons with the 1970s, when the two waves of inflation were largely fueled by the political weaponization of the oil markets, have been making the rounds ever since.

I remain totally unconvinced that starving the oil & gas industry of capital will make the transition go any faster, particularly since new pools of capital will step in as long as demand for fossil fuels exists.
Michael Cembalest

However, it is important to bear in mind that energy dependency is significantly lower today than it was in the 1970s. For example, 65% less oil is needed per US dollar of GDP in the US today than in the 1970s. Moreover, as a result of a significant expansion in oil production, the US is now the largest producer of oil and even a net energy exporter. Increases in energy prices may push up inflation. However, this also generates additional income for the US, which at least partially offsets the rise in energy prices. However, the oil price trend is relevant for shaping inflation expectations. The correlation between the Brent oil price and 5-year, 5-year US inflation expectations since 2011 is a very high 0.88.

5-Year, 5-Year Forward Inflation Expectation Rate (lhs), and Brent (rhs), in USD, 01/2003–04/2024



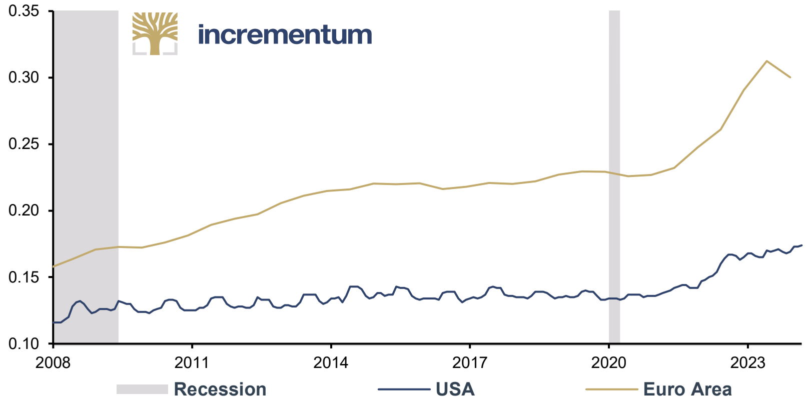
Source: Federal Reserve St. Louis, Reuters Eikon, Incrementum AG

As Europe and the rest of the World get pounded by energy shortages, people may soon be begging for nuclear power plants in their backyards — NIMBY turns RIMBY (right in my backyard).
Dave Collum

The US is also rushing from record to record in terms of LNG production. One consequence of the significant increase in supply is that the price of liquid gas is lower than it has been for a long time, apart from the first Covid-19 lockdown.

The situation in the EU is very different. In 2022, 63% of the EU's primary energy requirements had to be imported. The inflation trend in the EU was therefore much more pronounced than in the US. The upward trend in energy prices, particularly in the EU, was further exacerbated by the increasingly stringent sanctions imposed on Russia in the energy sector. Without the numerous circumventions of the sanctions, for example by relabeling Russian oil as Indian oil, energy prices in Europe would have risen even more sharply. Conversely, the eurozone benefited significantly more from the normalization of energy prices until March. The expansion of the sanctions regime to include secondary sanctions could therefore further exacerbate Europe’s energy situation.

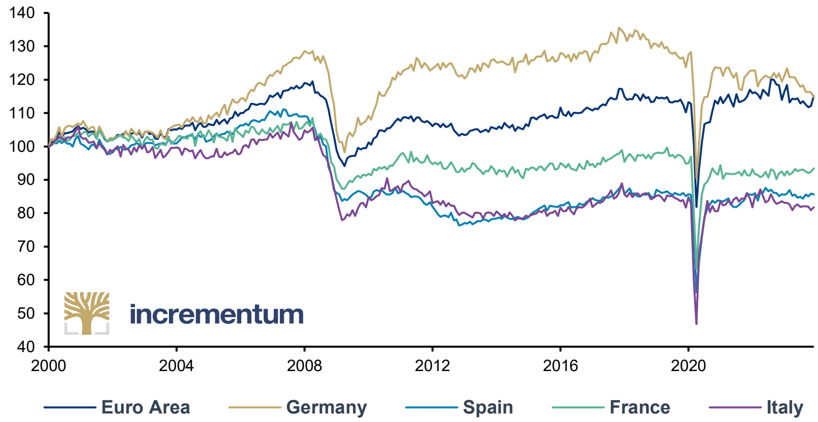
Electricity Prices, in Local Currency, 01/2008–03/2024



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

Energy-intensive German industry in particular is already groaning under the sharp rise in energy prices, which have only been kept in check to some extent by tax relief. For example, taxes and levies on industrial electricity fell from 9.08 cents/kWh in 2021 to just 1.49 cents/kWh this year. As a result, the electricity price for industry is per January 2024 almost 4 cents lower than in 2021, although net costs have risen by around a third since 2021. However, industrial production in the eurozone as a whole has also slipped. As of January 2024, it is already 6% below the 2021 level. In Germany, the drop is more than 12%.

Industrial Production, 100 = 01/2000, 01/2000–12/2023



Source: Eurostat, Incrementum AG

Nominal wage development

In the *In Gold We Trust* report 2022, “Stagflation 2.0”, we addressed the risk of a wage-price spiral. One of the reasons we gave for this was that, due to demographic change, the bargaining power of employees is significantly greater than in previous decades. Everyone is talking about the shortage of skilled workers and, more generally, the shortage of labor.

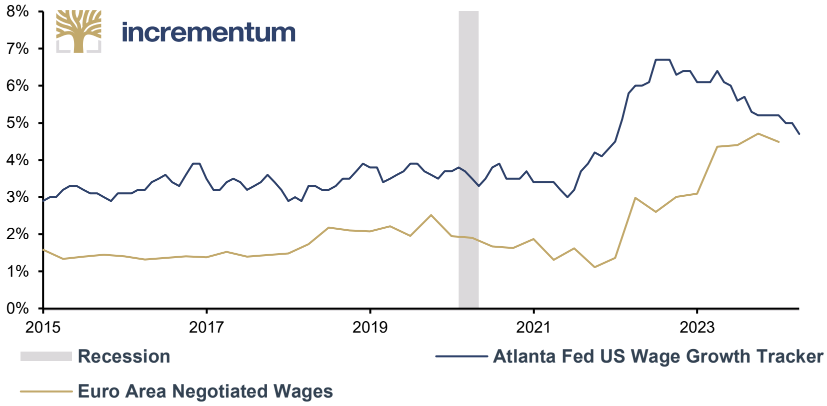
Nothing is easier, or more emotionally satisfying, than blaming high prices on those who charge them, rather than on those who cause them.
Thomas Sowell

It is not the employer who pays the wages. Employers only handle the money. It is the customer who pays the wages.
Henry Ford

Germany, for example, has been plagued by strikes with unusual frequency, the majority of which are in the transportation sector. The Conflict Monitor of the German Economic Institute (Institut der deutschen Wirtschaft [IW]) confirms this impression with the highest value on the escalation scale this millennium. In Germany in particular, the coming wage negotiations are likely to prove difficult once again in view of the significant economic slowdown.

In the US, on the other hand, the economy is still humming along. However, significant (illegal) immigration is likely to have a dampening effect on wage growth for unskilled workers. In Europe, on the other hand, (illegal) immigration is being absorbed to a much greater extent by the social systems. This reduces the pressure on wages in the lower income segment, but places a burden on public budgets.

Atlanta Fed US Wage Growth Tracker and Euro Area Negotiated Wages, 01/2015–03/2024



Source: Federal Reserve Atlanta, Reuters Eikon, Incrementum AG

An interesting phenomenon has been emerging in the US for some time now. The number of retirees is increasing much faster than forecast. At the end of December 2023, the number of retirees was around 2.7 million higher than would have been expected, according to model calculations by the Federal Reserve Bank of St. Louis. Within just six months, the number of surplus pensioners rose by 80%. This wave of early retirements is due to the wealth effect resulting from the booming stock markets, which in turn is further depressing the labor supply.

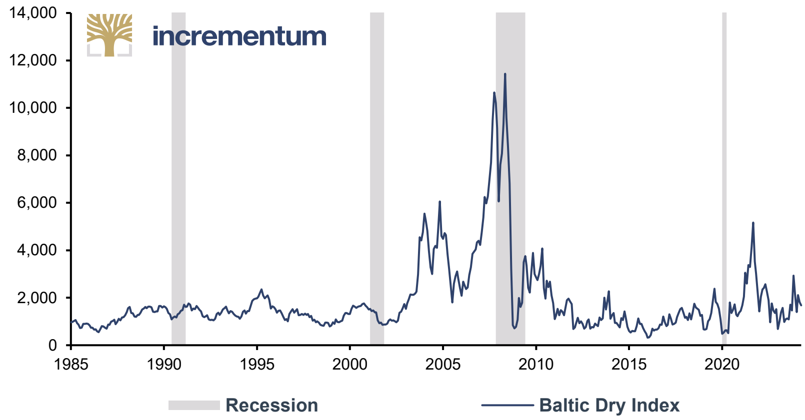
Geopolitical risks

With the start of the war in Ukraine, geopolitics returned to economic policy and, under the term *geoeconomics*, also to economic theory. Chatham House defines the term as "the use of economic tools to advance geopolitical objectives". In this respect, the age of globalization, the idea of pacifying the world and the democratization of states through free trade – "change through trade" – belongs to the past.

Conversely, the use of state power to economically weaken geopolitical rivals in order to achieve political goals is also becoming more important. While the capacity of the Panama Canal has been reduced by drought for several quarters, the Suez Canal, the second critical trade bottleneck, is no longer fully functional. Since November 2023, Yemeni Houthi rebels have been attacking Israeli-bound ships. These attacks on one of the most important lifelines of international trade have led to a sharp drop in freight capacity in the Suez Canal.

Nevertheless, the impact on international trade should remain manageable after an adjustment phase, as the route via the Cape of Good Hope provides an alternative. Only a few companies have had to restrict or stop their production and only temporarily. The higher transportation costs – freight rates from Asia to Europe have risen sharply as of mid-February – should not have any noticeable impact on inflation in view of the low proportion of transportation costs in sales prices and the Suez Canal's manageable share of international trade of no more than 15%. In contrast to the six-day blockade of the Suez Canal as a result of the *Ever Given* accident in March 2021, the global economy is no longer as out of balance as it was in Covid-19 times. The increase in freight rates was nevertheless considerable.

Baltic Dry Index, 01/1985–04/2024



Source: Reuters Eikon, Incrementum AG

The new geopolitical realities are making themselves felt in more and more areas. In mid-March, for example, the Houthi rebels on the one side and China and Russia on the other signed an agreement that guarantees ships from these two countries safe passage through the Red Sea.

Better to have your enemies inside the tent pissing out, than outside the tent pissing in.
Lyndon B. Johnson

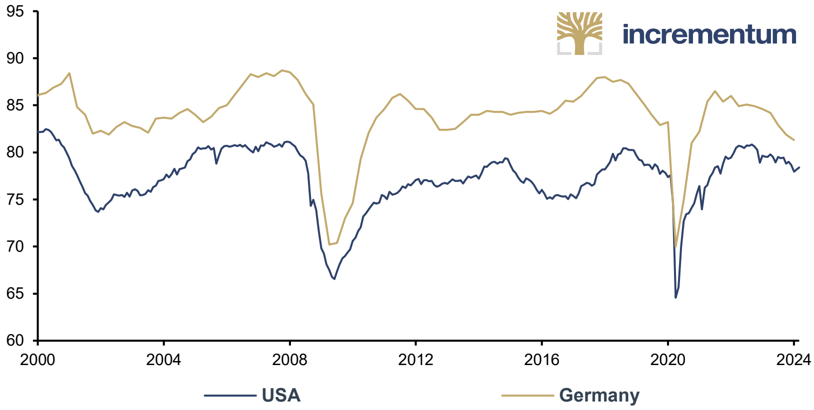
The increasing geopolitical risks and tensions are leading to significantly higher defense spending, especially among European states that have enjoyed a peace dividend so far. Nevertheless, the risks are an enormous burden on national budgets, especially as cuts in the largest area of expenditure, the social sector, are virtually impossible politically. There is therefore a high likelihood of a repeat of the guns and butter policy of the 1960s and its inevitable consequence, higher inflation. Back in the 1960s, it was Lyndon B. Johnson who wanted to build the *Great Society* and wage the Vietnam War at the same time. As a result, the inflation rate rose to over 6% at the end of the 1960s, after having been well below 2% for most of the first half of the 1960s. It will be the same this time, even if the transformation to a *Green Society*, this generation's notion of a Great Society, is to succeed.

The euro is irreversible.
Mario Draghi

Former ECB President and Italian Prime Minister Mario Draghi, who is currently drafting a report on the future of European competitiveness on behalf of EU

Commission President Ursula von der Leyen, estimates the costs of the energy transition at EUR 500bn annually (!), which is roughly equivalent to the GDP of Ireland. In the US, the current estimates are over USD 850bn. To put it bluntly: The politically desired simultaneous construction of wind turbines, electricity grids, electricity storage facilities, railroad lines, and new housing is an economic castle in the air.

Capacity Utilisation, 01/2000–03/2024

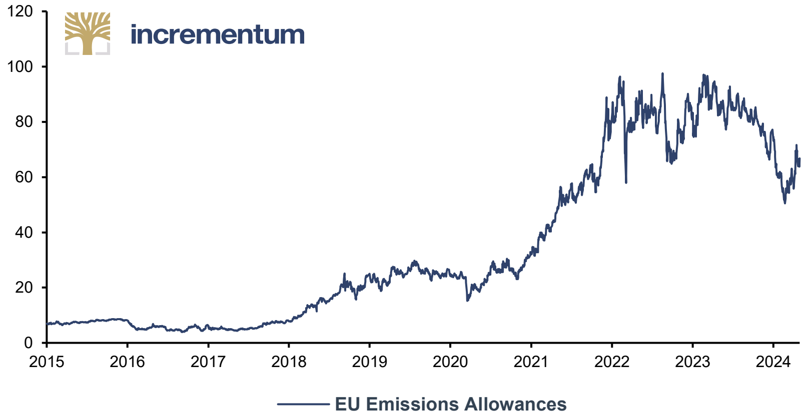


Source: Federal Reserve St. Louis, Reuters Eikon, Incrementum AG

Green inflation through CO_2 pricing and CO_2 certificates

In any case, the CO_2 pricing introduced to combat climate change, whether through a CO_2 tax or certificate trading, has an inflationary effect.

EU Emissions Allowances, in EUR per Tonne of CO2, 01/2015–04/2024



Source: Reuters Eikon, Incrementum AG

Everybody wants to save the earth; nobody wants to help Mom do the dishes.
P. J. O'Rourke

While there is no CO_2 levy at the federal level in the US, the EU has had an emissions trading system (EU ETS) since 2005. This currently covers around 40% of the CO_2 emissions generated in the EU. According to the study "The End of Free EU ETS Rights: The Carbon Bill Reshaping European Industry", if CO_2 emissions remain unchanged, the cost of CO_2 certificates for industry will more than triple to around EUR 6bn by 2030, with large differences depending on the sector: from 2.5 times (pulp and paper industry) to 20 times (aluminum industry). This has a structural inflationary effect. The effects of *greenflation* on the inflation rate are quite noticeable, according to a recent calculation by the ECB.

The same study also calculated the impact of higher CO_2 pricing on GDP, which is expected to be more than 2% lower cumulatively by 2030 than without a CO_2 tax. This leads to the conclusion that carbon pricing not only transforms the economy but also further promotes deindustrialization.

In view of the growing discontent among the population regarding the financial and regulatory consequences of the energy transition (with the farmers' protests in many EU countries as the visible spearhead of this discontent), it is quite possible that the cards will be reshuffled at the EU level after the elections to the EU Parliament from June 6 to 9.

Fiscal situation

After all, postponed is not canceled and a delayed evil often becomes a worse evil a little later. For example, some countries have bought lower inflation rates with higher budget deficits. In order to reduce the gross prices used to calculate inflation, various indirect taxes and levies have been reduced or temporarily (rarely permanently) abolished or price caps have been imposed.

Under current policy and based on this report's assumptions, [government debt relative to GDP] is projected to reach 566 percent by 2097. The projected continuous rise of the debt-to-GDP ratio indicates that current policy is unsustainable.
Financial Report of the United States Government, February 2023

The increase in government debt associated with the higher budget deficits makes it even more difficult to combat inflation in the medium term. On the one hand, the additional demand is driving up prices. On the other hand, the stronger rise in government debt increases the pressure on central banks to lower interest rates again. The greater the fiscal dominance, the more difficult it will be for central banks to keep inflation in check with a tight monetary policy.

In his article "Fiscal Dominance and the Return of Zero-Interest Bank Reserve Requirements", which is well worth reading, Charles W. Calomiris argues that the US will soon reach this point, given a long-term forecast for government debt to rise to 566% by 2097.[32] He is therefore of the opinion that it is not unlikely that, once the tipping point is reached, the US will resort to a special form of inflation tax by no longer paying interest on commercial banks' reserves at the central bank.

The gold standard makes 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

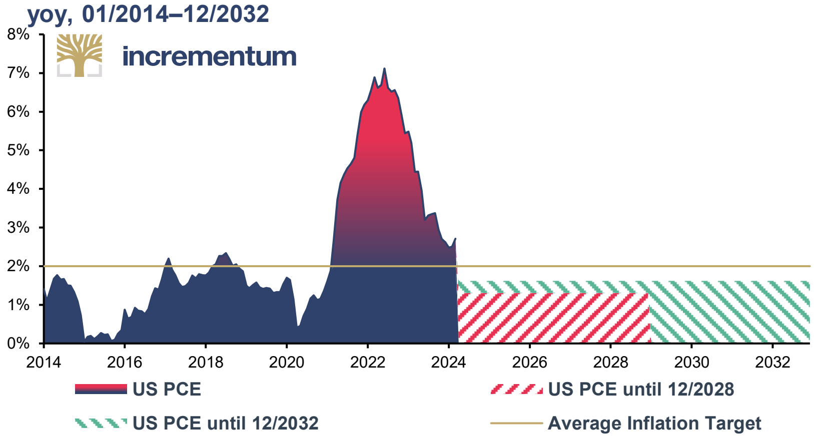
An IMF study entitled "Central Bank Independence and Inflation in Latin America-Through the Lens of History" demonstrates the importance of central bank independence and thus the absence of fiscal dominance for monetary stability. This study examines the relationship between central bank independence and price stability in 17 Latin American countries over the past 100 years. **The results are plain. There is a strong negative correlation between central bank independence and inflation.** The higher the degree of independence, the lower the inflation rate. A stronger degree of independence led to a steady decline in inflation rates, while a deterioration led to an increase in currency devaluation.

The public debate seems to have largely forgotten that the Federal Reserve has been aiming for an average inflation target of 2% since August 27, 2020, although the FOMC has not defined value in detail the time period for calculating the average. Regardless of how long this calculation period "over the long run" is set at,

[32] See also "Status quo of debt dynamics".

the Federal Reserve would now have to aim for an inflation rate of well below 2% for a longer period of time in view of the significant overshooting of the 2% mark in recent quarters. **With a calculation period of 10 years, the average inflation rate would now have to be 1.3% for almost 6 years in order to reach the target average of 2%.** If the Federal Reserve is given 4 more years until the end of 2032, the inflation rate should average 1.6% over these almost 10 years. But this is never mentioned**. In other words, the Federal Reserve's inflation target was – indirectly and implicitly – raised.**

US PCE and US PCE Required to Reach Average Inflation Target, yoy, 01/2014–12/2032



Source: Reuters Eikon, Incrementum AG

Show me the incentive and I'll show you the outcome.
Charlie Munger

An answer to the question why Western industrialized countries underestimated the inflation risk in contrast to some emerging markets is provided in a recent IMF study entitled "Inflated Concerns: Exposure to Past Inflationary Episodes and Preferences for Price Stability". It concludes that those age cohorts that were exposed to higher inflation rates in the past are more concerned about rising prices. **For a large proportion of the population in Western industrialized countries, the wave of inflation in recent quarters was their first formative inflation experience, in stark contrast to the populations in many emerging markets.** The study also confirms that poorer segments of the population are more affected by inflation than richer sections, meaning that inflation has a regressive effect.

Equally revealing is a Dutch study entitled "Lifetime Memories of Inflation: Evidence from Surveys and the Lab". **One result of this study is that the subjects remembered disinflationary periods more keenly than inflationary periods.** However, the stronger the memory of disinflationary phases was, the lower future inflation expectations were.

Conclusion

One of our core theses is that the phase of the *Great Moderation* is finally over. For four decades, inflation rates and bond yields moved structurally downwards until they reached the zero lower bound. The higher level of inflation will be accompanied by higher inflation volatility. **Investors must face up to this new reality, this new playbook.**

This economy depends about as much on economists as the weather does on weather forecasters.
Jean-Paul Kauffmann

And what better illustration of this thesis than the debate on interest rate trends in the first few weeks of this year. At the beginning of the year, forecasts of possible interest rate cuts were outdoing each other. At the time, the probability of an interest rate cut at the Federal Reserve's monetary policy meeting in March was estimated as high as 75%. In the short term, the markets were even pricing in up to 7 interest rate cuts in the current year. Less than 8 weeks later, the Chairman of the Federal Reserve Bank of Richmond, Tom Barkin, did not rule out that there would not be a single interest rate cut in 2024. The pace would be set by the data.

One of the great mistakes of the past 30 years of economic policy has been an excessive belief in the ability to forecast.
Martin Feldstein

However, the ECB's inflation forecasts are also systematically erroneous. As the study "The bias and efficiency of the ECB inflation projections: A state dependent analysis" shows, the ECB always tends to bias its inflation forecasts towards the 2% inflation target. If the inflation rate is above the inflation target, the ECB forecasts the future medium-term inflation rate with a downward bias, and vice versa. In other words, the ECB models are calibrated in such a way that they assume the ECB is actually in a position to steer the inflation rate towards the inflation target. Or to put it another way: The ECB ascribes to itself the ability and power to control the inflation rate. Psychologically, this is understandable, also from the perspective of an institution's will to survive; but it does not have much to do with a factual, sober economic analysis.

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

To sum it up: there is much to suggest that the last mile until the – sustainable – achievement of the 2% inflation target will be very difficult. A second wave of inflation like that in the 1970s is becoming increasingly likely. Finance ministers in particular are likely to find it difficult to tighten the fiscal reins again without risking heavy losses in the next elections, given the new mentality of the fiscal cornucopia, also known as "whatever it takes". The imminent wave of retirements among baby boomers will put a significant strain on budgets in many countries.

The increasing confusion about inflation rates, which has taken hold above all in the US, is also no help in the fight against inflation. One can certainly speak of *a hyperinflation of inflation concepts*. An incomplete list of frequently used inflation indicators now includes CPI headline inflation, CPI core inflation, PCE headline inflation, PCE core inflation, and PCE super core inflation; and these concepts are each available as an annual rate of change, as a monthly rate of change, or as annualized monthly data or rolling 3-month or 6-month averages. The Federal Reserve Bank of Atlanta compares some inflation concepts and their significantly differing inflation rates in its Underlying Inflation Dashboard.

To summarize, the current trial of strength between various disinflationary and inflationary forces can be described as follows:

<u>Short-term disinflationary dynamics</u>
- Quantitative tightening
- Interest rate hikes or postponement of the start of the rate cut cycle
- Partly negative money supply growth

- Global economic slowdown in leading industrialized nations, with the exception of the US

Medium- and long-term disinflationary dynamics
- Capitalism
- Technology and innovation, AI

Short-term inflationary dynamics
- Higher interest burden (especially on the corporate side)
- Nominal wage increases
- Price increase/supply shortage spiral

Medium-term inflationary dynamics
- Wage pressure
- Structural government debt
- Bread-and-butter policy
- Green transformation
- Structural inflation due to greenflation
- Possible adjustment of the inflation target of 2%

Long-term structural inflationary dynamics
- Demographic change and the associated shortage of skilled workers and general labor shortage
- Geopolitical bloc formation
- Increase in energy prices due to expansion of wind and solar energy
- Increasingly expansive fiscal policy

In our view, annual (headline) inflation will remain elevated in both the US and the eurozone in 2024, i.e. above the inflation target of 2%. The significantly higher core inflation rate indicates that the disinflationary momentum stems primarily from energy and food prices. The base effect on energy prices, which depressed the overall inflation rate as a result of the energy price explosion in 2022, came to an end in the US and the eurozone in March, while the dampening effect on food prices on both sides of the Atlantic did not set in until this spring. **Inflation is likely to remain significantly higher, particularly in the services sector.**

The only way you can finance a deficit is by inflation. You cannot raise this amount by genuine borrowing. ... A large government deficit is a certain way to inflation.
Friedrich A. von Hayek

The high budget deficits is one of the undercurrents that is likely to ignite the next wave of inflation. Spending increases in the areas of defense and green transformation are expected to be significant and are highly politically charged. In combination with the high momentum in social spending and the likewise sharply rising interest burden, this results in a toxic fiscal cocktail that the central banks will make more "palatable" through their tendency towards loose monetary policy and the resulting dilution of the real debt burden. Budgetary consolidation is rather unlikely in view of the decline in re-election chances that would result.

That is all that I have to say about that.
Forrest Gump

In short: Even if the economic slowdown has a dampening effect on prices – as is desired and as can be observed as we speak in the euro area – the risk of a renewed acceleration in inflation is significantly higher than that of a permanent and significant undershooting of the inflation target.

Addendum: 25 years of the euro

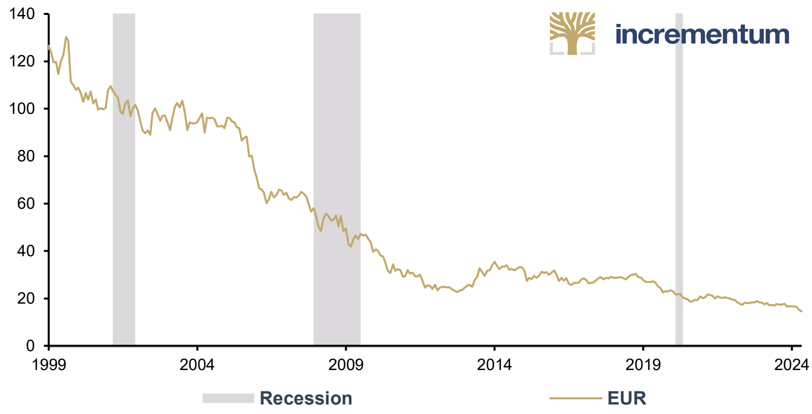
On January 1, 1999, the euro saw the light of day as book money. After decades of discussions and preparations, the euro was finally introduced in two stages: in 1999 as book money, followed by banknotes and coins in 2002.

Truth hurts. Maybe not as much as jumping on a bicycle with the seat missing, but it hurts.
Inspector Frank Drebin

After a quarter of a century of the European single currency, it is time to take stock. The euro has already had to endure a number of crises, from the global financial crisis in 2007/2008 to the sovereign debt crisis in the eurozone from 2010 onwards, the Covid-19 pandemic, and the striking wave of inflation from autumn 2021 onwards. The euro was and is seen as a political instrument, as the single currency is intended to serve as a catalyst for political union. However, only 20 of the 27 EU member states have introduced the euro to date.

In any case, the euro has lost almost 90% of its value against gold in the first quarter of a century of its existence.

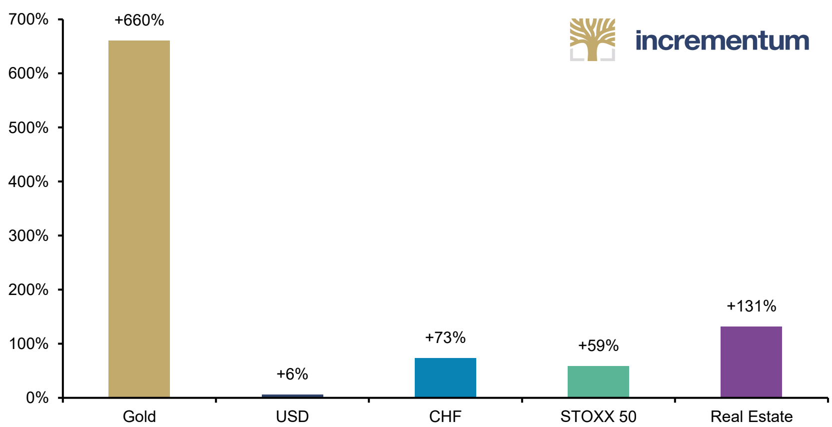
1 EUR in mg of Gold, 01/1999–04/2024



Source: Reuters Eikon, Incrementum AG

The euro has also performed poorly against other assets and currencies.

Assets vs. EUR, 1999–2023



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

The world is going to end in 12 years if we don't address climate change.
Alexandria Ocasio-Cortez, December 2019

The question may be asked whether Christine Lagarde and the ECB Executive Board are not currently getting too bogged down in side issues, dealing with topics that are currently en vogue such as diversity and climate change, and neglecting the actual core task. A search for the term *climate* on the ECB's website returned 626 hits for the past 12 months alone (as of April 30). With the "Amendments to the Monetary Policy Framework" adopted on March 13, 2024, alignment with the EU climate targets has now been officially established as part of the Eurosystem's monetary policy as part of the secondary objective, i.e. supporting the EU's economic policy objectives. At a presentation in Rio de Janeiro, Frank Elderson, who is responsible for climate agendas on the ECB Executive Board, confirmed this orientation.

A few weeks earlier, the very same Frank Elderson had caused a stir. In an article on the *Politico* site entitled "ECB tells staff: If you're not green, you're not wanted", it was reported that Elderson had openly spoken out in favor of not considering job applicants who were not committed to the ECB's climate agenda. This is because the ECB would have to "reprogram" these applicants.

It's not easy being green!
Kermit the Frog

At the international level, according to media reports, the Federal Reserve has rejected calls by the ECB to introduce rules that would oblige commercial banks to disclose their green commitments. **On the other hand, in October 2023, Jerome Powell emphasized at the presentation of "Principles for Climate-Climate-Related Financial Risk Management for Large Financial Institutions" that the Federal Reserve "is not and will not be a 'climate policymaker".**

Christine Lagarde also has a difficult time among her own employees at the ECB headquarters in Frankfurt. More than half rated her presidency as "very poor" or "poor" in a survey conducted by the trade union. Among other things, employees complain that Lagarde deals too much with issues that have nothing to do with monetary policy. Diversity policy was explicitly mentioned. The fact that ECB employees have had to accept real income losses for three years in a row has certainly not boosted Lagarde's popularity, either.

Inflation has clearly increased over the last three quarters and we know how painful that is. But we see it as a hump that will decline over the course of 2022.
Christine Lagarde, December 2021

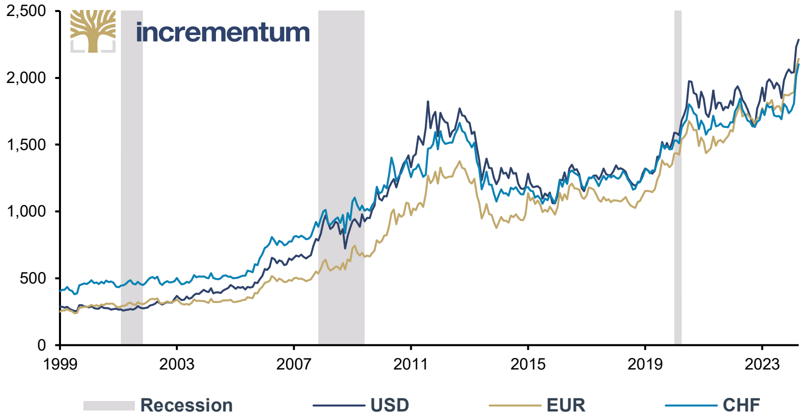
However, it is not only within the ECB that Christine Lagarde's remaining term of office as ECB President is likely to be challenging. Her serious misjudgment of the currently fading wave of inflation has certainly wounded her professional reputation. The fact that in December 2021 she described the inflation wave that is only now coming to an end as a "hump" and said she did not expect an interest rate hike in 2022 – in the end there were four, including two interest rate hikes of 0.75 percentage points and two of 0.50 percentage points – is certainly not a boost for her remaining term of office until the end of October 2027.

And if the majority in the European Parliament shifts significantly towards climate-skeptical and more conservative parties in the EU elections at the beginning of June, she is likely to face more headwinds from both the European Parliament and the newly appointed EU Commission. She will then no longer be able to score as many points in Brussels and Strasbourg with her current, highly politicized agenda. In fact, the opposite is to be expected.

The modern mind dislikes gold because it blurts out unpleasant truths.
Joseph Schumpeter

For the euro, this would probably translate into a weakening of internal and external purchasing power. The gold price in euros, on the other hand, would get a boost. In other words: Gold would continue to do its job and protect gold investors from bad monetary policy.

Gold in USD, EUR, and CHF, 01/1999–04/2024



Source: Reuters Eikon, Incrementum AG

Status Quo of Gold Demand

2023 was another year of blistering central bank buying, together with resilient jewellery consumption, offsetting sizable ETF outflows.

World Gold Council – Gold Demand Trends Full Year 2023

- The last few quarters have unequivocally validated one of our central hypotheses: The trend of gold moving increasingly to the global East is accelerating.
- 2023 saw total gold demand (excluding OTC) of 4,448 tonnes, 5% below a very strong 2022. However, when OTC and stock flows were included, total gold demand was the strongest on record at 4,899t.
- Central bank demand was supported from the global East, especially China (225t) and Singapore (77t). Poland (103t) was also a significant purchaser.
- Bar and coin demand in the West declined significantly, with Germany seeing exceptionally weak demand. China and the Middle East picked up the reins.
- Jewellery demand remained steady, with China and India switching places at the top. China recorded the largest purchases in all three major sectors.
- Jewellery demand, especially in India, is impacted by higher prices, as seen in 2023. 2024 should be no different.
- The trend from the previous quarters continued in Q1/2024. Central bank gold demand set a new record for a first quarter. OTC purchases emerged as a new driver of gold demand and turned overall demand slightly positive.

Now, we turn to the most important developments on the demand side, with our focus on central bank gold demand and investor demand. For more detailed information, we suggest referring to the World Gold Council's Gold Demand Trends, which is always an informative read.

Gold = Low Beta Proxy on Emerging Markets

Small wonder that gold has been prized over all else, in all ages, as a store of value that will survive the travails of life and the ravages of time.
James Blakeley

In recent years, the *In Gold We Trust* report has repeatedly highlighted the importance of emerging economies in driving physical gold demand.[33] Louis-Vincent Gave refers to gold as a "low-beta emerging-market proxy": Gold can be seen as a substitute for emerging-market assets, and gold's price movements tend to be less volatile than the broad emerging-market asset class. Gold acts as this 'proxy' because economic growth in emerging markets leads to higher income levels and a wealthier population.

In many emerging markets, gold – especially gold jewellery – is an intrinsic part of culture and tradition and is purchased widely for festivals and weddings**.** As disposable income levels in emerging markets rise, the demand for gold increases, and this can propel the price of gold to a higher level.

These are not merely anecdotal relationships between income and gold. The World Gold Council, in its 2023 report "India's Gold Market: Reform and Growth," shows that rising income is the most powerful driver of Indian gold demand in the long term, with demand responding more to income than to price. India is now the world's most populous country, with a population of 1.4 billion. India also has a very young population, with a median age of just 27 and a forecast median age below 35 for the next decade. The Indian working-age population is also expected to reach 890 million in 2041, with many of these people buying gold with their disposable income.

In India, one has to plan according to the monsoons.
Roland Joffe

In the short term, the WGC report found that Indian investors use gold as a hedge against inflation. They buy more gold as the price falls, and they buy more gold in years of good monsoons, which boost harvests. The same report found that weddings and festivals are key drivers of gold demand in India.

Courtesy of Hedgeye

To quantify the significant impact of gold demand in Asia: Gold jewellery demand in 2023 totaled 2092 tonnes, of which 562 t was from India, 630 t from China, and 171 t from the Middle East. That's 65% of the total from these three markets. Likewise, of the 1,189 t of gold bar and coin demand in 2023, the three largest components were from China (279 t), India (185 t), and the Middle East (114 t), which together accounted for nearly half of the total.

The people will believe what the media tells them they believe.
George Orwell

While the Western media will claim that the current gold price surge is due to geopolitical tensions and fear of unsustainable US deficits, could it be the case that the gold price is being driven higher not only by these fears but also by the forces of Eastern emerging-market physical demand? We certainly think so.

—
33 *See* "The Rise of Eastern Gold Markets: An Impending Showdown with the West," *In Gold We Trust* report 2023

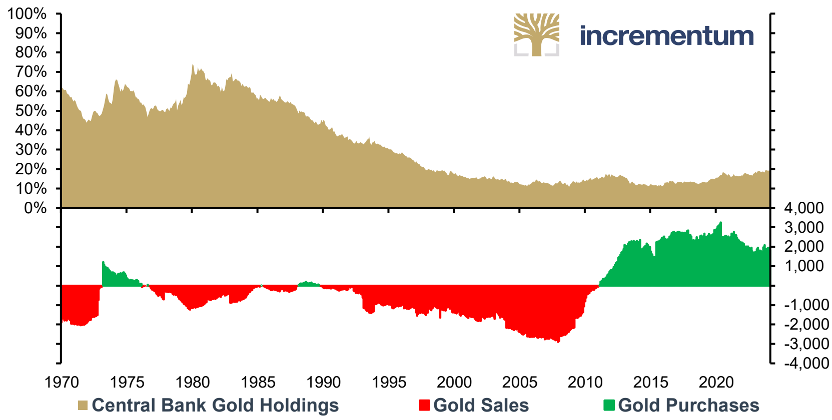
Central Bank Gold Demand

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, a brief history of central bank gold demand post-1971. Central banks spent the better part of the last 50 years as net sellers of gold. The global financial crisis of 2007/08 marked a turning point and gold turned from an unpopular asset into a favorite of central banks. The increase in gold reserves is exclusively attributable to the emerging markets, while the amount of gold held by central banks in industrialized countries has fluctuated slightly around 25,000 tonnes.

This means that in recent years the central banks of the emerging countries have been the dominant marginal investors. **This successive build-up of gold reserves can be seen as an indication of the growing distrust in the current US dollar dominance and the associated global money and credit system.** In addition to economic policy interests, geopolitical considerations and claims to power play a particularly important role here. Countries such as China, Russia, Iran, and Türkiye have repeatedly and more or less openly questioned the prevailing US global economic order in recent years. **This mistrust is also reflected in the continuous build-up of gold reserves.**

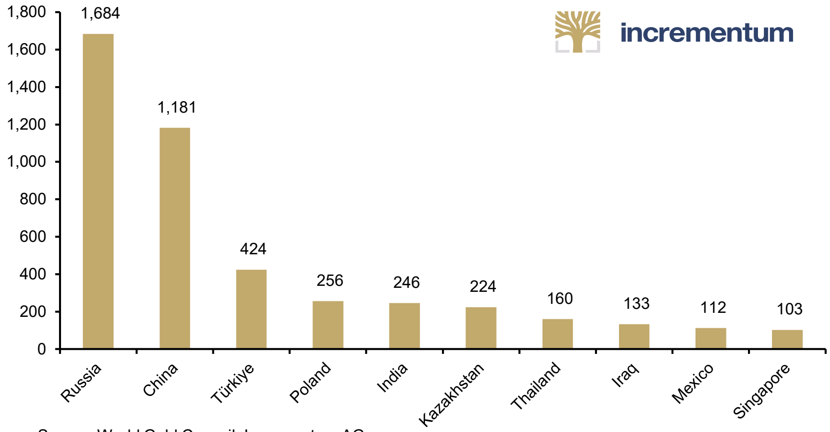
Central Bank Gold Holdings (lhs), as % of Foreign Reserves, and 5 Year Rolling Gold Purchases (rhs), in moz, 01/1970–02/2024



Source: Crescat Capital, Reuters Eikon, Incrementum AG

Emerging-market central banks have been particularly strong buyers since 2010, with Russia, China, and Türkiye being the top buyers, together adding 3,289t or 62% of total central bank purchases during this period. Other prominent buyers include the central banks of Poland, India, Kazakhstan, Thailand and Iraq.

Top 10 Gold Buyers since 2010, in Tonnes, 2010–2023



Source: World Gold Council, Incrementum AG

On the top of Wuthering Heights; where I woke sobbing for joy.
Emily Bronte

Needless to say, sentiment regarding gold among central banks is hovering around all-time highs, with the WGC's *2023 Central Bank Gold Reserves Survey* indicating that 59% of central banks expect to have a more significant proportion of their reserves in gold five years from now. These planned purchases are chiefly motivated by increased buying of domestic gold production, rebalancing to a more preferred strategic level of gold holdings, and financial market concerns, including higher crisis risk and rising inflation.

Recapping the total amount of gold reserves held per country, the US still holds the greatest amount of gold, followed by Germany, Italy and France. However, emerging-market countries have been catching up over the last decade.

Top 20 Countries by Offical Gold Reserves, Q4/2023

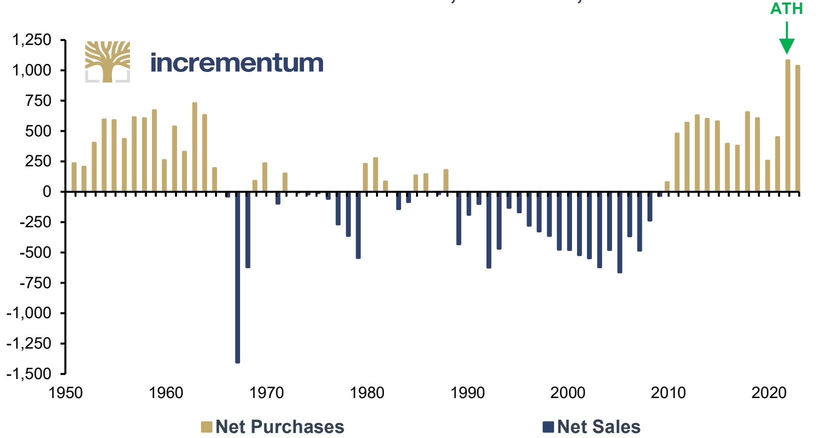
	Tonnes	as % of Global Offical Gold Holdings	as % of Reserve Assets
Euro Area	10,771	29.9%	56.6%
USA	8,133	22.6%	69.9%
Germany	3,353	9.3%	69.1%
Italy	2,452	7.8%	65.9%
France	2,437	6.8%	67.3%
Russia	2,333	6.8%	26.0%
China	2,235	6.5%	4.3%
Switzerland	1,040	6.2%	8.0%
Japan	846	2.9%	4.4%
India	804	2.4%	8.5%
Netherlands	612	2.2%	58.3%
Türkiye	540	1.7%	100.0%
ECB	507	1.5%	35.3%
Taiwan	424	1.4%	4.7%
Portugal	383	1.2%	72.1%
Uzbekistan	371	1.1%	71.4%
Poland	359	1.0%	12.4%
Saudi Arabia	323	1.0%	4.6%
UK	310	0.9%	11.6%
Kazakhstan	294	0.9%	54.4%
IMF	2,814	7.8%	
BIS	197	0.5%	

Source: World Gold Council, Incrementum AG

Gold has reinvented itself many times. It's the original monetary fintech. The 5000 year thing has seen many different chapters, some with official recognition. Last one ended in 1971. Yet unofficially, the official sector are doubling down on gold.
Charlie Morris

Central banks have been the dominant buyers of gold in recent years. According to the World Gold Council (WGC), they bought a total of 1,082t of gold in 2022, which includes reported and unreported purchases, setting a new record. **In 2023, their buying spree continued, with official gold demand only slightly lower than the previous year at 1,037t.** To put this into perspective, total mine production for 2023 came in at 3,644t, which means **central banks bought more than 35% of the total yearly supply**. As a result, the aggregate gold holdings of central banks worldwide reached a new all-time high of 35,927t.

Global Central Bank Gold Purchases, in Tonnes, 1950–2023



Source: World Gold Council, Incrementum AG

The aforementioned "2023 Central Bank Gold Reserves Survey" also shows that interest rates, inflation, and geopolitical instability are the key variables in central bank portfolio management. Gold remains a compelling risk diversifier, particularly for central banks in emerging markets that are susceptible to capital flight risks. Almost two thirds of surveyed central banks expect the share of gold in global reserves to rise from 15% to 16–25% over the next five years. Among the central banks of the emerging market and developing economies (EMDE), the figure is almost 70%.

Central banks and finance ministries do not hold copper, aluminum, or steel supplies, yet they hold gold. The only explanation for central bank gold hoards is the obvious one - gold is money.
Jim Rickards

In 2020, the BIS released an excellent working paper looking at gold allocations in central bank portfolios titled, "What share of gold?" The study focused on how gold affects portfolios formed purely of fixed-income assets, as these more closely resemble in practice those managed by central banks and governments. In a next step, a broad range of risk-return measures over and above the typically applied mean-variance framework was analyzed. **They concluded that the optimal share of gold allocation for central banks is 10% for adequate diversification, especially if the fixed-income share is of a longer duration.**

A report released by ANZ research in February 2024, titled "Central Banks Continue Gold Stockpiling," indicated that global central banks are increasingly diversifying their foreign reserves by accumulating gold as a hedge against geopolitical risks, with their share in annual gold demand nearly tripling to 25–30% in recent years. Recent inflation shocks, rate hikes, and valuation losses on foreign currency reserves have bolstered gold's attractiveness relative to bonds in their portfolios.

Applying a 10% rule to emerging markets, including China and India, yields around 609t of annual purchases by 2030. This estimate excludes unreported purchases, the share of which has increased to more than 50% over the last two years, against the pre-pandemic average of 25%. The ANZ report projects that Russia will increase its share of gold in foreign currency reserves to 30% from the current 26%. **China's contribution will undoubtedly be the most noteworthy, as its current share of gold in foreign currency reserves is low at 4.3%.**

	Gold Purchases (2013–2023), in Tonnes	Gold Share of Reserves		Expected Share of Gold Reserves by 2030	Total Purchases (2024–2030)	Implied Annual Purchase, in Tonnes
		2013	2023			
China	1,181	1.1%	4.3%	10%	2,643	378
Russia	1,298	7.9%	26%	30%	205	29
India	246	7.2%	8.5%	10%	85	12
EM ex-China, Russia, India	1,317	3.6%	7.1%	10%	1331	190
Total	4,042	2.9%	7.4%	13%	4,264	609

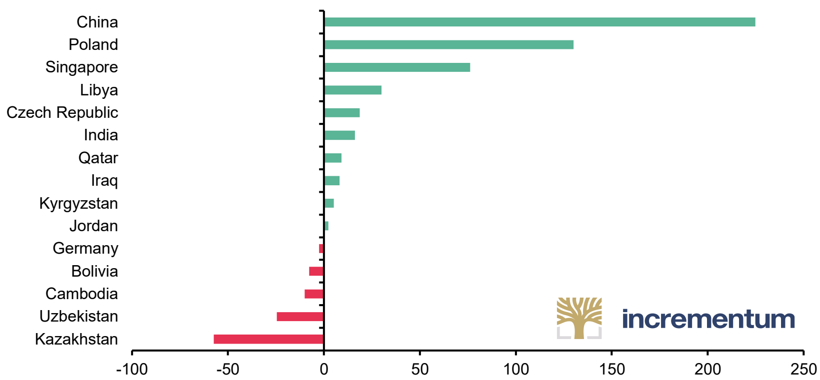
Source: World Gold Council, ANZ Research
Calculations based on the IMF's latest FX reserves data, assuming gold price at USD 2,200 per ounce.

Key developments in 2023

Do not wait for a coronation; the greatest emperors crown themselves.
Robert Greene

The People's Bank of China (PBoC) regained the crown of the largest single gold buyer; it reported a total rise of 225t in its gold reserves over the year. This marks China's biggest single-year purchase since at least 1977, according to IMF records dating back only to that year. As per March, China added another 27t to its gold stock for the 17th consecutive month, for a total now of 2,262t. Jan Nieuwenhuijs has long been following China's covert or undisclosed gold purchases. He estimates that the PBoC bought a total of 735t in 2023 and holds a total of 5,385t, which is 3,108t more than what was officially disclosed as of March 2024.[34]

Central Bank Gold Purchases/Sales, in Tonnes, 2023*



Source: World Gold Council, Incrementum AG
*Data until 12/31/2023, if available

The National Bank of Poland (NBP) increased its gold holdings by 57%, to 359t, making it the second largest buyer of gold in 2023. The bank purchased 130t of gold between April and November, which surpassed its previously stated target of 100t. The President of NBP, Adam Glapiński, aims to increase the share of gold in Poland's international reserves, currently at 12%, to 20%. The Monetary Authority of Singapore (MAS) bought 76t of gold, taking its gold reserves to 230t. The Central Bank of Libya purchased 30t of gold, increasing its total gold reserves to 147t. The Czech National Bank added 19t of gold, the highest annual addition on record since 1993, taking its gold reserves to 31t.

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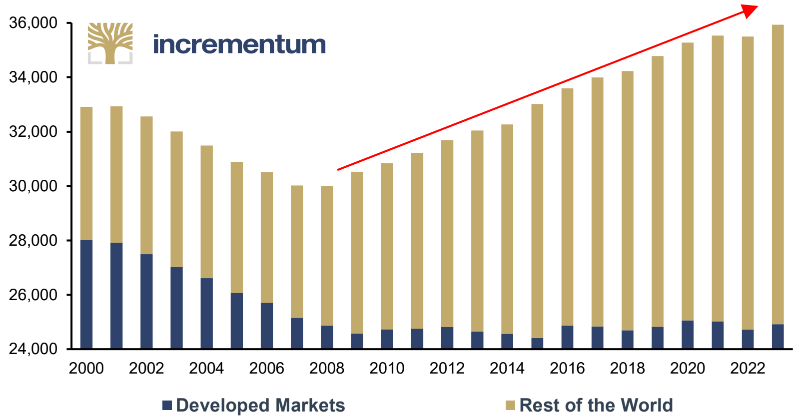
34 *See* "The Rise of Eastern Gold Markets: An Impending Showdown with the West," *In Gold We Trust* report 2023, pp. 204–211

Kazakhstan is the greatest country in the world; all other countries are run by little girls.
Borat

On the sell side, The National Bank of Kazakhstan (57t) and the Central Bank of Uzbekistan (25t) were the largest sellers of gold. Both countries are significant buyers of locally produced gold and actively manage their official gold reserves. Fluctuations between buying and selling by these countries are not unusual.

Global Central Bank Gold Reserves, in Tonnes, Q4/2000–Q4/2023



Source: World Gold Council, Incrementum AG

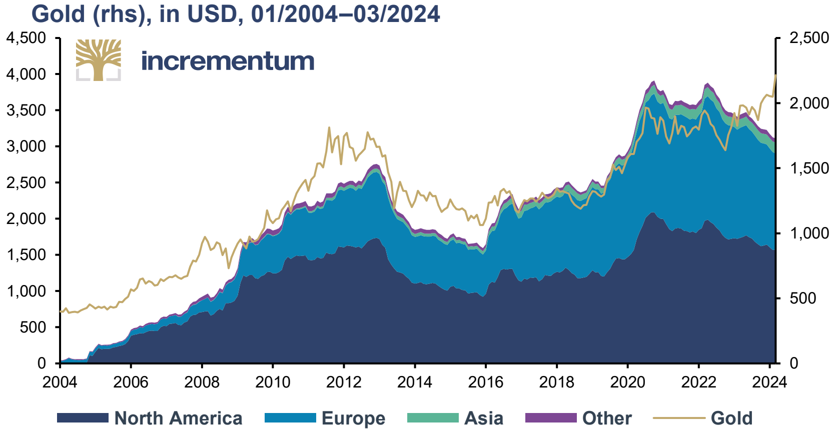
Investor Demand for Gold

We now examine investor demand, mainly focusing on demand for private investment and ETFs.

If the West joins the Chinese gold buying craze, in fear of rate cuts and currency debasement, it will be a perfect storm for gold.
Jan Nieuwenhuijs

Limp, weak, and somewhat disappointing – that's the best way to characterize ETF demand for gold. **Global gold ETFs registered a third consecutive year of net negative demand.** Global holdings dropped by 244t or USD 15bn, which is 15% lower than the already low figure for 2022. Significant declines in Europe (180t) and North America (82t) were somewhat offset by increases in Asian markets, where gold ETF holdings grew by 19t.

Accumulated Gold ETF Holdings by Region (lhs), in Tonnes, and Gold (rhs), in USD, 01/2004–03/2024



Source: World Gold Council, Incrementum AG

In 2023, total bar and coin purchases came in 3% lower than 2022, but the real story is revealed only upon closer examination, when we find that very weak demand in the West was offset by strong demand from Eastern markets, especially China.

It's a great feat for me to have broken my world record.
Usain Bolt

In fact, China saw a record second half of the year in 2023. Factors to take into account are that China was still reeling from its prolonged Covid-19 measures, which negatively affected its 2022 numbers; a strong local gold price due to a depreciating yuan; and weak performance in other domestic Chinese investments, mainly property and equities.

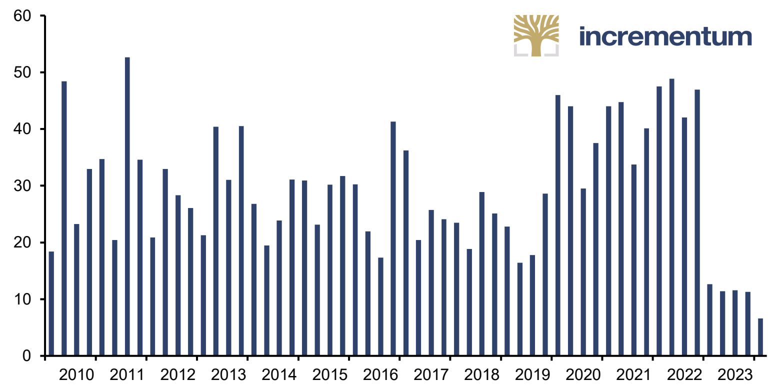
Indian bar and coin investment rebounded by 7% year-on-year, reaching 185t, with a significant surge in Q4/2023, which was 64% above the five-year quarterly average. The Middle East and Türkiye witnessed a record year for gold bar and coin investment, with Turkish demand nearly doubling from 2022, driven by factors like consumer inflation, negative real interest rates, and geopolitical tensions.

I want to just obey the Constitution. The Constitution says only gold and silver can be legal tender.
Ron Paul

Meanwhile, investment demand for gold bar and coin in the US reached 113t, marking the third-highest year ever, with a return to year-on-year growth in Q4/2023 driven by geopolitical tensions and shifting rate-cut expectations. The year also witnessed increased selling activity alongside continued buying interest from individual investors. Worth noting is that Walmart and Costco now sell physical gold in their stores and online, and have reported substantial volume. Costco CFO Richard Galanti mentioned that they sold over USD 100 million of gold in their financial quarter ending November 26, 2023, and that 1-ounce gold bars typically sell out within a few hours after being listed on Costco's website.

In Europe, however, bar and coin investment was again very weak, experiencing a significant decline of 59% to 127t, hitting a 16-year low. This is attributed to factors such as higher interest rates, a cost-of-living crisis, and record gold prices encouraging reselling, particularly in Germany.

German Gold Demand for Bars and Coins, in Tonnes, Q1/2010–Q1/2024



Source: World Gold Council, Incrementum AG

If you can't hold it, you don't own it.
Mike Maloney

Taking a holistic view of these numbers, it seems clear that investors in the West are shunning gold ETFs and rather opting for physical gold. Investor demand from the West seems lackluster in general, given the prevailing macro conditions and high opportunity costs.

Jewellery Demand

Wear a fabulous smile, great jewelry and know that you are totally and utterly in control.
Donatella Versace

Despite new record highs in gold prices in 2023, global jewellery demand remained resilient. Annual consumption of gold jewellery around the world showed little change compared to the previous year, with some regions even experiencing slight increases. China emerged as a significant driver of this growth, bouncing back from a relatively weak 2022. Additionally, pockets of growth were observed in other regions, most notably in Türkiye.

Global Gold Jewellery Demand, 2022–2023

	2022	2023	yoy
World Demand	2,088.9	2,092.6	0%
India	600.6	562.3	-6%
China	570.8	630.2	10%

Source: World Gold Council, Incrementum AG

India and China dominate this sector by a large margin. Despite being one of the largest consumers of gold jewellery, India experienced a decline in demand in terms of tonnage compared to the previous year. **The high prices likely deterred some consumers from purchasing gold jewellery.**

We cannot be more sensitive to pleasure without being more sensitive to pain.
Alan Watts

Going forward, we expect India's jewellery demand to weaken somewhat, due to the considerable price sensitivity.[35] Indian gold demand largely comes from lower-income earners, causing volatility in demand as price changes quickly affect jewellery costs. This high sensitivity is confirmed by various studies, for example in "Elasticities of Gold Demand—An Empirical Analysis Using Cointegration and Error Correction Models", by Maria Immanuvel and Daniel Lazar. The authors found a long-run relationship between gold jewellery demand, price, and income of consumers. Price elasticity is negative, and income elasticity is positive in the long run. That is to say, higher prices weaken gold jewellery demand while income gains support consumption.

China took the top spot in global jewellery demand from India in 2023. In the fourth quarter of 2023, China's gold jewellery consumption rose to 148t, marking a 17% increase compared to the same period the previous year, and contributing to a full-year total of 630t, up by 10% year-on-year. The removal of Covid-19 restrictions in early 2023 set the stage for a revival in gold jewellery consumption, with consumers increasingly turning to gold as a means of value preservation, supported by record-high saving intentions among households as indicated by surveys from the PBoC.

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[35] *See* Steel, James: "Unchartered territory", *HSBC Gold Outlook*, April 10, 2024

Gold beans – cool beans

Source: Bloomberg

One interesting new trend in the Chinese market is the rise in popularity of gold beans. Yes, you read that correctly. Chinese consumers, especially the younger generation, or "Gen Z" (18–24-year-olds), are embracing gold, both as a form of investment and as a symbol of Chinese tradition and heritage. These gold beans can be purchased per gram and have a low barrier to entry into owning gold.

Gold beans are considered a hybrid between investment gold bars/coins and gold jewellery. They are ubiquitous in China and can be purchased everywhere from large gold jewellery stores to online merchants and even from Chinese banks. **Beans are an easy way to own physical gold.** A study by CTF Jewellery Group found that 64% of Gen Z consumers in Mainland China and Hong Kong purchase pure gold jewellery for self-reward.

I don't normally cook, but if I did it probably would be beans, sausage, bacon and eggs. I never really get to eat that to be honest...
Wayne Rooney

Discussion of gold beans has even gone viral on Chinese social media such as Weibo and TikTok, and so too has the proliferation of online gold merchants selling gold beans, who tout them as "investment gold beans" and use the slogan "Saving golden beans is equivalent to investment." However, one of the pitfalls of investing in gold beans is that the repurchase price – for those who want to sell their gold beans to merchants – is lower than the retail price, and even gold jewellery stores that initially promised to exchange gold beans for other gold products often renege on those promises. Another danger is a lack of standards. Fake gold beans have begun to circulate in the marketplace.

A nugget of genuine truth is the ultimate viral hit.
Annalee Newitz

It is not clear whether this Chinese gold bean craze is a temporary trend or a generational shift in investment preferences, but what is clear is that the younger Chinese population is signaling a preference for a tangible physical gold product over financial products and securities. **These accessible and affordable gold beans could act as a gateway for larger purchases of gold bars and gold coins as the Chinese youth move up the income scale.**

The gold bean phenomenon is also further evidence of the stark differences in perceptions of gold between East and West. Asian populations, and even their youth, understand the value of gold and its cultural and symbolic significance. This is in strong contrast to the West, where the vast majority of youth do not even know the current gold price, let alone invest a portion of their monthly incomes in gold.

Conclusion

These trends are continuing – by and large – in Q1/2024. The developments in gold demand in the first three months of the current year can be summarized succinctly.

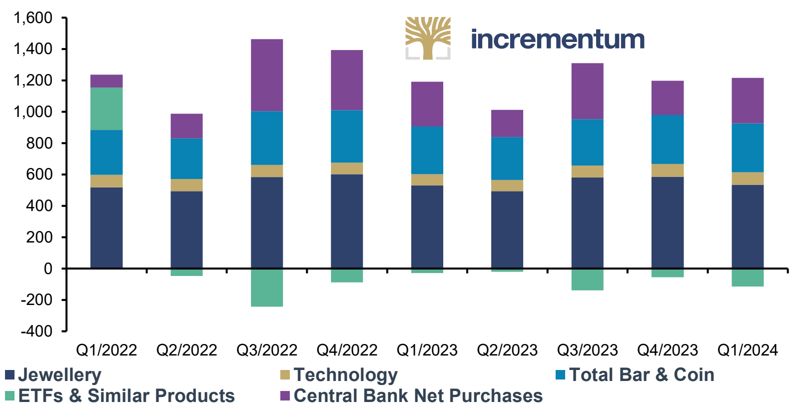
Central bank demand set another record, this time for purchases in a first quarter. Overall, the central banks increased their official gold reserves by a net 290 tonnes. New net purchases of more than 1,000 t are definitely within the realm of possibility as a result of this record for the first quarter, possibly even a new annual record. With Türkiye (30t), China (27t), India (19t), Kazakhstan (16t), and Singapore (7t), it was once again central banks in the East that increased their gold reserves in Q1/2024.

Gold ETFs also confirmed the picture of previous quarters. Global holdings fell once again, by 114 t in Q1/2024. Once again, the decline is attributable to ETFs in the West, while gold ETFs in the East recorded slight inflows. As an exception to the rule, the US also returned to the buying side with small inflows. The slight increase in demand for bars and coins was offset by an equally slight decline in gold jewelry.

Greed and fear are powerful, greed is powerful, fear is more powerful, but there's one thing more powerful than both and that's need.
Jeffrey Gundlach

Another development was noteworthy in Q1/2024, showing that a new wind is blowing on the gold market. Official global demand for gold fell slightly by 5% to 1,102 t in Q1/2024, primarily due to continued outflows from ETFs. However, considering the considerable OTC purchases, total gold demand increased by 3% to 1,238t, making Q1/2024 the strongest first quarter since 2016, according to the WGC. The increase in OTC sales is indeed significant. OTC demand of 136.4t in Q1/2024 corresponds to a year-on-year increase of a whopping 220%. **The coming quarters will show whether OTC demand will become a further driver of gold demand and the gold price.**

Global Gold Demand by Sector, in Tonnes, Q1/2022–Q1/2024



Source: Metals Focus, World Gold Council, Incrementum AG

Gold owners will dominate in a new monetary system.
Clive Thompson

To put the demand developments in a nutshell: China is now clearly dominating the demand side of gold, coming in at number one in all sectors we cover, with Chinese gold demand rising and demand from the West still in decline. We have been covering this phenomenon for several years. It is imperative that gold investors and market participants take these shifts and market changes into account. **The analysis of gold demand also demonstrates that the gold playbook needs to be adjusted.**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Conclusion: Status quo

It is better to be early than too late in recognising the passing of one era… the waning of old investment favourites and the advent of a new era affords new opportunities for the investor.

Thomas Rowe Price, Jr.

- Our look at the status quo clearly shows that we have entered a new era. Following the breakout of the gold price in spring, it is now finally time to outline the key points of the new gold playbook.
- How do you adjust your portfolio to the new gold playbook? Gold and commodities provide a hedge against different types of inflation: industrial metals in the case of a demand-driven inflation, while gold and silver perform best when the credibility of central banks and the banking system is called into question.
- The commodity bull market has been consolidating over the past year. In recent months, however, commodities have picked up momentum again.
- In view of current market sentiment, seasonality and the CoT report, we would not be surprised to see a breather phase lasting several weeks. However, we do not expect a deep correction, as there seems to be a lot of buying interest waiting on the sidelines.
- The 4 *Incrementum* gold ratios - Oktoberfest beer, iPhone, ski ticket and now the US gasoline price - prove that gold not only maintains its purchasing power in the long term, but actually increases it.

After our tour de force through the diverse gold universe, we would like to summarize the most important thoughts once again.

Soccer is constantly evolving. In the past, the libero was the boss in defense; today, players are called upon everywhere on the field.
Franz Beckenbauer

Our look at the status quo in its many facets clearly shows that we have entered a new era. The fact that a new chapter is being opened has already been indicated in recent years at all levels that influence the gold price, including the economic, (geo)political and investment levels. However, after the breakout of the gold price in the spring, it was finally time to outline the key points of the new gold playbook, **just as the era of the classic libero came to an end.**

The heel turn is not just about switching sides; it's about embracing a part of your character that you've always been afraid to show.
Paul Heyman

The decisive change – we have also compared it to a *heel turn* – in the gold market can be seen in the significant transformation of central bank activities in the last few years. The official sector has re-established itself as an influential player on the market. While gold was of secondary importance for a long time, central banks moved into the limelight in 2022 with the acquisition of 1,082 tonnes of gold. In 2023, they continued their increased confidence in gold with similarly high purchases, and this has so far continued in 2024.

Several reasons for this trend deserve a closer look:[36]

- **Portfolio diversification:** Gold serves as an instrument to diversify the portfolio and to reduce the risk associated with holding currencies and debt instruments of other countries.
- **Risk reduction:** Gold is free of credit risk as it is not subject to counterparty risk.
- **International payments:** Gold can be used to cover important imports during balance of payments crises, such as the Asian crisis in 1997/98, or to support the national currency. Gold can also be used as collateral for borrowing.
- **Anonymity:** Countries under sanctions or at risk of sanctions may see gold as an interesting asset that offers a degree of anonymity.
- **Prestige:** There is a tendency, particularly among some central banks in emerging markets, to imitate the gold holdings of OECD countries. This is often done for reasons of national prestige and to strengthen confidence in their own currency.

Our New World Disorder will be characterized by greater volatility, higher inflation and deeper financial repression.
Alexander Chartres

As we explained earlier, we expect increased inflation volatility and at least one more wave of inflation. In many places, however, the idea is beginning to spread that inflation has already been defeated and that we will return to the pleasant times of the Great Moderation.

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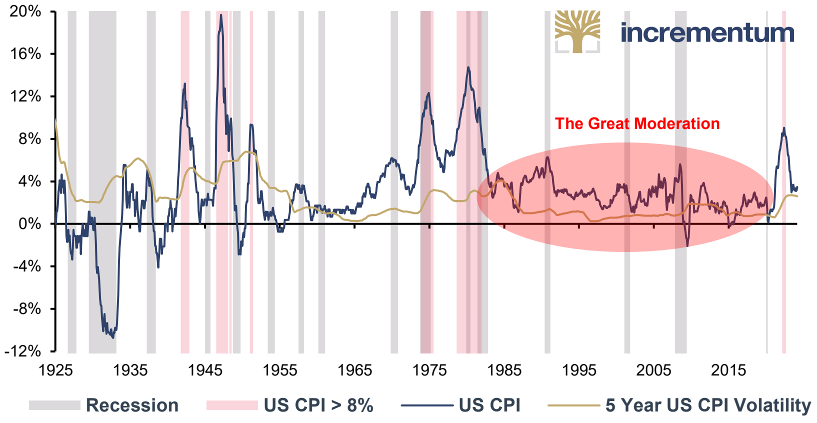
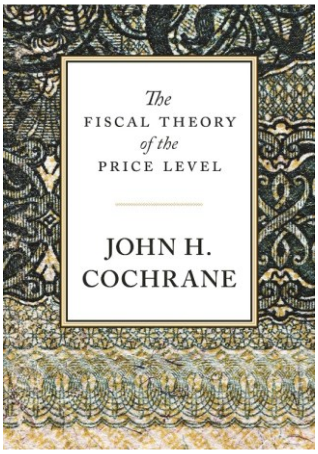
[36] *See* "Uncharted territory", *HSBC Gold Outlook*, April 10, 2024

US CPI, yoy, and 5 Year US CPI Volatility, 01/1925–03/2024



Source: Reuters Eikon, Incrementum AG

Due to increased inflation volatility, the correlation between equities and government bonds is likely to remain positive. This could catch many portfolio managers on the wrong foot, especially if they design their portfolios according to the old playbook.



The so-called *Fiscal Theory of the Price Level* (FTPL) provides arguments in favor of higher inflation volatility and higher inflation rates. An important representative of the FTPL is the renowned US economist John Cochrane. In contrast to monetarism, this relatively new theoretical framework does not explain increased inflation rates on the basis of an excessive expansion of the money supply, but instead blames fiscal policy. Inflation would increase whenever the view prevails that the state will no longer be able to meet its future obligations in full. In technical terms, inflation occurs when the present value of future government expenditure exceeds the present value of future government revenue. In other words: Citizens and investors no longer trust that the state will be able to offset any deficits in the present with surpluses in the future.

We are not going to spend our way to prosperity. Prosperity comes from free markets and free people.
John Cochrane

The practical consequence for investors is that it is not only the absolute level of government debt that is decisive for the assessment of creditworthiness, but also the confidence in the government to be able to repay future debts. This in turn has concrete consequences for the (future) inflation rate. According to the FTPL, the money supply should be viewed in the narrow sense as a perpetual, non-interest-bearing bond.

In view of the current multiple burdens on governments – ageing, immigration, green transformation, rearmament, higher interest rates – it seems obvious that the financing difficulties of many countries will increase, and with them – at least according to the FTPL – inflation.

I'll see you on the dark side of the moon.
Pink Floyd

In line with the FTPL, the German economist Ingo Saurer, in his comprehensive study "The Lessons from 1923 for the Euro Area: Enlightening the Dark Side of (In-)Solvent Central Banks' Balance Sheets", focuses his argument on the fact that the decisive criterion with regard to the risk of hyperinflation is the sheer *quantity* of the money supply, i.e. the liabilities side of the central bank balance sheet; but he also asserts that the *quality* of the assets, i.e. the assets side, should be given greater consideration. The qualitative easing practiced by central banks such as the ECB and the BoJ, i.e. buying up bad assets, would therefore pose a greater risk than the expansion of the money supply through quantitative easing per se. In view of the massive losses incurred by central banks as a result of write-downs, recapitalization of central banks is recommended in light of historical experience.

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

In Sweden, the country's central bank, which is the oldest of its kind, recently requested its recapitalization from the Swedish parliament on the basis of legal requirements. An alternative would be to use the revaluation reserve to cover losses. Price gains from the gold reserves, for example, are recorded in this adjustment item so that they do not have to be distributed as (book) profits. In the ECB balance sheet, the "revaluation accounts" amount to EUR 635.1 billion, in the balance sheet of the Deutsche Bundesbank they are EUR 197.1 billion. Of the total liabilities, the adjustment item in the ECB balance sheet accounts for 9.1%, almost three times as much as equity, while in the balance sheet of the Deutsche Bundesbank it accounts for almost 8% of all liabilities.

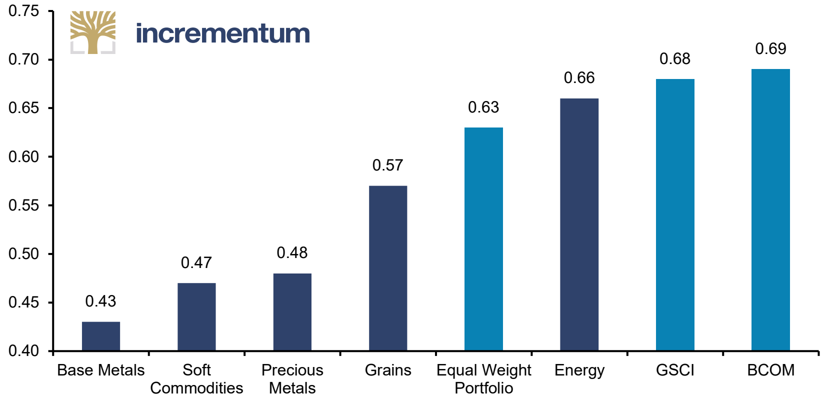
The proposal to capitalize the revaluation accounts for the purpose of recapitalization can also be found in the World Bank's recently published "Gold Investing Handbook for Asset Managers". This report emphasizes that, in principle, the revaluation accounts should not be used to cover losses, as equity would have to absorb further balance sheet losses in the event of falling gold prices once the revaluation accounts have been fully drawn down. However, according to the World Bank, this risk is insignificant for central banks that carry their gold reserves on their balance sheet at the Bretton Woods price of USD 35. **The World Bank is probably alluding to the situation in the US.**

Nevertheless, countries as diverse as Italy in 2002, Lebanon in 2002 and 2007, and the central banks of Curacao and Saint Martin in 2021 have implemented this practice. Finally, the revaluation of Switzerland's gold reserves on May 1, 2000 should also be mentioned. Following the adoption of the new Swiss Federal Constitution in 1999, the remaining gold peg of the Swiss franc was abolished. The revaluation at market price resulted in a one-off extraordinary revaluation gain of CHF 27.7bn. Subsequently, half of the Swiss gold reserves were sold.

Intelligence is the ability to adapt to change.
Stephen Hawking

How do you adapt your portfolio to the new gold playbook? Gold and commodities provide a hedge against different types of inflation. Industrial metals perform best when inflation is driven by demand, the energy sector naturally performs best when inflation is driven by energy costs, while gold and silver perform best when the credibility of central banks and the banking system is called into question.

Inflation Sensitivity, 01/1972–12/2021



Source: Reuters Eikon, Incrementum AG

In our 2019 *In Gold We* Trust *report,* "Gold in the Age of Eroding Trust", we were already more positive than many others about a renaissance in the commodities sector. The commodity bull market consolidated last year. In recent months, however, commodities have picked up momentum again.

A commodity allocation offers investors three potential advantages:

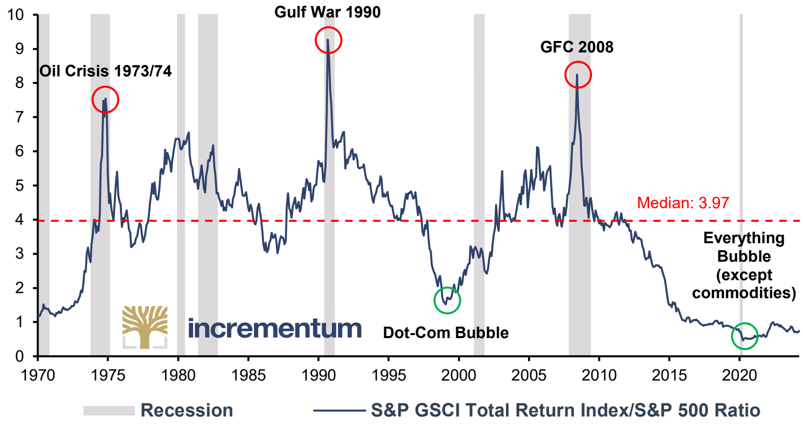
- Positive long-term returns
- Low correlations with equities and bonds
- Hedging against inflationary pressure

Given the evident (geo)political challenges for renewables, a contrarian take: are we moving to a fully electrified world as an end-state, or rather towards a hybrid fossil/ nuclear/ renewables world?
Alpine Macro

Let us now take a look at the development of commodities relative to the stock market. Loyal readers know that the following chart has been by far the most quoted chart in the *In Gold We Trust* reports in recent years.[37] It shows impressively that the relative valuation of commodities compared to equities remains historically extremely cheap and has just stabilized at this historically low level in recent years. Compared to the S&P 500, the *GSCI Commodity Index* (TR) has barely recovered from its low in April 2020. The ratio is currently 0.74, which is miles away from the highs and still well below the long-term median of 3.97.

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

S&P GSCI Total Return Index/S&P 500 Ratio, 01/1971–04/2024

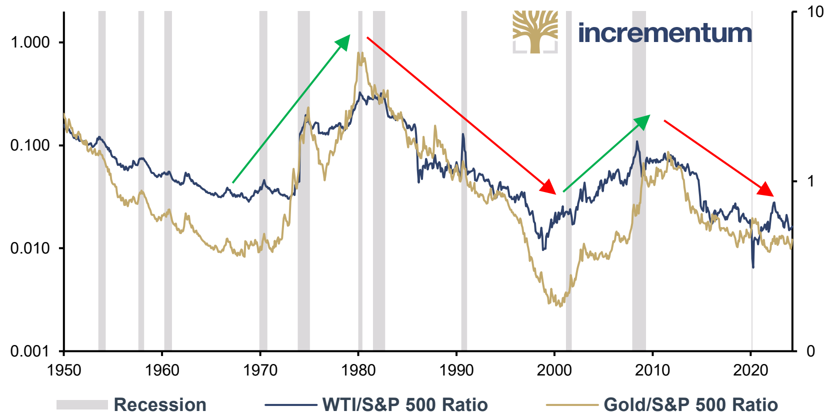


Source: Torsten Dennin, Lynkeus Capital, Reuters Eikon, Incrementum AG

I'm an oil man.
Daniel Plainview

In view of the next chart, we could imagine a phase of outperformance of gold and oil against the S&P 500 over the next few years. The cycles are largely synchronized and the respective turning points are only slightly shifted in time, which reflects the often-high positive correlation between gold and oil price trends.

WTI/S&P 500 Ratio (lhs), and Gold/S&P 500 Ratio (rhs, log), 01/1950–04/2024



Source: Nick Laird, Reuters Eikon, Incrementum AG

Is gold useful or just expensive?
Jack Heath

The sharp rise in the price of gold raises the obvious question: Is gold already too expensive? We hear this question frequently, from clients, journalists and private investors. A comparison of various macro and market indicators at the time of the last two secular all-time highs in 1980 and 2011 with the current situation confirms our positive basic stance. **The gold price still has (plenty of) room to rise.**

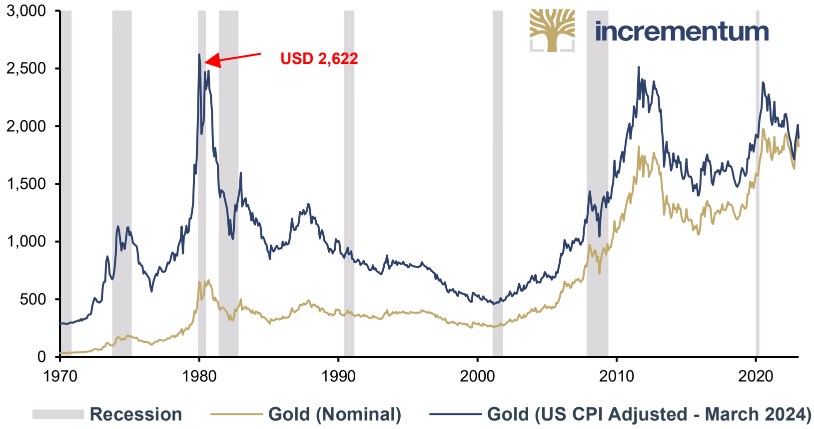
Comparison of Various Macro- and Market Key Figures at Gold ATH in 1980, 2011, and at Present

	1980	2011	Current
Gold Price in USD	835	1,900	2,285
Monetary Base in USD bn	157	2,637	5,883
M3 Supply in USD bn	1,483	9,526	20,767
US Federal Debt in USD bn	863	14,790	34,563
GDP per Capita	12,303	50,056	84,103
US Median House Price in USD	63,700	228,100	417,700
S&P 500	111	1,174	5,036
USD Index	86.1	75.2	106.1

Source: treasury.gov, Federal Reserve St. Louis, Reuters Eikon (as of 04/30/2024), Incrementum AG

And there is another reason why the answer to the question of whether gold is not already too expensive is *no*. Because in an inflation-adjusted analysis based on the official CPI figures, gold has by no means reached its real all-time high of USD 2,622 from 1980.

Gold (Nominal), and Gold (US CPI Adjusted - March 2024), in USD, 01/1971–03/2024

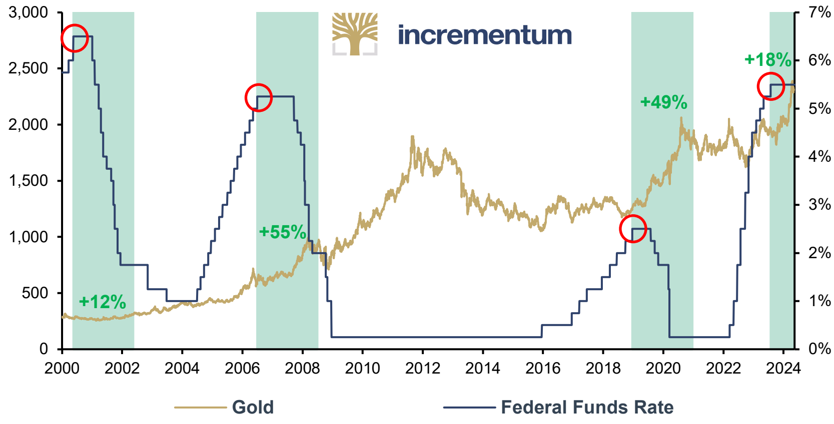


Source: Nick Laird, Reuters Eikon, Incrementum AG

Generally, we remain skeptical regarding the "soft landing" narrative. The USA will enter a recession—sooner rather than later. There are several possible triggers, especially if multiple factors coincide: the deteriorating consumer confidence, particularly due to persistent inflation; the higher interest burden for all debtors; problems in the real estate market; the withdrawal of support from the currently very high budget deficit, or an actual tightening of general liquidity conditions.

The next chart shows that the price of gold tends to have a tailwind in the 24 months following the last interest rate hike. The last interest rate hike took place on July 26, 2023. Compared to the last two cycles, where the gold price increased by 55% and 49%, respectively, the current performance, with an increase of 18%, is still below average. However, it has only been about 10 months since the last interest rate hike.

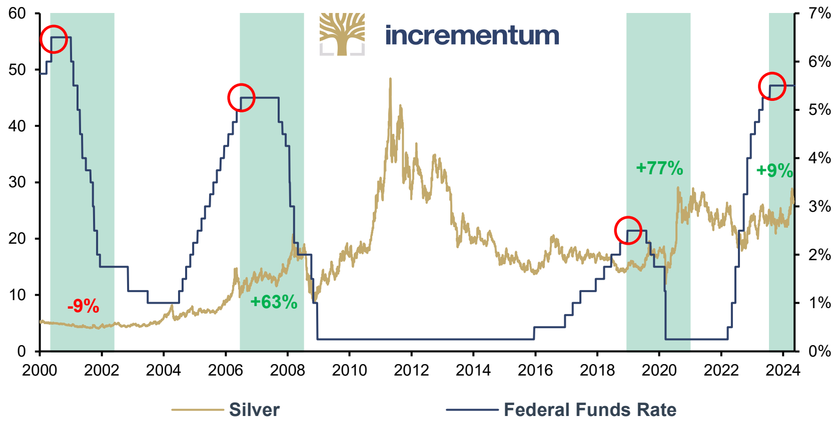
Gold, in USD (lhs), and Federal Funds Rate (rhs), 01/2000–04/2024



Source: Reuters Eikon, Incrementum AG

A similar picture emerges for silver, although the interest rate cut cycle in the early 2000s resulted in a 9% decline. In the last two cycles, the silver price increased by 63% and 77%, respectively, after the last interest rate hike. Since the most recent interest rate cut at the end of July 2023, silver has only risen by around 9% up to the end of April.

Silver, in USD (lhs), and Federal Funds Rate (rhs), 01/2000–04/2024



Source: Reuters Eikon, Incrementum AG

You know where I learned that from? The Don. My old man. The Godfather.
Mario Puzo, The Godfather

Technical analysis is a helpful tool for determining the allocation and timing of investments.[38] An extremely useful theory, which also forms the basis of technical analysis, is the division of a trend into three phases. This theory goes back to Charles Dow, the *godfather of technical analysis*.[39]

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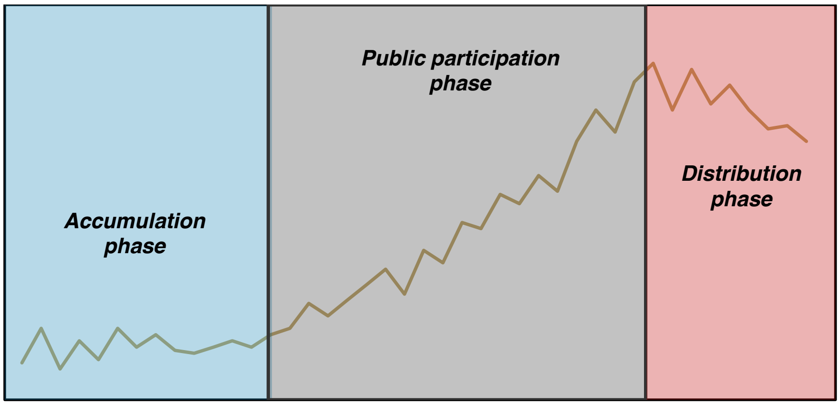
[38] *See* the chapter "Technical analysis" in this *In Gold We Trust* report
[39] *See* Murphy, John J.: Technical Analysis of the Financial Markets, 1999



Dow divides trends into these three phases:

1) Accumulation: In the accumulation phase, the most informed, astute and anti-cyclical investors buy. If the previous trend was downward, brave contrarian investors realize at this point that the market has already discounted the bad news.

2) Public Participation: Prices slowly start to rise. Trend followers show interest, the news improves, and commentators, media, etc. write increasingly optimistic articles. Speculative interest and volumes increase, new products are launched, and analysts' price targets are raised.

3) Distribution: During this last phase, the mania phase, the group of informed investors who accumulated near the low point begin to reduce their positions. Media and analysts outdo each other in raising price targets, and the environment is characterized by a "this time is different" mood.

We are now likely to be in the participation phase, following the breakout from the multi-year consolidation formation. Exceeding the all-time highs should now trigger increased interest from institutional investors and the media.

However, in view of current market sentiment, seasonality and the CoT report, we would not be surprised to see a breather phase lasting several weeks. However, we do not expect a deep correction, as there seems to be a lot of buying interest on the sidelines, leading to a "buy the dips" mentality. In addition, positive seasonality should give gold a tailwind in the second half of the year. **In this regard, both fundamental and technical indicators suggest favorable conditions for the continuation of the bull market.**

In Gold We Trust Extra: Incrementum Gold/Wiesnbier Ratio[40]

Courtesy of *Exithamster*

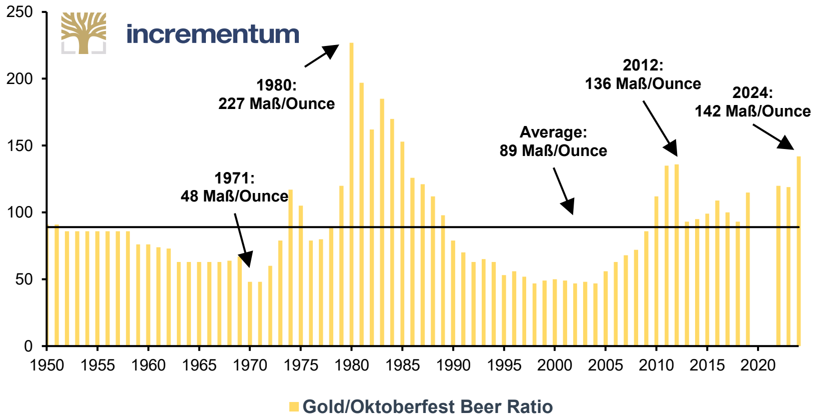
At the upcoming Oktoberfest, which opens on September 21 with the ceremonial beer tapping, it is almost certain that the EUR 15 mark for a Maß of beer will be surpassed. After all, even Oktoberfest beer is not immune to inflation.

Gold investors, however, do not have the slightest reason for gloom or abstinence. **This is because the price of gold in euros has more than made up for the massive price increases of recent years.** Based on the Oktoberfest beer inflation rate of the last 5 years, we estimate a price of EUR 15.70 per Maß[41] at the upcoming Oktoberfest, resulting in an Oktoberfest beer purchasing power of 142 Maß of Oktoberfest beer per ounce of gold. Thus, gold investors will be able to finance 23 more Maß this year compared with last year's 119 Maß. This means that the Oktoberfest beer purchasing power of gold is now well above the 75-year average of 89 Maß.

Alcohol is like Photoshop for real life.
Will Ferrell

So, is gold at the Oktoberfest already excessively overpriced? Not at all, because the current ratio is still well below the absolute high of 227 Maß in 1980. However, the previous interim high of 136 Maß from 2012 has already been exceeded.

Gold/Oktoberfest Beer Ratio, 1950–2024



Source: Statista, Reuters Eikon, Incrementum AG

My beer is not stupid!
Edmund "Mundl" Sackbauer

For beer lovers with an affinity for gold, gold has certainly protected them very well against the massive increase in the price of Oktoberfest beer during the wave of inflation. Those who bet on gold will therefore not be left high and dry at this year's Oktoberfest.

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40 We take a closer look at the gold/Wiesnbier ratio every fall in an *In Gold We Trust special*, when the Theresienwiese is a hive of activity. For last year's In Gold We Trust *special, see* "O'zapft is! The Gold/Oktoberfest Beer Ratio 2023", In Gold We *Trust special*, October 2023

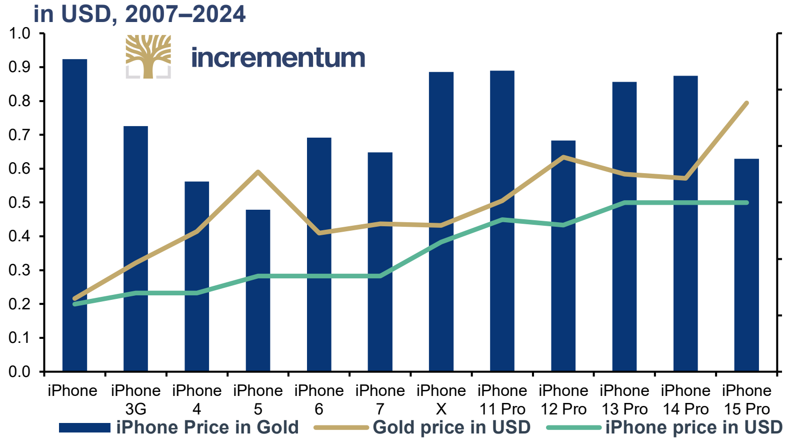
41 We have assumed that the price of a Maß will rise this year by the annual Oktoberfest beer inflation rate of the past 5 years, i.e. by 5.3% . This is significantly higher than the general annual inflation rate of 3.8% for this period.

In Gold We Trust Extra: Incrementum iPhone/Gold Ratio[42]

You realize how old you are when you tell a kid you had phones attached to the wall. They look at you like you just said you rode dinosaurs to the iPhone store.
Chris Rock

"Apple has significantly reduced the price of its latest iPhone!" That would be the headline if you paid for your iPhone with gold. The current model, the *iPhone 15 Pro* with 1 TB of memory, cost just 0.63 ounces of gold in mid-April. This compares to 0.78 ounces when it was launched in fall 2023. A sharp rise in the price of gold combined with constant sales prices results in a sharp fall in iPhone prices measured in gold. The very first iPhone in 2007 cost 0.92 ounces of gold. The average price since 2007 is 0.74 ounces of gold.

Gold/iPhone Ratio (lhs), and iPhone Price and Gold Price (rhs), in USD, 2007–2024



Source: venturebeat.com, Reuters Eikon, Incrementum AG

They've done it again. The new iPhone is thinner, lighter, and faster. Because what we all really need in life is less physical presence and more speed.
Conan O'Brien

As a gold investor, you have to spend significantly less gold on the current iPhone than you did 16 years ago. For this amount of gold, however, you get much more iPhone. The improvements in performance over the past 16 years have indeed been enormous.

	2007	2012	2017	2023	2023 vs. 2007
	iPhone	iPhone 5	iPhone X	iPhone 15 Pro	
Working memory	128 MB	512 MB	4 GB	6 GB	48 x
Memory	16 GB	16 GB	512 GB	1 TB	64 x
Megapixels	2.0	8.0	12.0	48.0	24 x
Cameras	1	2	2	3	3 x
Battery	1150mAh	1440mAh	3174mAh	3650mAh	3.2 x
Resolution	480 x 320 (163 ppi)	640 x 1136 (326 ppi)	2436 x 1125 (458 ppi)	2256X1179 (460 ppi)	2.8 x

In US dollar fiat currency, however, the development looks completely different. In 2007, an iPhone cost USD 599; today, as in the two previous years, it costs USD 1,499 for the respective Pro model with the largest memory. This corresponds to a price increase of 150% compared to the first version of the iPhone or an annual iPhone inflation rate of 5.9%. **As you can see, gold increases its purchasing power even for products that are technologically advanced.**

[42] We will be looking at the iPhone/gold ratio in more detail again this fall in an In *Gold We* Trust special when the new iPhone is unveiled. For last year's premiere of the iPhone/gold ratio, *see* "The iPhone/gold ratio 2023", In Gold *We Trust special*, September 2023

In Gold We Trust Extra: Incrementum Gold/Ski Pass Ratio[43]

Skiing is the only sport where you spend an arm and a leg to break an arm and a leg.

Skiing continues to be an international winter sport par excellence in Austria, an expression of pure joie de vivre. So it is hardly surprising that Wolfgang Ambros composed "Schifoan", one of Austria's unofficial anthems. **But what happens when this pleasure becomes increasingly expensive?**

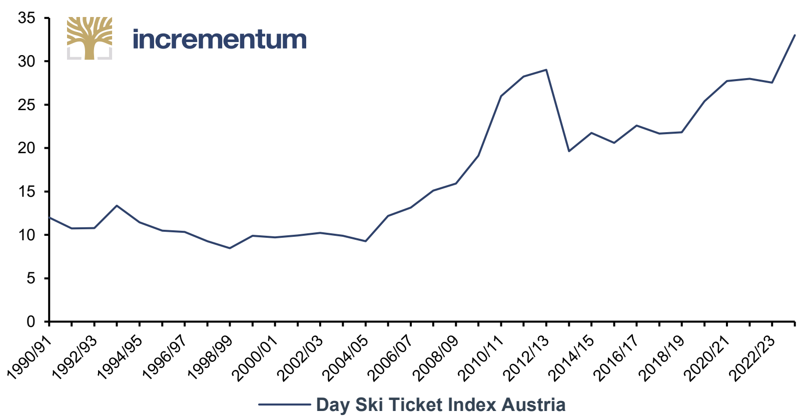
The wave of inflation has also left its mark on the "entrance prices" to Austria's winter wonderland. Prices for an index of 11 ski resorts[44] rose by 10.2% in the past winter season. The year before, it was 8.1%. Since the 1990/91 winter season, ski ticket prices have risen by 3.5% annually, which is more than one percentage point higher than Austria's headline inflation rate in this period.

In skiing, as in life, if you're not going downhill, you're not making progress. Just remember to do it with style!
Arnold Schwarzenegger

Once again, however, it was gold investors who did not get frostbit by these euro price increases. For them, the purchasing power of an ounce of gold in terms of day ski passes remained unchanged. As in 2022/23, in the winter season 2023/24 one ounce of gold purchased 27.6 day tickets. As a result of the gold price rally in spring, this would already be 33 day tickets as of mid-April. Gold investors therefore have every reason to look forward to next winter.

The long-term comparison is also impressive: Only in three winter seasons since 1990 has an ounce of gold bought more day ski tickets than last winter. However, it should not be forgotten that the quality of the ski resorts (lift facilities, mechanical snowmaking, etc.) is improving year on year, meaning that you get much more value for your (gold) money.

Gold/Ski Pass Ratio, 1990/1991–2023/2024



Source: ZUKUNFT SKISPORT, Reuters Eikon, Incrementum AG

[43] The detailed presentation of this ratio, which was published for the first time this year, can be found at "Schifoan – The Gold/Ski Pass Ratio 2024", *In Gold We Trust* Special, January 2024. We will publish an update next winter.
[44] These are the ski resorts of Stubai Glacier, Kitzbühel, Obertauern, Kleinwalsertal, Arlberg, Wilder Kaiser, Sölden, Wagrain/Snow Space, Fiss, Steinplatte and Schmittenhöhe. We would like to thank Günther Aigner, one of the members *of ZUKUNFT SKISPORT,* for the data. Mr. Aigner is one of the most renowned experts and a top speaker on the subject. Further information can be found at www.zukunft-skisport.at.

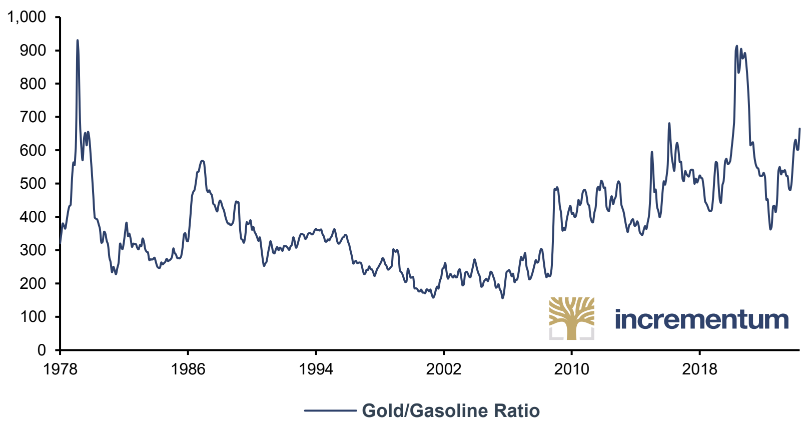
In Gold We Trust Extra: Incrementum Gold/Gasoline Price Ratio 2024[45]

America is a tune. It must be sung together.
Gerald Stanley Lee

Just in time for the 4th of July celebrations, countless US Americans will be getting into their cars to celebrate the holiday with their friends and family, as they do every year. So let's take a look at who's sweating it out at the gas pump, not because of the summer heat but because of the cost of gas. Our new gold/gasoline price ratio shows beyond doubt that gold investors have no reason to stay home for the holiday, even if gasoline prices remain well above average by US standards.

An ounce of gold buys more than 650 gallons of fuel as of mid-April. Only in the late 1970s/early 1980s and in 2020 did drivers get more fuel for their gold for a few months. However, the 2020 high was merely a theoretical value due to the Covid-19 restrictions that dampened demand.

Gold/Gasoline Ratio, 01/1978–04/2024



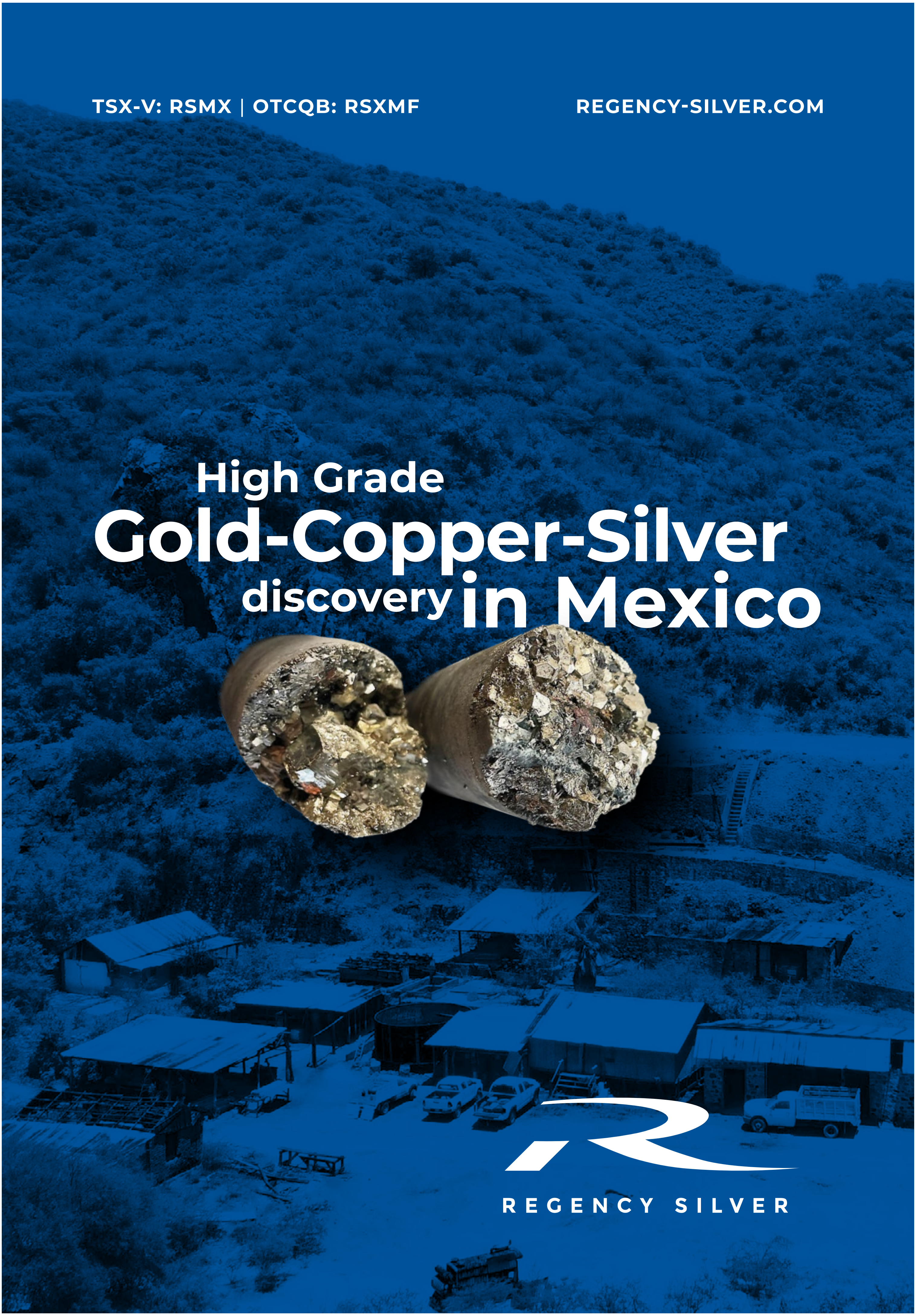
Source: Federal Reserve St. Louis, World Gold Council, Incrementum AG

Nothing but harmony, honesty, industry, and frugality are necessary to make us a great and happy people.
George Washington

For drivers, the decisive factor is not just how many gallons they can buy with an ounce, but how many miles they can drive with a full tank. And the range per ounce of gold depends on the car's fuel economy. Fuel economy has increased significantly in recent decades, by around 50% since 1978. To put it another way: At the end of the 1970s, with one gallon in the average car you could drive just under 17 miles, whereas today it goes almost twice as far. This means that whereas in 1978 fuel worth one ounce of gold let you travel about 5,200 miles, in mid-April this year it was around 23,000 miles – around four and a half times as far and nearly all the way round the Earth!

Whether at the Oktoberfest, in the Apple store, on the ski slopes or at the petrol station – gold investors are better off, as they get a special discount on US dollar or euro prices everywhere.

45 We will publish a detailed account in the second half of June, just in time for the US Independence Day celebrations on July 4.


TSX-V: RSMX | OTCQB: RSXMF
REGENCY-SILVER.COM
High Grade
Gold-Copper-Silver
discovery in Mexico
REGENCY SILVER

Mastering the New Gold Playbook

You are never really playing an opponent. You are playing yourself, your own highest standards, and when you reach your limits, that is real joy.

Arthur Ashe

- **The new rules in the gold market require a rethinking of traditional asset allocation and portfolio construction. Our historical analysis indicates that an optimal gold allocation lies in the range of 14-20%. However, given the current market conditions, an increased allocation of approximately 25% appears appropriate.**

- **The gold price is being driven by new catalysts. As a result, gold is being revalued to resemble the queen in a chess game.**

- **In addition to gold, there are other beneficiaries of the new set of rules: commodities, which have risen from pawns to anchors of stability in the portfolio, and Bitcoin as a new piece that is establishing itself on the playing field.**

- **The risks for equities and bonds have increased. Bonds in particular only play a subordinate role in the new gold playbook: *Anything But Bonds* (ABB) is the new credo.**

- **Following the successful breakout of the gold price, now is the time for *performance gold*. However, mining shares are not a simple buy-and-hold investment and require active management.**

- **An active mining stock strategy using our new, proprietary *Incrementum Active Aurum Signal* is clearly superior to a passive strategy from both a performance and risk perspective.**

A New Set of Rules

We refresh our wardrobes when they go out of style and renovate our kitchens when they're no longer in vogue. When it comes to our knowledge and opinions, though, we tend to stick to our guns.
Adam Grant

Like an experienced chess player who adapts his strategies to his opponent's moves, the investment world requires a similar degree of flexibility. Investors need to be aware that the investment world is not a static terrain. Rather, it resembles the complexity of a 3D chess game.

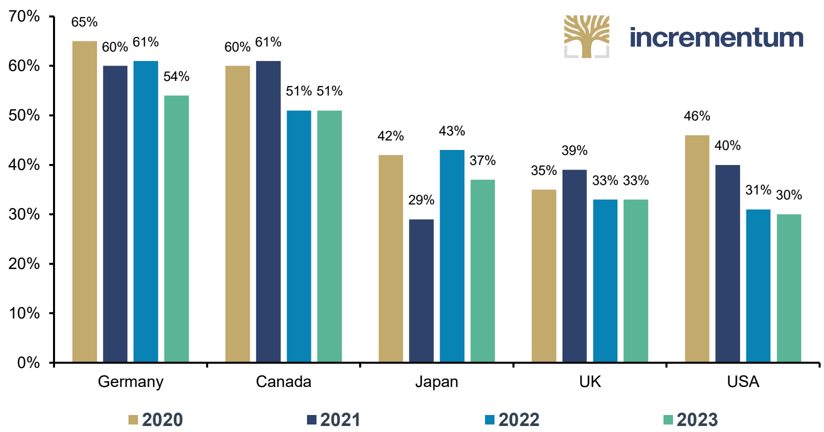
In recent years, there have been several structural changes that have shaped not only the gold market but also the entire financial system and the geopolitical landscape. In our view, these transformations require the development of a new gold playbook.

A game without trust

Trust is the currency of our generation.
Kimbal Musk

Trust is the key: Wherever confidence in the currency or monetary policy wanes, alternatives are sought. We described this dynamic in detail in the *In Gold We Trust* report 2019, "Gold in the Age of Eroding Trust". Since then, confidence levels have not risen again. On the contrary, trust in political decision-makers has continued to decline, particularly due to the wave of inflation in recent years.

Confidence in National Government*, 2020–2023



Source: Gallup, Incrementum AG
*Percentage of people having confidence in national government.

The financial world is increasingly trying to counteract this loss of trust in institutions by increasing its degree of independence.[46] But which assets are truly independent?

Investors should diversify across asset classes, geographies, and sectors to protect against unexpected events that can affect their portfolios.
Harry Markowitz

Shares are highly dependent on economic and political developments. Changes in legislation, political decisions, or international events can have a direct impact on the business environment. In addition, sanctions and regulations can severely affect certain sectors or companies. Bonds, on the other hand, are particularly dependent on interest rate changes, credit risks, and other macroeconomic factors. However, both asset classes are always dependent on respective locations and economic policy decisions and therefore cannot be classified as independent assets.

—
[46] *See* "Gold in the Context of Portfolio Diversification," *In Gold We Trust* report 2016

In the search for alternative investments, commodities have become the focus of attention. Their independence is manifested in the fact that most of them can be found or grown in many parts of the world.
Despite this independence, supplies are frequently distributed unevenly, which poses a risk of them being manipulated by political decisions in the geopolitical power play. Concepts such as re-shoring, near-shoring and friend-shoring have experienced a boom since the outbreak of the war in Ukraine.

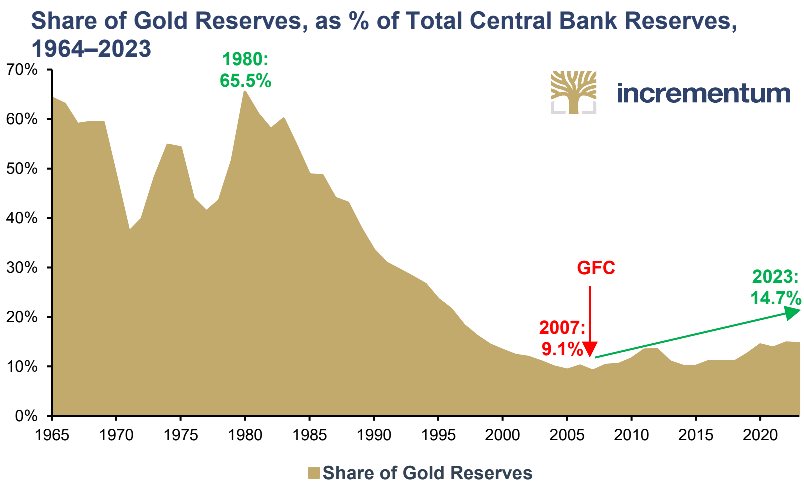
The history of gold is the history of freedom.
Hans Sennholz

Commodities that serve as a store of value have some similarities with consumer commodities but fulfill a different function, which means they are less likely to be misused as a political instrument. The oldest and best-known asset of this type is gold. However, other assets such as silver and Bitcoin also fall into this category. Silver embodies a hybrid form of store of value and consumer commodity, as it has both monetary and technological or industrial uses due to its properties.

Gold and Bitcoin are closely linked conceptually. The value of both assets derives precisely from their nonconfiscability through inflation or as a result of bank failures, or, in the case of Bitcoin, through state expropriation. In a fiat currency system, this is precisely what gives store-of-value assets their value. The recent rises in gold and Bitcoin reflect that the market is valuing the portfolio property of nonconfiscability more highly.

Liberty is meaningless if it is only the liberty to agree with those in power.
Ludwig von Mises

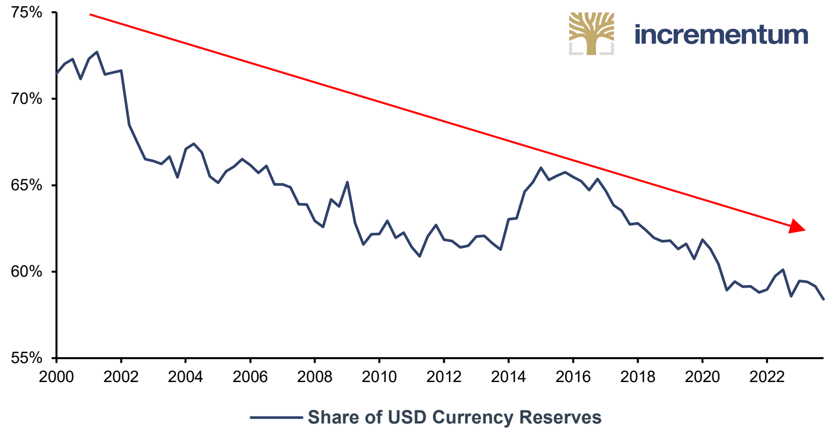
The fact that gold has been in high demand as an independent investment alternative, and not only in the past two years since the outbreak of new geopolitical conflicts or the escalation of old conflicts, is underpinned by the following statistics: **The share of gold in the currency reserves of global central banks has been rising since the 2008/09 financial crisis and, according to IMF and WGC data, stands at just under 15% as of Q4/2023.**



Source: IMF, World Gold Council, Incrementum AG

By comparison, the US dollar's share of global currency reserves fell from 71% in 2000 to 58% in Q4/2023.

Share of USD Currency Reserves, Q1/2000–Q4/2023



Source: IMF, Incrementum AG

Because gold has multiple sources of demand and supply as compared to other major asset classes, its liquidity is less likely to dry up during times of market volatility.
Kamol Alimukhamedov

These figures not only illustrate the trend of increasing diversification of currency reserves but also the continued importance of gold as a currency reserve. In fact, the importance of gold has increased again in recent years, underlining its role as the ultimate hedging vehicle against political and economic uncertainties.

We believe it is likely that gold, as well as other store-of-value assets, will emerge victorious from this confidence game. Because in an environment where trust is on thin ice and the past serves as a basis for trust, many players are turning to gold with its inherent independence.

Fiscal dominance replaces monetary dominance

Points become games become sets become tournaments, and it's all so tightly connected that any point can become the turning point. It reminds me of the way seconds become minutes become hours, and any hour can be our finest. Or darkest. It's our choice.
Andre Agassi

A significant change is crystallizing in the new gold playbook with the shift from once-dominant monetary policy in favor of greater consideration of fiscal policy as a stimulant for the real economy. This transformation has been underway for several years and has gained momentum since the outbreak of the Covid-19 pandemic, when many governments went into a veritable frenzy of fiscal expansion.

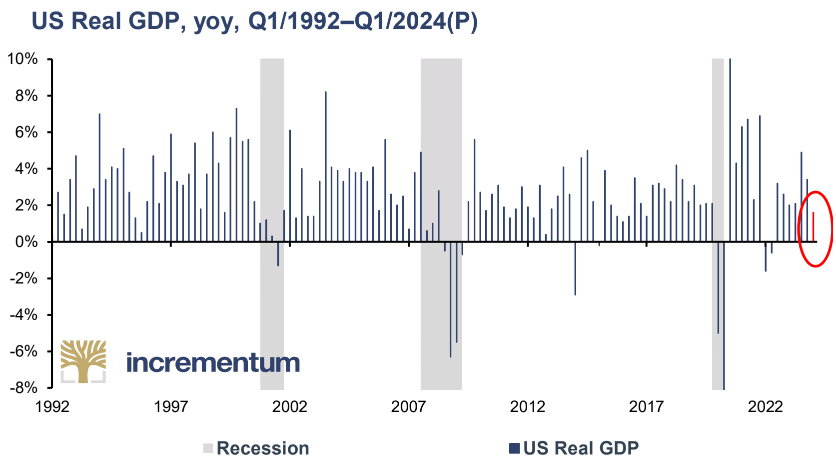
We paid particular attention to this development in our *In Gold We Trust* report 2021, "Monetary Climate Change", when we wrote:

> *Fiscal conservatism has been in retreat for some time. […] But since the onset of the pandemic, governments have embraced their role as big spenders more enthusiastically than ever. Whether it is debt-financed subsidies for "green" companies or permanent transfer payments to ever larger parts of the population, there are more and more goals that are seen as so important that higher debt is accepted for them. […] More and more aspects of the Modern Monetary Theory now seem to be subjected to a practical test.*[47]

In last year's *In Gold We Trust* report 2023, "Showdown", we painted a portrait of an impending monetary policy showdown and the threat of a US recession from Q4/2023 to Q1/2024. However, the US economy has shown little sign of an

[47] "Introduction" *In Gold We Trust* report 2021, p. 6

economic downturn to date, even though the first GDP estimate for Q1/2024 fell well short of expectations at 1.6%.

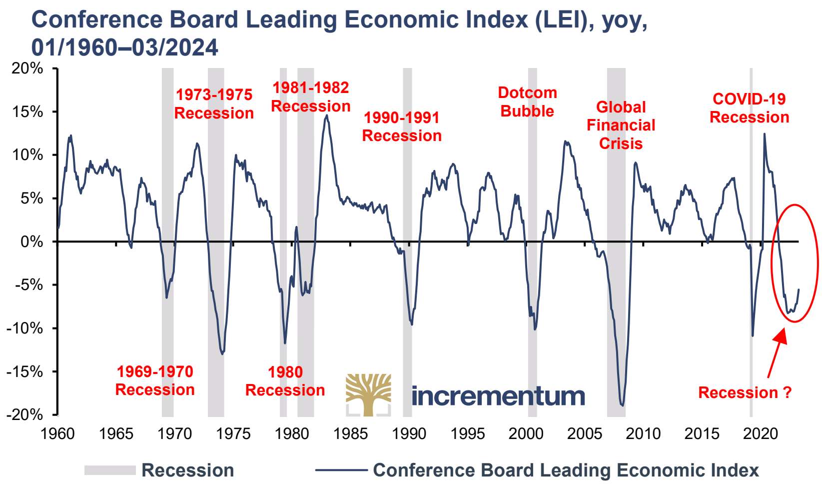


Source: Reuters Eikon, Incrementum AG

The financial crisis happened because no-one could actually say out loud how bad things were.
Mark Ravenhill

Numerous leading indicators show a much gloomier picture ahead for the US economy and the global economy in general. The Leading Economic Index (LEI), the inversion of the yield curve, and the crisis in the regional banking sector in the US played a central role in this economic storm.

The development of the LEI, which summarizes 10 leading indicators and is designed to predict the dynamics of the economy for the coming quarters, has improved slightly in recent months. **A soft landing would mark the end of an impressive series of successes that the LEI has recorded in recent decades: the accurate prediction of all recessions in the US since 1970.**

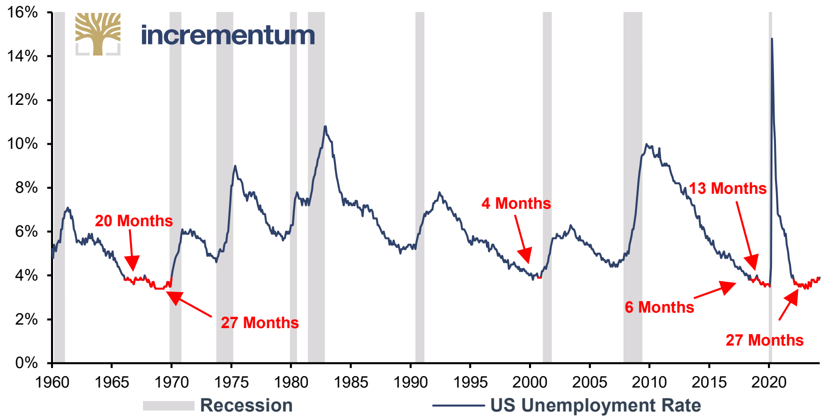


Source: Reuters Eikon, Incrementum AG

The economy is like a rollercoaster: there are ups and downs, but in the end things are moving forward.
Richard Branson

The University of Michigan's Consumer Sentiment Index rose by 17.7 points in two months from November 2023 to 79, the strongest two-month increase since 1991. In April, it stands at 77.2, which is still a robust level. **Meanwhile, the unemployment rate has remained below 4% for 27 consecutive months, the longest period of full employment in more than 50 years.** Historically, there have only been two periods of full employment that lasted at least as long: in the 1960s with 27 consecutive months and in the early 1950s with 35 months.

US Unemployment Rate, 01/1960–04/2024



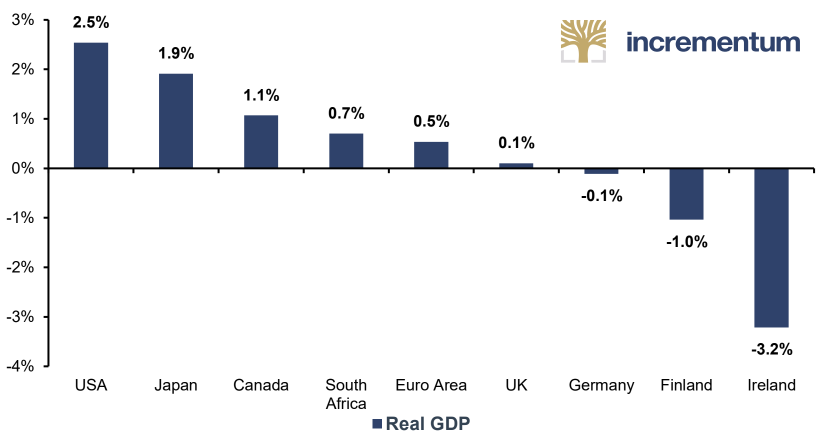
Source: Reuters Eikon, Incrementum AG

Please don't call me arrogant, but I'm European champion and I think I'm a special one.
Jose Mourinho

In Europe, the collapse of the banking institution Credit Suisse was painted as a storm sign on the economic horizon. In view of these gloomy cloud formations of negative economic signs and early warning indicators, which in the past predicted the approach of a recession with remarkable accuracy, the expectation of such an economic storm front was obvious, and the wisdom of these words from Shakespeare became increasingly apparent: "So foul a sky clears not without a storm."

While many European countries did indeed find themselves under the predicted recession clouds and some are still lingering in them, the storm passed the US economy by in 2023.

Real GDP Across Countries, yoy, 2023



Source: Reuters Eikon, Incrementum AG

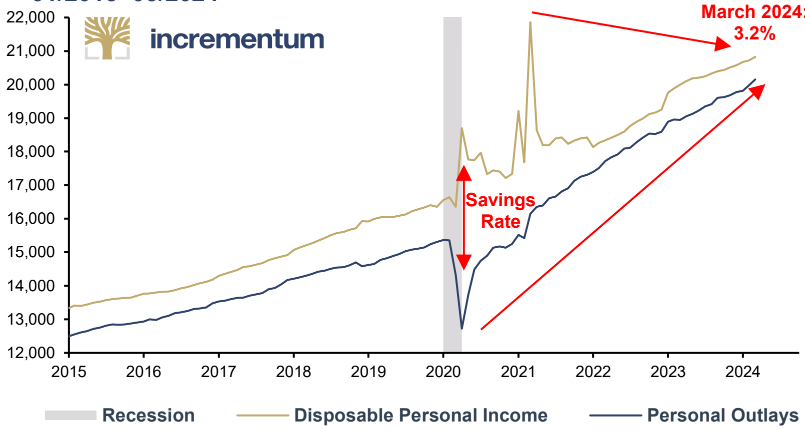
You can change your wife, your politics, your religion, but never, never can you change your favorite football team.
David Beckham

So, were our analyses wrong? The fact is that the US is still not in a recession. This forecast was off the mark, just like David Beckham's legendary penalty kick in the 2004 European Championship quarter-final. We believe the main reason for this is the diminishing but still intact effects of the fiscal stimulus packages, which have kept US consumption at a high level so far.

Savings and investment are indissolubly linked. It is impossible to encourage one and discourage the other.
Murray Rothbard

The next chart illustrates this fiscal effect. While the disposable income of private households skyrocketed in the wake of the stimulus packages, spending plummeted at the same time as a result of the Covid-19 measures and general uncertainty. A consumption gap therefore formed, which has led to a significant increase in the savings rate. At the moment, however, the savings rate is back at a low level of 3.2%. **Before the Covid-19 pandemic, the last time such a low figure was recorded was in September 2008. In other words, US consumers, especially those in the lower income segment, are increasingly living from hand to mouth.**

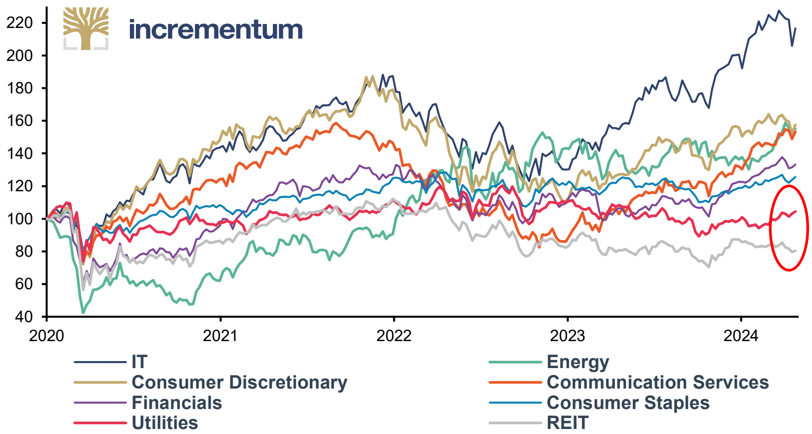
Disposable Personal Income, and Personal Outlays, in USD bn, 01/2015–03/2024



Source: Reuters Eikon, Incrementum AG

The fact that fiscal dominance is currently playing a key role for the US economy is also reflected in the sector performance of the S&P 500. While consumer-driven sectors are currently chasing all-time highs, interest rate-sensitive and defensive sectors are well below their highs.

MSCI USA Sector Performance, in USD, 01/2020–04/2024

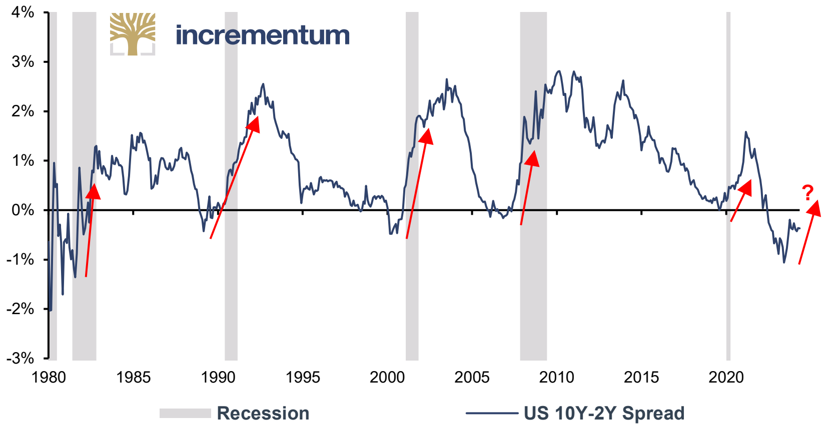


Source: Reuters Eikon, Incrementum AG

The future's in the air /
Can feel it everywhere /
Blowing with the wind of change.
Scorpions

Nevertheless, we should bear in mind that, historically, a recession in the US only occurred when the inversion of the yield curve normalized. In this respect, we do not dare to claim that the recession clouds have finally passed. The current euphoria, which has mutated from a *hard landing* to a *soft landing* and finally to a *nevercession* scenario, with interest rates rising sharply, is reminiscent of the deceptive mood before the 2007 financial crisis.

US 10Y-2Y Spread, 01/1980–04/2024



Source: Reuters Eikon, Incrementum AG

In this respect, our recession forecasts last year may have been a little premature - at least for the US. But regardless of this, many economies around the world went through a recession last year or remain in the shadow of recession clouds. **If the recession does not materialize, it would be a notable example of the increasing dominance of fiscal policy measures - and thus a fundamental change in the new gold playbook.**

Structural inflation – a game changer

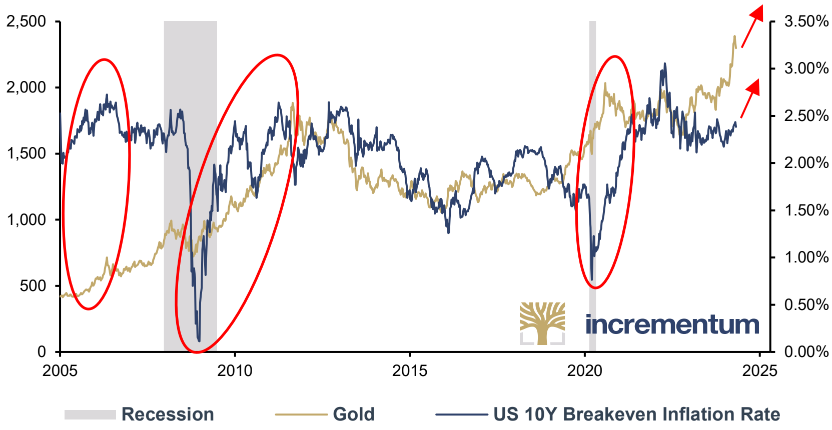
There is another aspect to consider in the new gold playbook: structurally higher inflation rates, which go hand in hand with increased inflation volatility. These will most likely accompany us in the coming years.

Inflation is like ketchup: once it's out of the bottle, it's hard to control.
Harold Wilson

Rising interest rates, as we have seen recently, lead on the one hand to a reduction in lending by banks, which has a disinflationary effect. On the other hand, however, they also lead to an increase in budget deficits and debt due to rising interest payments. The central bank's instruments hence lose their effectiveness when debts are high and rising. The source of inflation no longer lies primarily in bank lending and monetary policy, but increasingly in the government's high deficits. **This creates a structurally pro-inflationary environment**.

In principle, the gold price reacts positively to rising inflation expectations, as was seen in 2020. The renewed pricing in of a higher inflation risk would therefore, in all likelihood, once again have a positive effect on the gold price.

Gold (lhs), in USD, and US 10Y Breakeven Inflation Rate (rhs), 01/2005–04/2024



Source: Reuters Eikon, Incrementum AG

I'm not the same person I was when I bit that guy's ear off.
Mike Tyson

After 40 years of the Great Moderation, a stubbornly higher inflation level seems like an unexpected move that brings back memories of the legendary boxing match between Mike Tyson and James "Buster" Douglas in 1990, when the supposed underdog defeated the seemingly invincible champion in a complete surprise.

The war on inflation is over. We won, at very little cost.
Paul Krugman

The wave of inflation in 2022 could have been just a foretaste of what is to come. Fiscal policy is increasingly driving monetary policy. However, the fact that the narrative of victory over inflation currently prevails, particularly in the eurozone, shows that we could be surprised by the same train twice.

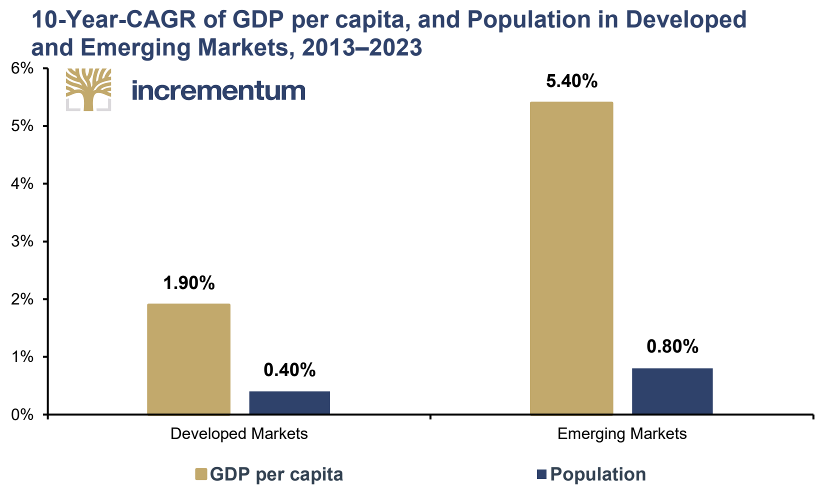
Confrontational team constellations

A study by Baur and Smales, which is well worth reading, makes it clear that geopolitical risks and a geopolitical threat situation have a greater influence on gold price formation than actual actions. Gold purchases that correlate in time with political, economic or financial shocks strengthen this thesis and demonstrate the close link between geopolitical events and fluctuations in the gold market, as Arslanalp, Eichengreen and Simpson-Bell show in their study.

The study results are supported by the behavior of the gold price in the recent past following the outbreak of war in Ukraine and the resurgence of conflict in the Middle East, when the gold price rose sharply in both cases, at least briefly.

Source: Reuters Eikon, Incrementum AG

In addition to the monetary policy dispute between East and West, demographic change is contributing to the center of demand for gold moving ever further east.[48]



Source: worldeconomics.com, Incrementum AG

One of the factors that contributes to the great confidence in the United States dollar which exists the world over is undoubtedly our large gold holdings… [I]nternational agreement is not a substitute for gold.
Harry Dexter White

In 2024, around 50% of global GDP will be generated by emerging markets. A quarter of a century ago, this figure was just 19%. The development of GDP per capita, which grew by an average of around 5.4% per year from 2013-2023, shows that this growth is not only due to the population doubling in the emerging markets. The increasing economic potential of the growing population is therefore a key driver that is likely to result in continued robust demand for gold in the coming years.

In addition to increasing consumer demand, gold will also be in greater demand from the central banks of the emerging economies in Asia. While the industrialized nations have at best left their gold reserves unchanged since the Bretton Woods era, emerging markets are consistently pursuing an increase in their gold holdings. This strategic reorientation reflects not only the historical experience of phases of financial repression but also the desire for more independent currency reserves.

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[48] See the chapter "Enter the Dragon: De-dollarization and the Eastern Push for Gold" in this In *Gold We Trust report* as well as "The Rise of Eastern Gold Markets: An Impending Showdown with the West," *In Gold We Trust* report 2023

Indeed, nonfinancial factors such as historical experience can play a crucial role in explaining central banks' gold holdings. For example, Monnet and Puy have shown how institutional habits from the time of the gold standard influenced monetary policy decisions even decades later. In other words, **the collective memory of a central bank has a decisive influence on the level of gold reserves.**

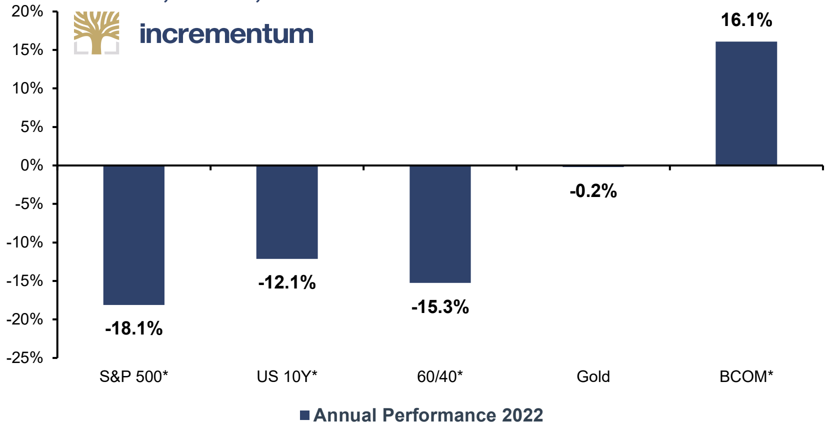
The game is getting rougher

A new era is dawning in the investment world, accompanied by a change in the interest rate paradigm. The days of ultra-loose monetary policy and the ongoing zero interest rate policy are a thing of the past – at least for the time being.

I'm a defender. I'm there to defend.
Ruben Dias

A structurally higher interest rate level requires a reassessment of investment strategies and an adjustment of portfolios. We have recently witnessed the substantial vulnerability of equities and bonds in an environment of higher inflation and rising interest rates. Commodities, on the other hand, proved to be an excellent hedge in 2022, with a positive annual performance of 16.1%, while adding gold to the portfolio would have at least significantly cushioned the losses.

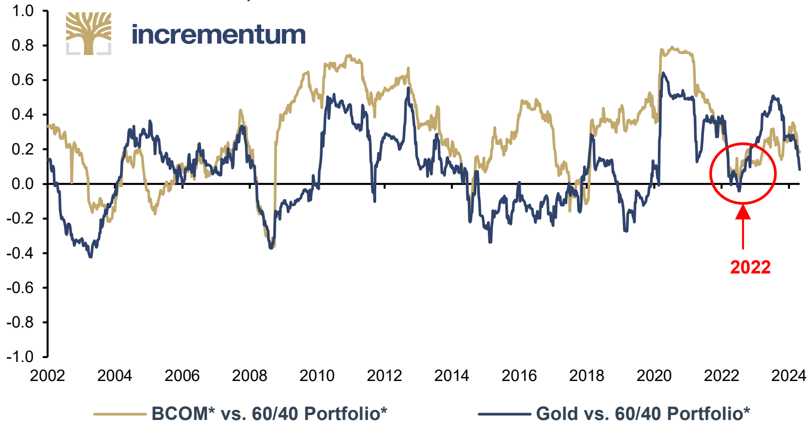
Annual Performance, S&P 500*, US 10Y*, 60/40 Portfolio*, Gold, and BCOM*, in USD, 2022



Source: Reuters Eikon, Incrementum AG
*Total Return

Gold and commodities hold a significant advantage over equities and bonds because they carry no default risk, a benefit that is particularly relevant in the current challenging interest rate environment. The integration of alternative asset classes therefore offers sensible diversification of the portfolio, not least due to their low correlation to equities.

Rolling 1-Year-Correlation of BCOM* vs. 60/40 Portfolio*, and Gold vs. 60/40 Portfolio*, 01/2002–04/2024



Source: Reuters Eikon, Incrementum AG
*Total Return

The New Gold Playbook in Action

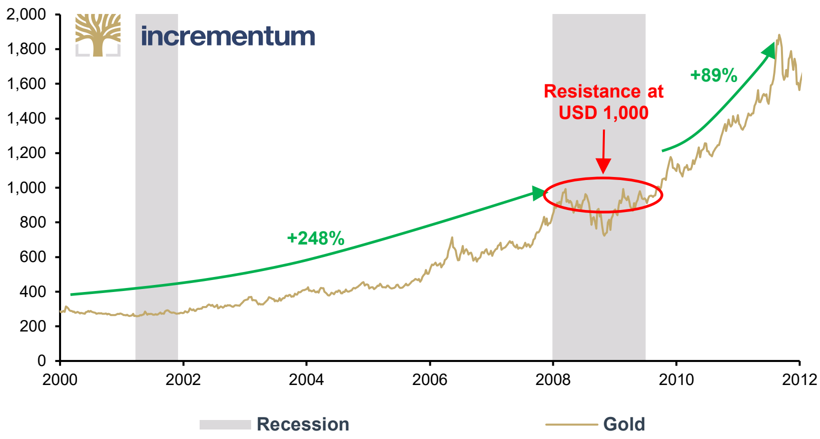
The Heisenberg principle - If something is closely observed, the odds are it is going to be altered in the process. The more a price pattern is observed by speculators the more prone you have false signals; the more the market is a product of nonspeculative activity, the greater the significance of technical breakout.
Bruce Kovner

In the following, we will address the question of what a portfolio based on the new gold playbook can look like and what role gold plays in it. We specifically address the various forms of investment on the gold market, outline specific investment strategies, and present our new proprietary *Incrementum Active Aurum Signal.*

For both private and institutional investors, gold accounts for only a very small proportion of their portfolios, if any at all. This is despite the fact that gold has impressively confirmed its renaissance with its breakout above the USD 2,000 mark.

The current scenario is reminiscent of the exciting beginnings of the previous bull market at the start of this millennium when gold broke through the symbolically momentous USD 1,000 mark. After a brief phase of correction during the recession following the global financial crisis in 2007/08, gold began a rapid advance towards the USD 2,000 mark. Although this target could not yet be reached in September 2011, we saw the enormous potential that was unleashed as soon as momentum picked up.

Gold, in USD, 01/2000–01/2012

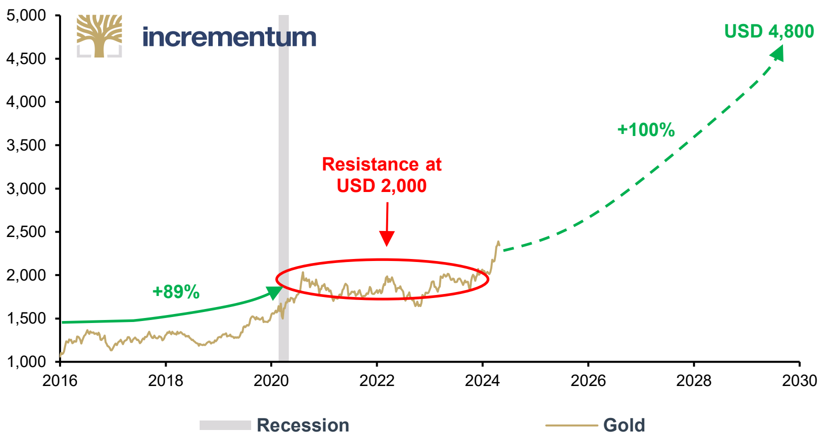


Source: Reuters Eikon, Incrementum AG

Omnia mutantur, nihil interit. Everything changes, nothing perishes.
Ovid

Now that gold has sustainably exceeded the USD 2,000 mark, new targets are coming into focus. In our view, it is not unrealistic for gold to go on a run similar to that at the beginning of the millennium and roughly double from its current level of around USD 2,400 over the next few years, which would correspond to our decade target of USD 4,800, which we presented in the *In Gold We Trust* report 2020, "The Dawning of a Golden Decade".

Gold, in USD, 01/2016–01/2030



Source: Reuters Eikon, Incrementum AG

The golden queen

Unlike other games, chess is transparent. Nothing is hidden from the opponent except the intention of the player.
Savielly Tartakower

The history of chess spans centuries and is characterized by a series of adaptations and evolutions. One of the most revolutionary changes, considered a turning point in the history of chess, was undoubtedly the introduction of the queen in its modern form towards the end of the 15th century – a development known as *the birth of the modern queen* or *mad queen's chess*.

In the new gold playbook, gold undergoes a similar metamorphosis, which raises the significance and versatility of the yellow metal to a higher level and ultimately leads to its transformation into the *golden queen* and thus the most important piece on the investment chessboard. This transformation increases complexity and opens up new strategic dimensions. However, the scope of this transformation does not end with gold but also encompasses the other assets in a portfolio, which now act in different roles.

Nothing in the world is as powerful as an idea whose time has come.
Victor Hugo

Up to now, gold has usually been part of a portfolio as a reliable defense strategy. But just as a skilled chess player does not use the queen exclusively for defense, gold should not be viewed solely with defensive intent. In view of the recent breakout in the gold price, one should familiarize oneself with the golden queen as an offensive piece.

Time for *performance gold?*

The current gold bull market may still be in its early stages. It therefore makes sense to consider *performance gold* as an additional position in the portfolio. We define performance gold as assets that have the potential to benefit disproportionately from a rising gold price.

Courtesy of Hedgeye

Attentive readers of our gold studies will already be familiar with the distinction between *safe-haven gold* in the form of physical gold on the one hand and *performance gold* such as (gold) mining shares and mining funds on the other. While the primary aim of acquiring physical gold, i.e. safe-haven gold, is to preserve purchasing power, gold and silver shares and mining funds, i.e. performance gold, offer the possibility of capital growth and cash flows, for example in the form of dividend payments.

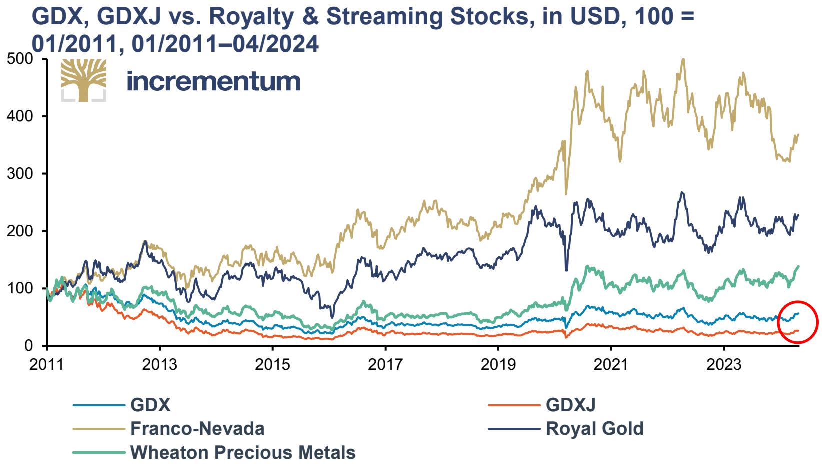
	Safe-haven gold	Performance gold
Goal	Monetary insurance	Return and capital growth
Purpose	Hedging against uncertainties, inflation or other risks	Benefit from rising gold prices and achieve a higher (risk-adjusted) portfolio performance
Shape	Physical (coins or bars)	Gold mining stocks, gold funds or derivative financial instruments
Costs	Acquisition costs (spread), costs for safe custody	Transaction and management fees
Advantages	Physical store of value, no counterparty risk	Potentially high returns, source of income (dividends, option premiums), flexibility
Disadvantages	No productive capital	Higher volatility, default / company risks
Investment character	Preservation of capital and protection against loss of value in times of economic turbulence	More speculative investment that targets price movements and market trends

Source: Incrementum AG

Diversification is the only free lunch in investing.
Harry Markowitz

A proven approach to risk diversification in a portfolio of mining stocks is to focus on royalty and streaming companies. These companies are characterized by the fact that they do not operate their own mines, but instead focus on acquiring rights to future gold and silver production.[49] Their business model has proven to be extremely robust, as they generate solid returns during upturns and are often more resilient than the overall market during downturns.

[49] *See* "Royalty & Streaming Companies: An Excellent Way of Investing in Gold," *In Gold We Trust* report 2022



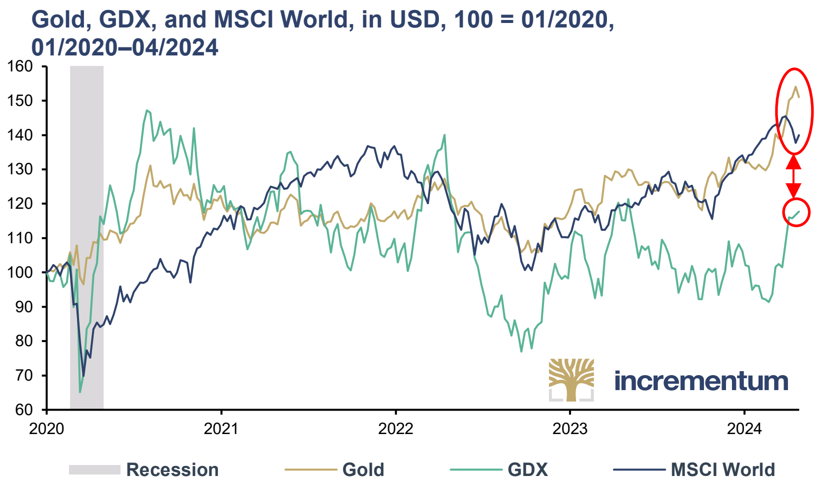
Source: Reuters Eikon, Incrementum AG

What doesn't kill me makes me stronger.
Friedrich Nietzsche

Thanks to their business model, which allows them to benefit from rising gold and silver prices without bearing the direct operational risks of mines, they exhibit remarkable anti-fragility. Their diversified portfolios reduce the risk of individual mines and thus offer a better hedge against market fluctuations.

Gold mining stocks: Active management is required!

The fact is that the gold mining sector is currently about as unpopular with investors as Marco Materazzi has been with every neutral soccer fan since the 2006 World Cup final.[50] A look at the performance of the past few years immediately shows why this is the case.



Source: Reuters Eikon, Incrementum AG

Success is no accident. It is hard work, perseverance, learning, studying, sacrifice and most of all, love of what you are doing or learning to do.
Pelé

And from a long-term perspective, buy-and-hold investors in gold mining stocks have also experienced a relatively lackluster and emotionally unsatisfying rollercoaster ride, like the German soccer club Bayer 04 Leverkusen, which was awarded the thankless title of "Vizekusen" after having lost the Champions League final, the German Cup final, and the national title in the very last game of the season. **In this respect, it is perhaps a good omen that Leverkusen won the German championship this season for the first time in history.**

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[50] Although, one of the authors of this report is known for his fondness for Italian defensive players, which explains his sympathy for Marco Materazzi.

Gold Miners* and Gold (lhs), 100 = 01/1970, and Performance (Gold vs Gold Miners) (rhs), 01/1970–12/2023

Source: Nick Laird, Reuters Eikon, Incrementum AG
*1970–2000 BGMI, 2000–Today HUI

You only get a shot at a motherlode once, you better be ready for it.
Parker Schnabel

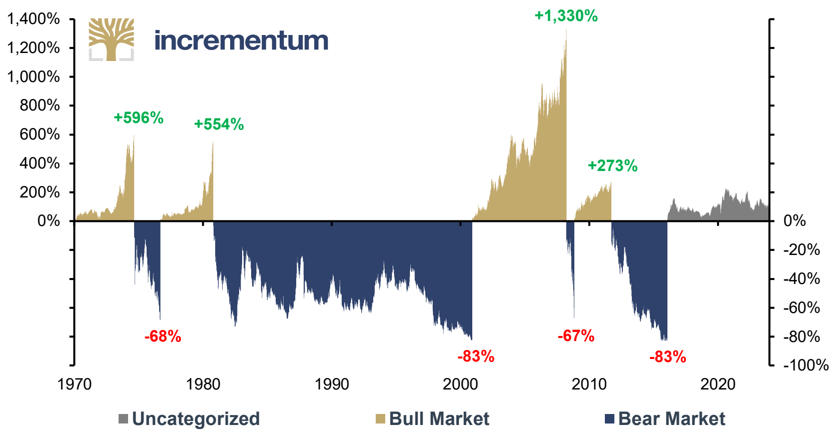
For us, one thing is clear: Gold mining shares are not a buy-and-hold investment. The assumption that they are merely a direct lever on the gold price is an oversimplification. In fact, every type of mining company – whether explorers, developers, producers, or royalty companies – harbors a multitude of risks that can have a significant impact on the share price beyond the pure gold price.

Asset value	Alpha potential	Leverage to gold	Diversification	Exploration Upside	Dividend	Operational risk	Capex risk	Worst Case Scenario Protection
Exploration (shares)								
Development (shares)								
Mid Cap (shares)								
Large Cap (shares)								
Royalty & Streaming (shares)								
ETFs (shares)								
ETFs (precious metals)								
Physical (precious metals)								

Source: Jefferies, Incrementum AG

In view of the many risks, we advocate an active investment strategy when dealing with gold mining stocks. This is because not only bear markets but also bull markets are generally much more pronounced in these stocks.

Gold Miners* Bull/Bear Markets, 01/1970–12/2023



Source: Nick Laird, Reuters Eikon, Incrementum AG
*1970-2000 BGMI, 2000-Today HUI

The *Incrementum Active Aurum Signal*

Observe due measure, for right timing is in all things the most important factor.
Hesiod

But what indicators are there to help you recognize the optimal time to add performance gold to your portfolio? Over the past few years, we have been working intensively on this question and have developed a signal that helps us to precisely anticipate this critical point.

We are proud to present the result of our analysis: our new, proprietary *Incrementum Active Aurum Signal*. The signal has been developed to determine the optimal time to adjust gold exposure in the portfolio.

The art of investment is the discipline of inaction in the absence of a good opportunity, but aggressive action when one is identified.
Li Lu

It examines when it is advisable to acquire performance gold in the form of mining shares in order to increase the gold beta. It also determines when it is appropriate to take a more defensive approach to gold exposure. This can be implemented, for example, by shifting from higher-risk mining stocks – particularly in the small-cap segment – to bonds issued by mining companies or royalty and streaming companies, or simply by reducing exposure in order to achieve a lower beta to gold overall.

Simplicity is the highest form of sophistication.
Leonardo da Vinci

However, the *Incrementum Active Aurum Signal* is not only suitable for complex strategies but also enables the implementation of simple investment strategies via funds or ETFs. The signal provides a clear buy or sell recommendation.

Composition

The *Incrementum Active Aurum Signal* is made up of two sub-signals: the *cycle signal* and the *fundamental signal*. The cycle signal is made up of five anticyclical components:

1. **Momentum: relative strength index (RSI) of gold mining stocks**
   The RSI of the gold mining sector provides information on whether gold mining shares are overbought or oversold. This can indicate whether the market is overheated or whether there are signs of a trend reversal.

2. **Sentiment: CFTC net gold positioning**
Total net gold positioning as measured by CFTC data can give an indication of how market players such as hedge funds and other institutional investors are positioned. Extremely positive or negative sentiment can indicate that the market may be at a turning point.

3. **Risk appetite: Bollinger bands on gold mining stocks/gold ratios**
Analyzing the Bollinger Bands of mining stocks versus gold and junior mining stocks versus senior mining stocks can give an indication of how risk averse investors are. High volatility and strong movement in the bands can indicate increasing uncertainty and risk aversion.

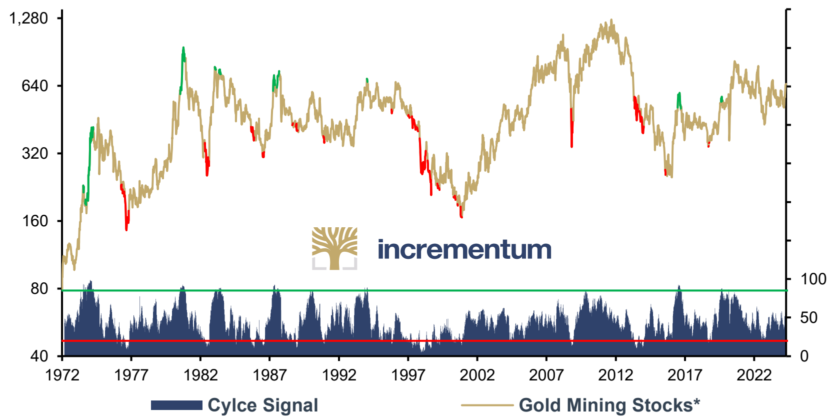
4. **Macro environment: *Treasury Inflation-Protected Securities* (TIPS)**
The TIPS analysis compares the real yield of inflation-protected bonds with their 52-week moving average. This can provide an indication of market expectations regarding inflation and real interest rates, which in turn can have an impact on the attractiveness of gold as an inflation hedge and thus also on the price performance of gold mining shares.

5. **Boom/bust indicator: gold mining stocks relative to their moving average**
The delta between the current price and the moving average can indicate whether gold mining shares are fundamentally overvalued or undervalued. A significant delta can indicate that the market is in an overbought or oversold phase and that a correction is likely.

The greatest discoveries often arise from a series of smaller discoveries that come together.
Alexander Fleming

All sub-indicators of the cycle signal oscillate between 0 and 100 and affect the cycle signal with different weightings. Overall, this results in the cycle signal, also with a value between 0 and 100. Buy or sell signals are achieved when the cycle signal is above 85 (= sell signal) or below 20 (= buy signal). A high value therefore indicates a potentially overbought situation or a largely exhausted upside, while a low value indicates an oversold situation and a limited downside.

Gold Mining Stocks* (lhs, log), in USD, and Cycle Signal (rhs), 01/1972–04/2024



Source: Reuters Eikon, Incrementum AG
*BGMI = 01/1972–06/2006, GDX = 06/2006–

Markets are never wrong – opinions often are.
Jesse Livermore

The second cornerstone of the *Incrementum Active Aurum Signal* is the *fundamental signal*, which can be understood as a pro-cyclical market environment indicator for gold mining companies. A gold mining stock margin trend channel was created as a central input factor that takes into account developments on the commodities market.

In contrast to the cycle signal, the fundamental signal only has two levels:
– 0: negative/weak fundamental environment
– 100: positive/strong fundamental environment.

A buy signal is triggered at a value of 100 and a sell signal at a value of 0.

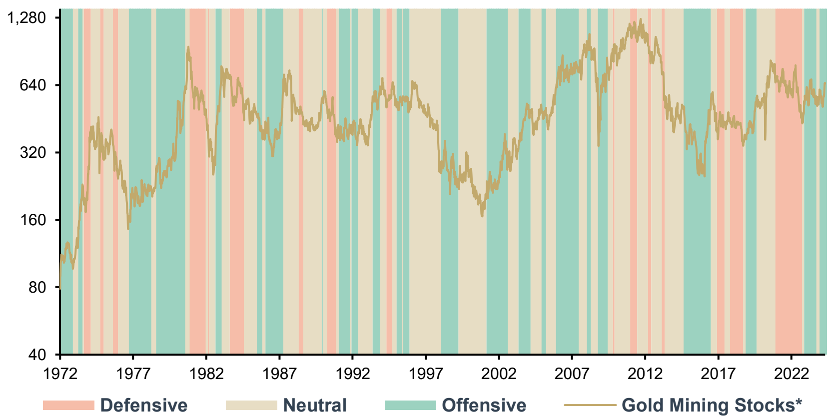
Gold Mining Stocks* (lhs, log), in USD, and Fundamental Signal (rhs), 01/1972–04/2024

Source: Reuters Eikon, Incrementum AG
*BGMI = 01/1972–06/2006, GDX = 06/2006–

Interpretation:

The combination of the two sub-signals results in the *Incrementum Active Aurum Signal,* which has three levels:
– Offensive: Both sub-signals indicate *buy*
– Neutral: The two sub-signals give different indications.
– Defensive: Both sub-signals indicate *sell*.

Gold Mining Stocks* (log), in USD, and *Incrementum Active Aurum Signal*, 01/1972–04/2024



Source: Reuters Eikon, Incrementum AG
*BGMI = 01/1972–06/2006, GDX = 06/2006–

Backtest properties

Backtesting the *Incrementum Active Aurum Signal* for the period since 1971 shows an average of 1.5 signal changes per year. We interpret this result as positive.

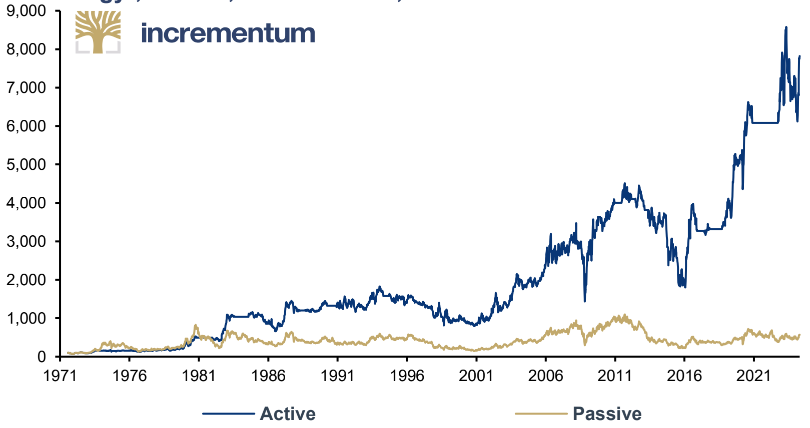
It is a capital mistake to theorize before one has data.
Arthur Conan Doyle

A simple backtest strategy using the *Incrementum Active Aurum Signal* can be implemented by investing 100% in gold mining stocks in the case of an offensive signal, 50% in the case of a neutral signal, and 0% in the case of a defensive signal. We used the Barron's Gold Mining Index (BGMI) as the investment instrument for the backtest from 1971–2005 and the VanEck Gold Miners UCITS ETF (GDX) from 2006 onwards. While the BGMI is the oldest gold mining stock index worldwide, the GDX is an investment vehicle in the gold mining sector in which the vast majority of investors can invest globally.

The best investment is in knowledge.
Benjamin Franklin

How does the performance of an active gold mining stock strategy using our *Incrementum Active Aurum Signal* compare to a passive strategy, i.e. a strategy where you are always 100% invested in gold mining stocks? **The results speak for themselves.**

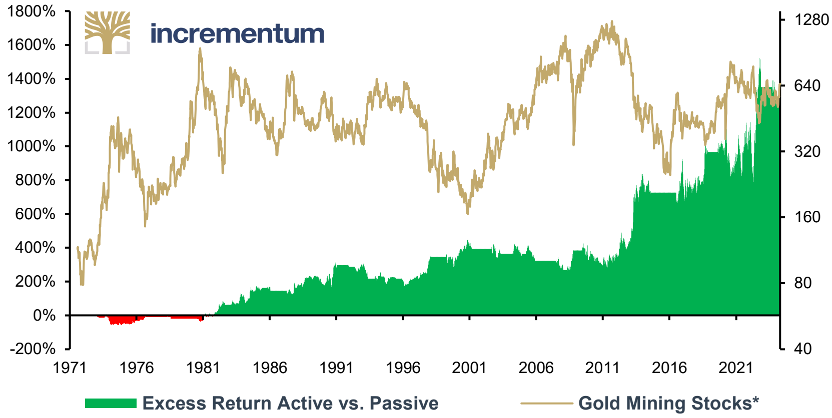
Performance Comparison: Active vs. Passive Gold Mining Stocks Strategy*, in USD, 100 = 07/1971, 07/1971–04/2024



Source: Reuters Eikon, Incrementum AG
*BGMI = 01/1972–06/2006, GDX = 06/2006–

While a passive strategy has achieved a performance of around 470% since 1971, our *Incrementum Active Aurum Signal* strategy achieved a performance of over 7,000%. Note that the excess return was not achieved due to a period-dependent outperformance in a short period, but rather consistently over the entire period. **The results of the relative performance backtest are therefore independent of the chosen time period.**

Excess Return Active vs. Passive (lhs), and Gold Mining Stocks* (rhs, log), in USD, 07/1971–04/2024



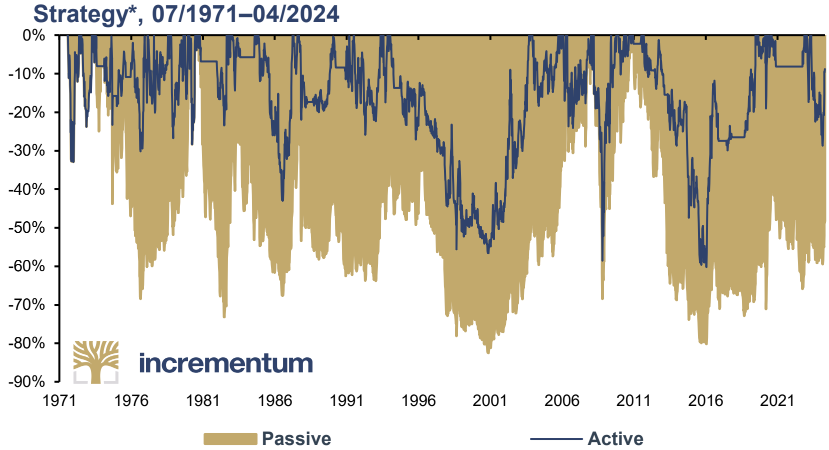
Source: Reuters Eikon, Incrementum AG
*BGMI = 01/1972–06/2006, GDX = 06/2006–

Volatility comes and goes, but the quality of a company remains.
Warren Buffett

Previously, we made it clear that their pronounced volatility might deter many investors from investing in gold mining stocks. It is therefore important not only to look at performance as part of the backtest but also to analyze key risk figures.

The next chart illustrates the drawdown comparison between a passive mining strategy and an active strategy using the *Incrementum Active Aurum Signal*. The result is evident: The active strategy recorded significantly lower drawdowns**. In addition, the annualized volatility of the active strategy is 26.01%, which is more than ten percentage points lower than the volatility of the passive strategy (36.80%).**

Drawdown Comparison: Active vs. Passive Gold Mining Stocks Strategy*, 07/1971–04/2024



Source: Reuters Eikon, Incrementum AG
*BGMI = 01/1972–06/2006, GDX = 06/2006–

The results obtained suggest that an active strategy supported by the *Incrementum Active Aurum Signal* is clearly superior to a passive gold mining stock strategy in terms of both performance and risk characteristics.

A look at the remaining pieces

Yesterday's home runs don't win today's games.
Babe Ruth

Just as the multi-layered moves in a chess game do not depend on the queen alone, a sophisticated portfolio consists not just of a single asset but is a multifaceted ensemble of different asset classes. **In addition to managing the gold**

allocation, the other pieces in the new gold playbook also need to be rethought.

I don't like it when a player says, 'I like freedom; I want to play for myself. Because the player has to understand he is part of a team with 10 other players. If everyone wants to be a jazz musician, it will be chaos. They will not be a team, and nothing will be possible.
Pep Guardiola

Of course, the size of the gold position also depends on the other assets held in the portfolio. For example, if we consider a portfolio that increasingly contains interest rate-sensitive stocks such as REITs, utilities, or tech companies, then it makes sense to increase the gold position.

The same applies to bonds. The longer the duration in the portfolio, the more appropriate a higher gold allocation in the portfolio appears to be, as Van Vliet and Lohre show in their study. This correlation is based on the fact that certain assets react more sensitively to market fluctuations than others. Put simply, the more sensitive the assets in the portfolio, the higher the gold allocation should be in order to achieve adequate diversification and optimize risk-adjusted performance.

In the following, we will examine the impact of the new gold playbook rule changes on the remaining protagonists. The selected players include equities, bonds, commodities, and Bitcoin.

Stocks – the threatened king

Speculators can temporarily over- or undervalue the market, but ultimately prices are determined by fundamentals.
Benjamin Graham

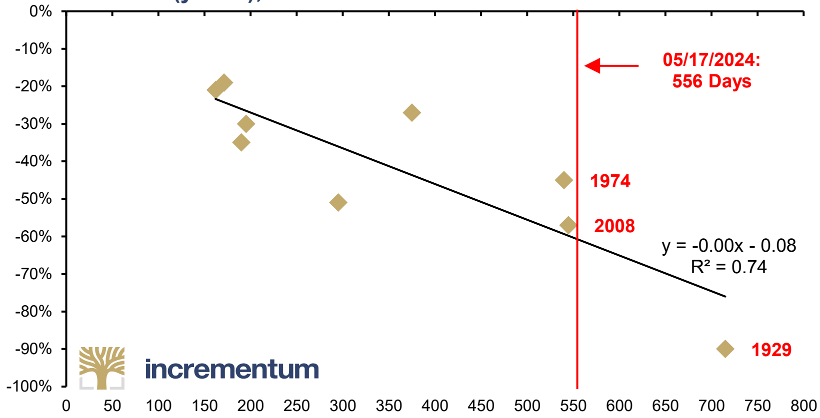
In our view, the king symbolizes equities, which make up the lion's share of a traditional portfolio. The recent rule changes under the new gold playbook have undoubtedly had an impact on equities. While these changes are not immediately apparent when looking at the prices of many equity indices and their mostly intact uptrends, **the inherent risks in the equity markets have changed.**

In particular, a structurally higher inflation rate in conjunction with rising interest rates could lead to further valuation discounts, especially for interest rate-sensitive sectors. Geopolitical tensions contribute to making this scenario even more likely, whether through ongoing deglobalization or measures that have a direct impact on the commodity markets and therefore influence inflation dynamics. Furthermore, the possibility of a recession should not be ruled out.

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

At the time of publication of this *In Gold We Trust* report in mid-May, the yield curve between 10-year and 3-month US government bonds had already been inverted for 556 days, a period previously only achieved before the outbreak of the Great Depression in 1929. Although the number of observations is too small for a statistically significant analysis, **a positive correlation can be seen between the duration of the inversion and losses on the stock market**.

Number of Days US 10Y-3M Spread Inverted (x-axis), and S&P 500 Drawdowns (y-axis), 01/1920–05/2024



Source: Game of Trades, Reuters Eikon, Incrementum AG

In view of these risks, it is essential to protect the king. Various options are available, including bonds and commodities. However, in our view, the golden queen offers the best solution due to its flexibility and versatile hedging properties.

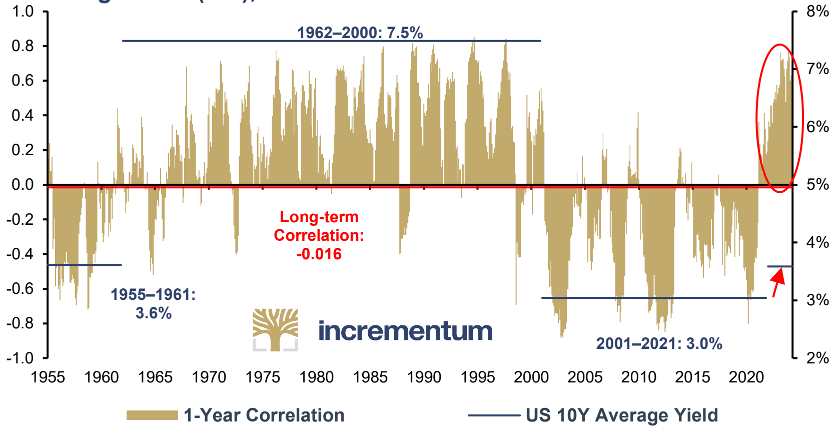
Nevertheless, equities remain of central importance even after the rule changes in the new gold playbook. Overall, we believe that a broad reduction in equity holdings is not appropriate and that the long-term growth prospects for the equity market remain solid. However, the current situation requires a differentiated analysis: **While the changes brought about by the new playbook entail increased risks for some sectors, opportunities are opening up in certain industries such as the commodities sector and in certain regions (Europe, emerging markets).**

Bonds – just another historical character?

Reconsidering something we believe deeply can threaten our identities, making it feel as if we're losing a part of ourselves.
Adam Grant

The offensive players are in the spotlight, but you can't win a championship without a solid defense. And bonds are no longer that solid and reliable defender in the wake of the rule changes in the new gold playbook. Equities and bonds have been positively correlated for some years now, and the performance of bonds has recently left a lot to be desired in times of falling equity prices. Currently, the 1-year correlation between 10-year US bonds and the S&P 500 is just under 0.7.

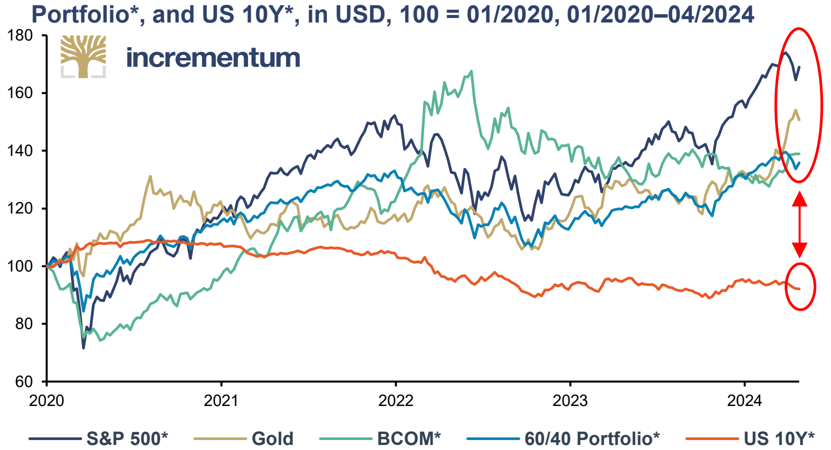
1-Year Correlation of US 10Y and S&P 500 (lhs), and US 10Y Average Yield (rhs), 01/1955–04/2024



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

In particular, the rise in interest rates in response to the wave of inflation is contributing to this. This development proves that an inflationary environment is poison for traditional portfolios. Since the first quarterly outflow from the bond market since Q4/2020 was recorded in the US in Q1/2024, the "anything but bonds" rally in markets continues apace.

Performance Comparison, S&P 500*, Gold, BCOM*, 60/40 Portfolio*, and US 10Y*, in USD, 100 = 01/2020, 01/2020–04/2024

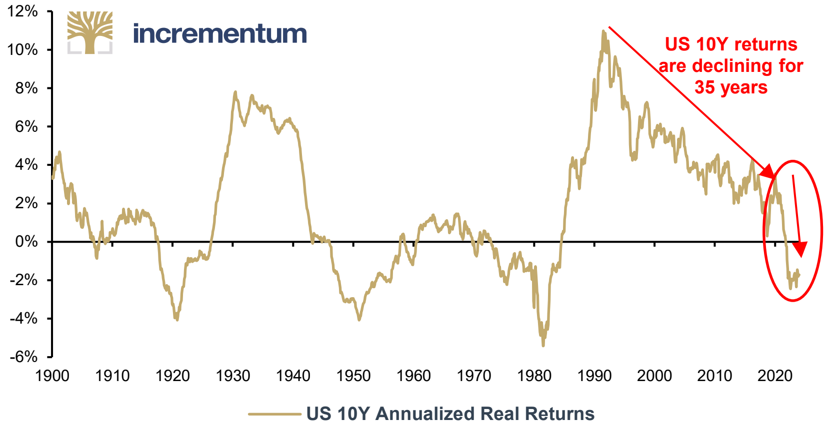


Source: Reuters Eikon, Incrementum AG
*Total Return

The greatest value of a picture is when it forces us to notice what we never expected to see.
John Turkey

Even though bonds will benefit from the expected interest rate cuts just like other asset classes, we see bonds as the big loser in the changed rules of the game. However, the paradigm shift in the bond market is not a sudden phenomenon, but rather the result of a gradual development, as can be seen in the historical course of the annualized, real returns of 10-year US bonds. However, the events of the last 24 months reinforce the conciseness and intensity of this shift, which will at least not be reversed in the new gold playbook.

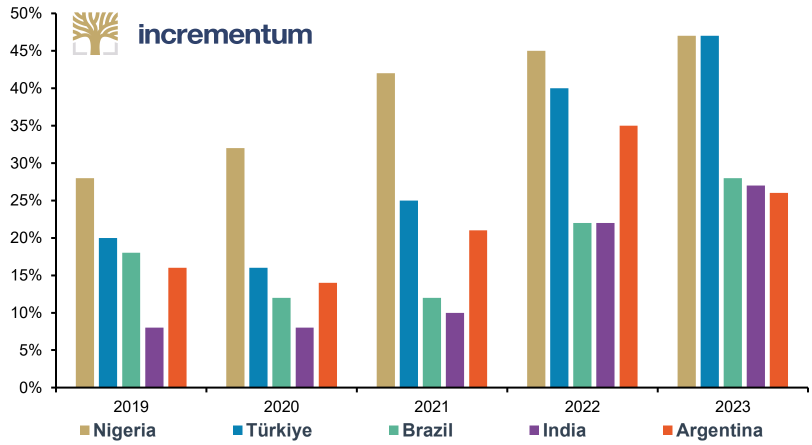
US 10Y Treasury Annualized Real Returns, in USD, 01/1900–04/2024



Source: Robert J. Shiller, Incrementum AG

We shed light on what this means for the financing of many countries in another chapter of this *In Gold We Trust* report.[51] The unsustainability of the current monetary system is becoming increasingly apparent, and it is in danger of reaching its limits, which inevitably stimulates the search for alternatives. This is shown by the increasing popularity of gold and Bitcoin as alternative stores of value and means of payment in countries where there is little or no trust in the state and currency.

Share of Population Owning or Using Cryptocurrencies, 2019–2023



Source: Statista.com, Incrementum AG

Commodities – from pawn sacrifice to anchor of stability

Raw materials are the economic building blocks on which our world is built.
Peter Lynch

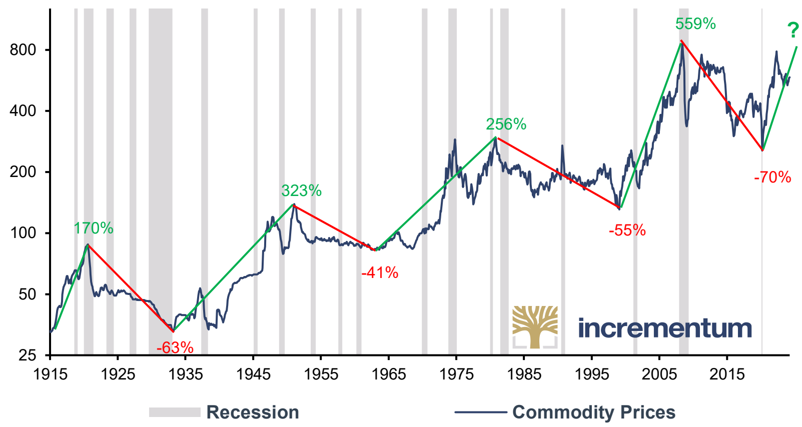
The perception of commodities as an asset class is low. One of the main reasons for this is their high volatility, coupled with the fact that commodities are not productive goods. In addition, commodity investments are often made via derivative instruments, which are only accessible to a limited circle of market participants and can potentially cause negative rolling costs in a state of contango.

—
51 *See* "Status Quo of Debt Dynamics" in this *In Gold We Trust* report

It is better to prepare in good time and not have an opportunity than to have an opportunity and not be prepared.
Whitney M. Young Jr.

There are many reasons to invest in commodities, and in the new gold playbook they have the potential to act as an anchor of stability in a structural inflationary environment. While commodity investments are generally considered to be risky, we firmly believe that **commodities are no longer an afterthought, but rather an indispensable component of a resilient portfolio**, **especially due to its characteristics as a liquid alternative investment and its lack of correlation with stocks and bonds.**

Commodity Prices* (log), 01/1915–04/2024



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

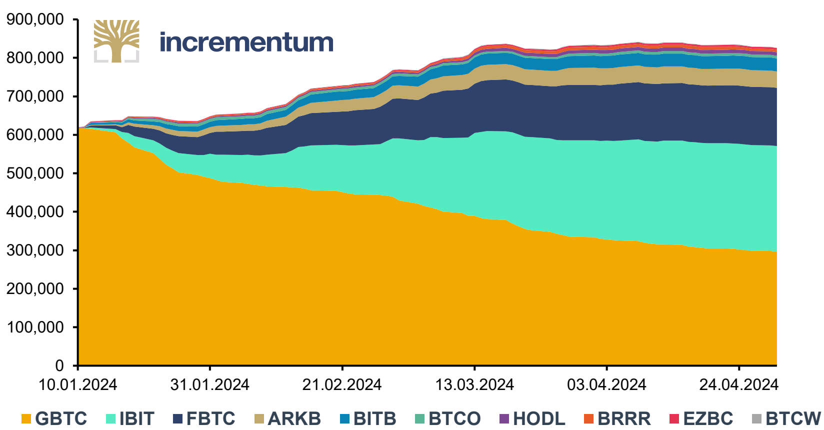
In previous supercycles, commodities have significantly surpassed their respective all-time highs. We believe that in the current cycle, there is still considerable upside potential for commodities, and after the consolidation phase, price dynamics could resume.

Bitcoin – The new piece in the game establishes itself

I would take the gold and sprinkle a little bitcoin on top.
Ray Dalio

Bitcoin's market capitalization as a percentage of gold's market capitalization has steadily increased in recent years and currently stands at around 7.7%. This is just below the record level set in 2021, when Bitcoin reached its all-time high in US dollars. Bitcoin thus appears to be establishing its position as an asset class, which is supported by the Spot ETF approval by the SEC in January 2024.

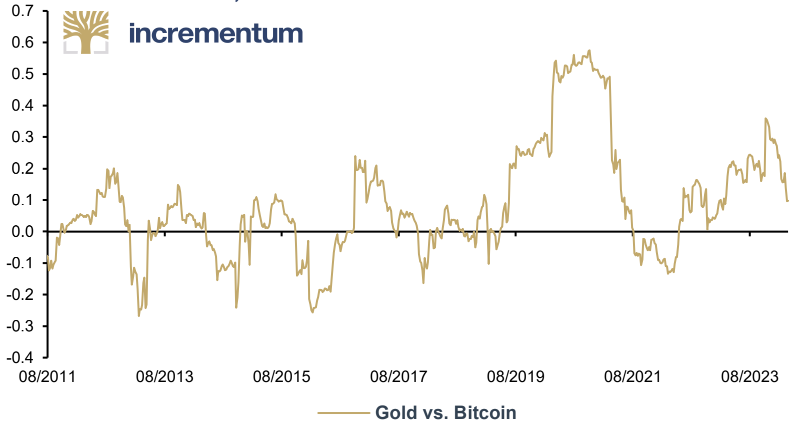
Spot Bitcoin ETF Holdings, in Bitcoin, 01/2024–04/2024



Source: hildobby, Incrementum AG

Since 2017, we have been paying special attention to Bitcoin in a section of the *In Gold We Trust* report. In the portfolio context, we have devoted particular attention to the combination of physical gold and digital Bitcoin, as this represents a fascinating mix due to its low correlation and widely varying volatility.[52]

Weekly Rolling Correlation over 1 Year of Gold and Bitcoin, and Silver and Bitcoin, 08/2011–04/2024

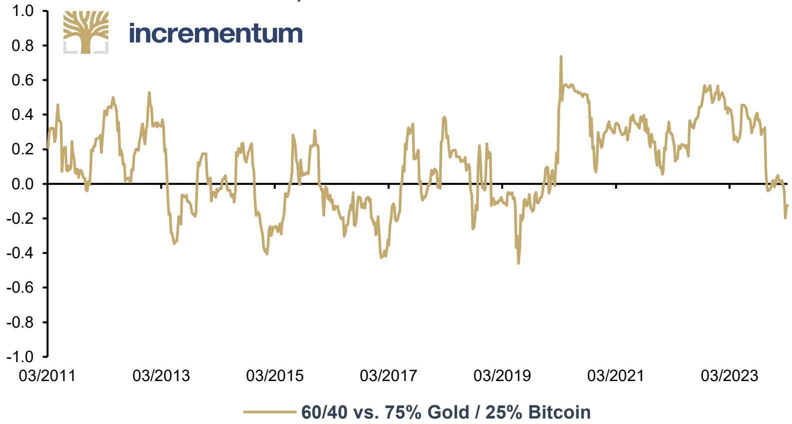


Source: coinmarketcap.com, Reuters Eikon, Incrementum AG

Most bond bulls are crypto bears, and vice versa. Occasionally, one finds an investor who is both a bond bear and a crypto bear and such folk tend to be gold bugs.
Louis-Vincent Gave

A combination of gold and Bitcoin is also uncorrelated with a traditional 60/40 portfolio. In November 2023, the 1-year correlation of a portfolio comprising 75% gold and 25% Bitcoin compared to a 60/40 portfolio slipped into negative territory for the first time since early 2020, enhancing the diversification properties of a gold/Bitcoin combination.

Weekly Rolling Correlation of a 60/40 Portfolio*, and a Portfolio of 75% Gold / 25% Bitcoin, 03/2011–04/2024

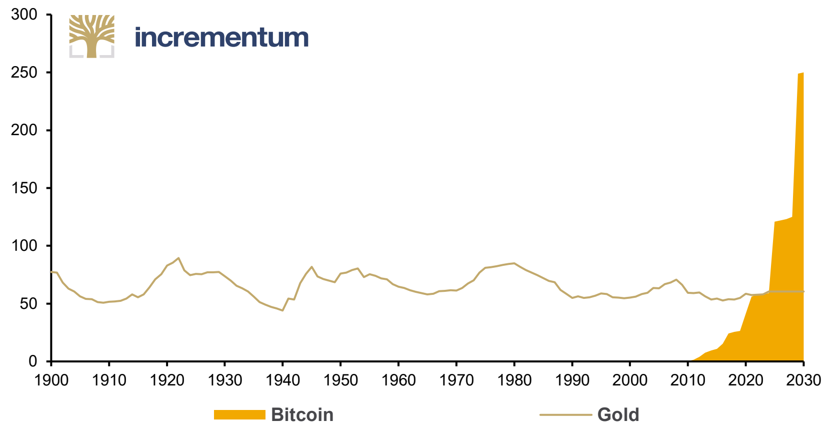


Source: Reuters Eikon, Incrementum AG
*60% S&P 500 TR / 40% S&P US Aggregate Bond Index TR

We also see many of the rule changes presented in the new gold playbook as positive for Bitcoin, as it is a neutral and noninflationary asset, like gold. With the latest halving, Bitcoin has already overtaken gold in terms of the stock-to-flow ratio.

[52] *See* "Showdown in Sound Money," *In Gold We Trust* report 2023; "The Plan B Model: The Holy Grail of Bitcoin Valuation?," *In Gold We Trust* report 2020; "Gold and Bitcoin: Stronger Together?," *In Gold We Trust* report 2019

Stock-to-Flow Ratio for Gold and Bitcoin, 1900–2030e



Source: blockchain.com, USGS, World Gold Council, Incrementum AG
*Gold Production (2024–2030) = average growth rate (2004–2023)

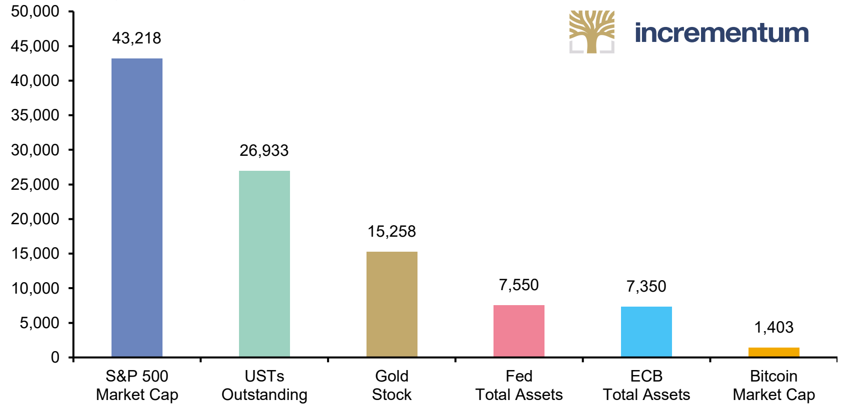
Conclusion

The biggest risk is not taking a risk. In a world that's changing really quickly, the only strategy that is guaranteed to fail is not taking risks.
Mark Zuckerberg

For a long time, well-known drivers such as real interest rates, growth expectations, the inflation rate and the external value of the US dollar determined the performance of gold. **However, the last two years have shown that these traditional factors are no longer sufficient to explain the dynamics of gold price movements. Gold has proven to be surprisingly resilient to the rise in real interest rates**.

This development marks the emergence of new catalysts for gold, which are joining the traditional bullish drivers and giving the precious metal a tailwind. The new gold playbook underlines this fact, making a reassessment of gold and other asset classes necessary. Gold is experiencing a significant revaluation due to the potpourri of rule changes. In general, it can be assumed that the search for alternative investments to the established players on the financial markets will intensify significantly, which should have positive implications not only for gold but also for commodities, silver and Bitcoin.

Market Capitalization of Various Assets and Central Bank Balance Sheets, in USD bn, Q1/2024



Source: coinmarketcap.com, World Gold Council, US Treasury, Fed, ECB, Reuters Eikon, Incrementum AG

Diversification that works.
World Gold Council

The new gold playbook demands more than just an adjustment from investors. It requires a rethink of the strategic portfolio. Old certainties are fading; established strategies are failing. The willingness to question established patterns of thought and break new ground often requires courage, but for those who recognize the signs of the times and have the courage to change, implementing the new gold playbook opens the door to growth and stability.

We laugh at people who still use Windows 95, yet we still cling to opinions that we formed in 1995. We listen to views that make us feel good, instead of ideas that make us think hard.
Adam Grant

The exact asset allocation depends on several factors. Van Vliet and Lohre illustrate in a study that the inclusion of gold in a portfolio can significantly minimize downside risk. **The estimated optimal allocation of gold for investors with a portfolio duration of 10 years is around 13%.** Investors with a higher tolerance for interest rate risk may find greater diversification benefits in gold than investors with shorter portfolio durations. A study by SPDR also shows similar results: The integration of gold into a portfolio improves the Sharpe ratio and reduces risk ratios such as standard deviation and maximum drawdown, while at the same time achieving a higher return.

The role of gold in a portfolio should be carefully considered in order to maximize long-term returns and minimize risk.
Fischer Black

In the case of gold, we differentiate between *safe-haven gold*, which is held in physical form as a crisis-proof portfolio component, and *performance gold*. The latter comprises investments that have the potential to benefit disproportionately from a rising gold price, but that also entail a higher risk than safe-haven gold, which makes active management advisable. These are primarily gold mining stocks, but also silver and silver mining stocks. A similar differentiation is made in a study by Sprott, in which a distinction is made between gold and gold-like investments. These studies suggest that the **gold allocation should account for a total of 10-15% of a diversified portfolio, with 10% invested in physical gold and a maximum of 5% in gold-like investments.**

WisdomTree took the poor performance of a 60/40 portfolio in 2022 as an opportunity to conduct a study on gold as a resilient asset class and its optimal allocation. This research, using a Monte Carlo simulation with 20,000 simulations of different 10-year observation periods and allocations, found that a **16–19% allocation of gold in a portfolio maximizes risk-adjusted performance.**

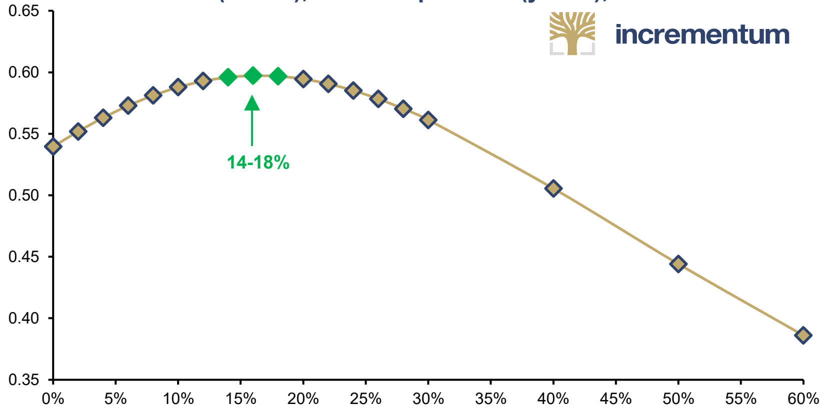
The range of the gold allocation proposed in the studies is between 10% and 19%, depending on the investment period and the other assets held in the portfolio. Even the lowest allocation in this range is therefore well above the gold exposure of a standard asset allocation.

Planning replaces chance with error.
Werner Kirsch

Based on these findings, we analyzed the effects of different gold allocations in an equity/bond portfolio. The study period extends from 1970 to 2024 and includes monthly data on gold as well as the total return indices of the S&P 500 and 10-year US government bonds in US dollars.

Our calculations show that the integration of gold into an equity/bond portfolio has a clearly positive impact on the Sharpe ratio. **The optimum is achieved in an allocation range of 14–18%**. An excessive increase in the gold allocation, on the other hand, leads to a decrease in the Sharpe ratio.

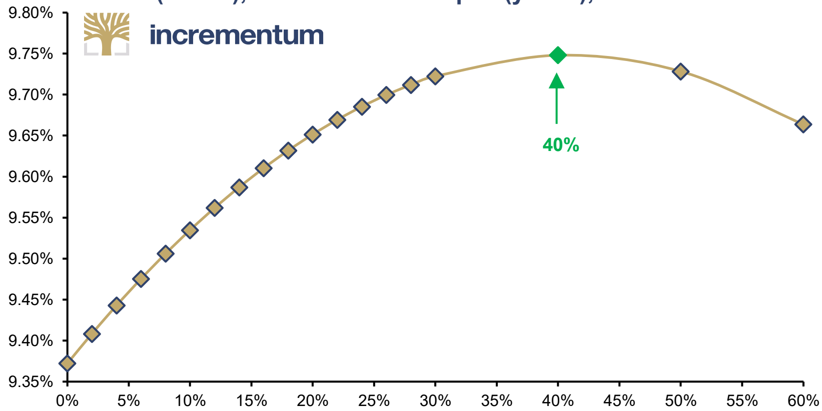
Optimal Gold Allocation for Risk-Adjusted Returns Maximization: Gold Allocation (x-axis), and Sharpe Ratio (y-axis), 01/1970–04/2024



Source: Robert J. Shiller, Reuters Eikon, Incrementum AG

While maximum performance is achieved with a gold allocation of around 40%, this is also associated with significantly higher risk, characterized by higher volatility and larger drawdowns.

Optimal Gold Allocation for Performance Maximization: Gold Allocation (x-axis), and Performance p.a. (y-axis), 01/1970–04/2024



Source: Robert J. Shiller, Reuters Eikon, Incrementum AG

For investors seeking to limit risk, a gold allocation in the 14–20% range is the sweet spot.

Optimal Gold Allocation in a Stock/Bond Portfolio, 1970–2024

Gold Allocation	Performance p.a.	Annualized Volatility	Max. Drawdown	Sharpe Ratio
0%	9.37%	8.28%	-27.00%	0.54
2%	9.41%	8.16%	-26.38%	0.55
4%	9.44%	8.05%	-25.76%	0.56
6%	9.48%	7.96%	-25.13%	0.57
8%	9.51%	7.89%	-24.50%	0.58
10%	9.53%	7.84%	-23.87%	0.59
12%	9.56%	7.82%	-23.46%	0.59
14%	9.59%	7.81%	-23.07%	0.60
16%	9.61%	7.83%	-22.67%	0.60
18%	9.63%	7.87%	-22.28%	0.60
20%	9.65%	7.92%	-21.97%	0.59
22%	9.67%	8.00%	-22.10%	0.59
24%	9.69%	8.10%	-22.24%	0.59
26%	9.70%	8.22%	-22.37%	0.58
28%	9.71%	8.35%	-22.51%	0.57
30%	9.72%	8.51%	-22.65%	0.56
40%	9.75%	9.49%	-25.99%	0.51
50%	9.73%	10.77%	-31.55%	0.44
60%	9.66%	12.25%	-36.76%	0.39

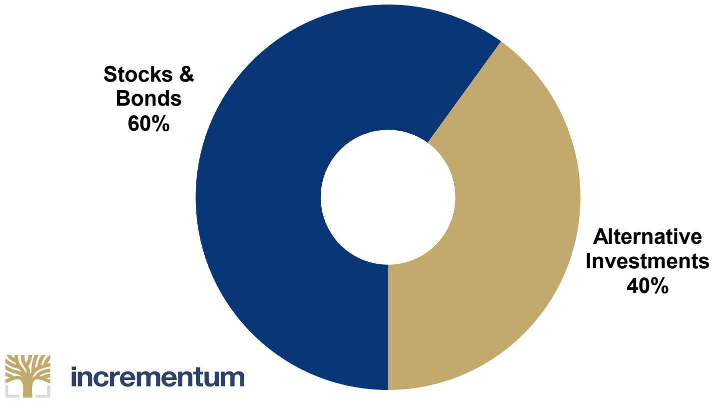
Source: Robert J. Shiller, Reuters Eikon, Incrementum AG

The key to successful investing is not predicting the future but managing risk.
Harry Markowitz

Our results suggest that a gold allocation of 14–20% ensures a balanced portfolio structure. These findings harmonize well with the results of previous studies, which recommend a gold allocation of 10–19%.

Aside from gold, we also see other alternative asset classes such as commodities and Bitcoin as beneficiaries of the new gold playbook. We are therefore convinced that these two asset classes are indispensable in a portfolio that is to be prepared for the new playbook. **A suitable portfolio consists of 60% equities and bonds and 40% alternative asset classes.**

The New 60/40 Portfolio: Strategic Model Allocation Based on the New Gold Playbook



Source: Incrementum AG

Our interpretation of the *new 60/40 portfolio* for long-term investors provides for the following allocation:

Stocks	45%
Bonds	15%
Stocks + Bonds	**60%**
Safe-haven gold	15%
Performance gold	10%
Commodities	10%
Bitcoin	5%
Alternative Assets	**40%**

Source: Incrementum AG

I do not play according to a given set of rules; I look for changes in the rules of the game.
George Soros

This marks a clear departure from traditional 60/40 portfolios. Of course, this positioning is not a rule set in stone, but rather a guideline that is based on current market conditions and will evolve with time and changes in the currency environment. The new playbook applies as long as we are in a period of currency instability, characterized by vast debt burdens and above-average inflation volatility. In other words, until we return to an environment with a stable hard currency – be it a sovereign hard currency or a gold/Bitcoin standard – a higher proportion of hard currencies seems necessary.

No one cares about junior gold miners. It's where money has gone to die for more than a decade. Describing the asset class as hated necessitates that people care enough to hate it, which is being far too generous. Yet, when something is so unloved, it often represents an opportunity.
Kevin Muir

The timing for a portfolio rebalancing currently appears favorable. Disinflationary tendencies are showing signs of abating, while geopolitical risks are increasing, and gold is advancing with a strong tailwind after its breakout. As *performance gold*, gold mining stocks could benefit disproportionately from the more positive sentiment in the gold market. As our analyses show, mining stocks are not a passive buy-and-hold investment but require active management. Here we rely on our new, specially developed *Incrementum Active Aurum Signal*.

The *Incrementum Active Aurum Signal* enables an investment process that takes into account not only long-term market cycles but also short-term volatility and trends in order to better adapt the gold (mining stock) exposure in the portfolio to changing market conditions. **In the backtest, the *Incrementum Active Aurum Signal* impresses with clear outperformance compared to a passive mining stock strategy.** This is illustrated by the following table, which shows both performance and risk figures.

Passive vs. Active Gold Mining Stock Strategies, in USD, 07/1971–04/2024

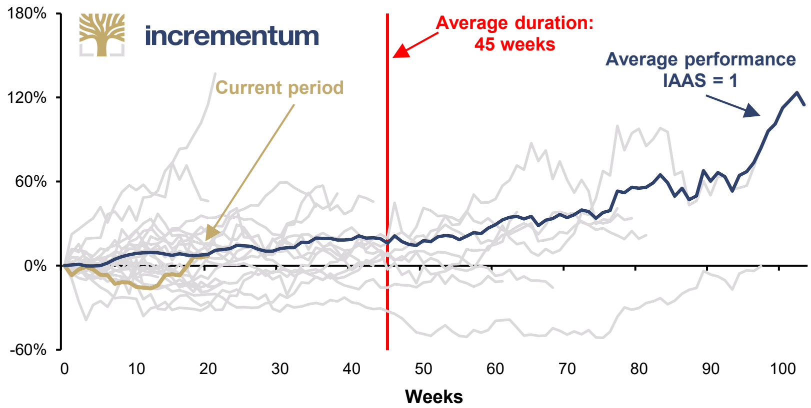
	Passive	Active
Performance	469.37%	7,722.89%
CAGR	3.35%	8.61%
Weekly standard deviation	5.10%	3.61%
Annualized volatility	36.80%	26.01%
Sharpe ratio	0.09	0.32
Sortino ratio	0.13	0.41
Omega ratio	1.03	1.15
Skew	-0.50	0.02
Max. Drawdown	-82.53%	-60.18%
RoMaD	2.11	7.24

Source: Reuters Eikon, Incrementum AG

The reasonable man adapts himself to the world; the unreasonable one persists in trying to adapt the world to himself. Therefore all progress depends on the unreasonable man.
George Bernard Shaw

The *Incrementum Active Aurum Signal* also shows that the time may now have come for gold mining stocks: Since December 2023 it has been recommending an offensive positioning. Compared to past periods with offensive signal characteristics, we are still in an early phase. The average performance during such phases has so far been 23% over a period of 45 weeks. Currently, however, with a performance of 7% over 21 weeks, we are still well below this average, which statistically indicates further upside potential for gold mining stocks.

Gold Mining Stocks Performance*, when *Incrementum Active Aurum Signal* = 1, in USD, 08/1971–04/2024



Source: Reuters Eikon, Incrementum AG
*BGMI = 01/1971-06/2006, GDX = 06/2006-

Furthermore, there is a positive correlation between the duration of the *Incrementum Active Aurum Signal* at its offensive level and performance. The longer the duration, the higher the profits that can be achieved during these periods.

Our proprietary signal provides invaluable support by equipping the investor with the necessary tools to grasp the golden queen as a versatile player and leverage her skills optimally. **Armed with these insights, one can comprehend the intricate game dynamics and ultimately master the diverse challenges of *the new gold playbook*.**

IGWT Report

Enter the Dragon: De-dollarization and the Eastern Push for Gold

I would not allow countries to go off the dollar because when we lose that standard, that will be like losing a revolutionary war.

Donald Trump

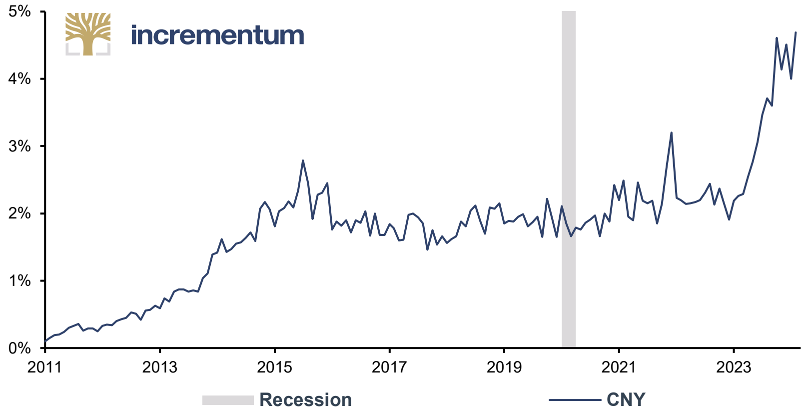
- **The US dollar remains dominant as a key lynchpin of world trade; the euro… not so much. The dollar has entrenched network effects as a global reserve currency. The Dollar Milkshake ensures continued USD demand.**
- **However, due to US political exertion on the system, the US dollar has been losing share as a reserve currency, and alternatives are rising to take its place.**
- **Many nations, including China and Russia, are quietly making moves to supplant the US dollar. This movement is growing, as the expansion of BRICS has demonstrated. Bilateral agreements and closed-door meetings demonstrate a clear desire to move off the US dollar standard.**
- **The global East is reasserting its dominance, initiating large gold purchases, and driving prices higher. The stage is slowly being set for a transition away from US Treasuries. Will gold be the replacement of choice?**

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

On February 10th, 2024, the Chinese zodiac welcomed the Year of the Dragon. This year, according to the adherents, will usher in evolution, progress, and prosperity; it stands as the time for new beginnings and creating the foundations for long-term growth. How fitting, then, that Asian demand is leading a new phase in the burgeoning gold bull market. Prices of the yellow metal, long stagnant in US dollar terms, have seen a remarkable surge in the new year, with prices soaring to new highs.

The East is on the move. China has made significant efforts to forward the goal of renminbi internationalization by forging key agreements with Saudi Arabia and the UAE; it has advocated the use of its currency in oil and gas trade and expanded its Belt and Road Initiative to include new countries and projects. The renminbi's share of trade settlement, long stagnant below 1% of global transactions, has soared in recent months, as indicated by SWIFT.

Share of Currencies in SWIFT Global Payments, 01/2011–03/2024



Source: Bloomberg, Incrementum AG

Russian stories never have happy endings.
Bill Browder

Russia has made similar advances. After the invasion of Ukraine and the ensuing sanctions, the Kremlin has renewed efforts for de-dollarization across all aspects of the economic system, drastically reducing dependence on the greenback and forging new alliances instead. Putin, in a powerful interview with American journalist Tucker Carlson, asserted: "As soon as the political leadership decided to use the US dollar as a political instrument, a blow was dealt to this American power."

To be prepared for war is one of the most effective means of preserving peace.
George Washington

The drumbeats of Eastern power sound off in the sands of Arabia as well. The United Arab Emirates has begun reaching out to trade partners, suggesting use of local currencies to settle oil & gas contracts, and Saudi has expanded trade with China, prioritizing the use of renminbi instead of US dollars. Egypt has begun issuing *panda bonds* denominated in the Chinese currency; and other moves are being made across Northern Africa and the Levant to reduce greenback dependency.

However, these nation-states are well aware they are fighting a formidable opponent: the most dominant military and economic power in the history of man. The dollar's position as the cornerstone of the world financial system will not be easy to disrupt; and strong forces on America's side are coming to her defense.

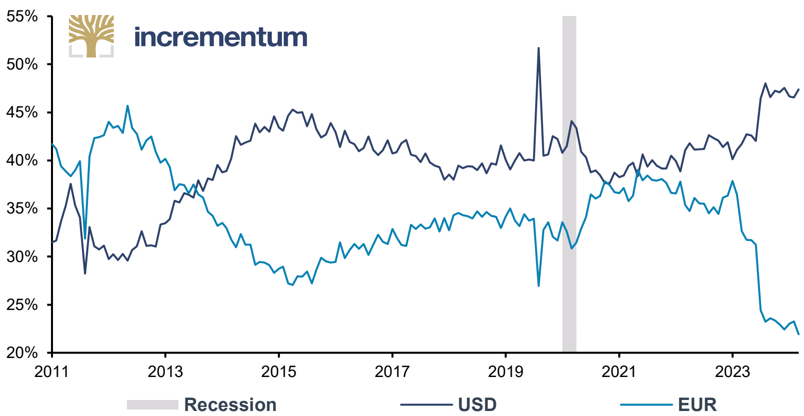
Dollarization

- The dollar is not losing ground in many key areas and is, in fact, gaining share in global payment transactions.
- Network effects of the dollar are extremely difficult to overcome.
- Many nations continue to prioritize USDs above domestic currencies – fueling the vaunted *Dollar Milkshake* theorized by Brent Johnson.
- Countries like Argentina are rushing to find solutions to domestic inflation problems. They are now increasing their adoption of US dollars.

I was number one on the 'who's likely to die' list for 10 years. I was really disappointed when I fell off the list.
Keith Richards

The US dollar is dying a strange death. Despite what many believe, the greenback is not losing market share as a payment and settlement currency. The latest transaction data from SWIFT indicates that the prominence of the US dollar in international payments has reached unprecedented levels. Last summer, greenback-related trades surged to an all-time high of 46%, a significant increase from three years ago.

Share of Currencies in SWIFT Global Payments, 01/2011–03/2024



Source: Bloomberg, Incrementum AG

The West's killer apps:
1. Competition
2. The Scientific Revolution
3. Property rights
4. Modern medicine
5. The consumer society
6. The work ethic
Niall Ferguson

According to the 2022 Triennial Central Bank Survey by the Bank for International Settlements (BIS), the US dollar was involved in approximately 88% of global FX transactions. This proportion has remained consistent over the past two decades. In comparison, the euro accounted for 31% of FX transactions, a decrease from its peak of 39% in 2010. The euro has also fallen in other arenas. The share of foreign debt issued in euros was 27.6% in 2005 and fell to 20.7% in 2022; the percentage of foreign currency transactions in euros fell from 38% to 31%, and the portion of foreign exchange reserves fell from 23.9% to 20.5% in that period.

As we described last year, the network effects of a reserve currency are extremely hard to overcome. US dollars represent 59% of global forex reserves, around 80% of worldwide inter-regional trade, and over 50% of global trade invoices. They are also the standard base currency for forex and eurodollar swaps. **All this usage means the US dollar's network effect is incredibly strong, making it difficult for the system to switch to a new reserve currency.**

In the *In Gold We Trust* report 2023, we made the following point:

> ***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.*[53]

People are misunderstanding how the system works. The dollar is basically the foundation of the monetary system. It sits at the bottom of the house, so it's the foundation of the house. To say that the foundation can blow up and disappear, and the people living in the attic are just going to carry on just fine, I think that's to fundamentally misunderstand the structure.
Brent Johnson

As Brent Johnson lays out, the US dollar is still the cleanest dirty shirt in the laundry. It isn't perfect, and of course, the debt problems plaguing the US dollar will eventually prove fatal. But these problems also plague other monetary contenders – none of which have true external demand for their currency. In Brent Johnson's words: "And based on the design of the system, the US dollar is not going to get inflated away, at least not before all the other currencies get inflated away."

It is important to note why the US dollar has remained so dominant for so long. The US has significant structural advantages that have supported the dollar in becoming the global reserve currency. These include the deepest and most liquid bond market, the high convertibility of the dollar to almost any currency, the mostly effective rule of law, and settlements being handled by SWIFT. In addition to these economic factors, the US also benefits from its military strength and strategic geographic positioning.

Just because you make a good plan, doesn't mean that's what's gonna happen.
Taylor Swift

Actually, SWIFT itself is not a payments or settlements system but rather an inter-bank communication network. Founded in 1973 by a consortium of 239 banks from 15 countries, it quickly expanded and began processing messages, to the point that 10 million messages were processed just one year later. That number grew exponentially to more than 1 billion in 1999 and then reached nearly 3.8 billion a decade later. In 2022, there were already more than 16 billion transactions per year.

It is said that the BRICS nations are working on an alternative to SWIFT, but we remain skeptical about this development. In fact, the alternative solutions are self-contradictory. As Norbert F. Tofall lays out:

> *In order to limit currency fluctuations in their own national currencies, the BRICS launched the so-called Contingency Reserve Agreement (CRA) in 2014. The purpose of the CRA is to provide credit lines that allow participating*

—
53 "Quo vadis, aurum?," *In Gold We Trust* report 2023

> *central banks to stabilize currency fluctuations without risking depletion of their foreign reserves. The aim was to create a kind of alternative to the International Monetary Fund (IMF), but this has not even come close to being achieved to date. In addition, the basic structure of the CRA already contradicts the de-dollarization that is actually intended. Since the BRICS countries have strong trade links with the dollar bloc, the CRA's currency stabilization mechanism is logically based 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

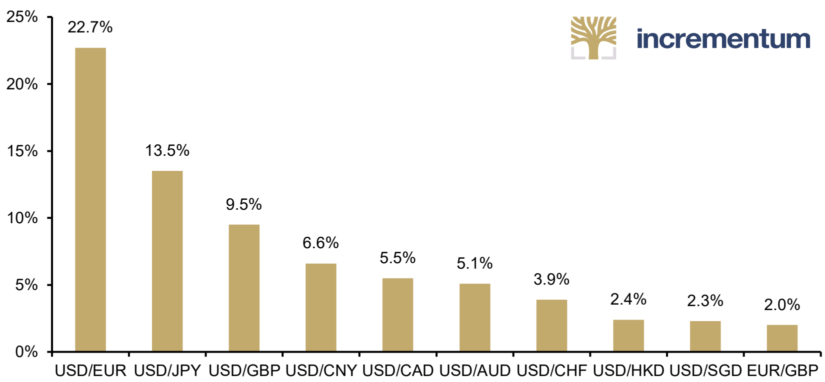
China, for example, wants to internationalize its own currency for global trade and is not likely to approve of plans to relink to a gold-backed currency that can restrict its monetary policy goals. Due to its position as a net exporter and a major trade partner with the US, **China has significant US dollar reserves and ties to US markets. Cutting itself off from the system would do significant damage to its economy**, which would take years to undo.

If China were to infiltrate BRICS, for example, and attempt to convince the major BRICS+ nations that export oil to only trade in renminbi, it would likely face significant headwinds. **Why would Saudi Arabia, the world's third largest oil producer, want a nonconvertible currency that would force it to buy only Chinese goods?**

…the U.S. dollar is the world's reserve currency and is likely to remain so—in times of global stress, the world runs to the dollar, not away from it.
Fed Governor Christopher Waller

The US dollar's dominance extends to forex markets. Of the top 10 most liquid and highly traded currency pairs, 9 are with the US dollar, with the only exception being GBP/EUR. Trading renminbi to the South African rand, for example, would be extremely difficult, as there isn't enough of a market to support a trade whose size is of any importance, not to mention the wide spreads. So, those looking to make such a transaction must first go through a US dollar pair as an "intermediary" currency.

Most Traded Currency Pairs, 04/2022



Source: FXOpen, BIS, Incrementum AG

Other BRICS nations would have similar reasons for resisting an international renminbi as a replacement for the dollar. Why trade in renminbi, when their own currency is perfectly suitable? And why de-dollarize and adopt the renminbi, if China maintains its entrenched position in the US dollar system and continues to use US dollars for trade?

TINA (There Is No Alternative) is turning into TUNA (The Ugly New Alternatives).
Frank Giustra

Right now, the TINA doctrine is in full swing: There Is No Alternative to the almighty greenback. America simply has the deepest, most liquid markets around, and the dollar's steamroll continues.

Faced with the absence of a viable alternative fiat currency for international and domestic trade, coupled with the overwhelming weight of eurodollar debt, nations have increasingly found themselves gravitating towards the relative stability offered by the US dollar. Currently, 9 countries officially adopt the US dollar as their primary currency, with an additional 21 countries accepting the US dollar alongside their respective local currencies.

It's super-easy to dollarize Argentina. This would end the fraud of the peso, which is melting like ice cubes in the Sahara.
Javier Milei

For many years, Argentina has experienced informal dollarization, with the US dollar and assets denominated in US dollars acting as a safe haven due to the diminishing value of the peso. Escalating inflation heightened the urgency of finding a solution to Argentina's economic woes. Newly elected President Javier Milei's proposed solutions to addressing the crisis included the somewhat radical notion of "dynamiting" the central bank, slashing social spending, and embracing dollarization. He has also drafted a *10-Point Freedom Plan* aka *Milei Pact*.

Venezuela has followed the same path. The South American nation's currency stability began deteriorating in 2016 and rapidly descended into hyperinflation, reaching an astonishing 1,000,000% by 2018. In response to the crisis, Venezuela has resorted to using the US dollar as a means of domestic trade and savings. Roughly half of all savings and payments are now denominated in US dollars, with figures soaring to between 60% and 75% in border regions.

Brazil has also heightened its exposure to the US dollar. The Brazilian Treasury announced its inaugural entry into the global debt market this year, unveiling two dollar-denominated bonds with maturities of 10 and 30 years. These bonds yield 6.35% and 7.15%, respectively, drawing substantial demand that reached nearly USD 7bn each.

But if we have to use force, it is because we are America; we are the indispensable nation. We stand tall and we see further than other countries into the future.
Madeleine Albright

Benin, a small West African nation, recently debuted a US dollar bond. Upon its release, the country experienced massive demand, exceeding six times the offering receiving USD 5bn in demand but only selling USD 750mn of debt. Remarkably, this occurred within a fortnight of Ivory Coast also launching a USD bond, which also encountered overwhelming demand, surpassing nearly four times the initial offering. This is surprising, considering Ivory Coast's history of defaulting on dollar debt, especially during the brief 2011 civil war.

However, the US dollar, being the singular reserve currency for the global system, poses significant challenges. In a November 2023 article published on a platform associated with the Chinese Communist Party (CCP) political journal, it was argued that recent US monetary policy decisions have generated a "US dollar tide" that exploits the wealth of other nations and imposes significant economic losses and financial risks on developing countries due to the dollar's dominance.

The black market was a way of getting around government controls. It was a way of enabling the free market to work. It was a way of opening up, enabling people.
Milton Friedman

These opinions are significant, particularly as the three BRICS invitees, Argentina, Egypt, and Ethiopia, face acute US dollar shortages and soaring inflation rates. In 2023, the shortages in Argentina and Ethiopia were so dire that black market exchange rates reportedly surged to nearly double the official rates. Meanwhile, Egypt faced a record deficit in its banking system's net foreign assets, signaling a severe shortage of foreign currency, particularly in June 2023. **The strain foisted by the greenback onto the global economic system is pushing some members to consider alternatives.**

The BRICS' Secret War – Many Nations Are Quietly Moving to Supplant the US Dollar

- The August 2023 BRICs summit in Johannesburg went further than any other to grow the list of countries desiring to join.
- China has been making strategic moves with its Belt and Road Initiative to internationalize the renminbi and reduce dependence on the dollar.
- Russia has been making significant progress towards de-dollarization and has almost eliminated dollar use in bilateral trade with China.
- Saudi Arabia has made several key deals recently, including a currency swap with the Chinese central bank and sales of oil and gas in renminbi to China.
- Africa is also looking to de-dollarize, with a Pan-African Payment System being built in Kenya.

Their actions are forging something new: Bretton Woods III is slowly taking shape, and in light of developments to date, my motto for Bretton Woods III – "Our commodity, your problem" – remains apt.
Zoltan Pozsar

The BRICS summit in Johannesburg distinguished itself by taking significant steps to grow and strengthen the group more than ever before. **The summit conveyed the clear message that the long-unquestioned post-World War II order must recognize the new multipolar reality and adapt accordingly to the current era.**

Several key points have emerged. First, the five original members of the bloc extended invitations to six additional countries to join: Argentina, Egypt, Ethiopia, Iran, Saudi Arabia, and the United Arab Emirates. Of the invitees, all except Argentina and Saudi Arabia have joined. Saudi Arabia is still undecided, whether to join or not, whereas in mid-April Argentina asked to join NATO as a *global partner* like Columbia, Australia, Japan, and South Korea. **The expanded BRICS+ alliance encompasses nearly half of the global population** and just below 30% of global GDP, making BRICS+ a more powerful force than ever before.

With Biden, you're going to lose the dollar as the standard. That'll be like losing the biggest war we've ever lost.
Donald Trump

Second, the leaders of the BRICS nations announced their commitment to lessen reliance on the US dollar and accelerate the process of de-dollarization in international trade. They discussed alternatives to the US dollar, including the possibility of creating a common currency. Brazilian President Lula da Silva supported the introduction of a BRICS currency, and Russian President Vladimir Putin, via video, denounced the hegemony of the US dollar and the impact of US sanctions on global economic stability, advocating for the benefits that de-dollarization would bring to BRICS countries.

The members concurred on increasing their backing for the African Continental Free Trade Agreement (AfCFTA), emphasizing the importance of Africa's political stability in fostering market confidence. Additionally, leaders deliberated on various strategies to improve dialogue and collaboration to further develop AfCFTA.

Lastly, a significant breakthrough was made with the agreement between India and China to ease tensions along their contested border. Following the summit, the Chinese Embassy in New Delhi shared via Twitter that President Xi Jinping had conveyed a wish to enhance India-China relations, emphasizing that better relations between the two nations would be mutually beneficial. However, a short time later, the Chinese government published a controversial map that included the two Indian territories, Arunachal Pradesh and Ladakh, within its borders. This move raised doubts among Indians regarding China's true intentions, despite the assurances given during the summit. **The division between these two behemoths has often been cited as a flaw in the proposed BRICs+ currency.**

We task our Finance Ministers and/or Central Bank Governors, as appropriate, to consider the issue of local currencies, payment instruments and platforms and report back to us by the next Summit.
BRICS Summit Declaration

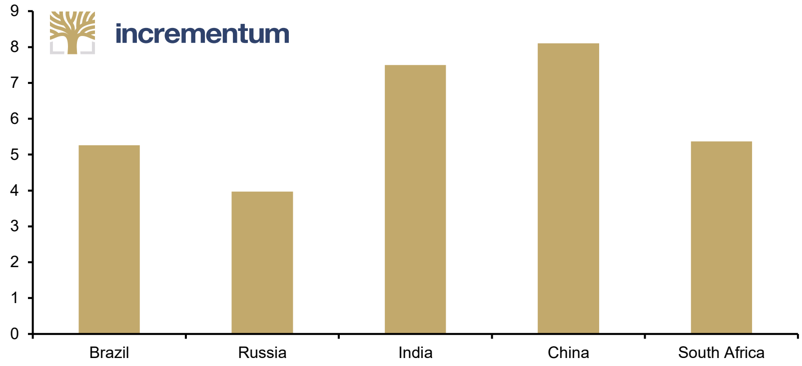
However, expectations were very high for the last summit – perhaps too high. In the joint declaration issued on August 24, 2023, the participants pledged to strengthen the Contingent Reserve Arrangement (CRA), encourage the New Development Bank (NDB) to make loans suited for sustainable development, and discuss the BRICS Payment Task Force, whose goal is to create inclusive, transparent, and efficient cross-border payment systems among the member states.

Despite these lofty goals, the results were somewhat meagre. The CRA is basically inactive, as it has been put on hold by the five BRICS central banks. Its scope remains limited, with only five participating members, and its functionality is limited due to a myriad of constraints and protective measures. The envisioned surveillance unit has yet to be created, and no actual balance of payments assistance operations have been conducted; only trial exercises have taken place.

How can we, as BRICS, credibly talk about de-dollarization if our main financial initiative remains predominantly dollarized?
Paulo Nogueira Batista Jr.

A similar story is seen with the NDB. Initially touted as a competitor to the World Bank, the NDB has fallen astonishingly short of its goals. The bank, in total, has claimed USD 32bn of approved financing over 96 different projects since inception, a fraction of the USD 175bn in loans from the World Bank in 2022

New Development Bank Project Portfolio by Country, in USD bn, 12/2023



Source: NDB, Incrementum AG

The NDB itself is hampered by political infighting, weak leadership, and sanctions that prevent transactions. Only 5 countries are members. Contrast this with the Asian Infrastructure Investment Bank (AIIB), established around the same time, which has grown to over 100 member nations.

All in all, it's just another brick in the wall.
Pink Floyd

For the next summit, to be held in Russia, we expect the trend of BRICS expansion to continue. Putin himself claimed this summit would be focused on establishing a "fair world order" and excoriated the current system: "As for the 'rules-based world order,' there are no such rules; in reality, they change every day depending on the current political agenda." BRICS does represent a strong desire to escape the stranglehold that the US holds over the global financial system. This desire is gaining strength, as last year the number of member applications soared to 22, and powerful allies of the US, such as Saudi Arabia, have already been invited to join this coalition.

Current candidates that have applied for BRICS membership include Belarus, Bolivia, Kazakhstan, Kuwait, Pakistan, Thailand, Venezuela, Vietnam and Nigeria. Mexico, Turkey and Indonesia have also expressed their interest in potential membership. **With NATO member Turkey and Mexico as the USA's immediate neighbour, two countries that are of particular geopolitical importance are showing interest in the BRICS.**

Membership requirements were one of the agenda items that were covered in the meeting, with the incumbent 5 nations laying out a framework for joining and a set of expectations for other nations to meet once they are accepted. The 22 new-member applications have all come as of 2023, as fallout continues from global supply chain disruptions and the US sanctioning of Russia at the onset of the Ukraine War. The list of interested parties continues to grow, and the diversity of applicants demonstrates that BRICS is no longer simply disaffected pariah states shaking their fists at US hegemony, and instead represents widespread discontent with the current world order and a desire to build something different.

I think where my view starts to differ from perhaps some others is that I also do not believe that just because these five or six or eight or nine countries (BRICS+), however you want to define that, just because they say they're going to do something, I've seen little actual progress in doing it.
Brent Johnson

A common BRICS currency would have several structural issues, not the least of which being coherent monetary policy and governance among the coalition, which is made up of many states pursuing disparate goals. A new BRICS currency would also need features that made it superior to the US dollar as a reserve asset, such as a global transaction network, deep and liquid money markets, and Western-style rule of law, which seems near impossible at this point. What is more likely is the increased use of alternatives, such as the ruble and renminbi, as the major nation-states in BRICS attempt to get smaller nations off the dollar standard and onto their own.

China – The Asian Behemoth Is Reshaping the Global Monetary System

China is attempting to raise the renminbi's status as a potential global reserve currency. Globally, the renminbi represents only 2.5% of FX reserves, but this number is an improvement from two decades ago when the currency was nonexistent on offshore bank balance sheets.

Without deviation from the norm, progress is not possible.
Frank Zappa

Progress is being made, however. China National Offshore Oil Corporation (CNOOC) and France's Engie SA have successfully concluded an international LNG transaction settled in renminbi, supplying a shipment of 65,000 tonnes of LNG to CNOOC in November. This comes after a March deal for the same tonnage with another French firm, TotalEnergies. CNOOC also made a deal with a Singapore supplier for a cross-border trade settled in renminbi, along with UAE's Abu Dhabi National Oil Co.

The Chinese also made inroads into South America in 2023, agreeing with Argentina, for example, that imports to the country will be settled in renminbi instead of US dollars. **However, this could just as well be a sign of the country's dwindling US dollar reserves as it faces a dual fiscal and monetary crisis.**

So, what is wrong with three world currencies – the euro, the renminbi, and the dollar – sharing the spotlight? Nothing, except that neither markets nor policymakers seem remotely prepared for such a transition.
Kenneth Rogoff

Later in the year, on November 20, 2023, the People's Bank of China and the Saudi Central Bank formally agreed to a local currency swap valued at CNY 50bn (USD 6.93bn), marking a significant step forward in strengthening relations between the two countries. In 2022, Chinese customs data revealed that China imported approximately USD 65bn worth of Saudi crude, making up roughly 83% of the kingdom's total exports to the Asian giant.

Belt and Road Initiative

The Chinese have also been making significant progress with their Belt and Road Initiative (BRI). In October of 2023, China held a Belt and Road Forum in Beijing and began strategically employing loans to advance the international standing of the renminbi, attempting to elevate its share in global payments to new levels. Belt and Road initiatives and investments have been executed in a host of nations spanning Asia, Africa, Europe, and South America. In recent months, the tally of

BRI cooperation agreements has surpassed 200, involving over 150 countries and 30 international organizations.

We stand ready to work with all partners to build the Belt and Road and make it a path of cooperation in addressing common challenges, a path for protecting people's health and safety, a path of economic recovery and social development, and a path of growth to achieve our full development potential.
Xi Jingping

As we noted in the *In Gold We Trust* report 2023:

> *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.*
>
> *The initiative takes the form of land-based transportation routes, from China through Central Asia to Europe, and sea-based transportation routes from China via Southeast and South Asia to the Middle East, North Africa and Europe. […]* ***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.***[54]

These projects include the construction or enhancement of roads, ports, railways, pipelines, and other trade-centric infrastructure. By financing BRI projects, China has successfully rejuvenated the previously stagnant process of renminbi internationalization.

Move over, US dollar. China wants to make the renminbi the global currency.
Washington Post

In September 2023 the renminbi achieved a record-high share of 4.6% in global payments by value, more than doubling from 1.9% in January 2023, as indicated by SWIFT. However, the share remains painfully tiny compared to the dominant position of the US dollar, which still comprises around 47% of global payments.

Individual Chinese banks are leading the charge, with notable examples being EximBank's loan cooperation with the Saudi National Bank in RMB and the agreements signed with Malaysia's Maybank and BBVA Peru. In a report released prior to the Belt and Road conference in October, the Chinese themselves noted:

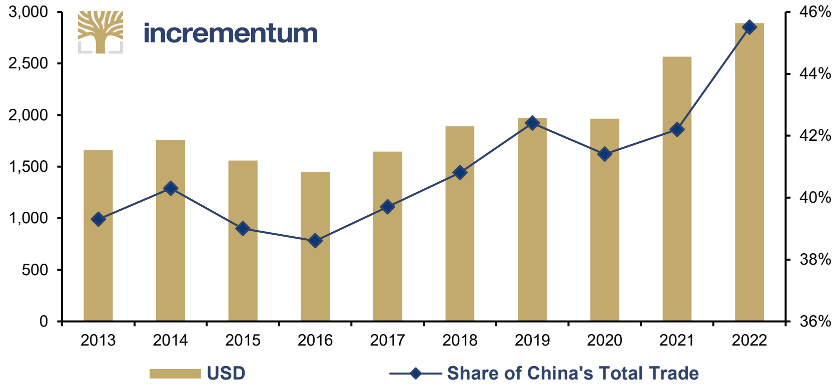
> *As of the end of June 2023, a total of 13 Chinese-funded banks had established 145 first-tier offices and branches in 50 BRI partner countries; some 17.7 million businesses in 131 partner countries had opened UnionPay services, and 74 partner countries had opened UnionPay mobile payment services. […]*
>
> *China has signed bilateral currency swap agreements with 20 partner countries and established renminbi (RMB) clearing arrangements in 17 partner countries. The number of participants, business volume, and influence of the RMB cross-border payment system have gradually increased, effectively facilitating trade and investment.*

Between 2013 and 2022, the total value of imports and exports between China and its BRI partner nations amounted to USD 19.1trn, with an average annual growth rate of 6.4%. Furthermore, the combined two-way investment between China and

54 "The Rise of Eastern Gold Markets: An Impending Showdown with the West," *In Gold We Trust* report 2023

its partner countries reached USD 380bn, with China contributing USD 240bn to this total.

Value of China's Imports and Exports with BRI Partner Countries, in USD bn (lhs), and as Share of China's Total Trade (rhs), 2013–2022



Source: Reuters Eikon, Incrementum AG

Mechanisms for countering foreign sanctions, interference, and long-arm jurisdiction will be strengthened.
Xi Jingping

These developments show the Asian behemoth is on the move with a well-thought-out plan to take on the vaunted US dollar. Their thinking is strategic and calculated. China is involving dozens of banks, financial regulatory agencies, law firms, construction and engineering companies, and government organizations to raise the dominance of the renminbi in offshore markets.

Transactions would not continue unless both sides gained, whether in international trade, employment, or renting an apartment.
Thomas Sowell

However, while it maintains a closed capital account, China's ability to internationalize the renminbi will remain limited, as not enough currency will flow out to settle trade and provide new financing for projects, a requirement for reserve currencies. Furthermore, the BRI strategy is not foolproof. Italy withdrew from formal participation in Belt and Road at the end of March.

Nevertheless, China is not the lone Eastern power fighting this battle against American hegemony: Russia is also attempting to shed the US dollar noose that has been tied around its neck.

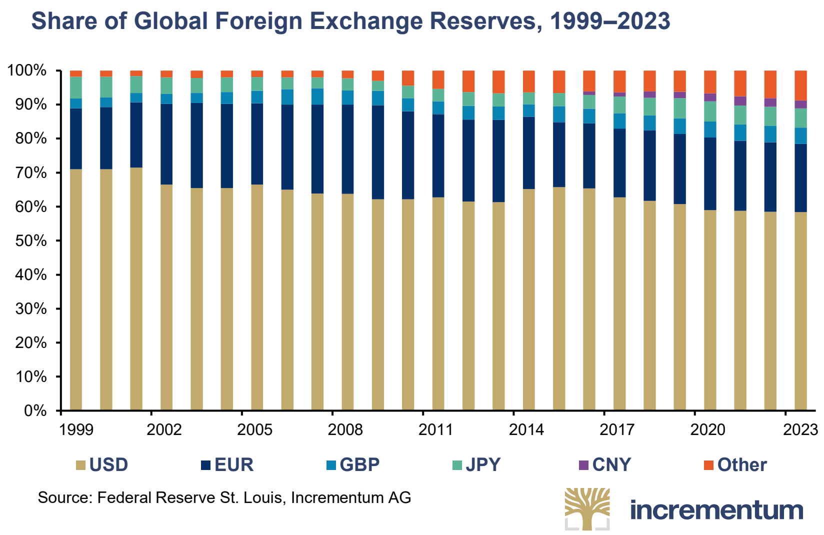
Russia – the Eurasian bear is playing geopolitical chess

As a response to Russian aggression in Ukraine, the Biden administration opted in 2022 to suspend Russia's access to the SWIFT international payment network, effectively barring its central bank from utilizing its foreign exchange reserves as a punitive measure.

Dollars and guns are no substitutes for brains and willpower.
Dwight D. Eisenhower

As we pointed out in the *In Gold We Trust* report 2023, "Showdown", the freezing of Russia's currency reserves by the US and the EU has highlighted to the world that redemption of US dollar- or euro-denominated reserves may not be guaranteed. **This erosion of trust is hard to reverse.** Thus, a potential weaponization of gold could have significant repercussions on global cohesion if a universal emergency payment method at the international currency level were compromised.

The full ramifications have not yet been fully felt, as this process of leveraging the global reserve currency in this form of financial warfare can have severely detrimental effects on the world's trust in their own US dollar reserves. Other nations have expressed discontent over the practice of "weaponizing" the US dollar, and their trust has subsequently eroded. **This has contributed to a decline in the US dollar's share among global reserves from 70 percent to 58 percent over the past two decades.**



What happened to gold is not complicated. A crisis of confidence in the Western financial system, seemingly triggered by the March '22 statement, led to a cash-n-carry spree into gold and now there isn't much left. Scarcity moves markets. That's, ultimately, why gold popped.
Doug Pollitt

Russia has responded in kind to the sanctions. Russian Prime Minister Mikhail Mishustin has aimed to get China and Russia to substantially reduce their reliance on the US dollar in bilateral trade. In a meeting in December 2023 with Chinese and Russian officials, Mishustin stated that the vast majority of the trade transactions between the two countries are now conducted in either Russia's ruble or China's renminbi: "Mutual trade has increased by almost one third year-to-date. Meanwhile, the majority of payments, over 90%, are made in national currencies, which demonstrates almost full de-dollarization of economic ties."

Trade between Russia and China saw significant growth in 2023, mainly caused by Russia's exclusion from SWIFT, which increased its dependence on China for trade. According to Mishustin, the total transactions between the two nations have surged to a record-breaking USD 20bn this year. At the same time, trade between Russia and the US reached a three-decade low, with a total value of USD 277mn, a shocking 90% lower than late-2021 levels.

Who rules East Europe commands the Heartland; who rules the Heartland commands the World-Island; who rules the World-Island controls the world.
Sir Halford John Mackinder

Russia has also dedollarized outside of its direct trade with China. The Kremlin has shifted away from what it deems "toxic currencies," leading to a large rise in the renminbi's share of Russian import settlements from 4% to 23% last year. Right now, these so-called toxic currencies make up just 28% of all Russia's export revenue and 31% of its import revenue, which is a significant decrease from before the war.

Instead of a Volcker moment, we got a Putin moment and we basically have war and out of this war, something will also emerge.
Zoltan Pozsar

Russia had moved to bolster its own currency after being slammed with sanctions for its invasion of Ukraine in 2022. In March of that year, Russia announced its intention to demand payment in rubles for gas sales to nations classified as "unfriendly." Putin's statement was cogent: To purchase our gas, you must use our currency. The extent to which Russia can unilaterally modify pre-existing contracts, originally agreed upon in euros, however, remains uncertain. Approximately 40% of Europe's total gas consumption is supplied by Russia. Throughout 2022, European Union gas imports from Russia had varied, ranging from 200mn to EUR 800mn (USD 880mn) per day.

In an interview with Tucker Carlson in February, Putin slammed the US for weaponizing the US dollar and claimed that their actions were responsible in large part for the fall in the US dollar's share of global currency reserves:

> *Tucker Carlson: How have sanctions, do you think, have changed, the dollar's place in the world? […]*
>
> *Vladimir Putin: Nevertheless, it is the main weapon used by the United States to maintain its power across the world. As soon as the political leadership decided to use the US dollar as a political instrument, a blow was dealt to this American power. I don't want to use any unliterary expressions, but this is stupidity and a huge mistake.*
>
> *Look at what is going on in the world. Even the United States' allies are now downsizing their dollar reserves. Seeing this, everyone starts looking for ways to protect themselves. But the fact that the United States applies restrictive measures to certain countries, such as placing restrictions on transactions, freezing assets, etc., causes grave concern and sends a signal to the whole world.*

Moreover, Putin obviously understands that the US dollar's role is fundamental to the US's global influence. Despite the vast amounts of US dollars circulated globally, **inflation rates within the United States remain relatively low due to the constant export of US dollars to the rest of the world via trade deficits.**

The US and Europe, by imposing sanctions on Russia, they are at the same time shooting themselves in the foot.
Iskander Lutsko

Putin also lays out his own nation's push towards de-dollarization. Until 2022, the US dollar was used for around half of Russia's trade with other nations. However, this figure has now plummeted to just 13%. **The decision to move away from the US dollar, Putin claims, was not initiated by Russia but was a consequence of US-imposed restrictions on Russia's US dollar transactions**. From Russia's perspective, such actions by the USA are counterproductive, harming not only the US economy but also diminishing its global influence.

Previously, Putin points out, transactions in the Chinese renminbi constituted only 3% of Russia's trade, but they now account for slightly more than 34%, a significant shift. Transactions in the Russian ruble also make up 34%.

Kenya is a mercurial character.
Yvoane Adhiambo Owuor

In an exciting development for the gold world, the Russian Embassy in Kenya tweeted: "The BRICS countries are planning to introduce a new trading currency, which will be backed by gold. More and more countries recently expressed a desire to join BRICS." This tweet should be taken with a pinch of salt, however, as managing the interests and power dynamics of multiple countries, especially those as aggressive as Russia and China, could prove to be extremely difficult. **And, of course, we are not 100% certain about the strategic significance of the Russian embassy in Kenya…**

The Middle East – The sands of allegiance are shifting

Amidst the push for de-dollarization, the Middle East emerges as a pivotal player despite the absence of any domestic alternative to rival the greenback. To date, the region has been intricately tied to American markets, with both the Saudi rial and the UAE dirham linked to the USD, tying their monetary policy to the Federal Reserve. This makes depegging from the US dollar extremely difficult, but also means the damage done to greenback hegemony will be greater if the de-linking is successful.

It was once said that "gold and oil can never flow in the same direction". If the current price of oil doesn't change soon, we will no doubt run out of gold.
ANOTHER

However, the past year has seen a clear move by China to join forces with Saudi Arabia, and this appears to be working in their mutual favor. During a meeting with Arab leaders in December 2022, President Xi Jinping announced China's intention to purchase oil and gas using renminbi. This strategic move is in alignment with Beijing's objective to promote its currency on the global stage and diminish the dominance of the US dollar in international trade. However, the majority of Saudi Arabia's assets and reserves are denominated in US dollars, including over USD 110bn in US Treasuries held by Riyadh.

Chinese Holdings of US Treasuries, in USD bn, 01/2013–12/2023

Source: US Treasury, Incrementum AG

Not only have we witnessed Saudi Arabia's bilateral agreements with China and other trade partners, but we've also seen an undercurrent of resentment towards the US in this last year.

I'll believe that oil is dead when the US military leaves the Middle East.
Luke Gromen

Saudi Crown Prince Mohammed bin Salman wielded economic threats towards the US in 2023. Behind closed doors, any retaliation against oil cuts would invite profound repercussions, promising a seismic severance of the longstanding US and Saudi alliance. President Biden, facing mounting pressure amidst soaring energy prices and the 2024 election, has yet to impose any consequences on Saudi Arabia.

We will not continue to be in the post-'79 era. That age is over.
Mohammad bin Salman

This was not the only move against the US made by Riyadh. Also in 2023, the opening of two new Chinese state-owned bank branch offices in Saudi Arabia coincided with the signing of memoranda of understanding and agreements between Chinese state-owned banks, major Saudi firms, and Saudi government entities. These initiatives were geared towards expanding the internationalization of the renminbi.

The UAE, another powerful Arabic player, added to the de-dollarization intrigue through extending their currency swap with China for 5 years. Khaled Balama, UAE Central Bank governor, explained that the deal "reflects the depth of the relationship between the UAE and China, embodying the Central Bank's commitment to solidifying the partnership with our Chinese counterpart in financial, trade and investment fields."

If they have dollar, we have our Allah.
Recep Tayyip Erdoğan

The nations signed a pact seeking to enhance collaboration between the UAE Central Bank and the Digital Currency Institute of the People's Bank of China in the realm of financial technology. China was not the only partner. The UAE expanded the initiative to de-dollarize by allowing their central bank to formalize similar swap agreements with Turkey and Egypt.

In an attempt to deepen its economic alliances, the Middle Eastern nation is also seeking to revamp payment mechanisms for oil transactions. The UAE is reaching out to countries like China, Russia, India, Egypt, and more, proposing the use of local currencies for oil settlements, and has already made tangible progress. Furthermore, Saudi Arabia has declared its willingness to accept local currencies for oil deliveries. The Kingdom is reportedly exploring the option of receiving payments in other regional currencies as part of its strategy to diversify its reserves.

India and Africa – the US dollar is being undermined

Our goal should be to make the Indian Rupee more accessible and more acceptable across the world.
Narendra Modi

India's central bank, the Reserve Bank of India, published a paper in July 2023 outlining a plan for the internationalization of the rupee. The paper included extensive in-depth discussions on the use of swap lines, integrations of offshore markets, an approach to increasing INR liquidity in forex markets, and more. **Their desire and plan for a multipolar global monetary system are coming to fruition.**

In a landmark move last year, the UAE shipped over 1mn barrels of oil to India, settling the payment in rupees in September 2023. **This is the first time India**

has paid for energy products in her own currency. UAE gold exporters have also begun transacting large sales of bullion in rupees, shipping gold to wealthy buyers in Mumbai.

Strategic autonomy is not secured by merely asserting one's independence: it is secured by creating mutually beneficial interdependencies.
Sanjaya Baru

This is possible due to the new bilateral agreement between India and the Arab nation, signed in July 2023, where the UAE agreed to settle trade in rupees in order to reduce transaction costs by eliminating dollar conversions. The Reserve Bank of India also announced that India's Unified Payments Interface (UPI) would soon be linked with the UAE's Instant Payment Platform (IPP). These types of agreements, which are becoming more common in Asia, result in reduced payment processing costs.

However long the night, the dawn will break.
African Proverb

The gradual decoupling from the US dollar is also taking place on the continent of Africa. In July of last year, Kenya's President William Ruto urged African leaders to transition away from reliance on the US dollar by advocating for the adoption of a Pan-African Payment and Settlement System. Banks and payment service providers have the opportunity to connect directly to the system, facilitating secure and immediate transactions in local currencies.

> *We also need to facilitate trade by making it possible for businesspeople to be able to transact their goods, their services without the unnecessary complications of changing currencies. That is why we want the PanAfrican payment system.*

One of the Senior Advocates of Nigeria, Femi Falana, has been a strong supporter of a move to shift away from the US dollar as the currency of exchange for oil commerce in the country. By doing so, Nigeria could bolster its currency and assert greater control over its economic affairs, thus mitigating the risks associated with the global dominance of the greenback.

The wise adapt; fools resist.
Egyptian Proverb

In another important development, for the first time, Egypt has issued bonds denominated in Chinese renminbi as part of its efforts to repay its foreign debt amid financial challenges. The three-year bonds are valued at CNY 3.5bn (USD 479mn) and maintain a 3.5% interest rate, which is, surprisingly, lower than what would have been associated with US dollar bonds.

These moves are representative of the slow and steady erosion of US dollar hegemony that has gripped the neck of the global monetary system for over half a century. **An even more interesting trend is developing, however – and it could have huge consequences for the future of gold.**

Is Gold eating USTs?

A new attack vector on the greenback's dominance is developing, and it is coming from a sector that most in the traditional financial system would not expect: gold. The World Gold Council reported that in 2023, gold demand surged to unprecedented levels due to ongoing geopolitical tensions and economic struggles in China, driving investors towards the safe haven asset. Last year, the total demand for gold amounted to 4,899t, up from 4,741t in 2022.

Culturally, Asian countries have had an enduring love for gold, and as globalization buoyed economic growth in the 1980s and 1990s, these nations started to become more important players in the gold space. In fact, anonymous gold blogger FOA mentioned that a large trader out of Hong Kong was responsible for the initial large physical drain out of the UK in 1997 that eventually forced a BIS meeting and a halt to the practice of selling gold certificates backed by stores in central bank vaults.[55]

If I got to choose a coast, I got to choose the East.
The Notorious B.I.G.

The global demand picture is shifting east. If we include India in the Asian region, nine out of the top 15 consumers for gold fabrication are situated here. Economic growth in this region has been rapid in the last few decades, and due to several constraints, including capital controls and limited investment opportunities, gold has been an attractive investment for capital allocators looking for a stable asset with reliable returns.

In an excellent article, Alasdair Macleod mentions several factors pointing to a burgeoning gold standard in the East, and for the nations that are associated with it:

The economy of imaginary wealth is being inevitably replaced by the economy of real and hard assets.
Vladimir Putin

First, Putin emphasized his vision for moving towards stable currency values anchored in commodities, such as gold, as opposed to relying on dollars and euros. He highlighted that the latter currencies could be used as economic weapons by the United States and its allied countries within their sphere of influence.

Next, Sber, Russia's leading bank, has launched digital financial assets backed by gold, underlining the anticipated monetary role of gold in the country. This is timed perfectly with the publication of an article by Sergey Glazyev in Moscow's *Vedomosti* business newspaper. Glazyev is at the helm of a project developing a new trade currency for the Eurasian Economic Union (EAEU). Glazyyev states:

> *In conditions of unprecedented sanctions pressure, the task of Russia is not to learn how to play according to the 'curve rules' of the West, but to build transparent and mutually beneficial rules of the game with friendly countries, create our own pricing, exchange trading, and investment systems. And gold can be a unique tool to combat Western sanctions if you recalculate the prices of all major international goods (oil and gas, food and fertilizers, metals, and solid minerals).*

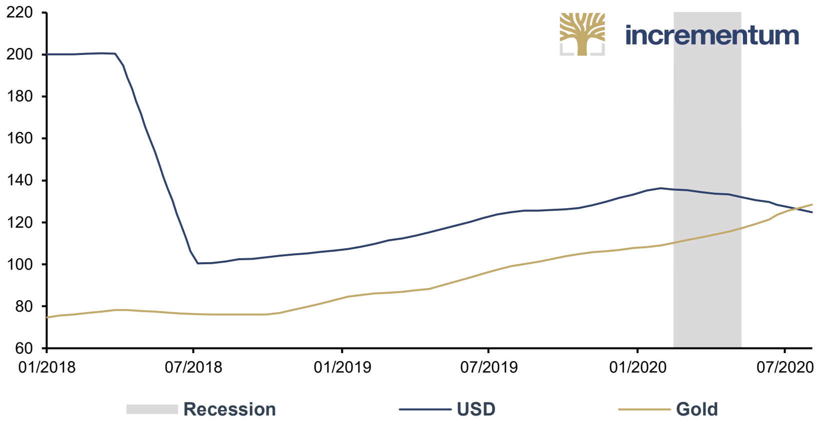
Dwell on the past and lose an eye. Forget the past and lose both eyes.
Russian Proverb

Glazyev's advocacy for the ruble to adopt a gold standard provides a strong indication of his approach as the leader of the EAEU committee in shaping a new trade currency, and he is a key proponent of the proposal to establish a new gold exchange in Moscow. **It seems unlikely that Middle Eastern oil exporters would agree to be paid in currencies other than the US dollar without strong guarantees about the future value of these payments compared to the petrodollar.** The option to hedge the renminbi into gold likely had a significant role in this consideration.

[55] *See* also: "My View of the Nixon Shock – Exclusive Interview mit FOFOA," *In Gold We Trust* report 2021; "20 Years later – a Freegold Project: Interview with FOFOA," *In Gold We Trust* report 2019

Russia's effort to decrease its reliance on US assets led to gold accounting for a larger portion than the US dollar of its USD 583bn international reserves in early 2021.

Russian Reserves, in USD bn, 01/2018–07/2020



Source: Bloomberg, Incrementum AG

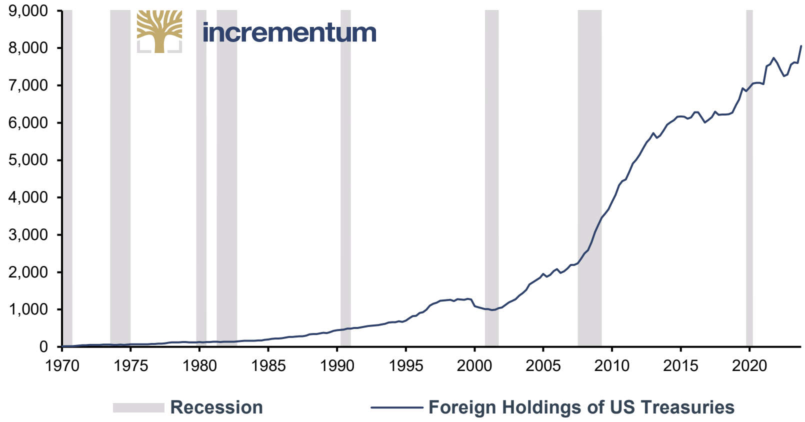
...or if new oil and gas exchanges appear where transactions are not made in dollars, this is the beginning of the dollar's end. We have nothing to do with it. They are doing it with their own hands, and this gives me every reason to believe that today's political elites are abusing the trust of the American people and are actually leading the nation to the negative consequences that I mentioned.
Vladimir Putin

Initially, Russia and China's strategy to phase out the use of dollars for commodity pricing, cross-border trade settlements, and most foreign exchange transactions was primarily defensive. They allowed the US to take the lead in geopolitical maneuvers and strategic missteps. However, the imposition of sanctions against Russia dramatically altered the situation. **Facing significant pressure, Putin has been compelled to adopt a more confrontational approach.**

At the St. Petersburg International Economic Forum in June 2023, attended by 81 official foreign delegations, Putin sought to undermine the Western financial system by openly criticizing the US dollar and the euro. His strategy to eliminate US influence from Eastern Europe encompasses both military and financial tactics and centers around convincing other heads of state to remove both currencies from their own reserve balances.

Perhaps more concerning for the US is the slow and steady erosion of US Treasuries as the de facto safe haven reserve asset. After China's entry into the WTO, it began buying US government debt hand over fist, and continued to do so throughout the 2008 financial crisis. Other countries followed China's lead and were large net buyers through the early 2000s and into the 2010s. In fact, from 2008 to 2014, foreign central banks purchased roughly 71% of all new US debt issued.

Foreign Holdings of US Treasuries, in USD bn, 1970–2023



Source: Federal Reserve St. Louis, Incrementum AG

This trend stalled in 2015, as noted by Luke Gromen:

> *So, like what we're watching right now in the US and around the world is the bursting of the global sovereign debt bubble [...] And US authorities have all had a lot more leeway to deal with it by virtue of being the reserve currency issuer and having all these piles of money that once foreign central banks stopped buying this stuff, they could regulate others into buying it.*

I declare bankruptcy!
Michael Scott,
The Office

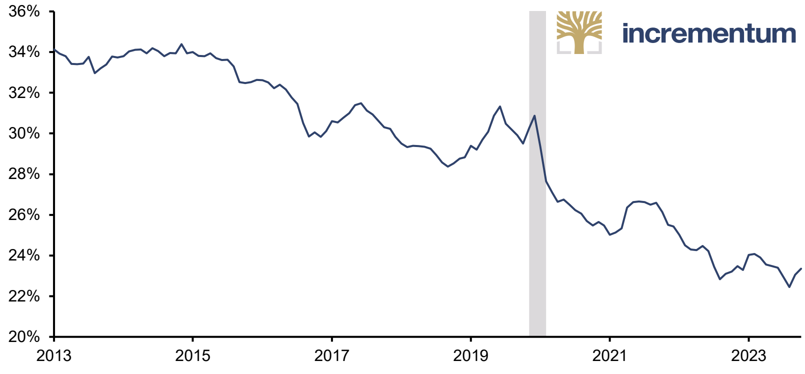
From 2018 to 2021, foreign central banks slowed their purchases, only buying a measly 14% of the debt issued. The US fiscal situation was getting increasingly worse, and in Q3/2021, as Luke Gromen noted, if you combine gross interest expense and entitlements, on a base case, you are already at 111% of tax receipts. True interest expense is now more than total federal income. **The federal government is already bankrupt – the market just doesn't know it yet.**

That same quarter, another striking event took place: Foreign central banks stopped buying US Treasuries on a net basis. According to TIC data from the Treasury itself, this trend has only worsened with time, with China, for example, seeing a decrease in holdings of USD 51bn in just 12 months, from December 2022 to December 2023.

It's gonna hurt me, I can't lie...
Let's just kiss and say goodbye.
The Manhattans

This trend may be the true de-dollarization we are looking for, or at least the first stage of it. The divestment from US Treasuries is the first nail in the US dollar's coffin, eliminating the easy source of offshore funding that America has benefited from for the last 50 years since Nixon closed the gold window and Kissinger flew to Saudi Arabia to help give birth to the petrodollar.

Foreign Holdings of US Treasuries, as % of Total US Public Debt, 01/2013–12/2023



Source: US Treasury, Federal Reserve St. Louis, Incrementum AG

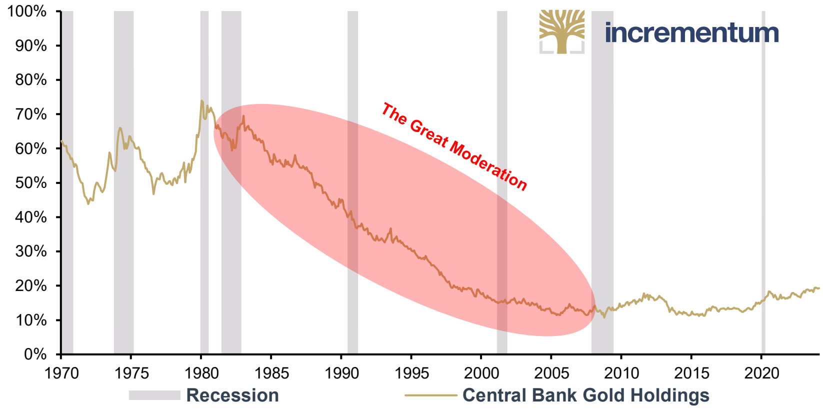
If you don't own any gold, buy some. If you own some, buy more. We are going to places where, no matter how much you have, you'll wish you had more. Sadly.
Grant Williams

Overall, this should be worrying to US policymakers, as it means they will have to find other sources of demand for government bonds. Several actions have already been taken in the last 10 years to alleviate the issue, including money market reform and Basel-III regulations that forced institutions to hold more government debt. Banks loaded up on so many bonds that in 2020 the Supplemental Leverage Ratio (SLR) was temporarily modified to exclude Treasuries, to prevent banks from holding capital against their assets. In March of 2024, US banks again asked the Federal Reserve to change the SLR so USTs would not be counted.

Can you smell what The Rock is cooking?
The Rock

To us, it is no surprise that foreign central banks are on a rapid gold-buying spree. Gold was a shunned asset during the Great Moderation. In sum, the yellow metal collapsed from a massive 80% of foreign reserves to only 15% in 3 decades. However, now a *heel-turn* is taking place: For the first time since the late 1980s, gold has rotated back into becoming a favored asset among central bankers, no longer vilified. For reference, a *heel-turn* is when a villain turns into a hero in a dramatic change of character. It is widely used in professional wrestling, and actors such as The Rock and John Cena have performed heel turns to the gleeful surprise of the audience.

Central Bank Gold Holdings, as % of Foreign Reserves, 01/1970-02/2024



Source: Crescat Capital, Reuters Eikon, Incrementum AG

Gold is not a way to wealth; it is wealth. But after 40yrs of financialization, few can distinguish capital vs debt or saving vs speculating.
Simon Mikhailovich

Could these foreign officials be hedging against inflation? Or against the devaluation of their own currencies? Perhaps. However, the more worrying implication is that US Treasuries, and perhaps the US dollar itself, are losing reserve status, and gold is returning to its rightful spot as the global neutral reserve asset. If this is true, it will have massive significance for the future gold price and the funding mechanism of the Treasury itself.

The only way to get gold to go down persistently would be to run persistent budget surpluses, which is for practical purposes impossible.
Dan Oliver

If the US dollar does lose reserve status, then excess US Treasuries built up overseas would come back to roost, causing interest rate hikes domestically. No currency has as many external liabilities as the US dollar, and the unwinding of these positions would be disastrous. The Fed would be forced to respond with a new, colossal wave of QE, likely much bigger than anything seen up to this point. We would shift violently from a unipolar world to a multipolar one, and gold would rise as the medium against which all fiat currencies are judged.

What is encouraging on this note is the role of the yellow metal in the new global monetary system. **Gold serving as a neutral reserve asset doesn't just fix Triffin's Dilemma, it obviates it completely.** Without a single central issuer of the global currency, there is no dilemma because there is no stark contrast between interior vs. exterior demand and supply. **The TINA doctrine would now be replaced by TIAA – There Is An Alternative – and the alternative is gold.**

No country can, on its own, escape from the 'dollar trap,' since its attempt to do so would only exacerbate the difficulties of others.
Robert Triffin

To expand on the Triffin Dilemma, in 1959 a Belgian economist by the name of Robert Triffin gave a presentation in front of the US Congress on what he saw as a fatal flaw in the Bretton-Woods global monetary system. The flaw he presented came to be known as the Triffin Dilemma or the Triffin Paradox, and it would, he asserted, destroy Bretton-Woods over a long enough timeframe. In the words of a 2017 BIS study:

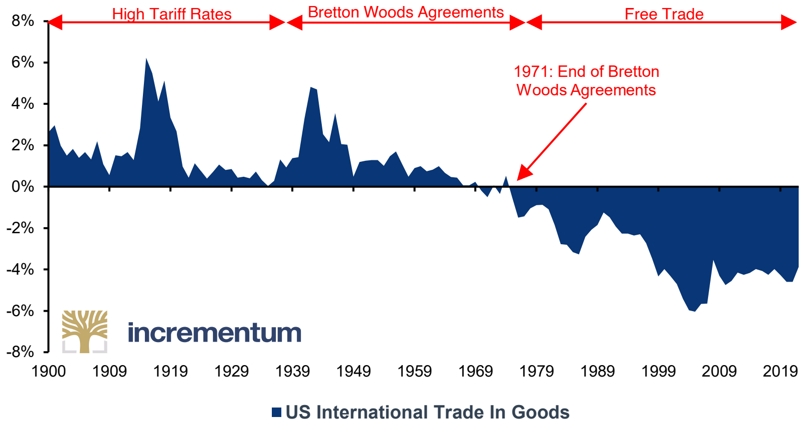
> *The most common version of Triffin shifts his thesis from the capital account to the current account. It posits that the reserve currency country must run, or at least does run, persistent current account deficits to provide the rest of the world with reserves denominated in its currency […]. 'In doing so, it becomes more indebted to foreigners until the risk-free asset ceases to be risk-free'.*

The idea of a single, stable currency is indeed an admirable goal. However, it requires institutional structures that ensure flexibility and adjustment, which our current system sorely lacks.
Robert Triffin

The Triffin Dilemma boils down to this: As the US dollar is the global reserve currency, there is international demand for it. These funds are needed to settle global trade, held as reserve balances by central banks, and to satisfy offshore dollar debts. **All these countries borrow, save, and trade in a currency they cannot print.**

The implications of this dilemma are extensive. In order to satisfy the international demand for the reserve currency, the issuing country must be prepared to perpetually export more of its currency than it recoups through trade surpluses. This can lead to a diminution of confidence in the currency if markets perceive that the balance between international liquidity provision and domestic economic stability is not being effectively managed.

US International Trade In Goods, as % of GDP, 1900–2023



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

The US must choose whether or not to satisfy this demand. If they elect not to, a deflationary crisis could develop, as there would not be not enough US dollars to satisfy global trade and finance needs. If they do, then the constant outflow of greenbacks would create more dollars than is otherwise justified, eventually breaking the Bretton Woods gold peg of USD 35 an ounce. Triffin gravely warned Congress that this outcome was essentially inevitable – and it was.

Through the Bancor, we seek to construct the economic Babel, not of confusion, but of connection, turning the babel of conflicting national interests into a symphony of economic harmony.
John Maynard Keynes

John Maynard Keynes had initially created a solution for the dilemma, which he termed the bancor. In the plan that he outlined at Bretton Woods, they would establish a global central bank known as the International Clearing Union (ICU), which would aim at addressing international imbalances. This bank would introduce a new international currency called the bancor for settling such imbalances. Under this plan, each country would be granted a restricted line of credit to prevent balance of payments deficits, while also being incentivized against running surpluses by being required to remit excess bancor to the Clearing Union.

The bancor was not adopted, however, as it was deemed unwieldy and idealistic in a world of competing nation-states and financial powers. The ICU and bancor settlement currency would need international cooperation on issues with competing interests vying for control.

The collapse will be a collapse of the US dollar system, the financial system, and the paper gold market, and the reset will include the repricing of physical gold.
FOFOA

However, today, gold can still replace USTs as the de facto reserve asset. In this scenario, the trend of the last few years will accelerate rapidly. Foreigners dumping Treasuries would replace them with gold reserves held in their own vaults, demanding physical ownership rather than custody. The self-balancing nature of the gold standard would return; any country issuing too much paper currency versus their gold would see their reserves drained, eventually causing devaluation and restrictive monetary policies to correct the issue.

This aligns closely with the writings of the anonymous bloggers ANOTHER and FOA (Friend of Another) in the late 1990s and early 2000s.[56] These two mysterious insiders hypothesized that Saudi Arabia was acquiring gold by hiding sales through the massive petroleum markets – swapping

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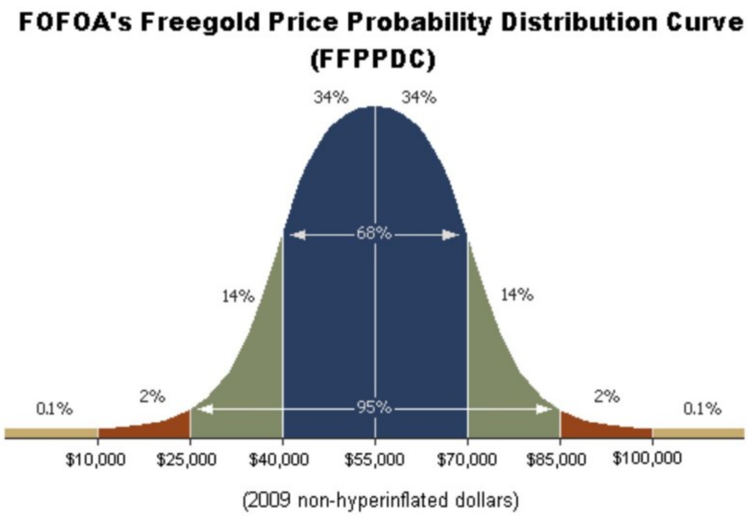
56 *See* also: "My View of the Nixon Shock – Exclusive Interview mit FOFOA," *In Gold We Trust* report 2021; "20 Years later – a Freegold Project: Interview with FOFOA," *In Gold We Trust* report 2019

barrels for a combination of dollars and bullion. They claimed that eventually the oil-producing nations would gain the upper hand and be able to force the repricing of gold in US dollar terms, demanding physical settlement for delivery of energy products.



Source: "20 Years later – a Freegold Project: Interview with FOFOA," *In Gold We Trust* report 2019

Gold will climb so high that only small amounts will be used to settle international trade balances.
FOA

Nations would then be forced to choose: Buy gold on the open market and deliver it for oil, or face imminent energy shortages. This ultimatum would shock the global financial system, and many nations would scramble to acquire bullion at whatever price necessary. A massive bid would open. **As our friend Lyn Alden says: "The first rule of running a developed economy is to not have an energy crisis. The second rule is to not have an energy crisis."**

It is not that gold will become money again, but that national currencies will no longer be money.
ANOTHER

Gold revaluation would then be forced, which could actually be profitable for central banks that hold a significant portion in something called a gold revaluation account (GRA). As Jan Nieuwenhuijs lays out, this has been done several times in the past, by the Netherlands in the 1930s and Italy in 2002, and it can be used to recapitalize a central bank, as Switzerland did in 2000.

Gold Price Needed to Back Each Country's Monetary Aggregates, in USD, 2024

Country	Gold Holdings (in Ounces)	M0	M1	M2
China	72,621,510	22,290	124,714	579,621
G8 Euro Area	280,825,646	19,361	39,253	58,016
Japan	27,160,830	27,786	260,555	298,039
Russia	74,900,965	2,426	7,201	14,536
Switzerland	33,389,200	18,022	19,838	30,108
UK	9,962,182	11,957	278,700	379,075
USA	261,498,000	22,497	68,827	79,699

Source: Brent Johnson, Santiago Capital, Incrementum AG

Let China sleep, for when she wakes, she will shake the world.
Napoleon Bonaparte

The gold price level would then depend on each country, its particular M2 composition, and its real gold reserves. This possibility could explain why foreign central banks are gobbling up the precious metal in record amounts. They are preparing for a reset of the global monetary system and a reintroduction of gold as the neutral reserve asset, replacing USD 7trn of US Treasury bonds. **The bullishness, in this case, for the gold price cannot be understated.**

In March of 2022, gold got scarce.
Doug Pollitt

Even if this scenario sounds far-fetched, one thing is clear: The East is back in the driver's seat for gold markets. Clearly, Eastern demand has begun pushing prices up and has reignited the bull market in precious metals, long thought dead by dollar proponents and bond traders. Crucially, as some Asian traders note, gold prices in China have soared, and this has caused dislocations in the West. On March 6, 2024, for example, spot gold on the Shanghai exchange traded at up to USD 2,189.59 an ounce, far above the USD 2,159 level seen on COMEX that day.

Shanghai Gold will change the current gold market with its "consumed in the East but priced in the West" arrangement. When China has the right to speak in the international gold market, the true price of gold will be revealed.
Xu Luode, Chairman, Shanghai Gold Exchange, May 2014

Analysts such as VBL's Ghost, the writer of GoldFix, have pointed out that this delta represents a massive arbitrage opportunity for traders, and a mechanism that will drain gold reserves out of the West and into the East. The price differential between the two exchanges must be eliminated by gold prices moving up to meet the ripping Asian bid – lest we face another run on gold, akin to 1971.

Actually, this may be starting to take place already: Gold prices in Shanghai closed at record highs on April 1st, well above where gold trades in the West. Bai, the CEO of an investment company in China, tweeted:

> *April 1, SGE/SFE gold opened and hit ATH again.*
> *SGE gold=$2286.22/oz;*
> *SFE gold=$2296.78/oz.*

For reference, gold futures in the US reached a record high of USD 2,265 before paring gains and retracing, closing at USD 2,249.89. The USD 36 and USD 46 price differential for the spot and future markets, respectively, may not seem like much, but by leveraging this up, traders can make a killing by pulling physical gold out of Comex and dumping it in Shanghai.

This has been going on for months. The average spread has hovered between USD 30 and USD 40 for the last few months, and at times is even higher. On September 20th, 2023, for example, the spread was USD 88. As this has continued, gold has consistently drained out of Comex. The arbitrage opened – or widened to be material enough – in July 2022.

This is being driven by record Chinese gold demand, as investors flee Chinese stocks and real estate. Housing markets in China are struggling as leveraged investment funds and property managers are defaulting on bonds and trust products, and contractors are left unpaid. The misallocated capital from these markets is now flowing into gold.[57]

[57] See chapters "The Status Quo of Gold Demand" and "China's Economic Situation and Its Consequences for Gold Consumption" in this *In Gold We Trust* report

The dollar's demise may come gradually, but not suddenly.
Niall Ferguson

Although the US dollar is fighting hard to defend its position as the bedrock of the global monetary system, last year we saw significant progress by players such as China and Russia to undermine the greenback's dominance. Crucial players like Saudi Arabia and the UAE have joined the fray, and the rumblings of a shift to a multipolar global order are beginning to be heard.

The truth doesn't always come in a nice, neat package.
Seymour Hersh

BRICS has expanded more than ever before, and China's push to internationalize the renminbi is coming at the expense of entrenched dollar support everywhere. The rallying cry to escape the dollar system is spreading to new ears and growing louder by the day. **Soon, it will be a cacophony.**

The East is rising, demanding bullion for fiat and leading the charge in a new gold rush. The complacent West, long thought to be the undisputed champion of the global monetary system, is standing in awe as the gold price enters new heights.

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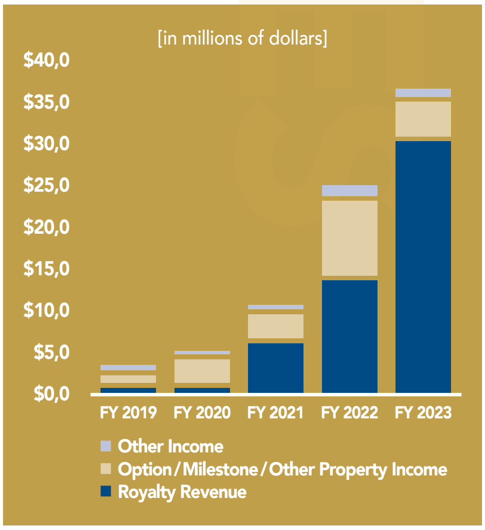

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From Wedlock to Deadlock: The East-West Divorce

Brent Johnson debates Louis-Vincent Gave on de-dollarization.

- We are in the process of a divorce between the global East and the global West as the East is attempting a move away from using the US dollar in international trade. As with any divorce, major changes will be unavoidable. It is likely that everyone involved will be negatively impacted, at least in the shorter term.
- The US and China are both relatively self-sufficient with regard to their energy needs. The vital question will be what currency other countries will accept for their goods, particularly oil.
- Just because China and the global East are attempting to de-dollarize, this does not mean that it is guaranteed to happen.
- The global East, in particular China, views de-dollarization as a political priority and are likely willing to endure economic hardship in order to achieve this goal.
- China used to be highly dependent on US markets as a purchaser for their goods. This seems to be changing as emerging markets are becoming more important due to economic booms in many emerging countries including India, Türkiye, and Indonesia.
- Europe is turning out to be the neglected child in this divorce as it is fast becoming irrelevant after grossly misplaying the geopolitical chess game over the last three years.

This debate focuses on the highly topical issue of de-dollarization and features two of the most prominent voices in global finance today: Brent Johnson and Louis-Vincent Gave.

Brent Johnson has been vocal about his belief in the enduring strength of the US dollar. He argues that the US dollar will not only remain the world's reserve currency but will also spike in a "violent" global debt crisis. His *Dollar Milkshake Theory* posits that the US dollar will continue to draw strength from the global financial system, challenging the notion of de-dollarization.

On the other side, Louis-Vincent Gave, a renowned economist and financial strategist, offers a contrasting view. He opines that de-dollarization is not a mere possibility but a reality that the world is gradually moving towards. According to Louis, the global economic landscape is shifting, with nations increasingly exploring alternatives to the US dollar for international trade, potentially leading to a gradual decline in the US dollar's dominance.

This discussion is a riveting exploration of the future of global currencies, featuring insights from two of the most respected minds in the field, an intellectual clash that will enhance your understanding of global finance and the role of the US dollar in the world economy.

Louis-Vincent Gave ist he CEO of Gavekal, a Hong Kong based company he co-founded over twenty years ago with his father Charles and Anatole Kaletsky. Gavekal has grown to become one of the world's leading independent research providers to institutional investors around the globe. Louis has written seven books, the latest being *Avoiding the Punch: Investing in Uncertain Times* with reviews how to build a portfolio at a time of rising geostrategic strife, and when very low interest rates and stretched valuations on most assets announce constrained returns on most assets over the next decade.

Brent Johnson brings twenty five years of experience in the financial markets to his position as CEO of Santiago Capital. He has a long career in finance, having also been Managing Director at BakerAvenue, a USD 2bn Asset Manager and Wealth Management firm. Before joining BakerAvenue, Brent spent nine years at Credit Suisse in their private client group. Brent regularly gives interviews and speaks at conferences regarding precious metals, currencies & macroeconomic trends. His views have been quoted in numerous print, online and television outlets. He lives in San Juan, Puerto Rico with his wife Mary and son Moses.

This debate was recorded on the April 30, 2024. We are publishing the highlights of this debate below.

The full version of the debate is available for download *here*. The video of the entire debate can be viewed on YouTube.

The big question is whether the US dollar will retain its centrality or will it be supplanted within the next decade?

Ronnie Stöferle

Gentlemen, we will now dive into a discussion on topics ranging from de-dollarization, global macro trends, the status of the Japanese yen, and the developments in the world of gold. These topics are like a complex 3D puzzle that we aim to piece together. Louis is particularly renowned for his analogies; he once compared the US dollar system to Microsoft Windows, noting how, despite its flaws and occasional malfunctions, it remains the dominant operating system, much like how the US dollar continues to lead among global currencies. This leads us to the overarching **question of whether the US dollar will retain its dominance, or will it be supplanted within the next decade**. Louis, could you share your perspective on this?

To replace it, you need not only a better system but a much better one that everyone changes to at once.

Louis Gave

Will the US dollar still be the dominant currency over the next 10 years? Yes, as I've said in my books, the US dollar is the Microsoft of the world. **To replace it, you need not only a better system but a much better one that everyone changes to at once.** Having said that, the story of the past 20 or 30 years, while Microsoft was still dominating and doing a great job, you actually did better with Apple, right? If you bought Microsoft in 2000, it was a 500bn market cap, and it's now over two trillion. But Apple was a 50bn market cap and is also over two trillion today. In the past 20 years, Apple created a new operating system. They invented the smartphone, and from there, a lot of people moved to Apple's new operating system, and sometimes running both side by side.

There's no reason trade between Mexico and China or South Africa and Zambia, for instance, needs to be priced in US dollars.

This is, in my view, what China is trying to do. China has said the growth in the world over the next 20 years will be in trade in emerging markets. **There's no reason trade between Mexico and China or South Africa and Zambia needs to be priced in US dollars.** Thus, they are attempting to create a new operating system. And lo and behold, this is happening. We now live in a world where 20% of oil is no longer priced in US dollars. Just like it would have seemed absurd for Apple's operating system to be on 30% of screens around the world. Twenty years ago, this would have seemed like madness.

The only growth in trade in the world now is emerging markets to emerging markets.

So you can chip away at it through specialized trade. **The only growth in trade in the world now is emerging markets to emerging markets,** for a number of reasons, whether it be geopolitical, such as the Russian sanctions, or financial, such as China offering great financing terms to Africa and Southeast Asia. It is a changing world, and I think the Apple analogy to Microsoft works decently well.

The world is clearly going through a divorce. When you go through a divorce, some things have to change.

Brent Johnson

Yeah, I actually like that analogy. **The world is clearly going through a divorce. When you go through a divorce, some things have to change**, like buying a new house or changing insurance. I don't think the monetary system will look the same in 10 years, but I agree that the dollar will still be dominant.

A lot of people look at this divorce and automatically think they'll go with Apple because it's the cool new thing. But remember, Steve Jobs wasn't the nicest guy and got fired. Apple went through tough times. So **when discussing de-**

dollarization, people think it's a foregone conclusion and it will happen quickly and peacefully.

Any transition that puts another system on par with the dollar or replaces it will cause incredible economic volatility and possibly military violence.

But I believe **any transition that puts another system on par with the dollar or replaces it will cause incredible economic volatility and possibly military violence**. In that process, the dollar could go higher. I don't think Microsoft and Apple will develop and operate peacefully alongside each other in this scenario. Just because Apple is the cool thing in the real world doesn't mean Apple will be the cool thing in this scenario.

Niko Jilch[58]

Louis, could you expand on this and China's broader economic ambitions?

Louis, could you perhaps summarize your viewpoint on China's strategic plans, especially in terms of its monetary policies? You've articulated some compelling comparisons, including how Beijing manages its central bank akin to Germany's Bundesbank approach, which intrigues us Austrians and Germans. **Could you expand on this and China's broader economic ambitions?**

Louis Gave

Foreigners believe the US's greatest comparative advantage is the US dollar, which allows for funding budget and current account deficits without constraints.

I agree that any transition is unlikely to happen without military violence, as we've seen in Libya and Iraq. Americans believe their greatest comparative advantage is the rule of law, world-class universities, entrepreneurs, natural resources, and the inability to be invaded. However, **foreigners believe the US's greatest comparative advantage is the US dollar, which allows for funding budget and current account deficits without constraints**, as seen after the 2008 mortgage crisis.

Chinese policymakers recognize the US dollar's importance and question why they should fund US growth using the dollar.

Chinese policymakers recognize the US dollar's importance and question why they should fund US growth using the dollar. When Xi Jinping became president, his focus shifted from domestic issues to an "imperialist vision" of China's future. This vision includes initiatives like One Belt, One Road, the Silk Road Fund, and the Asia Infrastructure Investment Bank. It's not about invading neighboring countries but rather a "road-building exercise" to facilitate trade and the flow of commodities and finished goods.

To move away from the dollar, the renminbi needs to be a strong currency, and the RMB bond market must be a reliable store of value.

Given this vision, China aims to de-dollarize emerging market trade to avoid paying tribute to its geopolitical rival, the US. **To achieve this, the renminbi must be a strong currency, and the renminbi bond market must be a reliable store of value.** Currencies serve as a means of exchange, a unit of account, and a store of value, with bonds and equities as options for the latter. **Emerging market central banks must be convinced that renminbi bonds will hold their value and keep reserves in renminbi**. Over the past 10 years, China has followed a policy similar to Germany's in the 1970s, prioritizing the bond market over its stock market and maintaining a steady currency.

58 Over the past few years, Niko Jilch has contributed numerous articles to the *In Gold We Trust* report. He works as a financial journalist and podcaster. You can follow him on www.nikojilch.com, X, and YouTube, among others.

Brent Johnson

My concern with this arises when people assume that just because China is trying to achieve something, they will be successful.

I completely agree with Louis' characterization of what China is trying to do. I have no issue with his explanation. However, **my concern arises when people assume that just because China is trying to achieve something, they will be successful**.

I believe it will be much harder to accomplish in reality than to write about in a book. For instance, part of the reason China's bond market has remained relatively flat is due to their quasi-pegged currency and interest rates, which have been kept low because they had largely shut down their economy until recently.

I believe it will be much harder to accomplish in reality than to write about in a book.

There is no significant external holding of RMB bonds; it's mostly internal. Despite this, the Chinese yuan has lost 15% of its value in the last two years. So, when people say the rest of the world will stop holding US bonds because the dollar is losing value and start using the yuan instead, it's worth noting that even though the US dollar is supposedly losing value, the yuan has lost 15% against it. The other reason Chinese bonds have outperformed US bonds is because the US purposefully increased rates, which causes bond prices to fall. Now, **I'm no fan of central bankers, but they definitely understand that raising rates leads to falling bond prices.** This idea that the US is shocked by the performance of treasuries is, in my opinion, off base. Of course, they knew raising rates would lead to lower bond prices.

The US has purposefully weaponized the dollar over the last couple of years.

I will argue until the day I die that **the US has purposefully weaponized the dollar over the last couple of years**. Higher interest rates and a blowing out of the budget are often used as evidence that the dollar can't last forever. However, considering the current state of the world, **higher rates in the US affect the rest of the world more than the US itself because the world uses dollars**. Although they're starting to use Apple as well, they still use Microsoft, and they owe a lot of money to Microsoft. In other words, the **world owes over 30 trillion in US dollar-denominated debt and another 80 trillion in off-balance sheet derivatives in US dollars.**

I don't see how we can transition from one system to another or even have dual systems without reconciling all that outstanding US dollar debt?

So, I don't see how we can transition from using Microsoft to Apple. If everyone starts using Apple, where will they get the money to finance, service, and pay off all the US dollar debt? In other words, **the process of de-dollarization, if it takes place, pushes the US dollar higher, not lower.** If there's less circulating, there's less supply, but all that historic US dollar debt still exists. **I can't figure out how we can transition from one system to another or even have dual systems without reconciling all that outstanding US dollar debt.** Until that is reconciled, we have the US dollar to contend with.

Ronnie Stöferle

Let's pivot our discussion to gold. Do you think Xi Jinping cares about the price of gold?

Let's pivot our discussion to gold, which may emerge as a vital diversifier in today's climate. You mentioned that Xi Jinping doesn't care about the Shanghai Composite or Chinese equities. **Do you think he cares about the price of gold**?

Louis Gave

I don't think Xi Jinping cares about the gold price. For him, gold is a means to an end.

To answer your question directly, **I don't think Xi Jinping cares about the gold price. I think gold for him is a means to an end**, as he's looking to reduce China's dependency on the US dollar and de-dollarize emerging market trade. Regarding China buying gold, it's important to note that gold demand is primarily driven by emerging markets.

When emerging markets do well, gold does well, and when they do badly, gold also suffers.

You don't need the dollar to be weak anymore for emerging markets to do well.

Gold is a play on emerging markets, where physical demand is concentrated in countries like China, which accounts for about a third of global gold demand, and India with another third. People in emerging markets are the ones who predominantly buy physical gold. **When emerging markets do well, gold does well, and when they do badly, gold also suffers**. Although gold is often seen as inversely correlated with the US dollar, the past 18 months have shown that gold demand can remain strong even when the dollar is strong, as emerging markets continue to perform well. When the dollar's weak, emerging markets tend to do even better, but **you don't need the dollar to be weak anymore for emerging markets to do well**, which is a very important change we're going through.

Gold is a hedge option for the world falling apart due to wars, geopolitical reasons, financial crises, or other bad scenarios.

So that's the first function of gold. The second function, typically focused on by Westerners, is that **gold is a hedge option for the world falling apart due to wars, geopolitical reasons, financial crises, or other bad scenarios.** We've had a glimpse of this, and while China has been buying a lot of gold, **the big new marginal buyer has been Japan**. In March, after the BOJ announced it would sit on the yield curve forever, the yen moved from 146 to 155 very quickly. Japanese investors started buying gold like crazy, as evidenced by the increased volume in the main gold ETF in Japan, 1540JT, trading at a 10% premium to NAV.

Japan's situation, with a collapsing yen and high debt, could potentially happen elsewhere.

This suggests that Japan cashed in on the second option, the hedge against financial repression or geopolitical crisis. This raises an interesting question because **Japan's situation, with a collapsing yen and high debt, could potentially happen elsewhere**. It's not a stretch to think it could happen in Europe, where France is running a 5.5% of GDP budget deficit at a time of full employment and economic recovery. The same could be said for the US, with full employment and budget deficits of 6% of GDP.

While a third of US debt is owned by foreigners, only 4% of Japanese debt is owned by foreigners.

While the stock of debt may not be as high in Europe and the US, these massive budget deficits will get them there over time. Additionally, the **ownership structure of the debt is very different, with a third of US debt owned by foreigners, only 4% of Japanese debt is owned by foreigners**, while more than 40% of French debt is owned by foreigners. This means that in these countries, things can move much quicker.

For China, gold is a means to an end. It's a way to give credibility to their currency and to de-dollarize their trade.

Does the Chinese government care about the gold price? No, they don't. For them, **gold is a means to an end. It's a way to give credibility to their currency and to de-dollarize their trade**. They can tell other countries that they will trade in renminbi, and if they don't want to keep the renminbi, they can trade it for gold at the Shanghai gold market. This is particularly attractive for countries like Russia, Kazakhstan, and those in the Middle East.

Brent Johnson

The primary motivation for individuals in Asia buying gold is to protect their daily living expenses from currency devaluation.

The recent surge in gold demand in Asia, particularly in Japan, is not solely driven by concerns about the US dollar. In fact, when people in Asia buy gold, it's often because their own currencies, like the yuan or the yen, are losing value. While the dollar may be a secondary concern**, the primary motivation for individuals buying gold is to protect their daily living expenses from currency devaluation.**

Gold is not a "silver bullet" that can solve all economic problems. Gold's value and demand are influenced by various factors.

Gold is undoubtedly a crucial component of any investment portfolio, as it has historically served as a hedge against economic and political uncertainties. However, **it is not a "silver bullet", pardon the pun, that can solve all economic problems. Gold's value and demand are influenced by various factors, including local currency strength and central banks' desire to diversify their reserves.** Therefore, while gold is an essential part of a diversified portfolio, it should not be viewed as an all-encompassing solution to the complex challenges of international politics and finance.

Until a new system incorporating gold is in place, using gold will remain less efficient.

Gold isn't the most convenient asset to move around the world. It can be done, but **is China really going to import all this gold just to start shipping it abroad to settle its trade balance?** Gold has been used for centuries, and it can still be used, but it's not as efficient, easy, or quick as the current system. **Until a new system incorporating gold is in place, using gold will remain less efficient**. Some countries might still use it to de-dollarize, despite the inefficiency. However, it's worth noting that **attempts to use gold by smaller countries in recent years have often failed.** While gold is an important asset and everyone should own some, it's not a silver bullet that solves all economic problems.

Louis Gave

China wants to create their own international gold exchange in Shanghai, but that would imply that all the other nations place their trust in China.

The initial Bretton Woods days saw countries like France, the UK, and Germany storing their gold in New York, facilitating trade settlements by simply moving gold bars between designated boxes. However, the loss of faith in global institutions and the US, particularly after the Russian sanctions, has led to a shift in gold usage**. China won't store its gold in New York; they want to create their own set of gold boxes in Shanghai, but that would imply that all the other nations place their trust in China**.

China is creating dependency similar to the US post-World War II.

China's Belt and Road initiative, which involves building infrastructure in other countries and establishing long-term financial dependencies, could potentially create a new dynamic where gold is used for trade settlements. By building high-speed rail lines and nuclear power plants in countries like Indonesia, **China is creating a level of dependency similar to the US post-World War II**.

Russia and Kazakhstan, which are more dependent on China, may have less choice in trusting China to hold their gold.

Countries like **Russia and Kazakhstan, which are more dependent on China, may have less choice in trusting China to hold their gold**. However, the extent to which other countries will follow suit remains an open question. The reality is that the shift towards using gold in trade settlements is slowly building up, with more and more trade being settled in this manner.

Niko Jilch
Within this framework, **who does one trust?** The CCP, the state, or Xi Jinping himself?

Louis Gave

Trusting China means trusting the Chinese Communist Party.

In China, the party and the state are intertwined, with the party constitutionally positioned above the state. **Trusting China, therefore, means trusting the Chinese Communist Party**. While one might speculate about political evolution, the party's ideology currently views such changes as an impossibility.

Ronnie Stöferle

Are we seeing "de-euroization"?

Talking about divorce and its complexities, in this ménage à trois, Europe is often overlooked amidst the dominant narratives of the US and China. **Are we seeing "de-euroization"?**

Brent Johnson

Yes. The world is going through a divorce. This reflects a broader geopolitical trend where alliances are shifting, and cooperation between major powers is becoming less certain.

In my opinion, yes. And for a couple of very specific reasons. **This world is going through a divorce**, as I mentioned earlier. It seems to be a mutually desired divorce, with both the US and China seeking to decouple from each other to a significant extent, while acknowledging that some level of business interaction will persist. This shift is not solely driven by the East or the West. Rather**, it reflects a broader geopolitical trend where alliances are shifting, and cooperation between major powers is becoming less certain.**

China's distancing from the West is hurting Europe adversely and the US appears to be prioritizing its interests over its alliance with Europe.

China is taking steps to insulate itself from the West, though not entirely severing ties. Previously, China relied heavily on imports from Europe. Contrary to some expectations, Europe's alignment has not leaned towards Russia or China against the US. **China's distancing from the West is hurting Europe adversely.** Concurrently, the **US appears to be prioritizing its interests over its traditional alliance with Europe**. This strategic realignment is observable in the significant outflow of industry from Germany, some relocating to China and others to the United States. At a recent entrepreneurial conference in Germany, attendees noted a trend of talented individuals migrating to other European countries such as Liechtenstein and Switzerland, as well as destinations outside Europe like Dubai. This shift underscores Europe's position as the disadvantaged party in this geopolitical recalibration, a situation unlikely to change soon.

Ronnie Stöferle

Europe is like the child who is left disadvantaged after the divorce.

Europe is like the child who is left disadvantaged after the divorce. A friend of mine in the automotive sector emphasized the increasing presence of Chinese cars in our markets in the coming years. This trend poses a significant challenge to German automakers such as BMW, Mercedes, and Porsche, which have historically taken pride in their industry. I agree that Europe is emerging as the primary casualty of this geopolitical transformation.

Europe had a significant opportunity to act as a mediator in this geopolitical separation. However, due to policy failure, it failed to do so.

Louis Gave
As a European who left Europe, the type Brent described, allow me to interject. **Europe had a significant opportunity to act as a mediator in this geopolitical separation. However, due to policy failure, it failed to do so.** There is a quote from Tolkien's "The Lord of the Rings" that resonates with me: "One ring will always corrupt, two will divide, but with three, there is balance." This notion, applied metaphorically, speaks to the potential for a balanced global order with the US, Europe, and China each wielding influence.

China's emergence as a major exporter of automobiles, heavy machinery, and agricultural equipment has reshaped the competitive landscape.

However, Europe faltered in fulfilling this role. Consequently, we find ourselves in a "two ring" world, as Brent suggested. Notably, **China had become an industrial powerhouse and transformed global trade dynamics. Its emergence as a major exporter of automobiles, heavy machinery, and agricultural equipment has reshaped the competitive landscape.** The remarkable productivity gains in Chinese industries have propelled its status as a leader in global manufacturing. **This shift has created a self-reinforcing industrial ecosystem, providing China with a substantial competitive advantage that will be difficult for other nations to match**. This makes it very hard for other countries to compete or to catch up.

In a global divorce, all major economies, including the US, China, Europe, Japan, and others, will face difficulties.

Brent Johnson
Louis's perspective on the global economic situation has made me realize that it's essential to acknowledge that **all major economies, including the US, China, Europe, Japan, and others, will face difficulties** and "take a hit". Despite the potential for the US to experience significant impacts, it's not a given that it will lose its global hegemony as a result. Bullies, like the US, often maintain their position due to the reluctance of others to confront them.

Outside of the US, markets may not be large enough for China to sell all their production at current prices.

However, I agree that eventually, bullies can fall, but the process might not be immediate. For de-dollarization to occur on a large scale, China would need to decouple from the US, which would be a challenging process. **While acknowledging the significant productive capacity and economic strength of China** and other countries, it's also important to consider that **outside of the US, markets may not be large enough to sell all their production at current prices.**

If China has to start selling to new markets at lower prices, it may not be able to service and pay off its debt effectively.

Both the US and China have accumulated considerable debt over the past 20 years, China's debt levels increasing significantly. **If China has to start selling to new markets at lower prices, it may not be able to service and pay off its debt effectively**. Russia is an outlier in this scenario, as it hasn't taken on much debt and possesses substantial natural resources, which has helped it weather sanctions and other pressures. As the world continues to decouple along East-West lines, **I don't think China can maintain its position as well as Russia has.**

The first big question is who's on the other side of the debt - is it domestic or foreign?

Louis Gave
I think on debt, for me I look at debt a little bit differently. **The first big question is who's on the other side of the debt – is it domestic or foreign?** For example, if I borrow a million dollars from my dad, as a family, we don't have any debt. But if I borrow a million dollars from Brent, I owe Brent a million dollars. When it comes to the growth of debt in the US and Europe, in

countries like France, it's increasingly owed to foreigners. This narrows policy choices compared to when debt is owed domestically. When you owe it to yourself, you can kick the can down the road for a very long time, as Japan has shown.

The other question is what is done with the debt. What did the US get for it's USD 34trn of debt?

The other question is what is done with the debt. When I started in this business, the US government debt was USD 4.5trn. Today, it's at USD 34trn. **I always ask myself, what did the US get for that USD 30trn?** Where are the major infrastructure projects like the Hoover Dam or the interstate highway system? A lot of that debt has gone to fund unproductive foreign wars and social transfer payments. **Once you give benefits, you can never take them back. Infrastructure projects have a definite end.**

Although there was a big increase in Chinese debt, the results were tangible in the form of visible infrastructure development.

Although there was a big increase in Chinese debt, the results were tangible in the form of visible infrastructure development. They've built high-speed rails, roads, ports, and airports. While the productivity of such infrastructure can be debated, it's generally more productive than, say, funding a hip replacement for a grandmother.

Economic activity is energy transformed. Most countries save US dollars to buy energy, especially oil.

When comparing debt, are we really talking about the same thing? I'm not 100% sure that we are. Here's a critical point: **economic activity is energy transformed. Most countries save US dollars to buy energy, especially oil**. In the past, dollars were saved to buy Caterpillar machines and Ford trucks, but that's no longer the case. Today, no one wants a Ford truck. If you want a Caterpillar, you'll probably buy a LiuGong machine because it's cheaper and just as good, if not better. For many industrial goods, you no longer need dollars, but you still need dollars for energy and commodities.

The US became an energy superpower thanks to the shale revolution.

This brings me to the most significant macro development of the past 15 years that everyone seems to forget: **the US became an energy superpower thanks to the shale gas revolution**. The US added a Saudi Arabia in just 15 years. This, to me, is what has underpinned the dollar's strength and the US bull market.

If the US remains at the center of the next energy revolution and continues to have the cheapest cost of energy, the dollar will stay king.

The fact that the US had a much cheaper cost of energy and more plentiful energy than anyone else for 15 years has been a significant factor in the dollar's strength. The question now is, what happens over the next 10 or 15 years? **If the US remains at the center of the next energy revolution and continues to have the cheapest cost of energy, the dollar will stay king.** However, **China is making leaps and bounds in nuclear energy**, particularly in molten salt reactors, which I think are the energy of the future. China is also the leading provider in solar energy, by a long shot. If you believe in wind energy, I don't, then Germany and Scandinavia could have a shot at being energy leaders.

If you think that in 10 years time, the US will still be the main driver of the marginal increase in energy in the world, then the US will stay king. However, this is not my belief, as the US has stopped investing in this field for the past seven or eight years.

Do you think that at some point, organizations like BRICS or the SCO will decide to sell their resources in currencies other than the dollar?

Ronnie Stöferle
Do you think that at some point, organizations like BRICS or the Shanghai Cooperation Organization will decide to sell their resources in currencies other than the dollar? We've already seen some shifts in this direction, but it hasn't yet become a major topic. So, what's your view on that?

Russia, being one of the top three oil producers in the world, has now moved away from the US dollar. The question remains whether the Middle East will follow suit.

Louis Gave
We've transitioned from 0% to 20% of oil being priced in currencies other than the US dollar. **Russia, being one of the top three oil producers in the world, has now moved away from the US dollar. The question remains whether the Middle East will follow suit.** In the near term, looking at the next few years, it's unlikely, due to their dependence on US protection, with the exception of Iran, of course. Iran has also moved completely to non-US dollar sales, selling its oil to China in RMB. **China's first goal was to obtain all its imported oil in its own currency rather than US dollars, and they're more than two-thirds of the way there now,** with Iran and Russia accepting 100% RMB for both oil and natural gas. They've also signed natural gas contracts with Qatar for RMB. China has made significant progress towards their goal, as they're about two-thirds of the way on natural gas as well. This change is already important for them, as it allows them to pay for their oil in their own currency.

Once you've moved away from the US dollar, you've eliminated the most significant restriction on your growth China is already about two-thirds of the way there.

Once you've moved away from the US dollar, you've eliminated the most significant restriction on your growth, right? You can always print more of your currency and avoid international sanctions. **China is about two-thirds of the way there**, but convincing Saudi Arabia to follow suit may be too much of a challenge. Instead, China is focusing on ensuring that the two-thirds they do have, is sufficient. That's why they're investing in nuclear, solar, and electric vehicles. By doing so, they aim to make the two-thirds of their energy needs they can obtain through these sources enough for their requirements. There's a higher chance of this happening through nuclear, solar, and investments in pipelines to Russia and Kazakhstan than by convincing Saudi Arabia to change its currency preference.

The shale revolution made the US the largest energy producer in the world. This means we're not buying as much oil from overseas, and as a result, we're not sending as many dollars out into the world.

Brent Johnson
My take on this is that the oil-for-dollars deal, which happened after the embargo in 1973, not only established the oil-for-dollars regime but also led to the exponential growth of the Eurodollar market. This growth occurred over the past 40 years when dollars were plentiful due to the United States buying oil from overseas by sending dollars out into the world. Fast forward to 10–15 years ago, **the shale revolution made the US the largest energy producer in the world. This means we're not buying as much oil from overseas, and as a result, we're not sending as many dollars out into the world.** Despite this, the Eurodollar market has grown to USD 30trn, with USD 80trn in derivatives and swaps. The Eurodollar market faces challenges as the US no longer exports as many US dollars due to the shale revolution. This situation is further complicated by increasing global divisions and national divorce. Where do the other countries get the dollars to buy the oil? **The US is not exporting dollars to the same extent as before.**

China's primary concern is facilitating transactions using renminbi. When you kick out Russia, it has consequences.

Louis Gave
China's primary concern is facilitating transactions using the renminbi. You throw in the fact that Russia is a significant exporter of commodities, often ranking as the top or second in the world. **When you consider kicking out Russia, it has had consequences.** You move from 5% of the market not priced in dollars to 20%.

The US is sending dollars abroad to service existing debt and purchase the commodities they need.

Talking about the US not exporting dollars, in 2023, the US current account deficit reached a record USD 880bn. This means **the US is sending dollars abroad to service existing debt and purchase the commodities we need**. So, the US is exporting dollars, it's never exported this much before.

Brent Johnson
That is true, but not for oil, and we agree that energy prices are rising.

After the shale gas boom, everyone expected the US current account deficit to improve, and it did from 2012 to 2017.

Louis Gave
The last time the US current account deficit was below USD 500bn was in 2006–2008, when the oil price was high. Since then, the US has had a shale boom, nearly eliminating its energy deficit. **Everyone expected the US current account deficit to improve, and it did from 2012 to 2017**. The US was exporting fewer dollars during that period.

But since 2020, the US current account deficit has exploded due to increased fiscal deficits of over 10% of GDP.

However, since 2017, and especially **since 2020, the US current account deficit has exploded** due to increased fiscal deficits. The US is now running twin deficits of over 10% of GDP. Typically, when a country reaches twin deficits of over 5% of GDP, the IMF gets involved. The US being the US, they can withstand 10% for a longer time, but let's not pretend that the US is not exporting dollars; it's exporting them like crazy. **For now, this hasn't been a major issue for the dollar, as US equity markets have been a dominant destination for investments.**

If the US stock market stops being a reliable store of value, it could potentially release more dollars into the global system.

The US equity market has been a significant store of value, with seven stocks driving much of the market's performance. However, **if the US stock market stops being a reliable store of value, perhaps due to a decline, it could potentially release more dollars into the global system**.

I don't think the US can have a recession without the rest of the world feeling it.

Brent Johnson
If you believe this divorce will not accelerate and instead lead to more cooperation, you're right. However, if you're like me and think the divorce will accelerate with more trade barriers and sides being chosen, I don't believe China will be able to sell all of their production at the current price. They may sell at a lower price in markets dependent on the United States. **I don't think the US can have a recession without the rest of the world feeling it.** That's where we may disagree. **The countries you mentioned sell to the US, and the whole world is connected. You can't simply say they don't use the US anymore.**

Louis Gave

Most Westerners believe that if China can't export as much to the US, it's in trouble. However, China is the largest car exporter globally, yet we don't see these cars on US streets? The answer is zero.

I believe the main difference in our views lies here. **Most Westerners believe that if China can't export as much to the US, it's in trouble. However, China is the largest car exporter globally, yet we don't see these cars on US streets? The answer is zero.** These cars are sold to countries like Indonesia, Saudi Arabia, and Chile. The trains, turbines, solar panels, nuclear and thermal power plants that China sells are not being sold in the US . They are increasingly sold across emerging markets. The growth in trade is happening primarily between emerging markets, particularly between China and emerging markets. As a result, China's dependency on the US decreases every year.

A decade ago, China was significantly dependent on the US, but this is no longer the case.

A decade ago, China was significantly dependent on the US, but this is no longer the case. TikTok serves as a perfect example. When the US demanded that China sell TikTok, they responded by saying it's only 17% of their business and they would rather shut it down than comply. This shows that China is willing to face consequences in the US to maintain their stance.

The view that China would be in trouble without the US is a US-centric perspective that may have been true 10 years ago, but no longer reflects the reality of China's trade flows today.

Ronald-Peter Stöferle

Gentlemen, I thank you for this very inspiring debate!

These were highlights of our debate with Louis-Vincent Gave and Brent Johns on "From Wedlock to Deadlock: The East-West Divorce". The full transcript of this debate is available for download here, the video of the entire debate can be viewed here.

Dubai, the Golden Oasis driving the UAE Gold Market's Growth

Becoming number one is not impossible – the word impossible *doesn't exist in our dictionary.*

Sheikh Mohammed bin Rashid Al Maktoum,
Vice President and Prime Minister of the United Arab Emirates and Ruler of Dubai

- **Powered by Dubai, the United Arab Emirates (UAE) has grown to become one of the largest and most important physical gold trading centres in the world.**
- **Between 20–30% of all gold traded globally each year passes through Dubai, putting Dubai among the world's top three gold trading hubs alongside Switzerland and London.**
- **Dubai's dynamic gold trading ecosystem comprises two main hubs, the Dubai Multi Commodities Centre (DMCC) free trade zone, and the Deira Gold Souk.**
- **Guided by the UAE's new Federal Gold Policy that reinforces regulation and responsible sourcing, global gold markets will have increasing confidence in the UAE's gold sector.**
- **The 2024 entry of the UAE into the BRICS+ group now gives the Emirates fantastic opportunities to increase gold trading with the world's gold powerhouses of China, India, Russia and South Africa.**

Introduction

Future generations will be living in a world that is very different from that to which we are accustomed. It is essential that we prepare ourselves and our children for that new world."
Sheikh Zayed bin Sultan Al Nahyan, First President of the UAE

From ancient Egypt to the Persian and Ottoman empires, and from the historical Islamic world to the present day, the Middle East has long been associated with gold. In fact, it's difficult to think of commerce in the Middle East without thinking of bustling gold bazaars and ostentatious displays of gold wealth.

That's because gold in the Middle East is embedded into both cultures and economies, and the peoples of this region have not just a love of physical gold but a deep-rooted appreciation of the value of physical gold in providing wealth preservation.

Nowhere in the Middle East is the importance of gold more apparent than in the United Arab Emirates (UAE), particularly in the dynamic Emirate of Dubai, the *City of Gold*, which via its iconic gold souks and free trade zones, has rapidly emerged as one of the world's largest physical gold markets, and one of the world's biggest gold trading and transit hubs.

Between 20–30% of all gold traded globally each year passes through Dubai, putting Dubai among the world's top three gold trading hubs alongside Switzerland and London.

The ultimate resource is the human imagination coupled to the human spirit.
Julian Simon

Having only been established just over 50 years ago, the UAE as a nation has witnessed spectacular economic growth since its founding, and its gold sector has grown in parallel, supported by an advantageous combination of world class transport infrastructure, business-friendly government policies, and a strategic location at one of the major trade crossroads of the world.

Source: www.nationsonline.org

Beyond national borders, the UAE is a recent new member of BRICS, an alliance which provides significant potential to boost the UAE's gold sector.[59] The BRICS bloc includes such gold powerhouses as China, Russia, India, Brazil and South Africa, as well as the large gold markets of fellow new members Egypt and Iran, as well as possibly Saudi Arabia The UAE and Saudi Arabia are also members of the Gulf Cooperation Council (GCC), together with neighboring countries Kuwait,

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[59] See chapter "Enter the Dragon: De-dollarization and the Eastern Push for Gold" in this *In Gold We Trust* report, as well as "De-Dollarization: The Final Showdown?," *In Gold We Trust* report 2023

Bahrain, Qatar and Oman, all of which share the region's insatiable appetite for physical gold.

Given that the Arabian Peninsula and Persian Gulf regions are now becoming an increasingly formidable force in the global gold market, it is critical to understand the rapid and ongoing developments that are now happening in the UAE gold market.

The Growth of the Dubai Economy and Gold Market

Most people talk; we do things. They plan; we achieve. They hesitate; we move ahead. We are living proof that when human beings have the courage and commitment to transform a dream into reality, there is nothing that can stop them. Dubai is a living example of that.
Sheikh Mohammed bin Rashid Al Maktoum

Since its independence in 1971, the UAE has been one of the world's leading success stories, undergoing an economic transformation from an oil producing nation into a leading regional trade and business hub. The UAE comprises a federation of seven emirates, with the Emirates of Dubai and Abu Dhabi being the largest and most populous of the Emirati economies.

Economic growth in the UAE was initially fueled by development of the Emirates' vast oil reserves, the revenue from which was then invested into developing the country's trade and transport infrastructure. This in turn supported the UAE's economic diversification into trade and commodities, into the financial sector, and into tourism and real estate. In parallel, the UAE government pursued business-friendly government policies and the establishment of many free trade zones, especially in Dubai.

The UAE's financial sector, with the government's backing, is also becoming a leading global financial center, comparable to Singapore, Hong Kong and even London and New York. To this end, there are now three international securities exchanges in the UAE, namely the Dubai Financial Market, the Abu Dhabi Securities Exchange, and NASDAQ Dubai, as well as two specialist financial free zones in the form of the Dubai International Financial Centre (DIFC) and Abu Dhabi Global Market (ADGM).

In the tourism sector, Dubai is now the "Middle East's Leading Destination", having won this accolade at the 2023 World Travel Awards. Dubai is now also the third highest ranked city globally for international visitors in the 2023 Euromonitor rankings with 16.8 million visitors, behind Istanbul and London, but ahead of Paris and Bangkok.

There are very few places today in the world where all countries can still trade with each other, and this, not just the Middle East, but particularly Dubai, is very much that crossroads.
Kevin Parikh, CEO, Avasant

The strategic geographic location of the UAE has also helped the Emirates in becoming the important trade entrepôt and global trade and logistics hub that it is today. Positioned at the heart of the Middle East, the UAE lies at one of the major trade crossroads of the world and is literally where East meets West and North meets South along the ancient Silk Road. To the north lies Iran and Central Asia, to the east lies India and Southeast Asia and China, to the west Turkey and Europe, and to the southwest the continent of Africa.

The UAE's gold market, centered in Dubai, has also grown immensely over the past 25 years, mirroring the wider growth of the UAE economy, and in many ways due to the same factors of strategic geographical location, modern infrastructure, and government-friendly gold sector policies.

The gold sector's growth has also been guided by the UAE government's economic policy goal of diversifying the UAE economy away from hydrocarbons towards other commodity flows, to such an extent that the gold trade now accounts for nearly 30% of total UAE non-oil exports.

Traditionally, Dubai is known as the "City of Gold", due to its long history as a gold trading hub, most famously in the Deira Gold Souk area, where an extensive network of wholesale and retail gold traders operate with connections all over the Middle Eastern, African and Asian gold markets.

However, there is also a more modern Dubai gold ecosystem of free zones, gold refineries, and strategic government initiatives which have leveraged this traditional gold market infrastructure.

Given its strategic location, Dubai is ideally positioned in proximity to both several gold-producing countries across Africa and central Asia, and also numerous gold-consuming countries, such as India, China, Thailand, Turkey, Saudi Arabia and Egypt. This strategic location allows Dubai to be a cost-effective transit point between sourcing gold supply and meeting gold demand, thus creating a constant flow of physical gold through the UAE.

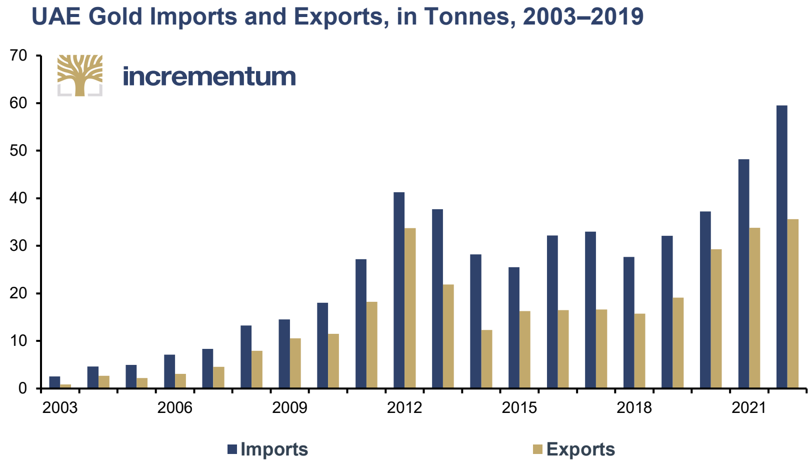
Taking advantage of these natural strategic benefits, and facilitated by its globally connected air transport infrastructure, the Dubai gold sector has become an intermediary and transit hub allowing the movement of vast international gold shipments between gold-producing and gold-consuming countries. These gold movements are facilitated by Dubai's Emirates SkyCargo and Abu Dhabi's Etihad Cargo, the respective cargo divisions of Emirates Airlines and Etihad Airways.

And given that much of the gold entering the UAE is in the form of doré bars from mines as well as scrap gold for recycling, the gold entering the UAE is generally further processed in the UAE's numerous gold refineries.

Not to forget that the UAE, and particularly Dubai, also hosts an extensive array of precious metals vaults and secure transport and logistics operators for transporting gold into the UAE, storing it, and transporting it out again.

Dubai's Gold Ecosystem

Dubai's gold market operates from two main locations, the Dubai Gold Souk in Deira and the Dubai Multi Commodities Centre (DMCC) free trade zone in Jumeirah Lakes Towers (JLT).



Source: UN Comtrade, DMCC, Incrementum AG

Dubai Gold Souk

The Dubai Gold Souk is Dubai's historical gold market. Located in Deira near Dubai Creek, the Gold Souk is perhaps the world's largest retail and wholesale gold market, with over 900 gold jewellery and gold bullion outlets spanning the lanes and buildings of the historic Gold Souk on one side of Al Khot Street and the new, modern Gold Souk extension on the other.


Courtesy of: Viator

The immensity of the Dubai Gold Souk is hard to fathom, with endless gold jewellery and bullion shops in a maze of streets and entire shopping malls dedicated to gold, such as the Gold Land Building and The Gold Centre. Hundreds of Indian and Arab gold traders also operate offices in the Gold Souk, discreetly located on the higher floors of buildings, coordinating much of Dubai's gold imports and exports.

While Dubai's Gold Souk has been an important regional gold trading center since the 1900s, it has grown in importance in the last 25 years thanks to the huge boom in tourism into Dubai as well as the Dubai government's initiatives in supporting and growing the gold sector.

Gold jewellery companies dominate the Gold Souk, from the mega Indian enterprises such as Malabar Gold & Diamonds and Joyalukkas, the UAE's Damas Jewellery, and countless lesser-known brands. There are also many specialist gold bullion dealers dotted around the Souk, in the maze of backstreets of the old Gold Souk, in the Gold Land Building, and also in the Gold Souk extension.

These bullion dealers sell a variety of gold bars, from 1 kilo cast bars, to ten- and five-tola gold bars, to 100-gram gold bars, and all the way down to smaller minted gold bars. A ten-tola gold bar is equivalent to 3.75 troy ounces. Gold bar brands popular in the Gold Souk include Swiss brands PAMP and Valcambi, and Dubai brands SAM Precious Metals, Etihad Gold and Emirates Gold.

The UAE's population demographics are also conducive to local gold demand, with over 60% of the UAE population being expats from India, Pakistan and

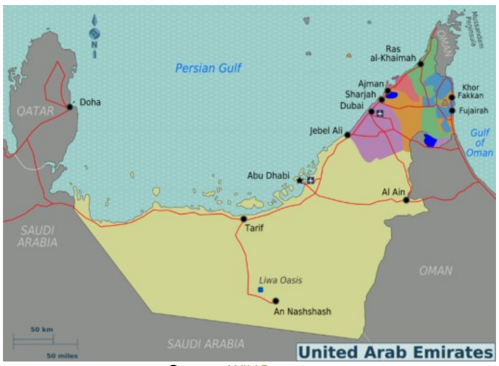
Bangladesh, and another 20% from the Philippines, Sri Lanka, Egypt and Iran, all nationalities that like to keep their saving in the secure store of value of gold bars. Emiratis, who make up about 10% of the UAE population, are also well-known for their love of investing in physical gold.

This is an iconic place, the heart of our city of gold.
Tawhid Abdullah, Chairman Dubai Jewellery Group

Each day in the morning and afternoon, the Dubai Jewellery Group, a trade association representing over 600 members in the Gold Souk publishes its "Retail Gold Rate" in dirham (AED) per gram. This Gold Rate is essentially the international spot price with a small markup, and gold bullion and gold jewellery companies throughout the UAE then use the twice daily Gold Rate as the basis for pricing all their transactions of bullion and bullion jewellery.

Approximately 500 tonnes of gold bullion is traded in the Gold Souk annually, as well as between 240 and 260 tonnes of gold jewellery, which include locally manufactured gold jewellery and gold jewellery imported from India, Turkey, Hong Kong and Southeast Asia. Dubai is well known as a destination for hand-carried gold, which air passengers bring in on flights, particularly from African countries. Nearly all of this gold hand carried into Dubai ends up being sold in the Dubai Gold Souk, including gold such as doré bars that requires further refining. There are no customs nor import duties on bringing gold bullion into the UAE/Dubai, and no limits on the amount of gold that a person can hand carry into the UAE, as long as importers have a VAT-registered entity.

While a majority of gold jewellery and bullion outlets in Dubai are located in the Dubai Gold Souk, there are also many other gold specialist areas in other parts of Dubai, such as a dedicated gold souk of hundreds of gold jewellery outlets in the gigantic Dubai Mall, as well as a dedicated gold jewellery mall on Sheikh Zayed Road, called the Dubai Gold and Diamond Park.



Source: WikiCommons

Dubai Multi Commodities Centre (DMCC)

In addition to the Gold Souk, the other major nexus of Dubai's gold sector is Dubai Multi Commodities Centre (DMCC), a free zone authority established in 2002 by the Government of Dubai as part of its strategy to diversify the Dubai economy and promote the Dubai Emirate as a global commodity trading and business hub.

Capital will always go where it's welcome and stay where it's well treated.
Wriston's Law of Capital

Physically, DMCC comprises all of the Jumeirah Lakes Towers (JLT) district and adjoining Uptown Dubai district, a huge development of nearly 100 high-rise buildings in a campus-style precinct, located near the Dubai Marina and Palm Jumeriah, and not too far from Jebel Ali port. When established in 2002, the strategic goal of DMCC was to provide a full range of facilities and services for trading in gold, diamonds and other commodities.


Courtesy of DMCC

Fast-forward to the present day, and DMCC's gold ecosystem now includes the Dubai Gold & Commodities Exchange (DGCX), a number of gold refineries and precious metals vaults, and hundreds of gold trading and wholesaling companies located in offices within the JLT. DMCC also runs the popular annual Dubai Precious Metals Conference (DPMC), the largest gold conference in the Middle East, where we gave a keynote speech last year.

There are 3 types of people. The ones who make things happen. The ones who wait for things to happen, and the ones who wonder what the hell just happened.
Tony Beets

DMCC is overseen by its Executive Chairman and CEO, Ahmed Bin Sulayem, who has seen the free zone grow from just 28 member companies in 2003 to a massive 24,000 DMCC member companies in 2023, from 180 countries, more than 1,000 of which operate in the gold and precious metals sector.

DMCC and its Executive Chairman are very much in favor of physical gold and in growing physical gold markets. On many occasions they have pushed back against the attempted dominance of the London Bullion Market Association (LBMA) and its bullion banks, and prefer a collaborative approach where the world's gold centers are treated as independent and as equals.

The impact of DMCC on Dubai has been so significant that DMCC now represents 11% of Dubai's foreign direct investment (FDI). In 2023, DMCC was voted the Global Free Zone of the Year by *The Financial Times' FDI Magazine* for a record 9th year in a row. In 2020, ownership of DMCC was transferred from the Government of Dubai to the Investment Corporation of Dubai (ICD), which is also fully owned by the Government of Dubai.

Q&A with Ahmed Bin Sulayem, Executive Chairman and Chief Executive Officer, DMCC

Q: How pivotal has DMCC been since 2002 in making Dubai into one of the world's largest gold markets, and how has DMCC helped develop Dubai's gold ecosystem?

Ahmed Bin Sulayem, Executive Chairman and Chief Executive Officer, DMCC

From the outset, our goal has been to transform the emirate into a global trade hub. Just as we have achieved this for other commodities such as diamonds, tea and coffee, this also holds true for one of our other core priorities – gold. DMCC has been instrumental in catalyzing the evolution of Dubai into a leading gold market, to the extent that it is now one of the largest hubs for the physical gold trade.

We have meticulously nurtured the gold ecosystem in Dubai by creating a specialized environment that prioritizes the growth of precious metals businesses. Through the provision of world-class infrastructure, state-of-the-art facilities and a comprehensive range of products and services, DMCC has empowered businesses in Dubai to trade efficiently, and importantly, with confidence.

A great example is the Dubai Commodities Clearing Corporation (DCCC), which acts as the central counterparty for clearing and settlement services to the Dubai Gold & Commodities Exchange (DGCX). Since its establishment in 2005, DCCC has emerged as the largest clearing house in the MENA region by volume, providing derivative contracts services across key asset classes, including base and precious metals, oil and gas, and currency pairs. To date it has cleared a total of 175 million contracts and in 2023 registered a total value of USD 115bn. In almost 20 years, DCCC has become one of the most prominent offshore exchanges for INR Futures and the first Shari'ah-compliant spot gold contract exchange.

Through offering such a transparent and collaborative ecosystem that serves the entire gold value chain, DMCC bolsters investor confidence, facilitates innovation, fosters synergies and drives the continuous evolution of the gold market in Dubai and the UAE. With the transition of economic power from west to east, and an even broader range of products and services to come online, Dubai and DCCC are poised to play a far more prominent and multinational role.

Q: What key initiatives are the UAE, Dubai and DMCC now focusing on to enhance Dubai's gold market?

The UAE, Dubai and DMCC, both individually and collaboratively, are currently spearheading a series of strategic initiatives and activities that are designed to bolster our competitiveness and attractiveness as a premier destination for gold trade.

From our perspective, DCCC's gold services continue to add value to Dubai's gold market. Beyond clearing and settlements, DCCC offers a secure and accessible destination to store gold as it is home to the MENA region's largest vault and several of the world's largest refiners. DMCC also works closely with logistical operators such as Brinks and Transguard, while Dubai's two international airports mean fast and direct access either for import or export purposes. Supported by the

DMCC Tradeflow system, a dedicated online platform for registering ownership of commodities and their subsequent transfers, Dubai is already home to 25 per cent of the world's gold trade, while the volume of gold contracts cleared through DCCC exceeded USD 4.97bn in 2023.

Responsible sourcing is also a critical part of our growth journey. At the highest level, the Ministry of Economy's Gold Bullion Committee runs the UAE Good Delivery Standard to enhance responsible sourcing practices in line with OECD guidelines. At DMCC, we also work hard in this area to ensure our members can operate with confidence. This includes our collaboration with the World Gold Council earlier this year to drive innovation and sustainability in the gold sector, particularly around critical issues such as the illicit hand-carried gold trade.

More broadly, the pursuit of Comprehensive Economic Partnership Agreements (CEPAs) with gold-producing countries underscores the shared commitment to facilitate seamless trade and investment flows in the gold market. By streamlining regulatory processes and reducing trade barriers, Dubai aims to attract greater investment and strengthen its position as a preferred destination for gold trade and investment.

Q: As the gold market shifts from West to East, can the Dubai gold market now surpass London and Switzerland, and will UAE's BRICS membership be beneficial?

The dynamics of the global gold market are rapidly evolving, and I firmly believe Dubai is favorably positioned for sharp future growth, while complementing traditional hubs like London and Switzerland. With its strategic geographical location bridging key markets in Asia, Africa and Europe, it serves as a gateway for gold trade between East and West.

Key trends such as de-dollarization among leading BRICS economies and the latest gold rush of the world's central banks in the face of a strong dollar and falling inflation expectations, continue to reshape global gold markets. Global economies are in a state of transition, and the UAE has emerged as a centralized destination for people and businesses. Whether through companies establishing trading hubs, or high-net-worth individuals hedging their assets or liabilities in a transparent jurisdiction, the UAE has achieved a state of global neutrality, while offering considerable advantages for its residents and investors. Business has continued to surge since our departure from FATF's grey list earlier this year, while we were ranked as one of the most trusted countries in the world by the 2023 Edelman Trust Barometer Global Report.

I think a key element to this is the support of DMCC, which means the emirate offers a comprehensive ecosystem for businesses operating in the precious metals industry. This greatly enhances the appeal of setting up a gold business in Dubai, which in turn facilitates greater trade through the emirate. The story is reflected in our numbers – in 2023, DMCC maintained record growth with 2,692 new companies joining its community, accounting for 11% of Dubai's total FDI inflows. This is compounded by the UAE's membership of BRICS, which offers a unique opportunity to further enhance the standing of Dubai in the global gold market. As a

> member of this influential group of emerging economies, the UAE stands to benefit from increased collaboration, trade diversification and investment flows, cementing its position as a preferred destination for gold trade and investment.
> Dubai's historic moniker as the "City of Gold" owes much to its renowned Gold Souk, dating back to the early 1900s. However, our strategic investment in the gold sector coupled with proactive government support have propelled gold trade in Dubai to unprecedented heights. I see this trajectory increasing in the coming years as trade flows shift eastwards.

Dubai Gold & Commodities Exchange (DGCX)

Dubai Gold & Commodities Exchange (DGCX) is an electronic commodities and derivatives exchange, founded in 2005, that has become the largest gold and commodities exchange in the Middle East. Fully owned by DMCC, the DGCX is located in DMCC's Jumeirah Lakes Towers complex, and is regulated by the UAE Securities and Commodities Authority (SCA).

Contracts offered on the DGCX include precious metals futures and spot contracts, as well as crude oil futures; currency futures, including some currencies of G7 and BRICS currencies; and equities futures.

In the gold category, DGCX offers a suite of contracts including physical daily gold futures, a spot gold contract, a Shariah gold contract, cash-settled gold futures, and India Gold Quanto futures. The daily gold futures, the spot gold contract, and the Shariah gold contract are all physically settled with delivery of gold warrants representing vaulted gold bars. The spot contract settles in UAE Good Delivery 0.995 purity 1-kilo gold bars. The Shariah gold contract settles in "1 kg allocated and segregated gold bars with a minimum purity of .995". The daily gold futures contract settles in UAE Good Delivery 400-oz gold bars.

DGCX is an important contributor to the regional gold market as it allows price discovery during Middle East hours while offering hedging and risk management to the region's gold sector participants.

Gold refineries

The UAE has an extensive range of gold and precious metals refineries, particularly in Dubai and DMCC, but also in the emirates of Sharjah and Fujairah. These refineries are an integral part of the UAE gold sector, and process both gold mine doré and scrap gold into high-purity gold for both the international and domestic markets. Note that none of the UAE's gold refineries are on the LBMA Good Delivery List.

The UAE's main gold refineries include:
- Emirates Gold DMCC, founded in 1992 by Mohamad Shakarchi. Emirates Gold operates as a DMCC company, and its refinery is located in the JLT campus. Emirates produces a full range of cast and minted gold bars as well as a range of silver bars.
- Al Etihad Gold DMCC, also located in the DMCC precinct. Founded in 2009, Al Etihad Gold has one of UAE's highest precious metals refining capacities, and

produces a number of gold bars from kilo bars to 10-tola bars, to 100-gram gold bars.

- SAM Precious Metals, located in a district called Dubai Production City, about 15 km from the DMCC campus. SAM was founded in 2018 by a team led by Sami Abu Ahmad who was previously general manager of Al Etihad Gold. SAM produces a full range of gold and silver cast and minted bars, and also operates a precious metals refinery in Cairo, Egypt.
- MTM&O Gold Refinery DMCC, located in Dubai in the DMCC, and part of the Kaloti group. Historically, Kaloti was one of the first gold refineries in the UAE, founded by Munir Al-Kaloti and located in the emirate of Sharjah, before the refinery moved to Dubai. MTM&O, which is named after the four co-founders Munir Kaloti, Tarek Medakka, Monzer Medakka, and Osama Kaloti, claims to be "one of the largest refineries in the world", with "a capacity to produce up to 1,400 tons of gold and 600 tons of silver per year".
- Gulf Gold Refinery, located in the emirate of Sharjah, within the Sharjah airport free zone (SAIF). It was founded in 2012 and produces a range of gold bars.
- International Precious Metal Refiners (IPMR), a gold and silver refinery located in the Khalifa Industrial Zone (KIZAD) in Abu Dhabi, with a branch in the Sharjah airport free zone.
- Fujairah Gold, a precious metals refinery located in Fujairah Free Zone in the Emirate of Fujairah, and owned by natural resources company Vedanta Resources. It produces a range of cast and minted gold bars from kilo bars to 10-tola and 100-gram bars, as well as silver bars.

Precious metals vaults and security carriers

As the world's largest physical gold trading and transit hub, Dubai not surprisingly also has numerous precious metals vaults and secure transport companies, including Brinks, Transguard, Loomis and Ferrari.

- Brinks Global Services UAE: Within the DMCC campus in JLT, DMCC owns the "largest non-sovereign vault in the Middle East", which is located within the basement of the Almas Tower. While owned by DMCC, this precious metals vault is operated by Brinks. Brinks also operates additional precious metals vaults in the Dubai Gold Souk and Dubai Airport free zone.
- Transguard, which is one the Middle East's biggest security companies and a division of the Emirates Group, operates precious metals vaults and strong rooms in Dubai Airport, the Dubai Gold Souk, DMCC and in Dubai International Airport. In fact, Dubai Airport's valuables cargo terminal is operated by Transguard, and Transguard is the only company authorized to escort valuable cargo to and from aircraft and the airport cargo terminal vaults.
- Loomis International operates a secure vault within Dubai Airport free zone.
- Ferrari Logistics operate a secure vault in the DMCC and has a presence in Dubai Airport free zone

Gold trading companies and banks

An astonishingly large number of companies are involved in the gold "trading" sector in the UAE, particularly in Dubai. According to a 2019 report by Dubai's

Department of Economic Development (DED), there were 4,086 companies operating in Dubai's gold sector, of which 2,498 were licensed for "jewellery and jewels of gold and silver", while 1,184 were licensed for "trading in gold and precious metals".

The UAE is a pivotal market for the gold industry, acting as a major hub for trade, investment, and innovation. Through our presence in the Middle East and our collaborative initiatives with key stakeholders such as the DMCC, we aim to enhance the gold market's integrity, transparency, and efficiency.
Andrew Naylor, Head of Middle East and Public Policy, World Gold Council

The largest concentration of businesses was in the Deira area of the Gold Souk. While the report didn't specifically mention DMCC, remember that more than 1,000 DMCC member companies operate in the gold and precious metals sector.

Overall, gold trading includes companies that source gold for refining in Dubai, from mining companies such as in Africa and from gold scrap aggregators in the UAE and abroad; companies that ship in refined bullion from markets such as Switzerland and Istanbul; and companies that export gold from the UAE to other markets around the world.

Out of this huge number of gold trading players in the sector, some of the main gold traders active in the Dubai gold market (many of which are in the DMCC) include:

- Dubai gold refineries: SAM Precious Metals, Al Etihad Gold DMCC, Emirates Gold DMCC, and MTM&O Gold Refinery DMCC (Kaloti group).
- UAE-based gold trading members of the London Bullion Market Association (LBMA): Peekay Intermark DMCC, Vintage Bullion DMCC, Gold Standard DMCC, Ashoka Global.ae DMCC.
- Large regional jewellery companies: Malabar Gold and Diamonds, Joyalukkas, and Damas.
- DMCC companies authorized to import gold from the UAE into India: a selection being AgaOne Commodities DMCC, DSV Trading DMCC, Kairos International DMCC, IGR Metals Trading DMCC, Aurum International DMCC, Mazyood Jewellery DMCC, Al Bogari DMCC, and Krishi International DMCC.
- Others: MAH Gold and Jewellery, Swiss Gold DMCC, Met Gold DMCC.

In tandem with the Dubai gold sector, the UAE also has an extensive banking sector of both domestic and international banks, including domestic banks involved in the gold sector such as Rakbank, Emirates NDB, and National Bank of Fujairah, as well as many leading international banks such as Standard Chartered, ICBC, HSBC and Citi.

Consumer Gold Demand in the UAE

Based on WGC data, the Middle East saw total consumer/retail gold demand of 285 tonnes during 2023, of which 171 t was gold jewellery demand and 114 t gold bar and coin demand, with the highest gold jewellery demand countries recorded being the UAE with 40 t, Saudi Arabia with 38 t, and Iran and Egypt with 27 t apiece. Within the gold bar and coin demand category, the WGC claims that Iran saw gold bar and coin demand of 44 t in 2023, followed by Egypt with 30 t, Saudi Arabia with 14 t, and the UAE with 11 t.

While it's unclear how the World Gold Council and Metals Focus calculate this data, these consumer gold bar and coin demand figures for the UAE look seriously underestimated given the enormity of the retail Dubai gold market. Indeed, anecdotally, gold sector observers in Dubai say the figures for retail gold bar and coin demand could be 3 times higher than the WGC data due to underreporting.

Shari'ah-Compliant Gold

As a predominantly Islamic region, it's important to many people in the Middle East that investing and transacting in gold is allowable within Islamic finance, and that financial products, services and transactions are Shari'ah-compliant. In terms of financial products and transactions, Shari'ah compliance, for example, would mean that these products and transactions avoid the charging of interest, avoid ambiguity, avoid speculation, be backed by tangible assets, and be ethically and socially responsible.

Relatively recently, a number of Shari'ah rulings have added certainty to investing and trading in gold within Islamic finance. These include a 2016 Shari'ah Standard on "gold and its trading" issued by the Bahrain-based Accounting and Auditing Organization of Islamic Finance Institutions (AAOIFI) in conjunction with the WGC, and which the WGC said would allow the development of "gold investment accounts, physical gold ETFs, spot contracts and regular gold savings plans".

Following this in 2018, the world's first Shari'ah-compliant spot gold contract was launched on Dubai's DGCX. With Dubai aiming to achieve the status of a global financial center and at the same time appeal to investors from the Middle East, the ability to offer Shari'ah-compliant gold products and services should be helpful in strengthening Dubai's position in the Islamic finance segment of the market.

UAE Federal Gold Policy

The federal gold policy will enhance the UAE's position as a leading hub in the global gold and precious metal trading landscape, in addition to maximizing the sector's contribution to increasing the non-oil GDP and driving the national economic growth.
Abdulla Bin Touq, UAE Minister of Economy

In recent years the UAE has actively strengthened the infrastructure and regulatory environment of the UAE bullion market via a federal gold policy administered by the UAE Ministry of Economy (MoE).

This policy aims to increase the contribution of the gold sector to the country's economic growth by boosting the volume of UAE gold and jewellery exports. **Out of this federal gold policy, a new Emirates *international gold standard* called the UAE Good Delivery (UAEGD) standard was launched in late 2021.**

Similar to the LBMA London Good Delivery standard, the UAE Good Delivery standard for gold and silver is a quality and technical framework which promotes technical proficiency in precious metals refinery production standard specifications of tradable/good delivery precious metals bars. Like the LBMA Good Delivery standard, the UAEGD standard also operates on the basis of accrediting *good delivery* refiners, which the UAEGD refers to as Accredited Members.

The UAE Good Delivery standard is administered by the Ministry of Economy's Emirates Gold Bullion Committee, of which the Minister of State for Foreign Trade, Thani Al Zeyoudi, is chairman. By reinforcing the governance and regulation of the UAE gold sector, UAE Good Delivery will strengthen UAE's position as a global gold bullion and jewellery trading hub and give international markets more confidence in UAE Good Delivery bullion products, thereby making the UAE gold sector more competitive.

While the UAE Good Delivery Standard defines product specifications for a 1-kg gold bar of either 99.5% or 99.99% gold purity and a 400-oz gold bar of 99.5% gold purity or above, it also defines standards for a 100-gram gold bar of either 99.5%, 99.9%, or 99.99% gold purity; a 1-kg silver bar; and a 900-oz silver bar, as well as gold and silver grain specifications.

There are currently five precious metals refiners listed on the Active UAE Good Delivery List for Gold, two of which are located in Dubai, namely Al Etihad and SAM Precious Metals. The other three Active refiner members are Valcambi of Switzerland, Turkish refiner Ahlatci, and the Perth Mint of Australia.

In parallel with the UAE Good Delivery standard, the UAE Ministry of Economy has introduced risk-based due diligence regulations for responsible sourcing of gold. These regulations aim to identify and minimize risks in importing gold from conflict and other high-risk areas, and are based on OECD/FATF due diligence guidelines on responsible supply chains of minerals, and are mandatory for all gold refineries operating in the UAE, and not just UAEGD-accredited refineries.

DMCC in conjunction with the World Gold Council, the UAE Bullion Market Committee, and UAE banks, is also spearheading a new effort to introduce responsible sourcing in the entire UAE gold supply chain, with all other gold sector companies in the UAE encouraged to participate.

Given the UAE's location and the huge flows of gold into the UAE gold market from surrounding regions, the aim of these gold supply chain due diligence regulations, says the UAE Ministry of Economy, is to ensure best practice international standards to the governance of the UAE gold trade, so as to enhance the UAE's image and position as a global gold hub.

And to address some of the concerns around hand-carry gold coming into Dubai from some African countries, a pioneering and collaborative new project between DMCC and the World Gold Council, aims to create policy recommendations on types of gold and limits that can be hand-carried through Dubai.

UAE Gold Imports and Exports

According to DMCC, between 20 and 30% of all gold traded globally each year passes through Dubai, putting Dubai among the world's top three gold trading hubs alongside Switzerland and London. Being one of the world's largest gold transit hubs means that the UAE is therefore naturally one of the world's largest importers and exporters of gold, with most of the gold imported into the UAE processed and refined further, before being re-exported to other countries.

The UAE has established itself as a critical link to every gold market in the world.
Thani bin Ahmed Al Zeyoudi, Minister of State for Foreign Trade

However, the emergence of UAE/Dubai as one of the world's largest importers and exporters of gold has happened with astonishing rapidity. According to a 2020 report by the Carnegie Endowment for International Peace: *"As late as 1996, the UAE did not even appear among the world's top one hundred gold-importing countries. Two decades later [in 2018], the UAE ranked among the top four, above Hong Kong and the United States."* These top four gold-importing countries that Carnegie refers to were, for 2018, Switzerland, China, India, and the UAE.

DMCC says that Dubai now accounts for 25% of worldwide trade in physical gold, "the majority of which flows through DMCC". Likewise, the UAE's Minister of Economy said in 2020 that the UAE "accounts for 11 percent of total global gold exports".

According to the Observatory of Economic Complexity (OEC), in 2022 gold was the UAE's largest import category and third largest export category behind crude petroleum and refined petroleum. This made the UAE the world's third largest gold exporter in 2022, says the OCE, behind only Switzerland and the US and slightly ahead of the UK. At the same time, in 2022, the UAE was the world's third largest gold importer, behind only Switzerland and China and ahead of the UK and India.

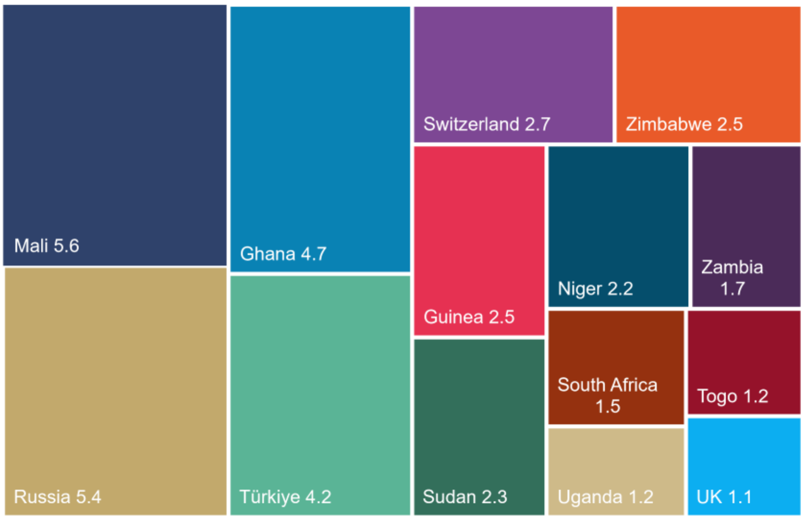
In 2022, the five largest destinations for gold exports from the UAE were Switzerland (25.3%), Hong Kong (18.1%), Türkiye (10.4%), India (9.8%), and Kuwait (8.0%). Together these five countries represented more than 70% of UAE gold exports. This makes the UAE a distribution hub for all other GCC gold markets, particularly Kuwait and Saudi Arabia, but also Bahrain, Qatar, and Oman, with the Dubai gold market supplying the other five GCC member markets with gold jewellery and bullion.

UAE Gold Exports by Country, in USD bn, 2022

Source: UN, Incrementum AG

On the gold import side, while the UAE imports gold from over 100 countries across the world, the leading source countries in 2022 were Mali (9.7%), Russia (9.4%), Ghana (8.3%), the UK (7.9%), and Zimbabwe (7.8%). From this list you can see that gold-producing African countries feature predominantly in UAE gold imports, with Dubai also importing smaller amounts of gold from non-gold-producing countries, i.e. the UK and Switzerland. Latin American countries such as Peru, Brazil and Columbia also feature further down the list as smaller gold suppliers to the UAE.

UAE Gold Imports by Country, in USD bn, 2022



Source: UN, Incrementum AG

More recently, Russia became the UAE's biggest supplier of gold, which was a direct result of G7 sanctions against Russia, with the UAE importing 96.4 tonnes of gold from Russia in 2022, according to Bloomberg based on UN Comtrade data. In 2021, imports from Russia accounted for only 0.2% of UAE's imports. However, these Russian gold flows to the UAE were short lived due to a tightening of controls in the UAE, which led to Russian gold exports being rerouted more and more to Hong Kong during 2023. According to Bloomberg, Hong Kong then became the biggest destination for Russian gold, importing 68 tonnes in 2023.

Overall, the UAE is the leading destination for African gold. One of the reasons for this is that the UAE has developed strong trade relationships and trade agreements with many African nations. Important African trading partners for the UAE include Kenya, Nigeria, South Africa, Tanzania, Angola and Ethiopia. In 2020 the UAE was among the top importers of goods and commodities from ten African countries.

In the gold sector specifically, Dubai and DMCC actively corroborate with African mining countries and their governments to encourage these countries to export their gold to market via Dubai. For example, DMCC runs the Africa Dubai Precious Metals Forum (ADPMF), which was staged in Ghana in 2015, 2016, and 2022. Ghana is an important gold trading hub for the Economic Community of West African States (ECOWAS). According to ADPMF, its aim is to create "stronger relationships between government, miners and traders in the African continent and industry stakeholders in Dubai".

UAE-India Comprehensive Economic Partnership Agreement (CEPA)

This decision by the Indian government means that everyone gets an equal opportunity to bid for the annual gold import quota from the UAE. It will definitely create higher demand for UAE gold at a lower import duty.
Shamlal Ahamed, Malabar Gold & Diamond

The introduction of a Comprehensive Economic Partnership Agreement (CEPA) between the UAE and India in May 2022 has been a major positive for the UAE gold market. While it is a broad-ranging free-trade and tariff-reduction bilateral agreement, as regards the gold market, the UAE-India CEPA is mutually beneficial for the UAE and Indian gold sectors, with the UAE fully removing a 5% import duty on *all* Indian gold jewellery, in exchange for India reducing by 1% the import duty on gold being imported from the UAE into India.

The UAE is India's third largest trade partner, with gold, gold jewellery and gems being the second most traded commodity between India and the UAE after oil. India has some of the highest gold import duties in the world at 15%, and the CEPA reduces this tariff by 1% to 14%. For gold imports from the UAE into India, this 1% import duty discount was phased in in 2022, starting with 120 tonnes of gold imports in the first year and then increasing by 20 t each year for 5 years up to 200 t in 2026. The eligible gold covered under the CEPA is "certified UAE/India Good Delivery gold bars in different denominations".

With over 3,700 Indian businesses in our free zone, DMCC has been fundamental in facilitating bilateral trade and investment between the UAE and India. Opening a representative office in Mumbai is the next pivotal step in this relationship's evolution, demonstrating our deep commitment to business in India and across the subcontinent.
Ahmed Bin Sulayem, Executive Chairman and CEO, DMCC

With India being the world's second largest gold importer – officially importing about 800 t of gold per year – and second largest gold-consuming country behind China, this means that the UAE will now supply a guaranteed 25% of these Indian gold imports, and that the UAE will become as important as Switzerland in satisfying India's insatiable appetite for gold. This will in turn will provide guaranteed activity and growth for Dubai's gold ecosystem in the areas of gold sourcing, gold trading, logistics, and refining.

The large Indian gold jewellery companies operating in both Dubai and India are the main importers of gold into India under the CEPA, and gold can also be imported directly into the vaults of the India International Bullion Exchange (IIBX) in the GIFT International Financial Services Centre (IFSC) located in Gandhinagar near Ahmedabad. The first export transaction of UAE Good Delivery Standard gold to India under the CEPA was processed in Dezember 2022, when 100 kgs of gold from Emirates Gold Refinery was shipped to IIBX.

Judging that CEPA's gold import quotas were fully used up in both 2022 and 2023 with 120 tonnes and 140 tonnes of gold, respectively, CEPA has so far been a success for both countries. Indeed, DMCC thinks the Indian market is so important that in May 2023 it announced the opening of a DMCC representative office in Mumbai "to boost UAE-India relations".

The UAE in BRICS+

The UAE's economic growth potential has also been boosted by the country's becoming an official member of BRICS+ in early 2024. The UAE joins fellow Egypt, Iran, and Ethiopia alongside existing founding BRICS members, Brazil, Russia, India, China, and South Africa, with neighboring Saudia

Arabia still considering whether to accept the invitation to join the alliance. BRICS+ is also set to expand even further, with South Africa's foreign minister saying that another 34 countries have expressed written interest to BRICS+ chair Russia in joining the organization.

With a combined population of 3.6 billion, i.e. 45% of the world's population, and a combined GDP of USD 26trn, this extended BRICS+ grouping is also now a force in the global gold sector.

BRICS+ Population and Gold Holdings, in Tonnes

Country	Population (2022)	Gold Holdings (2023)
Brazil	215.3 mn	129.7
Russia	144.2 mn	2,332.7
India	1.42 bn	803.6
China	1.41 bn	2,235.4
South Africa	59.9 mn	125.4
Ethiopia	123.4 mn	n/a
Egypt	111.0 mn	126.0
Iran	88.6 mn	n/a
Saudi Arabia	36.4 mn	323.1
UAE	9.4 mn	73.6

Source: World Bank, World Gold Council, Incrementum AG
*The World Gold Council does not publish data on Ethiopia's gold reserves
**Iran holds gold reserves, but does not disclose them

BRICS+ and gold

Membership of BRICS+ now confers a real opportunity for the UAE/Dubai to strengthen its position in the global physical gold market by increasing gold trade flows with other BRICS+ members, and making the UAE the de facto gold trading and transit hub for BRICS+.

In the process, this would increase gold imports into Dubai, increase gold volumes through the UAE's gold refineries, expand gold export volumes, and could boost direct investment into Dubai's gold sector by participants from BRICS+ nations. From the perspective of other BRICS+ members there are also synergies, as they too would benefit from having preferential access to a cost-effective and accessible gold hub at the crosswords of the world.

All five BRICS+ founding members are leaders in the global gold market. China is the world's largest gold producer, Russia is second, with South Africa in the top ten and Brazil in the top fifteen. India is the world's largest net importer of gold, China is second, and China and India are also the world's two largest consumer gold markets. With Saudi Arabia looking to become a major gold mining country, the UAE could instantly benefit by negotiating gold refining deals for Saudi's gold output.

The UAE already imports significant gold from South Africa, some gold from Brazil, and at times gold from Russia; but these flows, such as from Brazil and the rest of Latin America's Mercosur, could be augmented and made more formal under the auspices of BRICS. While the UAE is a significant exporter of gold to India and to Hong Kong, membership in BRICS+ should provide the UAE with potential to expand market access to China and to export more gold directly to China, by integrating the Emirate's logistics and supply chains into China's Belt and Road Initiative (BRI) Initiative.

Interestingly, the UAE – and four other GCC countries – are already "Dialogue Partners" in the China-led Shanghai Cooperation Organization (SCO), whose members consist of four BRICS+ nations – China, India, Russia, and Iran – as well as Pakistan, Kazakhstan, Kyrgyzstan, Tajikistan, and Uzbekistan.

Gold pricing and trading

As a leading OTC physical gold trading hub with a gold derivatives and spot exchange (DGCX), the UAE will find that its membership in BRICS now provides new opportunities to collaborate with China, Russia and India on physical gold trading and gold price discovery.

China operates the world's largest physical gold exchange, the Shanghai Gold Exchange (SGE) and also trades gold future contracts on the Shanghai Futures Exchange (SHFE). India runs the recently established India International Bullion Exchange (IIBX). And Russia, via the Eurasian Economic Union (EAEU), plans a new spot gold pricing mechanism called the Moscow World Standard (MWS) and a new Moscow International Precious Metals Exchange.

Together, all of these physical gold trading exchanges and venues in the BRICS+ countries could collectively become more influential on a gold price discovery process which has been traditionally dominated by the LBMA London and COMEX trading venues.

Monetary gold

Perhaps most critically, the expansion of BRICS, an overwhelming majority of which are strategically important in the global gold market, signals that physical gold will play a future role in a new multilateral monetary and trading system, which will attempt to be more independent of the US dollar as reserve currency.

That's why the majority of BRICS+ member countries are active buyers of gold for their monetary gold reserves. Yet, BRICS+ countries do not have a central procurement system for sourcing or transacting their gold holdings, unless they choose the traditional locations at the Bank of England, BIS, and Banque de France, all of which present sanctions risk to BRICS+ countries.

If the UAE positioned itself as the market hub for sourcing central bank gold for BRICS members, it would be a win-win for all parties involved, and independent of Western central bank surveillance and control.

The combined official central bank monetary gold reserves of the ten BRICS+ countries, i.e. including potential member Saudi Arabia, are a

significant 6,150 tonnes; however the real figure is most likely much higher. This is because various BRICS+ country central banks, such as the PBoC, are widely believed to understate their gold holdings, while the Iranian central bank does not reveal its gold holdings at all.

Conclusion

We are so used to looking at America and China that we sometimes dare to forget the rest of the world.
Louis-Vincent Gave

The UAE, through Dubai, the City of Gold, is now one of the epicentres of the global gold market. While the rapid emergence of Dubai as a significant player in the gold world has been extraordinary, its continued ascent and strategic vision for continued growth are equally impressive.

From the immensity of the Dubai Gold Souk to the sheer scale of DMCC with its multitude of gold trading companies, gold refineries, and DGCX, Dubai's gold ecosystem fires on many cylinders.

All of this is powered by vast flows of gold coming in from gold-producing countries and flowing out to gold-consuming countries. In some ways the Dubai gold market is like an orchestra, with the musicians being the gold refineries, gold traders, vaults, and security companies, and the UAE federal and Dubai governments conducting the symphony.

Dubai is an oasis of peace and modernity that shatters stereotypes about the Arab world.
Jim Krane

The federal government is also now playing a role in promoting responsible gold sourcing as well as reinforcing international connections for Dubai's gold market, via trade agreements such as the UAE-India CEPA, and via the huge potential of the UAE now being a member of BRICS+, where it can have an impact on international gold dynamics.

With Saudi Arabia having made significant gold discoveries and now planning to become a global gold mining powerhouse as it makes the mineral sector the "third pillar" of the Saudi economy, this adds an intriguing golden layer that could provide yet further gold flows into the UAE from one of its nearest neighbors.

The spirit of Dubai is about dreams, vision, innovation, and achievement.
Ahmed Bin Sulayem

The importance of Dubai as a gold trading center has also been endorsed by the World Gold Council, which has recently opened a new office in Dubai's DMCC as the Council's regional headquarters for the Middle East. This endorsement provides further evidence, if any evidence was needed, that Dubai and the UAE is now a formidably influential player in the global gold market.

The key takeaway with regard to Dubai, City of Gold, is therefore "watch this space" as the next chapter of Dubai's golden journey unfolds.


DMCC
SHAPE THE FUTURE OF GLOBAL TRADE WITH DMCC
Join over 24,000 companies at DMCC in Dubai, the ultimate hub for global business. Connect with leading precious metal dealers, refiners, and jewellery wholesalers in a vibrant marketplace!
100% business ownership, 0% personal income tax
Wide range of insurance options
Secure your family legacy with DMCC's Single Family Office (SFO)
Thriving ecosystem for gold traders in Dubai & beyond
Gain exclusive access to our cutting-edge underground vault for safeguarding precious metals and valuables
Utilise DMCC's Tradeflow platform to maximise the value of your physical precious metals
SET UP YOUR BUSINESS IN DUBAI TODAY!
Learn more:
MADE FOR TRADE

IGWT Report

China's Economic Situation and Its Consequences for Gold Consumption

The Chinese nation is the most patient in the world; it thinks of centuries as other nations think of decades. It is essentially indestructible and can afford to wait…. If China can avoid being goaded into war, her oppressors may wear themselves out in the end.

Bertrand Russell

- **The real estate crisis in China remains unresolved.**
- **Falling demand, the relocation of industries, the decoupling from Western economies and the demographic outlook are further negative factors for the Chinese economy.**
- **However, a similarity to Japan from 1990 onwards exists at best at first glance.**
- **There is still a great need for development in the hinterland due to the relatively low wages and relatively low economic efficiency.**
- **Chinese demand for gold from private households was robust despite China's economic weakness last year, and the outlook for 2024 is correspondingly positive.**

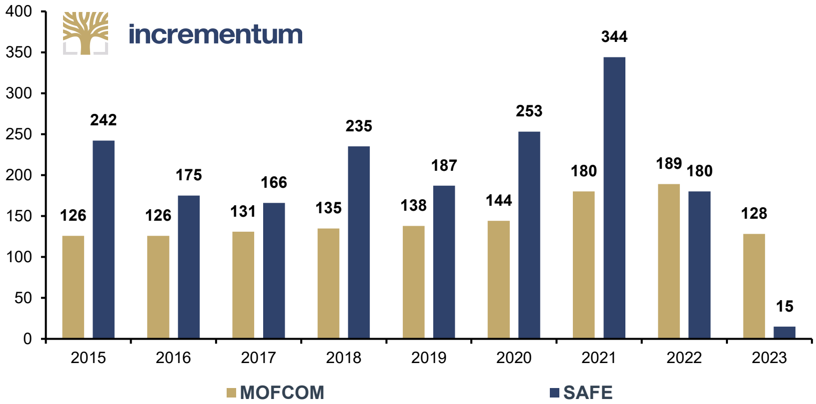
For the first time since the global financial crisis of 2008/2009, China is facing a really serious crisis. The Covid-19 measures, which lasted almost twice as long in China as in the rest of the world, were as haphazard as they were harmful. Their long duration also meant that the subsequent recovery was much weaker than expected. To make matters worse, the real estate crisis that had been smoldering for years flared up again, fueled not least by rising US interest rates, which suddenly made it much more difficult for real estate developers to refinance their US dollar-denominated foreign debt.

The collapse is fundamentally due to the unstable position; the instantaneous cause of the crash is secondary.
Didier Sornette

The climax of the Chinese real estate drama so far has been the order by a Hong Kong court to liquidate the country's second largest developer, Evergrande, which has not been able to escape negative headlines for years. And as if all this were not enough, there are further problems in the form of the marked ageing of Chinese society, the increasing decoupling from the West, and the associated partial migration of industry to Southeast Asia.

The interest rate hikes in the West are acting as a brake on investment in China. Why make risky foreign investments in a country that is becoming less and less constitutional from a Western perspective when you can earn 5% without effort or risk in the largest, safest, and most liquid market in the world? The answer to this question is clearly reflected in foreign direct investments in China. In 2021, these were still well over USD 300bn; last year, they collapsed to USD 33bn – a decline of over 80%.

FDI Investments in China, in USD bn, 2015–2023



Source: Chinese Ministry of Commerce (MOFCOM), Chinese State Administration of Foreign Exchanges (SAFE), Incrementum AG

In the beauty of the Soviet socialist or Communist or whatever system, when they get disillusioned, they become the worst enemies.
Yuri Bezmenov

Youth unemployment is having a disillusioning effect on many well-educated and motivated Chinese millennials. Wage cuts have become common among civil servants. **Dissatisfaction is growing accordingly:** The nonprofit organization China Labour Bulletin registered 1,794 strikes in 2023, more than double the previous year's figure of 831. This may be one reason why companies are starting to set up factory militias again for the first time since the 1970s.

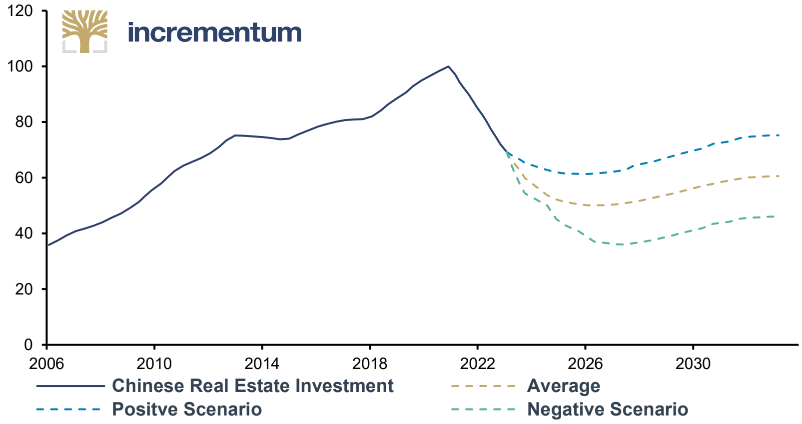
The economic picture is correspondingly gloomy and completely at odds with the alleged 5% growth in 2023 announced by the CCP – virtually every entrepreneur and businessman you speak to paints a less optimistic picture of the situation. In short: The economy is in bad shape.

The greatest danger in times of turbulence is not the turbulence. It is to act with yesterday's logic.
Peter Drucker

Quite a few analysts therefore see China going the way of Japan.[60] They fear a prolonged period of low growth, if not a slide into stagnation. "The Japanization of China" is a buzzword that dominates the headlines.

At first glance, such considerations do not seem wrong, as there are undoubtedly parallels. The real estate crisis is far from over. On the contrary, in its most pessimistic scenario, the IMF predicts a decline in real estate investments to the level of 2006. In Japan, the bursting of the bubble in the completely overheated Japanese real estate market was the decisive reason for the end of Japan's runaway growth. The skyscraper curse also seems to have been confirmed in China. In numerous cities, highly ambitious high-rise projects have come to a standstill.

Chinese Real Estate Investment, 100 = 2021, 2006–2033



Source: IMF, Incrementum AG

Of course, China will not follow Japan's economic trajectory perfectly, or even vaguely. They're very different countries, and these are very different times.
Robin Wigglesworth, Financial Times

However, China is a long way from either Japanification or a US-type subprime crisis. The degree of urbanization in China is only 60%, compared to 80% in Japan at the end of the 1980s. At over 40%, the savings rate in China is significantly higher than in Japan at the time (11%). The Chinese hinterland is still underdeveloped. People are still moving to the cities in search of better opportunities. Demand for real estate will therefore remain constant. In addition, the vast majority of buyers are by no means *ninjas* (no income, no job) as in the US, but are primarily solvent middle-class buyers who (normally) have to have at least 30% equity, a ratio that is far higher than in the West, and it is significantly more for second or even third homes. **Very few real estate buyers are overindebted. Also, interest can usually be paid from rental income.**

Moreover, as long as China's capital markets are not free and open, there are few investment alternatives. The stock markets are perceived, not without good reason, as a pure speculative playground. More than 90% of investors are still small players, who are colloquially known as "chives" that are regularly "harvested" on the stock markets. While China's GDP has increased thirty-fold in the last 30 years, the Chinese stock markets have barely moved. The Shanghai Composite Index, for example, only rose by around 300% in the same period. MSCI China lost 20% in the same period. **This clearly shows that the**

—
[60] *See* the chapter "The Akuma Afterglow: Japanification of the West?" in this *In Gold We Trust* report

Chinese government feels much less obliged than its Western counterparts to rescue investors or financial markets at all.

MSCI China Index (lhs), and China GDP (rhs), in USD trn, 01/1995–12/2023

Source: Reuters Eikon, Incrementum AG

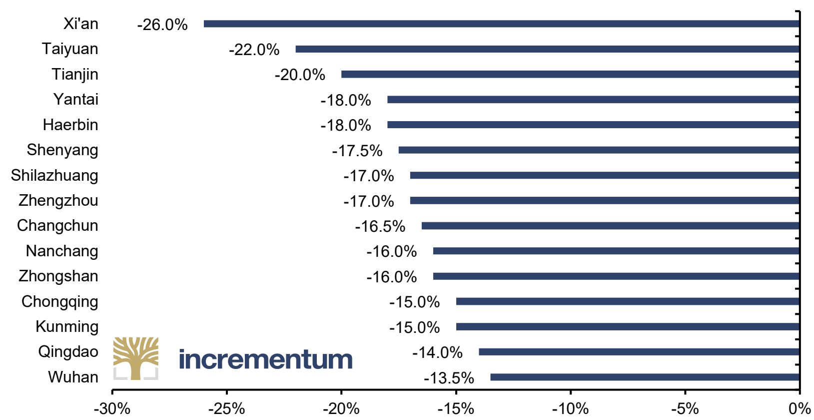
I'm an ordinary guy
Burning down the house.
Talking Heads

This also applies to the real estate markets: President Xi has made clear more than once that apartments should not be objects of speculation. In case of doubt, this means that real estate investors and developers will not be rescued. The focus will be on completing projects so that the average Chinese person can move into their home as a retirement residence. Foreign investors in particular should not rely on being bailed out by the government with taxpayers' money, as was the case with major German and French banks during the euro crisis in Greece.

No one's coming to save you.
David Goggins

However, this also means that China will avoid the mistakes of the Japanese and Europeans: Ailing or overindebted companies will not be rescued with state money or kept alive as zombies. This may cause pain in the short term, but in the medium to long term it will lead to a healthier corporate landscape overall. For private home buyers who purchase a home to live in, it is initially of secondary importance whether the price of the property falls. This is particularly true if the purchase was made with sufficient equity. Accordingly, Beijing has so far resisted pressure from real estate investors to put together large rescue packages.

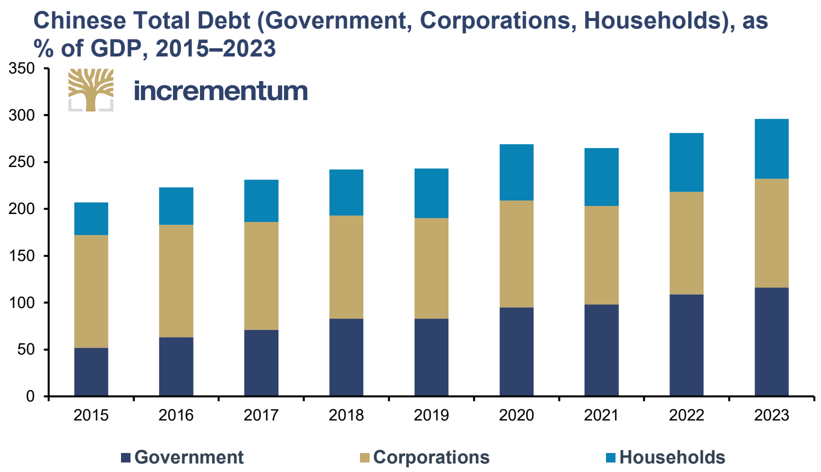
House Prices in Major Chinese Cities, 11/2018-06/2023



Source: Bloomberg, Goulian Secutrities, KE Holdings Data, Incrementum AG

China's monetary policy toolbox is still abundant and there is still plenty of room for monetary policy.
Pang Gongsheng, PBOC Governor

Nevertheless, Beijing will have to continue to intervene to support the economy if it fails to contain and resolve the real estate and general economic crisis. At the beginning of the year, the Chinese economy was given the classic medicine with a 0.5% reduction in the minimum reserve requirement for banks, releasing around USD 140bn in liquidity, and a 0.25% cut in the key interest rate. Pan Gongsheng, head of the PBoC since July 2023, emphasized that the central bank still has enough leeway for further stimulus. However, past experience shows that without further measures the problems will only be shifted into the future and not solved. At the China Development Forum in Beijing in March, that China is not aiming for short-term growth at the expense of long-term risks. In this respect, a sole focus on traditional solutions seems rather unlikely, especially as both household and state debt levels have long been unhealthily high. Municipal debt in particular is high; and one of the most important sources of income, land leases for construction projects, has been lost as a result of the real estate crisis.



Source: BIS, Incrementum AG

Instead, Beijing could try to bring about a solution in another way, namely through a series of genuine systemic reforms. There are already some indications of this: Since January 1, 2024, Beijing has been granting visa-free entry to citizens of other countries – mostly, but not exclusively, those from EU member states – for a limited period of one year. This is remarkable insofar as reciprocity has always been the basis for such measures in the past. This step indicates that perhaps the government is at least open to breaking new ground in other areas as well.

Understanding that China plays the long game is one of the most important insights you can have about what lies ahead. China's leaders know where they want to be five and ten years out.
Stephen Leeb

One of these could be a reform of the *hukou* system. The *hukou* is a kind of "family book" and is always linked to a specific place, which is usually the parents' place of birth and residence. As a result, however, the *hukou* i is usually not located in the current place of residence. Shenzhen, for example, has 14 million inhabitants but only 2 million *hukou*. The *hukou* plays a fundamental role in the lives of the Chinese and facilitates access to medical care, education and, to a very limited extent, state welfare. But only in the place to which it refers. This is one of the reasons for the high savings rate of the Chinese. With a fundamental reform, which has already been attempted more than once and has always failed due to resistance from communities, at least some of the capital from this high savings rate could be redirected into consumption.

However, some provinces, such as the economic powerhouse in the south of the country, Guangdong, have recently implemented reforms to the *hukou* system on their own initiative. **This is a small indication that China is far from being the monolithic bloc that it is perceived to be in the West.** Nevertheless, if such a reform were nationwide, it would provide economic stimulus by leveling the differences between rural and urban populations and would also be very much in line with President Xi's oft-stated goal of "common prosperity", which advocates modest prosperity for broad sections of the population, a departure from Deng Xiaopeng's mantra of "let some people get rich first".

山高皇帝远 – The mountains are high and the emperor is far away.
Chinese proverb

The decoupling often demanded now between the West and China, and the associated migration of companies, undoubtedly represents a further problem, but in the short rather than medium and long term. Neither side can afford a complete decoupling, anyway: bilateral trade between the US and China amounted to around USD 575bn in 2023, of which USD 148bn was imports from the US and USD 427bn exports to the US, despite the trade war that has been raging for 5 years. China cannot sell these enormous quantities of goods anywhere else, nor can the US purchase these same goods elsewhere. The situation is similar for most other Western countries. From this perspective alone, a complete decoupling is therefore more than unlikely in the long term and is not in the interests of either side. Moreover, in many sectors in the West, neither the knowhow nor the skilled workers have been available for a long time to simply bring back labor-intensive manufacturing. China now accounts for 35% of global manufacturing. Reversing this long-established trend overnight is virtually impossible.

Wars, like the currently unfolding economic war, are about control. The control of technologies (chips), commodities (gas), production (zero-Covid), and straits – chokepoints like the Taiwan Strait, the Strait of Hormuz, or the Bosporus Strait.
Zoltan Pozsar

There is no doubt that painful sanctions, such as those imposed by the US in the semiconductor sector, will continue to exist or be expanded, but these are unlikely to stop China's further rise, though they may slow it down. In the medium term, they will lead China to focus on its own strengths and become more innovative. The fact that Semiconductor Manufacturing International Corporation (SMIC), for example, has succeeded in advancing into 7nm process technology and producing commercially viable chips despite these sanctions is a telling example of this.

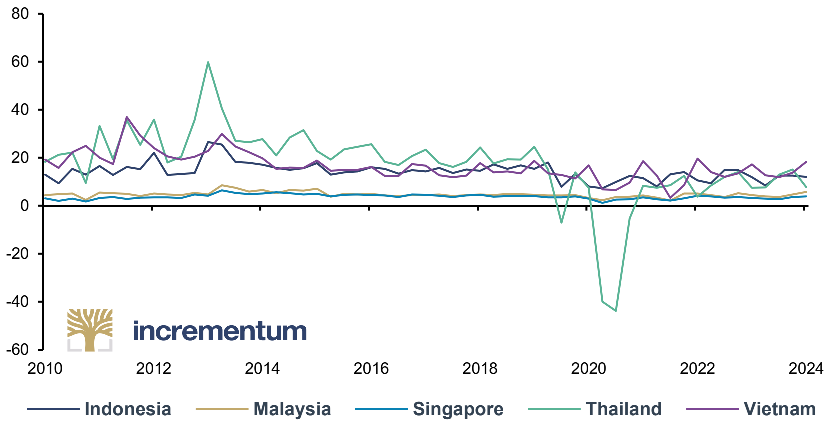
And as far as industrial migration is concerned, it is Chinese companies themselves that are fueling this trend. More and more Chinese companies, not only in the automotive sector, but especially there, want to become global players. This requires more than one location. The expansion of companies such as Nio or BYD into Europe, which required the establishment of locations in the EU, is lasting proof of this. Huawei, China's No. 1 flagship company, has long been offering its technology and services worldwide. Accordingly, the company has branches, research facilities, and servers everywhere, and more than 207,000 people work for Huawei in 170 countries. Huawei is a pioneer, but it is no longer an isolated case. **From this perspective, China's "discovery of the world" has only just begun.**

90% of toys are made in China, which technically makes the Chinese elves.
Sean Lock

There are other factors affecting industrial migration. Chinese environmental regulations have become stricter and the authorities less lax. Chinese workers demand or require higher wages than, for example, Vietnamese workers. Chinese companies suffered from Beijing's strict Covid-19 measures, too.

Under certain circumstances, goods *Made in China* could one day be difficult to sell. However, if the country of origin is Malaysia or Vietnam, at least this problem would be solved. Accordingly, Southeast Asia is one of the booming regions that is benefiting twice over from the trends towards location diversification by Chinese companies and the China + 1 strategies of Western companies. This economic boom could have a positive effect on the demand for gold, as most Southeast Asian countries are considered to have a pronounced affinity for gold.

South East Asian Consumer Gold Demand, Q1/2010–Q1/2024



Source: World Gold Council, Incrementum AG

Demographics are the single most important factor that nobody pays attention to, and when they do pay attention, it's often too late.
Peter Drucker

The topic of relocation also touches on another perennial issue in the list of China's most pressing problems: demographics.[61] It has long been a truism that China gets old before it gets rich. Almost all developed countries are confronted with the problem of ageing; but in China, with an average birth rate of just 1.07 children per woman, the trend is developing particularly rapidly. There is also a clear male surplus, which increases the younger the age cohort in question. In 2021, there were 112 male births for every 100 female births. Overall, there are 30 million more men than women in China. This is the basis for current and future dissatisfaction, as a considerable proportion of Chinese men, especially those from less-well-off families, will not be able to start a family.

China does not have a comprehensive pay-as-you-go social security system. This means that old-age provision is a private and not a state problem and must and will be solved in the same way. Nevertheless, for the urban middle class in particular, who grew up as single children in the 1980s and 1990s, having to provide for their parents alone in the foreseeable future is an enormous burden. This is another reason for the high savings rate. In addition, the economy and society are in a state of crisis despite – or perhaps because of? – the enormous growth of recent decades, and are still relatively inefficiently organized. There are countless state-subsidized activities that are completely superfluous, if only marginally demanding. With a rapidly shrinking population, these will simply disappear without anyone missing them. There is also still a lot of potential in companies that could be quickly exploited if the available workforce were to shrink significantly.

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[61] *See* "Global Demographics Turn Inflationary," *In Gold We Trust* report 2021

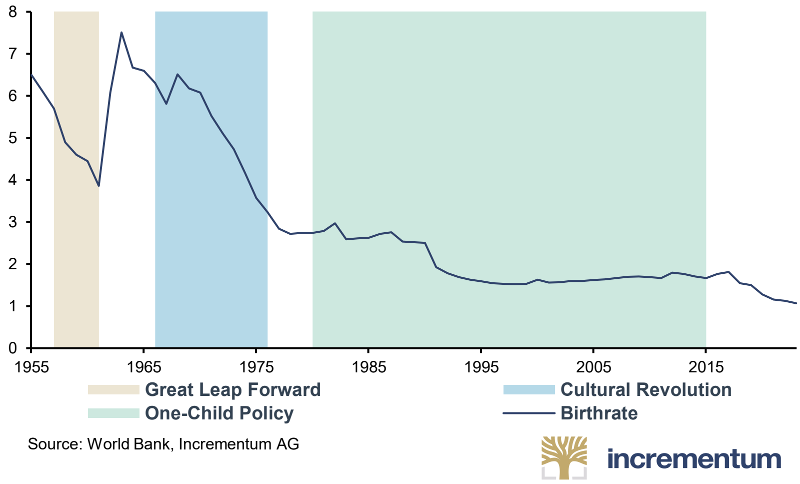
I think one of the biggest risks to civilization is the low birth rate and the rapidly declining birthrate.
Elon Musk

Nevertheless, the shortage of skilled workers is becoming a problem. In 2022, China's total population declined for the first time, and factories will be short millions of skilled workers in the coming decades. However, this is already being countered by relocating production to Southeast Asia, where there is a young and increasingly well-educated population. In addition, thanks to AI and advancing automation, productivity will increase, reducing the need for workers. One of the reasons why China has so far been so focused on growth above 5% is that new jobs are only created above this threshold.

I believe that children are our future. Unless we stop them now.
Homer Simpson

China is also beginning to position itself as an attractive place to work for well-educated specialists, and the visa reforms mentioned above are an indication of this. Finally, it is by no means certain that this demographic trend will continue: Authoritarian states consistently find it easier to reverse such trends. Under Emperor Augustus, for example, marriage became compulsory in Rome and families with many children were legally and economically better off than those without. **Those who enforce a one-child policy could also try to enforce a three-child policy.**

Chinese Birthrate, 1955–2023



Source: World Bank, Incrementum AG

China's reform and opening-up will continue to move on. The Yellow River and Yangtze River will not flow backward.
Li Keqiang

Despite all the current difficulties, it should not be forgotten that China is one of the most competitive markets in the world. Nowhere else is the battle for market share as fierce as in the Middle Kingdom. Every mistake is mercilessly punished by the competition. Where in the West claims are well staked out and large, inflexible companies lack almost any agility, in China Schumpeterian creative destruction reigns nearly unbridled. This naturally leads to tremendous pressure to adapt and, at the same time, to innovation, cost awareness, and intense motivation. The results can be seen in the tremendous dynamism that has developed in the Chinese market over the last 20 years. This will not change any time soon. **Competition is one of, if not the most important, factors for innovation, wealth creation, and long-term growth.**

Unless Beijing under Xi falls back into the ideological pitfalls of communism and renounces its fundamental commitment to free markets, the basic path will not change. This is the real danger and threat to China. Although former Premier Li Keqiang, who died in October 2023, stated at his farewell press conference that

China's reform course was as irreversible as the flow of the Yellow River and the Yangtze, since Xi's second term in office we have seen a clear return to central planning and a state-run economy.

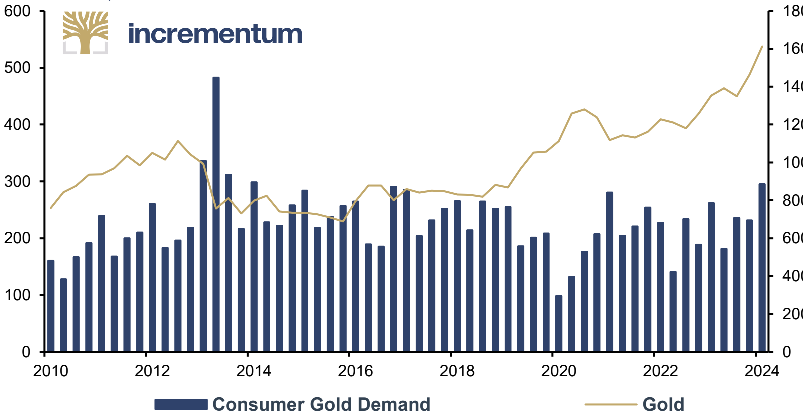
The road to success is paved with mistakes well handled.
Daniel Coyle

In summary, it can be said that ageing demographics, the high interest rates in the West, the loss of confidence in some sectors, the intensifying lines of conflict in Taiwan and beyond, the real estate crisis, as well as the growing levels of debt are all heavy burdens on China's economic development. China will not return to its former growth strength overnight. At the same time, however, the situation is not quite as gloomy as it is sometimes portrayed in Western media. Moreover, this would be the first time in the history of mankind that a country has succeeded in becoming an economic, cultural and military world power without serious crises and upheavals. The rise of the US to global superpower status was accompanied by a civil war, two world wars, and at least four major economic crises – the Long Depression, the Panic of 1893, the Panic of 1907, and the Great Depression.

Courtesy of Hedgeye

But what does this mean for gold? Surprisingly, Chinese consumers did not show any restraint. Consumption recovered significantly last year, even though 2023 was certainly a bitter economic year for the Chinese. The high hopes for a significant upswing in gold after the early end of all Covid-19 restrictions in January 2023 were not fulfilled. Nevertheless, gold consumption grew by more than 8% as the Chinese bought over 1,000 tonnes. Remarkably, gold is currently booming, including in the form of gold beans, and especially among the younger generation, who preferred to "invest" their money in iPhones, fashion accessories and the hottest *bubble tea* before Covid-19. **The share of 25–34-year-olds making gold purchases rose from 17% in 2022 to 59% last year.**

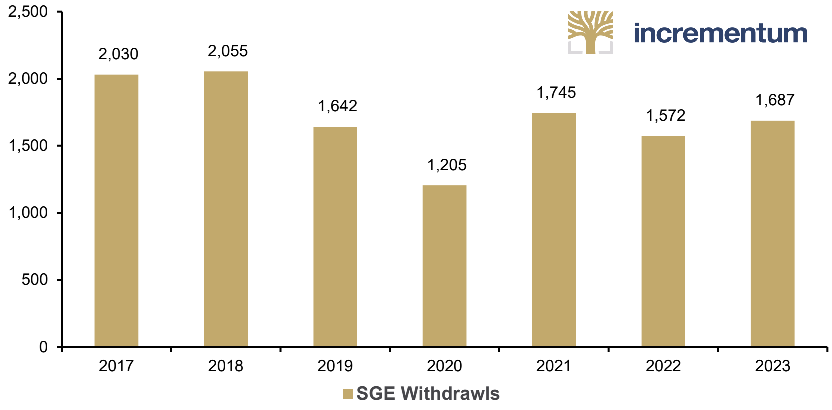
Chinese Consumer Gold Demand (lhs), in Tonnes, and Gold (rhs), in CNY, Q1/2010–Q1/2024



Source: World Gold Council, Reuters Eikon, Incrementum AG

For Chinese investors, gold valued in renminbi was one of the best investments of 2023 with a gain of 15.7%. At the other end of the scale were Chinese equities, which lost more than 11% on average. The positive trend for gold in renminbi is continuing in the current year. **In January, a whopping 271 tonnes of gold were delivered by the Shanghai Gold Exchange (SGE), the strongest month in the history of the exchange.** Although February was significantly weaker, this can be explained by the Chinese New Year holidays and the associated drop in demand. However, demand in February was still above the long-term average for that month.

SGE (Shanghai Gold Exchange) Withdrawls, in Tonnes, 2017–2023



Source: Shanghai Gold Exchange, Incrementum AG

Diversification is an established tenet of conservative investment.
Benjamin Graham

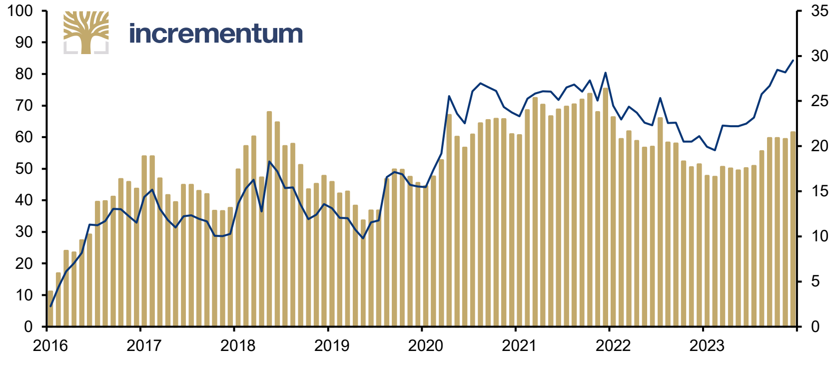
There are many reasons for the hunger for gold. The real estate crisis has taught young investors in particular to diversify and, as investment options in China are still limited, gold is an attractive option. Also, gold and jewelry dealers are now focusing more on the tastes of their customers, thus ensuring greater transparency: Traditionally, the unit price of jewelry was simply shown, but now the price of around two thirds of pieces is based on their weight.

Astrology may also play a role. 2024 is the year of the dragon in China and dragon years are considered special. The dragon stands for luck, strength and health. Traditionally, a particularly large number of children have been born in Dragon years.

The Shanghai Gold Exchange (SGE) is also gaining in importance for private buyers**. The SGE has been making it increasingly easy for Chinese citizens to buy gold, which has only been possible again since 2004**. At least, major banks such as the Bank of China, HSBC, and the Industrial and Commercial Bank of China (ICBC) now offer their customers the opportunity to buy gold online and directly at the SGE. The somewhat cumbersome physical purchase of gold, which is subject to high surcharges, is no longer necessary for pure-gold investors. Physical delivery from the bank is then quick and uncomplicated.

But it is not only direct physical products that are in high demand. Chinese gold ETFs have also seen significant inflows for months. Around CNY 5bn flowed into the corresponding investment vehicles in 2023, and around CNY 830mn was invested in January 2024 alone. In conjunction with the weak yuan, this drove assets under management in gold ETFs to around CNY 30bn, an all-time high. What is particularly remarkable about the strong demand is the fact that the Chinese are normally anticyclical buyers. In 2023, however, they bought into rising prices.

Chinese Gold ETF Holdings, in Tonnes (lhs), and CNY bn (rhs), 01/2016–12/2023

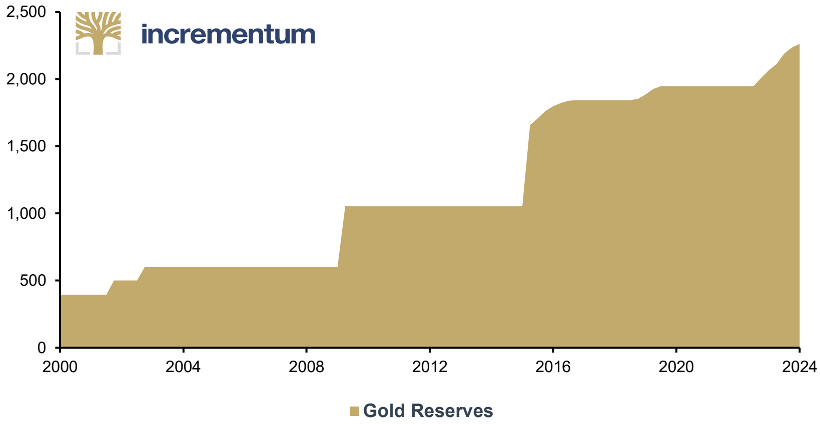


Source: World Gold Council, Incrementum AG

If I was in charge of Chinese foreign reserves… I'd probably double my holdings each year. Or at least I would try to.
Kevin Muir

The People's Bank of China is doing the same. The Chinese central bank bought around 225 tonnes in 2023 and added a further 33 tonnes in the first quarter of the new year. Beijing has now increased its gold reserves for the 18th month in a row. Nevertheless, the official gold reserves still account for less than 5% of the total currency reserves.

Chinese Gold Reserves, in Tonnes, Q1/2000–Q1/2024



Source: World Gold Council, Incrementum AG

The liberalization of the gold market in China will continue, with one major exception: The export ban on gold will remain in place for a long time to come. This is because Beijing undoubtedly sees the private gold purchases of its citizens as an opportunity to gain access to significantly larger quantities of gold than just the central bank's share. In virtually all crises, "patriotic" citizens have supported the state by selling gold to it. We saw this in Germany and Austria during the First World War – "I gave gold for iron" – and Korean and Taiwanese citizens also donated their private gold reserves during the 1997 Asian crisis. The fact that this is also the perspective of the Chinese central bank is confirmed by its statement from July 2015 that "China holds gold through its people".

Thus, China's official gold reserves must also be said to include the gold reserves of its private individuals, augmented, of course, by those reserves that Beijing did not acquire through official channels and certainly does not communicate about publicly. In sum, China's gold reserves probably amount to more than 30,000 tonnes.[62]

China wants to change the currency standard, and if that happens it will be like losing a world war.
Donald J. Trump

Gold is also a central component of Beijing's internationalization of the yuan, which aims to shake the dominance of the US dollar as the world's reserve currency in the medium to long term. Replacing the US dollar has been one of the central building blocks of Beijing's financial strategy for 15 years, ever since the then head of the PBoC, Zhou Xiaochuan, began thinking aloud about a new global monetary system based on the IMF's special drawing rights. Since then, China has been working consistently on the internationalization of the yuan, as Governor Yi Gang explained on the occasion of the 70th anniversary of the founding of his central bank in 2018: "RMB internationalization is an inevitable trend and natural result of the deepening of reform and opening-up in China's economic and financial sector."

We, together with you, and with our sympathizers will move towards a multipolar, just, democratic world order.
Sergey Lavrov

In the last two years, this "inevitable trend" has taken on forms such as the RMB Qualified Foreign Institutional Investor program (RQFII) that go well beyond investment facilitation for institutional investors and are much more likely to undermine the US dollar as the world's reserve currency: More and more trade agreements are being concluded in yuan, particularly with non-Western countries, especially Russia and Brazil. The welcome consequence of this is that the corresponding trading partners are increasingly buying in China and thereby strengthening production in China, especially of goods with greater vertical integration. They are also investing the renminbi they receive in Chinese government bonds, thereby strengthening China's borrowing capacity. Remarkably, India, as a BRICS country, is much more hesitant here and even advises its banks not to transact business involving Russian oil in yuan, for example, recommending dirhams instead.

...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

Further internationalization and the long-term establishment of the renminbi as a reserve currency – or at least as a serious alternative to the US dollar – will require growing confidence in the stability of the Chinese currency, the Chinese economy and the Chinese government. One major hurdle is the fact that China still has strict capital controls. Every foreign investment must first be approved in a long, complex and nontransparent process. For foreign investors, profit distributions abroad are a bureaucratic nightmare. Foreign transfers that are trivial in themselves can take a whole day at the bank, and the same applies to opening a mundane bank account. Chinese citizens themselves are allowed to withdraw a maximum of CNY 100,000 abroad, i.e. from all accounts, credit cards and so on combined. Little will change in the near future. For as patriotic as Chinese citizens may be, Beijing is aware that without these capital controls there could easily be a huge flight of capital, particularly to the US, Australia and Canada, with a resulting explosion in real estate prices in the corresponding regions.

Accordingly, Beijing and the PBoC see gold as an alternative way to strengthen international confidence in the yuan. It is important to bear in mind that Beijing is thinking and planning in terms of years and decades. In this

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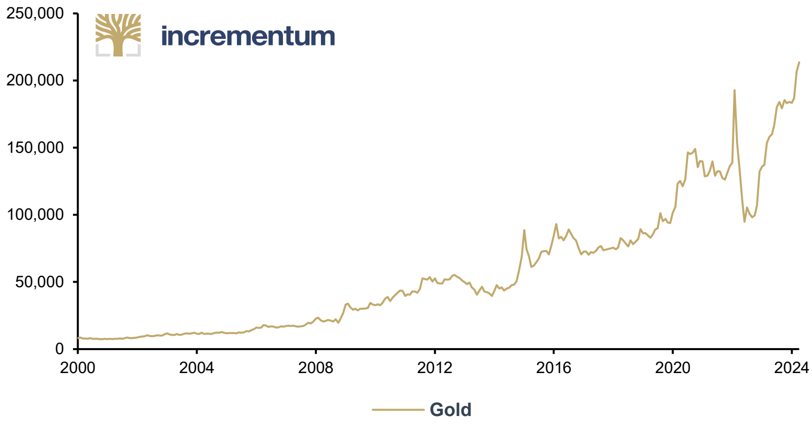
[62] *See* "The Rise of Eastern Gold Markets: An Impending Showdown with the West," *In Gold We Trust* report 2023

respect, the gold purchases that have been openly and consistently communicated for around a year and a half also indicate that internationalization is now moving from the planning and preparation phase to the implementation phase.

If you have two baskets, and we create the new currency as an index of commodities and national currencies, and we have a mechanism for reserves, according to the mathematical model that will be very stable.
Sergey Glazyev

Of course, large gold reserves are also a protection against capital market sanctions. The example of Russia in the Ukraine war clearly demonstrated this: The rouble was in free fall until Moscow gave its currency a golden lifeline. By guaranteeing a purchase price of RUB 5,000 per ounce of gold for a few months in 2022, Russia simultaneously put a floor under the rouble price. Not only did this stop the sell-off, but it also reversed the trend.

Gold, in RUB, 01/2000–04/2024



Source: Reuters Eikon, Incrementum AG

Beijing could counter the threat of capital market sanctions from the West with similar maneuvers. Of course, the "Taiwan factor" is always part of such considerations. "Reunification" with the Republic of China is stipulated in the constitution of the People's Republic, and President Xi sees this as a fundamental goal of his presidency. There is also the aspect of the internal crisis, which may lead to attempts to overcome the crisis through a more aggressive foreign policy, as so often happens in history. A military confrontation in the Taiwan Strait is therefore a distinct possibility. The ongoing internationalization of the renminbi alone will undoubtedly be seen as an aggressive act in some quarters in the US, especially if it is accompanied by a significant rise in gold prices, and is likely to provoke counter-reactions, for example in the form of capital market sanctions.

To a certain extent, the price of gold is going to tell you who is going to win that effort to de-dollarize Asia. If gold goes up, it's China. If gold goes down, it's the US.
Charles Gave

With sufficiently large gold reserves, Beijing should feel much more secure, at least with regard to the reaction of the financial markets. The price of gold is likely to rise sharply if there is an attempt to invade Taiwan. Overall, demand for gold from China should continue to provide good support for the price of the precious metal. **China's currency plans also contribute to the prospect of significantly rising gold prices over the next few years.**

The Akuma Afterglow: Japanification of the West?

It feels the same /
But time takes a toll on this buried flame /
Lift me up, say my name.

Soilwork

- **Contrary to popular belief, Japan's economic challenges started before the 1987 crash, as issues were already accumulating within a deeply ingrained quasi-centralized credit-allocation system.**
- **While the Eurozone and the US share similarities with the Japanese economy, it is important to note that the Eurozone and Japan are positioned on the production-based side, while the US is positioned on the consumption-based side. As a result, the US might face more inflationary consequences in the event of a resurgence of loose monetary policy.**
- **The implementation of potential yield-curve control and a resurgence of quantitative easing aimed at stimulating production to facilitate the green transition is anticipated to result in a prolonged period of elevated inflation. A scenario akin to Japan's experience lacks solid support upon more profound analysis.**
- **A resurgence of loose monetary policy is expected to sustain the recent trend of increasing demand for gold as a hedge against inflation. This environment is also likely to favor tangible assets, potentially resulting in a real loss for government bond investments.**

Fabian Wintersberger
Fabian Wintersberger, a trained economist, serves as a rates trader at an Austrian regional bank. Through his weekly newsletter, '*The Weekly Wintersberger*', he offers insightful analyses of financial markets and economic events rooted in the Austrian tradition.

The greatest trick the Devil ever pulled was convincing the world he didn't exist.
Charles Baudelaire

Within Japanese folklore there's a creature called *Akuma*, a demon or evil spirit. It's a bizarre animal, with a huge flaming head and glowing eyes that brings harm and misfortune over people. The Japanese attribute mental illness to the presence of Akuma. Hence, when a person is in such a state of mind that causes it to engage in impulsive, risky behavior, Japanese say it's surrounded by Akuma.

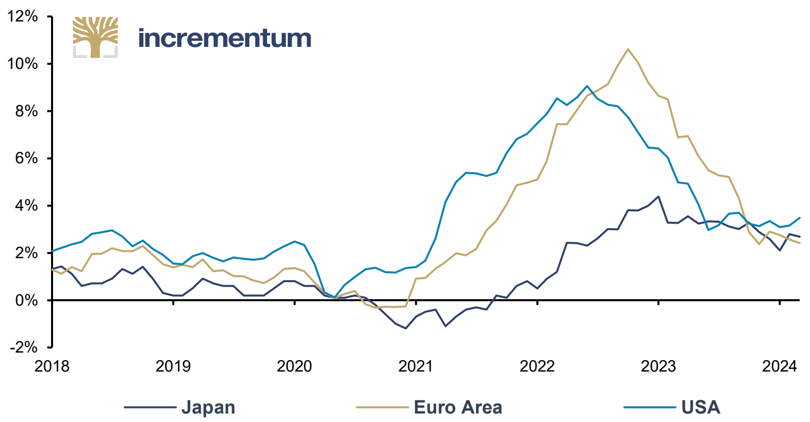
At times, an action may not immediately appear to be insane, and its true nature may only become evident over time, much like the subtle effects of certain central bank strategies. Regarding modern central bank policy, consider Japan's experience: Despite the employment of numerous asset purchase programs and the capping of long-term interest rates, the dire consequences often associated with such measures, such as misallocations and inflation, allegedly failed to materialize. Consequently, warnings about following Japan's lead are often dismissed with the rationale that it was not so bad for Japan, so it will not be bad for us.

I remember straightening my hair because I wanted to be like everybody else, and now the fact that anybody would emulate what I do? It's just funny…
Taylor Swift

With regards to the further direction of economic and monetary policy in the US and the Eurozone, discussions have abounded on whether the Western world will emulate Japan's economic trajectory. Post-2008, the Federal Reserve and ECB initiated quantitative easing, akin to the Bank of Japan's earlier measures amidst its prolonged economic slump. Over the past decade, parallels have emerged between the Eurozone, US, and Japanese economic paths.

The landscape shifted in 2020, when at the outbreak of the Covid-19 pandemic, governments injected record funds into the economy, accompanied by looser monetary policies, resulting – surprisingly for many – in a resurgence of inflation in the Eurozone and the US, while inflation remained benign in Japan.

CPI/HICP, yoy, Japan, Euro Area and USA, 01/2018–03/2024



Source: Reuters Eikon, Incrementum AG

Although inflation has dropped substantially due to tightening policies by the ECB, the obvious questions are whether the era of higher inflation has now passed and whether the Eurozone and the US will return to economic stagnation and deflation. **Will the Eurozone and the US face *Akuma*, the evil spirits that Japan has encountered, again, or will history make another, unexpected turn?**

The Case of Japan

...first is that we are now in the world of pervasive economic weakness. In many ways, we are all Japan now. This complicates policy for everyone, including Japan.
Paul Krugman

Usually, a movie features the main character fighting to prevail. Our story, however, is less optimistically heroic, with the main character suffering endless difficulties and the viewers witnessing setback after setback in sequel after sequel. For Japan, the sequels are never-ending, it reminds us somewhat of *The Fast and the Furious*.

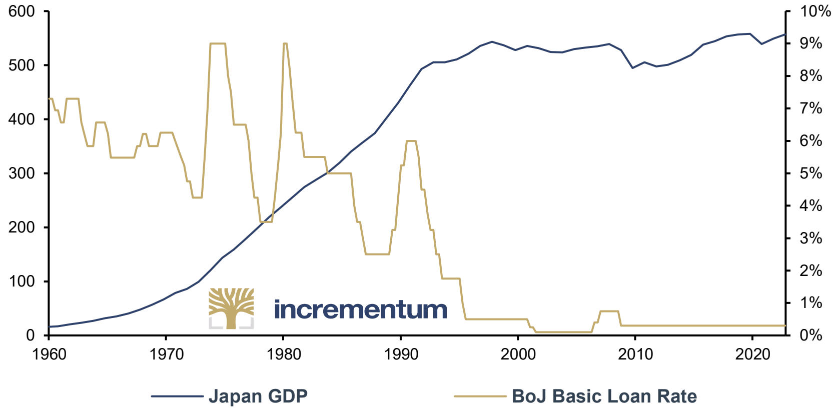
In the early 1980s, Japan was considered the poster child of the world economy, enjoying high economic growth, a solid industrial base, and full employment. It was expected to surpass the US to become the world's dominant economic power. However, history went in a different direction.

The more the government intervenes to delay the market's adjustment, the longer and more grueling the depression will be, and the more difficult will be the road to complete recovery.
Murray Rothbard

While the Japanese economy started to stagnate in the 1990s, it is overlooked that Japan's economic miracle was already in decline before the bursting of its stock market bubble. From the 1950s to 1991, the Japanese government intervened heavily in credit markets. The Bank of Japan controlled commercial banks, assessing whether quotas for specific economic sectors were fulfilled and punishing banks that missed them.[63]

On the one hand, this helped Japan to grow its industrial base. On the other hand, because central planning suffers from an information-asymmetry problem – as explained by Friedrich A. Hayek – that strategy massively misallocated capital and resources and diminished growth.

Japan GDP (lhs), in JPY trn, and BoJ Basic Loan Rate (rhs), 01/1960–12/2022



Source: IMF, Bloomberg, Incrementum AG

Bubbles do not end like a short story, novel, or play. There is no final denouement that brings all the strands of a narrative into an impressive final conclusion. In the real world, we never know when the story is over.
Robert Shiller

These credit quotas had yet another side effect. As described in Professor Richard Werner's fabulous *Princes of the Yen*, to fulfill these quotas, banks increased lending even when there was no demand for loans. This was achieved by handing out riskier loans, which grew the money supply and led to Japan's massive financial-market and property bubbles.

After the bust, Japan's average rate of consumer price inflation between 1990 and 2023 was 0.6%. Although the Bank of Japan was the first central bank to

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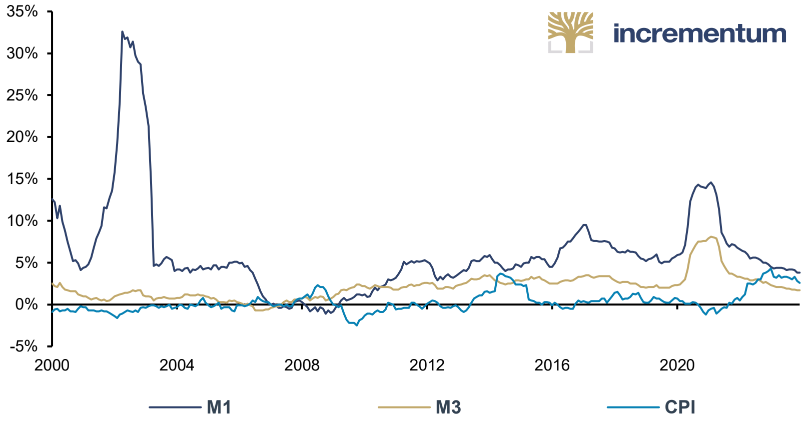
[63] *See* Werner, Richard A.: "A Reconsideration of the Rationale for Bank-Centered Economic Systems and the Effectiveness of Directed Credit Policies in the Light of Japanese Evidence", *The Japanese Economy*, May–June 2002, Vol. 30, No. 3, pp. 7-9; p. 23

implement QE in the early 2000s and cap long-term government bond yields in 2013, growth did not pick up again.

Japan is not the epic money printer people think it is. Their money supply grew more slowly than just about any other country over the past two decades and counting.
Lyn Alden

The reason for low inflation was that despite the Bank of Japan's balance sheet expansion, broad money growth remained subdued throughout that period. While narrow money (M1) grew 6.1% year-over-year on average between 2000 and 2023, broad money (M3) only rose 2.1% on average, which resulted in average yearly consumer price inflation of 0.3%.

Japan M1, M3 and CPI, yoy, 01/2000–12/2023



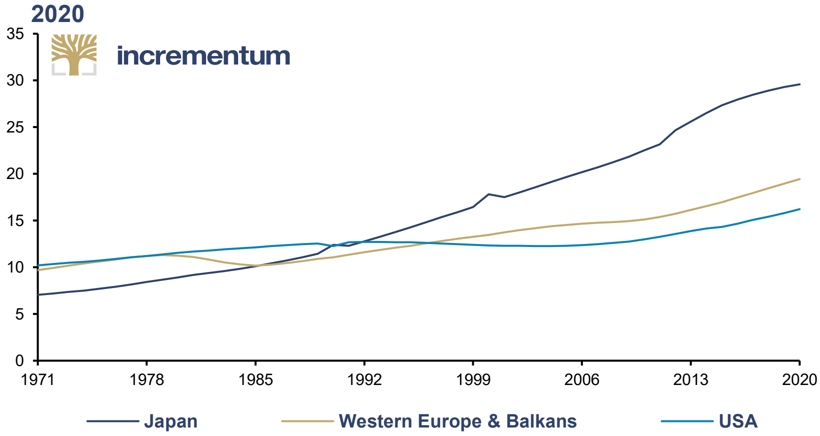
Source: Bloomberg, Incrementum AG

The Shared Fate of an Aging Population

Hope, ladies and gentlemen, is the most important factor for growth. A country ageing CAN still grow as a "hope-driven economy.
Shinzo Abe

When one looks at similarities among the Eurozone, US, and Japanese currency areas, the most apparent similarity is demographics. In 2023, almost 30% of the Japanese population was above 65. European and US demographic trends seem to be following Japan's. Currently, the share of people above 65 is about 19% in Europe and 16% in the US.[64]

Population Ages 65 and Above As % of Total Population, 1971–2020



Source: Bloomberg, Incrementum AG

[64] *See* "Global Demographics Turn Inflationary," *In Gold We Trust* report 2021

With rare exceptions, every businessman and every ordinary person tends to think that the reason why prices go up is because they are pushed up because costs go up… It is perfectly natural that people should think this way, because to each individual separately that is the way it looks. But the fact is that this has almost never been the source of inflation. It's the external manifestation of inflation, but not its source.
Milton Friedman

Keynesians have argued that aging demographics automatically lead to lower inflation, interest rates, and economic stagnation.[65] However, empirical data does not support this theory.[66] One could argue that an aging population poses the risk of increasing inflation because the supply of workers is shrinking, which should push wages up because of better negotiating power, ceteris paribus. That poses the question whether this could induce a wage-price spiral, where higher wages drive prices up, pushing wages further.

That argument bears some difficulties. Firstly, higher wages incentivize businesses to invest in automation enhancements, potentially reducing the demand for labor and, thus, wages. Secondly, higher prices might reduce demand and lower profits, increasing layoffs.

Further, in the absence of an increase in the quantity of money, higher wages should result in relative price adjustments, lowering demand for other inputs, consequently leading to lower prices. A wage-price spiral can only occur if there is a constant influx of new currency units into the economy.

On its own, a wage-price spiral, or any other increase in production costs, cannot be the source of inflation. Milton Friedman correctly described it as an observable effect of the actual cause, an expanding money supply.

Debt Levels

Debt levels suggest the Eurozone and the US could be capable of following Japan's path. As of the end of 2022, Japan's government debt was 260% of GDP, while the Eurozone's debt-to-GDP ratio was about 91%, and US government debt stood at 123.4% of GDP.[67]

We are not swimming in money, we're drowning in debts.
Wolfgang Schäuble

Yet, examining how these debt levels evolved in the last 20 years, the situation looks quite different. From 2005 to 2023, government debt-to-GDP levels doubled in the US, grew by 50% in Japan, and by "only" 30% in the Eurozone.

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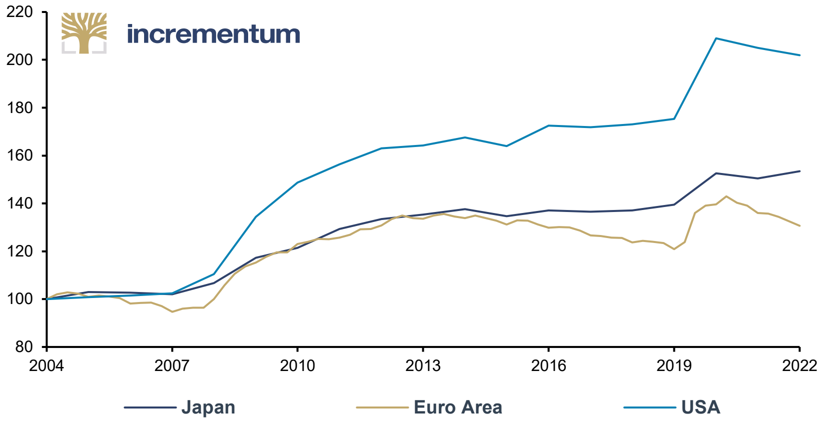
[65] Rachel, Lukas and Summers, Lawrence H.: "On Secular Stagnation in the Industrialized World", *Brookings Papers on Economic Activity*, Spring 2019
[66] Mayer, Thomas and Schnabl, Gunther: "Reasons for the Demise of Interest: Savings Glut and Secular Stagnation or Central Bank Policy?", CESifo Working Paper, No. 7954, 2019; *see* also "Global Demographics Turn Inflationary," *In Gold We Trust* report 2021
[67] *See* "Status quo of Debt Dynamics" in this *In Gold We Trust* report

Public Debt as % of GDP, 100 = Q4/2004, Q4/2004–Q4/2022



Source: Bloomberg, Incrementum AG

Was the Latest Inflation Wave Just a Blip?

…to anyone who's not a central banker it has become increasingly clear that inflation targeting is a policy of great stupidity.
Richard Cookson

The latest inflation wave led to higher Eurozone and US interest rates. According to the mainstream view, as formulated by ECB economists,[68] the rise resulted primarily from supply chain disruptions. Further arguments are that the price rises were due to the Russian-Ukrainian war or greedy businesses ("Greedflation") raising their prices and were unrelated to expansive monetary policies.

That begs the question of whether the outcome will be the same as in Japan and if the latest rise in consumer price inflation was just a blip, as Keynesian economists would claim. If there are differences between the Eurozone and the US compared to Japan, that would suggest that a *Japanification* will lead to different results if the Western central banks return to QE or implement yield curve control.

The Eurozone Is More Similar to Japan than the US Is

Like Japan, many European economies run export-oriented growth models, while the US economy is more consumption-driven. Hence, domestic consumption plays a much larger role in economic growth in the US than in the Eurozone and Japan.

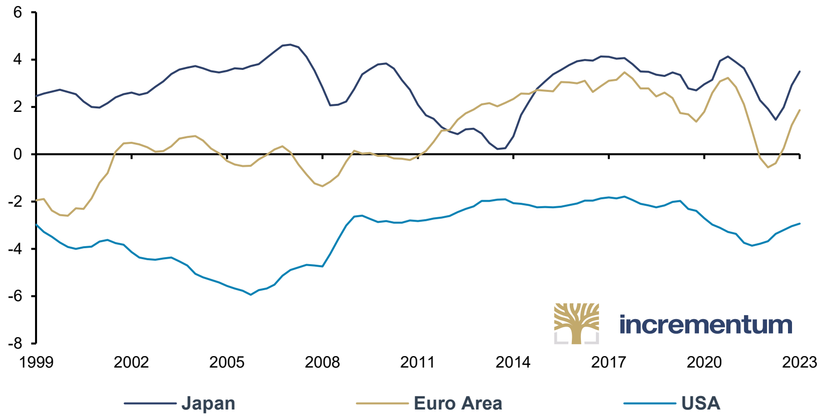
We give him (Messi) the ball and stand back and watch.
Thiago Alcantara

To use a soccer analogy, Japan and the Eurozone serve as the hardworking players, similar to Xavi, Iniesta or Dani Alves at the FC Barcelona or Angél DiMaria, Sergio Agüero or Nicolás Otamiendi in the Argentines national squad, while the US represents Lionel Messi, who gets handed the passes he needs to score.

[68] De Santis, Roberto A.: "Supply chain disruption and energy supply shocks: impact on euro area output and prices", ECB Working Paper Series, No. 2884, January 2024

For example, both Japan and the Eurozone have run continuous current account surpluses. As of Q4 2023, the Eurozone maintained a current account surplus equivalent to 1.9% of its GDP, while Japan's current account surplus stood at 3.5%. On the other hand, the US continuously runs current account deficits, with a current account deficit of 2.9% in Q4 2023.

Current Account as % of GDP, Q4/1999–Q4/2023



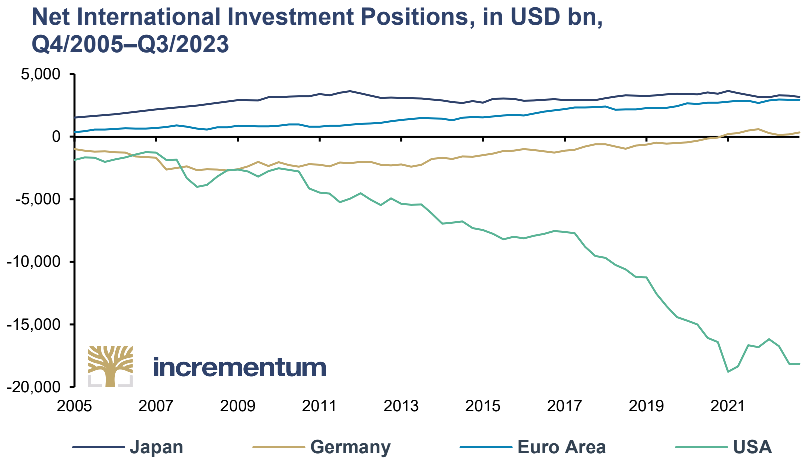
Source: Bloomberg, Incrementum AG

Being the world's currency confers both benefits and costs. The issuer enjoys greater liquidity and seemingly endless credit, but this same advantage discourages domestic policy discipline, leading to imbalances.
Barry Eichengreen

While the US constantly consumes more than it produces, the Eurozone countries and Japan produce more than they consume, a result of the so-called exorbitant privilege of the US that has the Federal Reserve printing the world's reserve currency. Roughly said, the US exports dollars in exchange for physical imports from Europe and Asia and vice versa. Just as Messi relies on passes from his teammates to score goals, the US benefits from its position as the issuer of the world's reserve currency, receiving "passes" in the form of European and Asian imports.

Nominal GDP in the Eurozone has also followed Japan's in the sense that it has been stagnating since the Global Financial Crisis in 2008, just as Japan's nominal GDP has stagnated since the Asian Financial Crisis in the mid-1990s.

Germany in particular is very similar to Japan in regard to its net international investment position (NIIP). Both countries have accumulated a positive NIIP over the years, which means they own more assets abroad than they owe to foreigners domestically. For the Eurozone as a whole, NIIP was only slightly negative in 2000, then worsened until 2010, before it improved substantially in recent years and finally turned positive in 2021.



Source: Bloomberg, Incrementum AG

The bad economist pursues a small present good, which will be followed by a great evil to come, while the true economist pursues a great good to come, at the risk of a small present evil.
Frédéric Bastiat

After 2010, one could say that the Eurozone has done something similar to what Japan did. Both regions are export-oriented and have run constant trade surpluses that they invested into foreign assets, while the US borrowed money from foreign countries to purchase their goods and services, continuously running a negative NIIP since 1985.

At this point, one has to mention a major difference between Japan and Eurozone countries like Germany. Foreign investors also hold government bonds from Eurozone members, while Japanese government bonds are predominantly held domestically.

Three things ruin people: drugs, liquor and leverage.
Charlie Munger

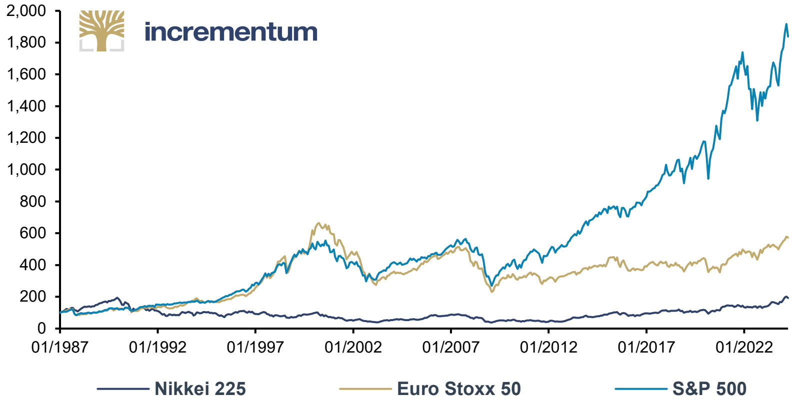
Due to ultra-low interest rates, Japanese investors started to engage heavily in the so-called *yen carry trade* in the 1990s, where they borrow yen at low rates and invest it into higher-yielding foreign currency assets, like US Treasury bonds or stocks, because they expect a greater return. As long as the US dollar is appreciating against the yen, the returns get even better. Over time, investors have increased their risk in that trade by using leverage. **Thus, one can say that Japan borrows from itself and then makes risky investments abroad.**

Further, stock markets in Europe and Japan appear remarkably similar. The sideways movement of European stocks suggests that Europe has already experienced *Japanification* since the early 2000s, while the US stock market has produced continuous returns for investors.

The world's biggest casino owner is none other than Japan.
Sunny Ralli

Recently, the Japanese Nikkei Index broke out of its decades-long sideways movement and, after 34 years, climbed to a new all-time high. However, despite QE and YCC, Japan's real economy continues to struggle; and it has lost its position as the world's third-largest economy to Germany, which itself has now slipped into recession. According to recent estimates, India, currently in fifth place, will have overtaken both countries by 2027. This highlights the ongoing challenges faced by Japan.

Nikkei 225, Euro Stoxx 50 and S&P 500, 100 = 01/1987, 01/1987–04/2024



Source: Reuters Eikon, Incrementum AG

The Difference between QE and Yield Curve Control

Sir, I can now understand the term "quantitative easing" but I realise that I no longer understand the meaning of the word "money", please advise…
Gerald Hill, Midlands
In a letter to The Times, March 2009

We will now look at historical examples of quantitative easing and yield curve control and further discuss it more generally. By doing so, we want to examine their potential effects should the ECB or the Federal Reserve implement them as monetary policy tools again.

The main goals of QE have been to strengthen financial-market functioning, lower long-term yields, raise consumer price inflation from deficient levels, foster economic stability, and spur growth. While QE programs define a nominal amount of bonds the central bank plans to buy, yield curve control directly concentrates on long-term interest rates. It aims to hinder them from rising above a specified level to keep the government bond market functioning.

Quantitative easing and yield curve control in history

Yield curve control was implemented for the first time in the US during World War II (in 1942), after an increase in inflation and rising concerns over the expansion of the budget deficit, and remained in place until 1951.[69] The principal idea, however, had already been mentioned in a letter by John Maynard Keynes to President Roosevelt during the Great Depression in 1933:[70]

> *I see no reason why you should not reduce the rate of interest on your long-term Government Bonds to 2½ percent or less with favorable repercussions on the whole bond market if only the Federal Reserve System would replace its present holdings of short-dated Treasury issues by purchasing long-dated*

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[69] *See* also "Introduction," *In Gold We Trust* report 2021; "Status Quo of Debt Dynamics," *In Gold We Trust* report 2021; "Yield Curve Control, the Biggest Mistake of the ECB So Far! – Exclusive Interview with Russell Napier," *In Gold We Trust* report 2021
[70] Amamiya, Masayoshi: "History and Theories of Yield Curve Control", Keynote speech at the Financial Markets Panel Conference to Commemorate the 40th Meeting, January 11, 2017, p. 3

issues in exchange. Such a policy might become effective in the course of a few months, and I attach great importance to it.

In 1947, the Bank of England also implemented yield curve control and capped long-term interest rates at 2.5%. Such operations, although not systematically employed, were carried out repeatedly for brief periods until 1971, driving government bond holdings of the Bank of England continuously higher.[71]

Compared to yield curve control, quantitative easing (QE) is a relatively new policy tool for central banks. It was first implemented by the Bank of Japan in 2001 with the aim of lifting growth and inflation rates. Yet, despite all efforts, the Bank of Japan failed to achieve its intended goals. The programs were conducted from 2001 to 2006, followed by additional asset purchase programs in 2010, 2013, and another in 2014, in which the Bank of Japan planned to buy JPY 80trn of bonds annually. By July 2020, the Bank of Japan held more than 50% of all Japanese government bonds outstanding.

They knew [QE] didn't work in Japan… but it is just that the Japanese used it the wrong way… They just blow your mind how they say this does not work but then they come to the conclusion that it must work… they know that it does not work, but they keep on claiming: 'QE did not fail, we just cannot identify the benefits'… I am paraphrasing, but I am not paraphrasing that much.
Jeff Snider

In response to the Global Financial Crisis, the Federal Reserve was the first to follow Japan when it initiated three quantitative easing programs between 2008 and 2015. Meanwhile, the Bank of England also started QE in 2011, and the ECB followed in 2015. **All three central banks experienced the same results as Japan, failing to sustainably lift growth and inflation.**

All central banks faced the same problem. In theory, QE should encourage banks to increase their lending, but they might not be willing to. After all, you can lead a horse to water, but you cannot make it drink.

In 2019, the Bank of Japan added yield curve control as a monetary policy tool in combination with QE, to produce QQE. At the height of the Covid-19 pandemic in 2020, the Bank of England, the ECB, and the Federal Reserve all reinstated QE programs in order to guarantee financial market stability. Unlike the Bank of Japan, the other central banks are currently trying actively to reduce their balance sheets, engaging in quantitative tightening (QT).

How yield curve control is implemented

The potential effects of a return to QE and yield curve control in the Eurozone and the US depend on how and where it's implemented first. In Japan, the Bank of Japan is actively buying government bonds to suppress interest rates. However, as Russell Napier has pointed out, the other possibility is financial repression, and he believes this will be the path central banks opt for.

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

If one assumes that yield curve control will be done through financial repression, starting in the Eurozone first, it could be that policymakers will force private investors to buy up government securities to cap yields, by law if necessary. Moreover, one can assume that yield curve control would be implemented after a return to QE when it turns out that the intended effects are not materializing. Because of the US dollar's exorbitant privilege and the Federal Reserve's stance

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[71] Amamiya, Masayoshi: "History and Theories of Yield Curve Control", Keynote speech at the Financial Markets Panel Conference to Commemorate the 40th Meeting, January 11, 2017, pp. 3f.

under Jerome Powell to try to avoid a return to QE for as long as possible, QE and yield curve control would probably be implemented in the Eurozone first.

Possible results of a return to QE and yield curve control in the euro area

Before the pandemic and the start of the war in Ukraine, the highest probability for what would happen in the euro area was a Japanese scenario. Recent geopolitical events and economic policies have changed this. Like Japan, the Eurozone has a solid industrial base and production sector.

However, current Eurozone economic policies and surging energy prices have caused a decline in industrial production and led many companies to offshore production to other parts of the world, like America and Asia. Going forward, Eurozone governments will likely try to combat that trend and subsidize industries, both to keep them from moving away and to boost the renewable sector.

Doubt is the origin of wisdom.
René Descartes

Apart from an increase in government debt levels, it is doubtful whether this would lead to a substantial pick-up in economic growth, because of several factors. First, the Eurozone lacks skilled workers to accomplish the economic green transition, and it has so far failed to attract the immigration of skilled migrants because of more attractive destinations for those workers elsewhere.

Second, the European continent lacks domestic raw materials needed for the green transition. Thirdly, the EU is already way behind China, which is currently leading in solar, battery, and electric vehicle production. At the end of February, the first Chinese ship with 3,000 EVs unloaded its cargo in Germany, and China plans to construct 200 ships of that size in order to massively boost the export of EVs.

To address these issues, Eurozone countries would need to run large deficits to subsidize businesses. The ECB likely will need to return to QE and implement yield curve control to make the debt burden bearable. However, it's doubtful that the result will be higher growth. The most apparent results are probably a weak euro and lower production for domestic consumption due to a misallocation of workers.

In a world of quantitative easing, the old adage of "don't fight the Fed" needs to be rewritten as "don't trust the Fed."
Russell Napier

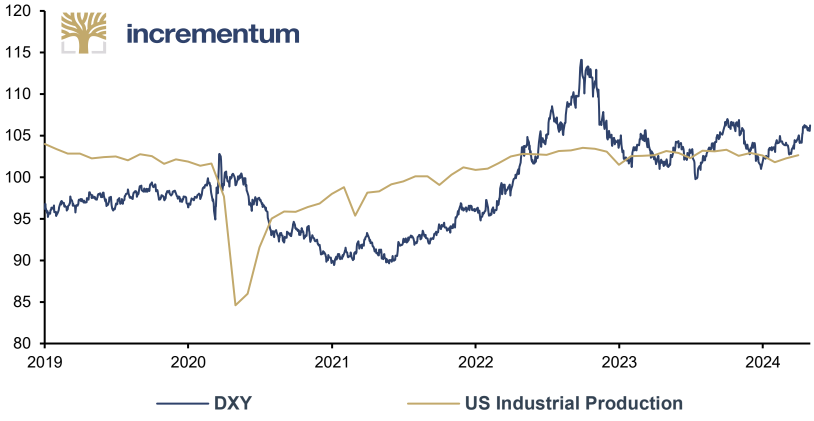
Higher import prices, lower output, and higher debt could send inflation higher in the Eurozone. If we recall Russell Napier here again, governments could implement credit guarantees to expand the money supply further. Still, it is hard to see that this would create sustainable growth apart from increasing inflation rates. Additionally, the Eurozone is constantly working toward more regulation instead of less. However, the measures might lead to lower debt-to-GDP ratios at some point, though at the expense of citizens due to inflation.

The Federal Reserve will bow to policy goals

If the ECB and Eurozone governments implement all these policies and the Federal Reserve stands aside, this could lead to a sharp rise in the US dollar. While this is favorable to imports, it runs diametrically to the declared goals of both US presidential candidates, who want to bring manufacturing back to the US.

To achieve this, the US would obviously need a weaker, not a stronger, US dollar.

DXY and US Industrial Production, 01/2019–04/2024



Source: Reuters Eikon, Incrementum AG

Further, both US presidential candidates are in favor of larger budget deficits to achieve their goals, which is problematic in times when interest rates are already much higher than over the last decade. This is driving US interest expenses and, hence, the deficit. Leaving aside the likely possibility that the current level of interest rates could harm the US economy at some point, it is clear that these policy goals will probably increase political pressure on the Federal Reserve and cause a change there at some point. When the Federal Reserve gives in under the prescribed scenario, the new printed money will find its way into the real sectors of the economy through government spending to subsidize industries.

Guess there's nothing like the element of surprise.
Alex Turner

This will drive consumer price inflation back up and, with it, interest rate expenses and government debt. However, one should not rule out the possibility that at some point the government will stop adjusting social security benefits to inflation, which at the moment is mandated by law. As either candidate would be serving his final term, he could surprise people with such a move.

Honestly, it is difficult to envision that this measure alone would prevent yield curve control. **As American guitarist and singer John Mayer poignantly croons in "Stop This Train", even though one might wish to get off, one knows one cannot:**

> *Stop this train*
> *I want to get off and go home again*
> *I can't take the speed it's moving in*
> *I know I can't*
> *But honestly, won't someone stop this train?*

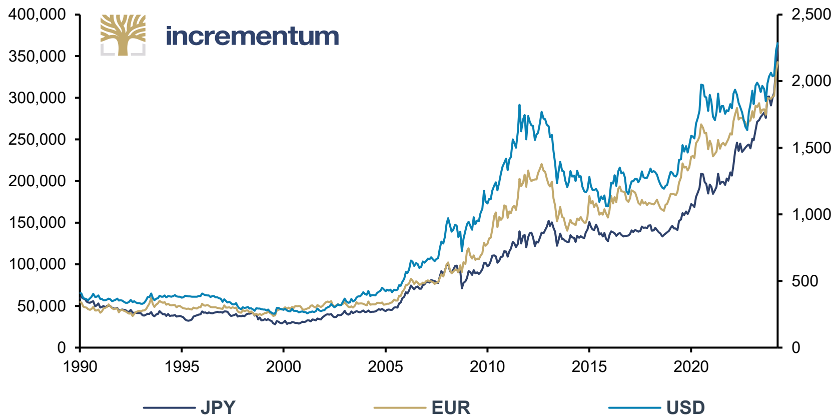
The Effects of These Policies on Asset Classes

Obviously, the pressing question now is, "What does this mean for assets?" and, given that this is the *In Gold We Trust* report, "What does this mean for gold"?

It is no use trying to sum people up. One must follow hints, not exactly what is said, nor yet entirely what is done.
John Greenleaf Whittier

If the ECB and the Federal Reserve loosen their monetary policies again and follow Japan, then the development of gold priced in yen could hint at where the gold price in euros and the US dollar is heading. When Japan implemented QQE in 2019, the gold price in yen broke out and started a solid upward trend, from one all-time high to another. The JPY 300,000 mark was crossed for the first time in the fall of 2023. Even the first interest rate hike by the BoJ since 2007 on March 19, thus ending the phase of a negative key interest rate that had lasted since 2016, did not affect the gold price in yen negatively.

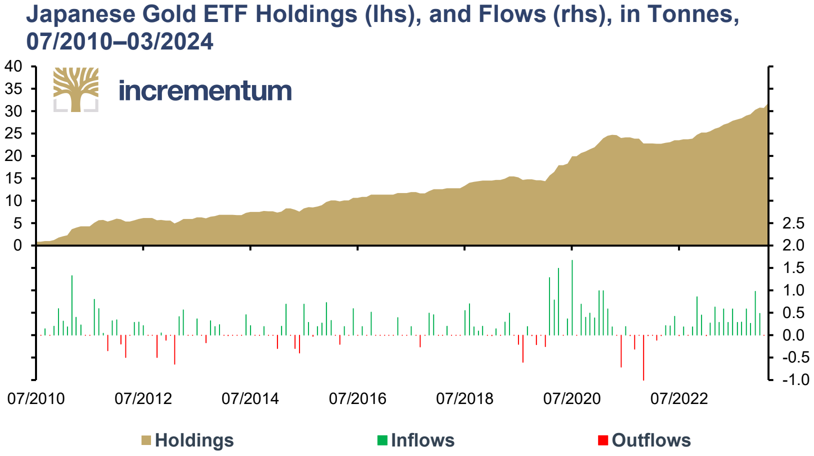
Gold, in JPY (lhs), and USD, EUR (rhs), 01/1990–04/2024



Source: Reuters Eikon, Incrementum AG

After the Federal Reserve began to raise interest rates and the Bank of Japan decided to keep monetary policy loose, the yen sold off against other major currencies. Following the drop in value, Japanese investors increased their demand for gold and gold ETFs.

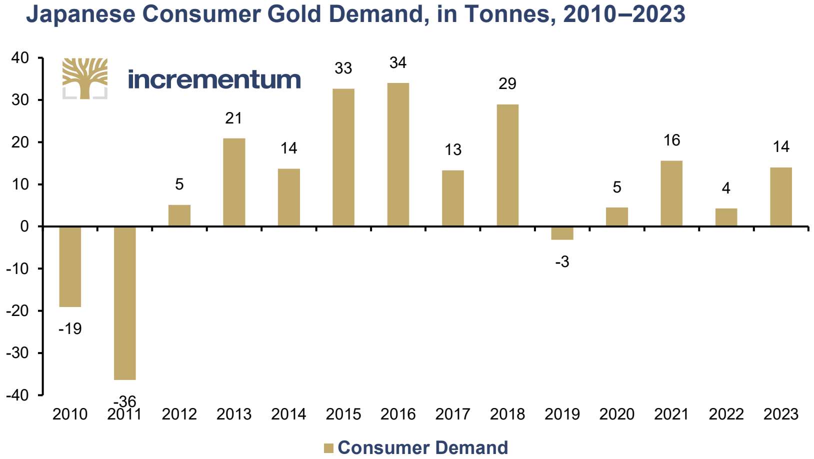
Interestingly, while Asian gold ETF holdings increased further from 2022 onwards, ETF holdings in Europe and the US declined, underlining the fact that demand has increased in Asia while staying stagnant in Europe and the US.



Source: World Gold Council, Incrementum AG

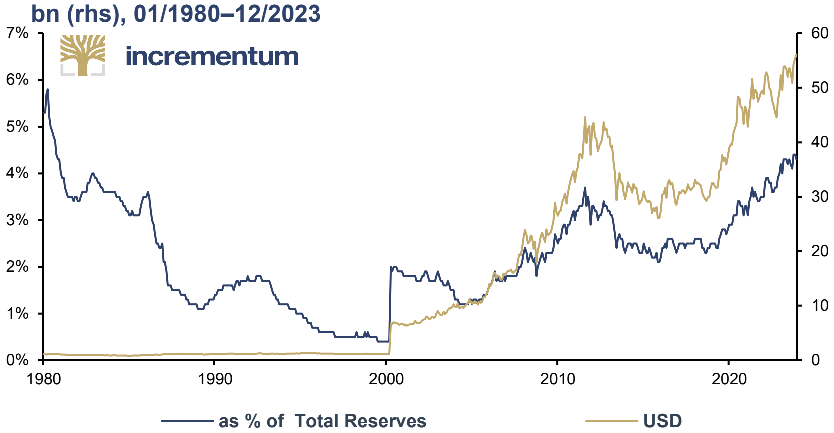
Wisdom shines when polished.
Japanese Proverb

Looking at consumer demand, Japanese demand for gold was negative before 2012 but started to turn positive afterward. Since then, only 2019 marked a year of negative demand in Japan.



Source: World Gold Council, Incrementum AG

Historically, the Bank of Japan holds only a small portion of its total assets in gold, far less than the Federal Reserve and central banks in the Eurozone. Since 2000, the Bank of Japan has increased its gold holdings by about 90 tonnes, which brought the share of gold reserves to total reserves from 0.4% up to 4.3%, levels where it had not been since the early 1980s. In US dollar terms, Japan's gold reserves have risen steadily since the early 2000s and are currently at an all-time high.

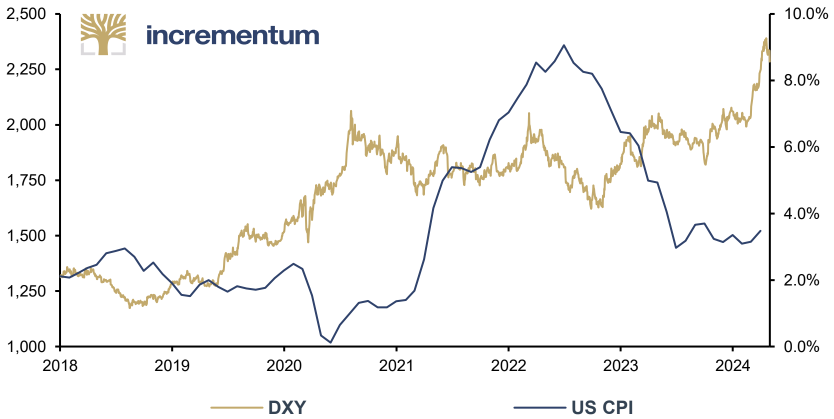


Source: Bloomberg, Incrementum AG

In inflationary periods, gold usually serves as a hedge, despite continual mocking from financial professionals, who claimed the latest inflation wave showed that gold wasn't a good inflation hedge because, despite a rising CPI, gold moved sideways.

I've never lost a game, I just ran out of time.
Michael Jordan

What is overlooked here is that the gold market had already anticipated inflation and started to trade sideways when it became obvious that monetary tightening was coming. Much like Michael "Air" Jordan anticipated situations in advance to score, executing such a trade ahead of time pays off, preempting market shifts. Suppose someone invests in gold to hedge against inflation after it has already spiked and they can now predict central bank intervention. That's more of a reactive response, akin to the moment when Utah Jazz's Byron Russell slipped just before Jordan threw in his final basket in a Chicago Bulls jersey.



Source: Reuters Eikon, Incrementum AG

Human reason can neither predict nor deliberately shape its own future. Its advances consist in finding out where it has been wrong.
Friedrich August von Hayek

All the policies discussed suggest that the Eurozone and the US will enter a period of consistently higher inflation in the years ahead, hence a higher price for gold (*and Bitcoin*) seems likely. Such an environment should benefit tangible assets, especially commodities, raw materials, and related industries that are needed for the pursuit of the *green transition*. Given that other energy sectors have suffered from chronic underinvestment in recent years, they should also profit, from our point of view.

It is a terrible mistake for investors with long-term horizons to measure their investment "risk" by their portfolio's ratio of bonds to stocks. Often, high-grade bonds in an investment portfolio increase its risk.
Warren Buffett

While investments in government bonds might look compelling in nominal terms, prolonged periods of high inflation usually lead to a loss in real terms. Currency-wise, though, it is likely that the US dollar will remain king, relative to most fiat currencies, apart from the Japanese yen or likely the Swiss franc, because the Bank of Japan cannot, and the Swiss National Bank will not, ease more than the Federal Reserve or the ECB. Under this scenario, the yen carry trade would likely blow up because of the rapid strengthening of the yen against the US dollar.

That could also benefit the Japanese economy, as a higher yen makes imports of raw materials cheaper that the innovative Japanese business could then use to build products for domestic consumption and for export. **Our sensing is that Japan will benefit in a scenario of Western Japanification.**

Genius is eternal patience.
Michelangelo

Although many say the US would suffer in such a scenario, it could very well be that the US is not hurt as much as many expect before it restructures and then profits from it. Further, we are all aware of the challenge of breaking away from old habits, and this holds true for the reliance on the US dollar in international trade, perpetuating a continuous demand for the currency. Apart from that, and given that the EU does not reverse its path to overregulation, the potential benefactors are likely Asia and commodity-rich countries in South America.

There is a saying that the definition of insanity is "doing the same thing over and over again and expecting different results." However, in the case of Europe and the US, our analysis does not support the assumption that implementing additional rounds of QE and yield curve control would yield similar results to those observed in Japan.

Beware of false prophets, which come to you in sheep's clothing, but inwardly they are ravening wolves.
The Bible, Matthew 7:15

Consider this: the greatest trick the devil ever pulled was convincing the world he didn't exist. Symbolically, Japan's monetary experiment could be seen as a similar trick, suggesting that ultra-loose monetary policy isn't as harmful as feared.

However, perhaps the effects were less obvious, and things appeared better than they were. **It's possible that the shadow of *Akuma* lurked within Japan's monetary policies all along.** If monetary policymakers in the Eurozone and the US adopt a similar approach, we may witness an '*Akuma Afterglow*,' revealing the hidden consequences of these policies, with completely different consequences.

Caledonia Mining Corporation Plc

A cash generative, multi-asset gold producer & explorer with a strong growth profile in Zimbabwe

Blanket Gold Mine: significantly increased production +75koz pa

New asset acquisitions lay foundations for multi asset strategy & significant growth potential

Committed to **returning value** to shareholders

Quarterly **dividend payer** since 2012

Major Zimbabwean **employer** and **social** & **economic** contributor

Strategy & Outlook

Growth supported by cash generation from production at Blanket

Start to progress new assets

Balance shareholder returns and investing in growth

Continuing strategy to become a multi-asset gold production in Zimbabwe

Roy Jastram's *The Golden Constant* and Inflationary Deflation

Could we better understand what was going on in the present if we knew more about the historical relationship of gold to other prices? Might we find something systematic in its history to give us a more perceptive appreciation of current monetary events.

Roy Jastram

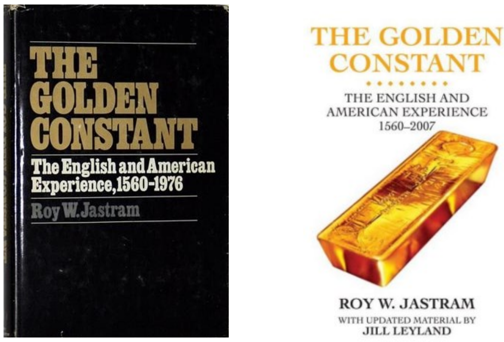
- *The Golden Constant* by Professor Roy Jastram can help us to better understand gold's investment case. It provided the first statistical proof that gold maintains its purchasing power over long periods – in this case five centuries.
- Most investors regard gold as inflation hedge. The most surprising of Jastram's conclusions was that the gold price does even better in periods of deflation, differentiating gold from other financial assets. It is the only financial asset which outperforms in either inflation and deflation.
- While the investment outlook might seem chaotic, it becomes clearer when viewed in the framework of long-term debt cycles. Historically, the cycle ends when debt accumulation overwhelms the economic system. The excess debt is purged by a deflationary debt crisis - the Great Depression being the last example.
- The current cycle is far longer than previous ones because policy makers have access to unlimited debt creation without the constraints of a gold standard. The world is awash with over USD 300trn of debt, and we are in the latter stages of this cycle. We are seeing the creation of the ultimate financial bubble – one that is in fiat money itself – although it is not perceived that way by most investors.
- The resolution of this debt cycle could be by another debt deflation. However, given policy makers ability to create unlimited credit, we think that the end of this cycle might be slightly different. We expect debt to be "reduced" – but by inflation. There will also be deflation – in the price of almost everything in terms of real money, i.e. gold. This led us to create the term "Inflationary Deflation". Gold wins in either the deflationary or inflationary (Inflationary Deflation) end games.

How can a little-known, old and very difficult to get hold of book about gold help us to understand the investment case for gold today and the global macro-outlook as a whole?[72]

Roy Jastram's *The Golden Constant*

Roy Jastram has produced a systematic study of the purchasing power of gold over the longest consistent datasets available.
Saifedean Ammous

Professor Roy Jastram's seminal work, *The Golden Constant* (TGC), subtitled "The English and American Experience 1560–1976", was published in 1977. Secondhand copies of TGC changed hands for several hundred euros prior to the release of an updated edition in 2009. From our recent search, secondhand copies of the first edition are unobtainable. New copies of the later edition are currently priced on Amazon at EUR 140–150.



Source: Paul Mylchreest

Roy Jastram was born in California in 1915 and received bachelor and doctoral degrees from Stanford University. After spells with the National Resources Planning Board and National Bureau of Economic Research, he served with the Navy in World War II. After the war, Jastram moved to the University of California at Berkeley, becoming professor of business administration. He retired from teaching in 1982 and died in 1991. Besides *The Golden Constant*, Jastram wrote a second book, titled *Silver: The Restless Metal*, which was published in 1981.

The desire for gold is the most universal and deeply rooted commercial instinct of the human race.
Gerald M. Loeb

While with the Stanford University Department of Economics in 1936, Jastram was tasked with a research project to answer the question, "*Was money worth more in past centuries than it is today?*" It's worth bearing in mind that at the time the world had been on some form of hard money standard for almost all of known history – notwithstanding periodic ill-fated attempts to circumvent it, often due to wars and imperial overreach – so this was a legitimate question.

The resulting research paper, which had been funded by an industrialist, was never published. Subsequently, Jastram's interest in gold remained dormant until 1968, when the gold price exploded with the collapse of the London Gold Pool, which proved the catalyst for the transition to today's global project in unbacked fiat currencies. As Jastram notes right at the beginning of his book,

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[72] This article was written under the lead of Paul Mylchreest. Paul has 30 years analytical experience, having started his career in the Chemicals sector at S.G. Warburg, Schroders and Citibank. After a brief foray into Oil & Gas, he worked for several years as a Global Macro & Cross Asset strategist, firstly setting up on his own, and later working at US commodity trader, Archer Daniels Midland (ADM Inc.). He began his mining coverage at Crédit Agricole Chevreux in 2005 and currently works at Hardman & Co.

Able scholars and inquisitive laymen have conjectured for centuries about the economic role of gold and the causes of its fluctuations in value and purchasing power. My aim is to crystalize these speculations by the use of quantitative evidence… (Jastram, Roy: The Golden Constant*, p. 1)*

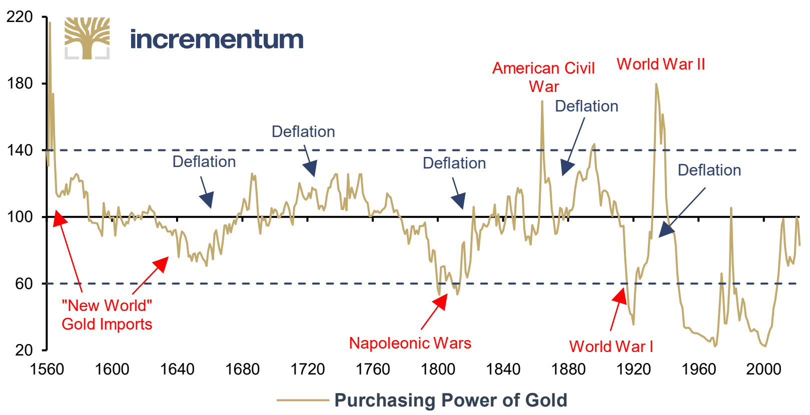
Measuring Gold's Purchasing Power Since 1560

There is, however, one common way the value of all forms of assets, fixed or liquid, and all kinds of income, earned or otherwise, can be evaluated. That common denominator is a precious metal, usually, gold.
Roy Jastram

The book is essentially a history of the purchasing power of gold and provides the first statistical proof that gold maintained its purchasing power over very long periods – in this case more than five centuries – hence Jastram's title *The Golden Constant*.

Our first chart depicts the main result of Jastram's studies. It shows an index for the purchasing power of gold (using UK data for the gold price and an index of wholesale/producer prices for 1560–1800 and US data from 1800 onwards). The chart exhibits how gold's purchasing power continually returns to what might be described as an "equilibrium level". This usually comes after gold significantly overshoots to both the downside and the upside for periods that can last for decades.

Purchasing Power of Gold for UK/USA*, 1560–2022



Source: Federal Reserve St. Louis, NBER, BLS, Bank of England, World Gold Council, The Golden Constant, Incrementum AG
*UK 1560-1800, USA 1800-2022

Gold will be around, gold will be money when the dollar and the euro and the yuan and the ringgit are mere memories.
Richard Russell

We believe that it's significant that gold's purchasing power has overshot on the downside for much of the past sixty years – a period defined by an unprecedented accumulation of debt globally – which portends a similar overshooting to the upside in our opinion.

Gold in Inflation and Deflation

Jastram defined inflation as a period of rapidly rising prices and deflation as rapidly falling prices. To an extent, these definitions are subjective, as he noted in *The Golden Constant*: "Since I cannot hope to argue my way through to any common agreement on such subjective matter, I simply adopt an arbitrary schema and state my considered selection of terminal dates…".

In the book, Jastram defined inflationary and deflationary periods as follows:

Inflationary and Deflationary Periods

Inflationary	Deflationary
1623–1658	1658–1669
1675–1695	
1702–1723	1723–1738
1752–1776	
1792–1813	1813–1851
1897–1920	1873–1896
1934–1976	1920–1933

Source: The Golden Constant, Incrementum AG

In this book we discover the stability of gold in yet another context. Its price has been remarkably similar for centuries at a time. Its purchasing power in the middle of the twentieth century was very nearly the same as in the midst of the seventeenth century.
Roy Jastram

A closer look at Jastram's conclusions shows that gold can be a relatively poor hedge against inflation, at least in the early stages. We have highlighted several inflationary periods in the chart above in red, and the problem with hedging can be seen from the experiences of World War I. However, the chart also shows how gold did act as an effective inflation hedge during the Napoleonic Wars, American Civil War, and World War II.

The fact that gold performed poorly in some periods of inflation, or in the early stages at least, can be rationalized. During the mid-sixteenth to mid-seventeenth centuries, gold imports from the New World into Europe (mainly Spain) effectively increased the money supply dramatically. Once again, bear in mind that for most of history, gold was either money or closely related to money, so a rising general price level sometimes led temporarily to a lower purchasing power for gold.

There was also another factor at play, which limited gold's ability to act as a hedge against inflation when various iterations of a gold standard were operative. This went unnoticed by Jastram, or he chose not to comment on it. During most of the period since 1560, there was no free market in gold, since the price was fixed by governments/kings and could remain fixed for relatively long periods until overwhelmed by market forces.

As the centuries passed, this trust in the metal was reinforced again and again.
Roy Jastram

Today's situation is obviously vastly different, with politicians and central bankers having done their best to exclude gold from the monetary system – although its role in international reserves has been increasing for some time now. However, as policy makers continue to abuse the flexibility of the current monetary system, they have defined gold as the alternative to unbacked currency by default. The most recent period of rapid inflation covered was 1966–1980, when the CAGR in US inflation was 6.9% and the gold price rose from USD 35/oz to USD 850/oz.

Now let's consider periods of deflation. The most surprising of Jastram's conclusions was that the gold price "does very well during periods of deflation". We highlighted several of these deflationary periods in black in the chart above. Few professional investors these days are likely to assert that gold does well in deflationary conditions, since they regard it primarily as an inflation hedge. Nevertheless, it makes sense.

In the absence of a gold standard, there is no way to protect savings from the confiscation through inflation. There is no safe store of value.
Alan Greenspan

In periods of deflation, the price of goods declines in terms of money, i.e. the real value of money increases. As J.P. Morgan famously stated, "Gold is money. Everything else is credit." In periods of deflation, we should expect gold's value to rise versus the prices of goods and the prices of assets that are supported by economic strength, for example, stocks, other commodities, and real estate.

Understanding Jastram's work highlights a key attribute which differentiates gold from all other financial assets including commodities: Gold is the only financial asset which outperforms in either inflation and deflation.

The table below lists the typical outperformance or underperformance of different asset classes in inflationary and deflationary conditions. Gold and commodities outperform during periods of inflation, and gold and bonds in periods of deflation.

Asset Class Performance during Inflation and Deflation

	Inflation	Deflation
Outperform	Gold Commodities Real Estate	Gold Bonds
Underperform	Equities Bonds	Equities Commodities Real Estate

Source: Paul Mylchreest, Incrementum AG

We'll consider the outperformance and underperformance of gold compared with other asset classes in more detail in a moment. First, it will be helpful if we establish a framework.

The Framework – Long-Term Debt Cycles

There are a host of reasons why the current investment landscape appears chaotic:

- uncertainty about central bank policy and whether they will "pivot" on high/rising rates;
- volatile inflation expectations;
- massive government deficit spending;
- cracks in China's real estate bubble;
- regional bank crisis in the US; and
- geopolitical risks in the Ukraine and Middle East.

Kondratiev's discovery of the long waves was a magnificent scientific achievement. His name will be remembered in the history of the analytical effort in the field of business cycles.
Joseph Schumpeter

In our opinion, the chaos becomes clearer when viewed in the context of long-term debt cycles. In 2006, we created a framework to put the global macro picture into a strategic context. Its foundation is the "Long Wave" or "Kondratieff Cycle" (K-Cycle). The Soviet economist Nikolai Kondratieff (1892–1938) identified long cycles in his 1925 book, *The Major Economic Cycles*. Kondratieff focused mainly on prices and interest rates, although there were a number of factors, including technological advance and the accumulation of capital.

In fact, as Prof. Roy W. Jastram demonstrated clearly in his seminal work The Golden Constant, gold acted as a better hedge against deflation than inflation, both in absolute terms and relative to other assets. This can be seen to be so through detailed price records over seven centuries.
Letter to the Financial Times, 30/10/2010

The primary driving force in our framework is the build-up and, in its final phase, the extinction of debt, although we incorporated Kondratieff's ideas and other commentators' work on long cycles. Surprisingly, to us anyway, hardly any analysts and investors have an appreciation of the long wave framework, and it is shunned by economists. Nathan Mager, the author of *The Kondratieff Waves,* explained this as follows:

> *There is a general reluctance to accept the fact that economic forces run in preordained mechanistic cycles, particularly those forces involving the actions of intelligent humanity. The doctrines of free will and the human capacity for self-determination are as deeply ingrained in us as religious belief.*

However, in a 2009 *New Yorker* article, "The Secret Cycle", about another cycle analyst, Martin Armstrong, journalist Nick Paumgarten noted: "The writer was told repeatedly that some of the biggest investors out there view even the wackier cycle theories with respect." Similarly, high-profile investor, Ray Dalio, of Bridgewater Associates, has written and commented extensively on cycles. Speaking on Bloomberg TV on 7 June 2023, he stated: "In my opinion, we are at the beginning of a very classic late, big-cycle debt crisis…"

Our analysis shows that a typical long-term debt cycle goes through phases of rebirth, growth, maturing and death, which provides the setup for the process to be repeated, albeit in a slightly different way and length each time. **The four main phases of the cycle can be characterized as "seasons", i.e. spring, summer, autumn, and winter.**[73]

Inflation is unjust and deflation is inexpedient.
John Maynard Keynes

Prices and interest rates are primarily on rising trends during the spring and summer phases and falling trends during autumn and winter. Average inflation rates are 2–3% or less during spring and 4–5% or more during summer. The autumn is characterized by modest deflation or disinflation in the current cycle – following the breaking of the link with a hard-money standard – and the winter by more intense deflation.

The trend in debt is slightly different. Debt continues to build up at a rapid pace during autumn and, combined with falling interest rates and disinflation/deflation, typically leads to asset bubbles in equities, bonds and real estate. However, the system eventually becomes overwhelmed by the level of debt accumulation at the end of the third or "autumn" phase.

The shift into winter is typically brought on by a crash in equity markets. In the first three long-term debt cycles these were:

- Panic of 1825;
- Panic of 1873; and
- Wall Street crash of 1929.

[73] *See* "The Long-term Debt Cycle," *In Gold We Trust* report 2021

The final phase sees the system purged of excess debt, overconsumption, misallocated capital, and asset price bubbles. The different phases and their typical features in a long-term debt cycle can be summarized as follows:

Breakdown of a Typical Long-term Debt Cycle

	Spring	Summer	Autumn	Winter
Key features	Rebirth	Inflationary abundance	Debt-driven asset bubbles	Payback
Debt	Rising	Rising rapidly	Rising rapidly	Falling
Inflation or Deflation	Modest inflation	Rapid inflation	Modest deflation or disinflation	Deflation
Interest rates	Rising slowly	Rising rapidly	Falling slowly	Falling rapidly
GDP growth	Strong	Strong	Slower	Negative/Low
Outperform	Equities Real Estate Commodities	Gold Real Estate Commodities	Equities Bonds Real Estate	Gold Bonds
Underperform	Gold Bonds	Equities Bonds	Gold Commodities	Equities Real Estate Commodities

Source: Paul Mylchreest, Incrementum AG

Western culture is prejudiced for we think everything is a straight line. My introduction to cycles was actually in high school. The teacher brought in a movie we were to watch in class the Toast of New York. This was about the Jim Fisk manipulation of gold in 1869… Suddenly the world was not a straight line.
Martin Armstrong

To confirm the performance of the five asset classes, we backtested this framework on each of the seasons in the three previous long-term debt cycles and the first three seasons of the current debt cycle. If you had been able to determine which of the seasons you were in, you had a 90.1% probability of identifying which asset classes would outperform or underperform. We should note that it's our belief that we've moved into a different type of winter phase in this cycle, one that has been highly distorted since Lehman in 2008. To put the current situation in context, we have been in the fourth long-term debt cycle since 1788, during the Industrial Revolution.

Kondratieff Cycles since the Industrial Revolution

Kondratieff Cycles	Time	Length (Years)
K-1	1788–1843	56
K-2	1844–1896	53
K-3	1897–1933	37
K-4	1934–?	90

Source: Paul Mylchreest, Incrementum AG

The current debt cycle is 90 years in the making and the longest by far – more than 30 years longer than the next longest of 56 years, from 1788 to 1843. The reason for this protracted length is directly related to the difference in the current fiat monetary system from the gold standards in previous cycles – let's term the difference "flexibility".

The financial crises in the wake of Lehman's failure in 2008 and following the onset of Covid-19 in 2020 saw the global economy teetering on the brink of collapse. On both occasions, policy makers were able to use unlimited debt/credit creation in the form of government deficit spending, bank bailouts, and QE that wasn't available in the three previous debt cycles, when they were constrained by various iterations of gold and silver standards.

Cycles exist because there MUST always be two opposing forces in everything. We are awake by day sleep by night (most of us anyhow). Hold your hand straight up in the air. No problem for most. Now keep it there. You will suddenly see that you run out of energy…This is why markets cannot go up forever nor down forever.
Martin Armstrong

Left to its own devices, the global economy would have likely seen a debt deflation, perhaps similar to the Great Depression of 1929–1933. There would have been painful years of economic readjustment. However, it would probably have cleared the ground for another long-term economic expansion, and one based on firm foundations. This is what we've seen with previous long-term debt cycles.

Debt is the primary driver of these cycles, and it's worth considering the mechanics of debt in more detail than the vast majority of Keynesian-minded economists and central bankers are used to doing. **Debt has a time function: bringing forward consumption of goods and services from the future into the present.** It's probably not widely appreciated that the three previously long-term debt cycles all ended the same way. In the wake of a financial crisis, the excess debt was cleansed from the system with "resets" that were the result of debt deflations during 1825–1843, 1873–1896 and 1929–1933, respectively. During these three periods, the gold price rose in real terms by 26%, 20% and 122%, respectively, while equities were trading sharply lower.

Performance of Equities versus Gold in Final Stages of Long-term Debt Cycles

Debt Cycle	Winter phase	Equities*	Gold (nominal)	Gold (real)
K-1	1825–1843	-78%	0%	26%
K-2	1873–1896	-22%	-10%	20%
K-3	1929–1933	-89%	69%	122%

Source: Paul Mylchreest, Incrementum AG
*peak to trough

The Current Long-Term Debt Cycle

The pattern of borrowing, spending more than you make, and then having to spend less than you make very quickly resembles a cycle. This is as true for a national economy as it is for an individual. Borrowing money sets a mechanical, predictable series of events into motion.
Ray Dalio

The world is now awash with debt. The Institute of International Finance (IIF) estimates that total global debt reached a massive USD 307trn in Q3/2023. This is equivalent to almost 300% of global GDP. Total US debt/GDP peaked at 250% during the Great Depression. **From a global debt perspective, we have moved well into uncharted territory.**

Let's consider the US. With gold priced in US dollars and the dollar being the world's reserve currency, the outlook for the US monetary system is critical. Of the USD 143trn increase in global debt during 2008–2023, the US federal government alone was responsible for more than USD 23trn – with the national debt increasing from USD 10trn to more than USD 33trn.

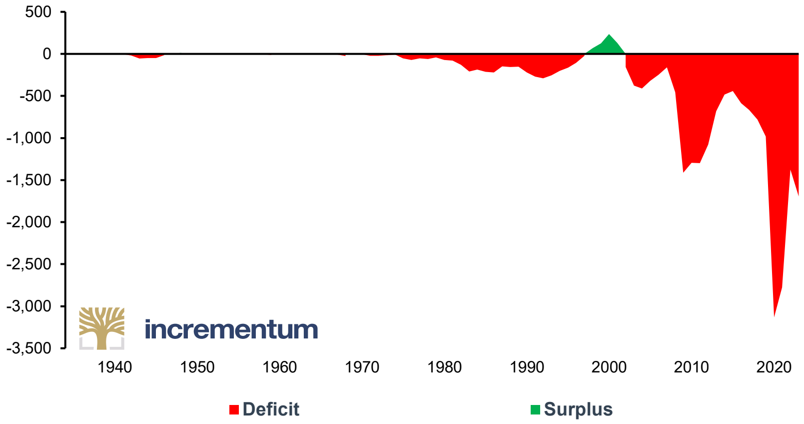
We should emphasize that the current debt figure substantially understates the position with respect to US government finances – it excludes the accrued value of unfunded obligations for Social Security and Medicare. The Bureau of Fiscal

Service's latest "Financial Report of the United States Government" estimates they amount to a gargantuan USD 79.5trn.

The way you create deflation is you create an asset bubble.
Stanley Druckenmiller

The next chart shows the surplus or deficit for the annual US federal budget since the end of the Great Depression in 1934 and the beginning of this long-term debt cycle. It provides a clear illustration of the extent to which US government finances have moved well beyond historical norms in recent years in the wake of Lehman.

US Federal Budget, in USD bn, 1934–2023



Source: Federal Reserve St. Louis, Incrementum AG

Courtesy of Hedgeye

US budget deficits below a trillion dollars are unlikely to be seen again. Projections by the Congressional Budget Office (CBO) over the next decade are for the deficit to be on a rising trend, reaching USD 2.7trn in 2033. By then, Covid-level deficits will have become normal, and that's based on the CBO's questionable assumption of stable economic growth for the next decade.

The Resolution of This Long-Term Debt Cycle

Stop being a horse with blinders. There is a big world around you. You have to see the world in its entirety or else you will fail.
Martin Armstrong

If policy makers lose control, the resolution of this debt cycle could once again be a debt deflation. In that case, we are highly confident that gold would "win" again.

However, we have seen with the Lehman and Covid 19 crises that each time there is a crisis, the degree of inflationary pushback – via massive debt/credit creation – on the part of policy makers has had to be commensurately greater. Although the vast majority of the world's population doesn't perceive it (never mind most financial professionals), policy makers have created the ultimate financial bubble. **The current financial bubble is in (fiat) money itself.**

We are of the opinion that the resolution of this debt cycle will see a repeat of key themes which played out in the final phases of the three previous long-term debt cycles:

– Debt reduction and
– Deflation.

However, since policy makers can call on unlimited credit creation, they have distorted the final winter phase of this cycle, as they keep "payback" at bay. Given the distortions which have been in play since Lehman, it's our best guess that the payback will play out slightly differently this time:

– Debt reduction via inflation; and
– Deflation – in the price of almost everything, as measured in "real money", i.e. gold.

Politicians and central bankers of monetary sovereign nations simply don't have an incentive to go down that Jenga-tower deflationary collapse route, especially since it was in part due to their policy in the first place that debt was able to get so high.
Lyn Alden

This is the paradox of simultaneous inflation and deflation – which led us to create the term *inflationary deflation* – as it depends on which type of "money" you measure inflation and deflation in – whether it's gold or fiat currency. From an investment perspective, the key takeaway is that gold wins in either the debt deflation or inflationary ("inflationary deflation") endgames for this current debt cycle, as Jastram's seminal work, *The Golden Constant*, suggests.

Central banks are walking a knife edge. Here again, we have this fine line between the risks of inflation and deflation. Inflation is proving stickier than anticipated and could reaccelerate. On the other hand, further rises in interest rates, or maintaining them at a high level for an extended period of time, risks pushing us into a debt deflation, as the global economy is carrying more than USD 300trn of debt.

Exponential curves have the tendency to slap you in the face way before you see them coming.
Gigi

Given the flexibility afforded to policy makers by today's monetary system, we believe that "inflationary deflation" is by far the most likely outcome, since the onset of debt deflation will be met with unlimited debt/credit creation, i.e. "whatever it takes" redux. We think that indications are emerging that we have entered the final stages of the Winter phase of this debt cycle and its end – whether via deflation or inflation – is getting closer on the investment horizon. Indeed, weaknesses in the global financial system are becoming increasingly apparent.

Someone's liability is someone else's asset. When you default on a liability, you destroy someone else's asset.
Lyn Alden

We were on the brink of another US debt crisis following the failure of Silicon Valley Bank on March 9, 2023. The Fed's rapid increases in interest rates had led to huge unrealized losses on bond portfolios held on the asset side of regional bank balance sheets. This led to a credit event in the form of an old-fashioned bank run, with customers pulling deposits, a source of funding on the liability side. Forced to sell bonds, regional banks crystallized losses, rapidly turning some of them insolvent. The failure of Silicon Valley Bank was followed in quick succession by the failures of two other US regional banks, Signature Bank and First Republic.

A serious banking crisis was only averted by USD 400bn of life support from the Federal Home Loan Banks (FHLB) and in excess of USD 100bn from the Federal Reserve's rapidly set-up Bank Term Funding Program (BTFP). This staved off contagion; otherwise, many regional banks would have collapsed, one by one.

While US regional banks are being supported, the issue has not been resolved. The same can be said with regard to China's real estate crisis. Some commentators estimate that the Chinese residential property market may be the single largest asset class globally. **With a valuation in the region of USD 60trn, it is comparable to the total market capitalization of US equities.**

People often blame policymakers for printing money and other dovish things when a long-term debt cycle starts to go awry, but that's not where the key mistakes are made. Instead, the key mistakes were made in the decades that led up to the peak, with over-use of monetary policy… Once it's built up to that extreme level, including it the sovereign level, the options to deal with it are limited.
Lyn Alden

Chinese property developer Evergrande became the poster child for China's real estate crisis after defaulting on its debts in 2021, followed by many others since. With liabilities in excess of USD 300bn, the company has been teetering on the brink of bankruptcy. A Hong Kong court ordered the company's liquidation in January 2024, but it remains unclear how the restructuring will pan out.

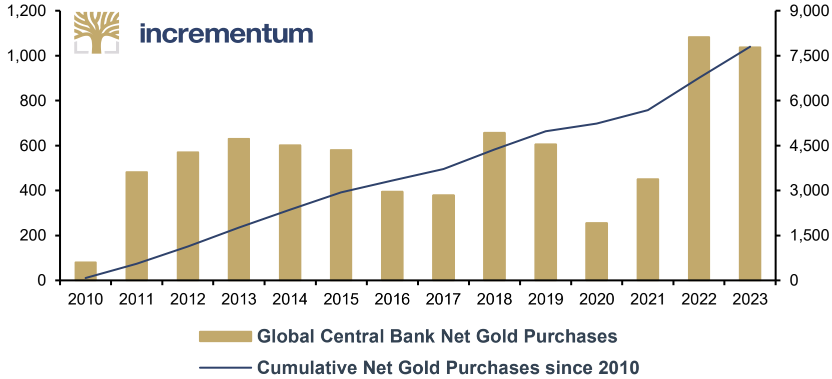
In February 2024 a liquidation petition was filed against Country Garden – China's largest property developer – for nonpayment of a USD 205mn loan. Country Garden had liabilities of USD 194bn at the end of June 2023. Beijing's policy measures have yet to revive the real estate market, and the news flow remains concerning.

Indicators that we may be in the latter stages of this debt cycle are also evident in the gold market. The gold price made several new all-time highs recently. Besides being the only financial asset to outperform in inflation and deflation, it is the only one with no counterparty risk. In other words, gold is nobody else's liability. The same cannot be said for bonds, equities and cash. This enhances gold's safe haven status and is obviously a major potential advantage as the world accumulates ever more debt.

If inflation is the genie, then deflation is the ogre that must be fought decisively.
Christine Lagarde

The next chart shows the activity of central banks in the gold market. The chart compares the reported purchases in 2022–23 with the cumulative net purchases since 2010.

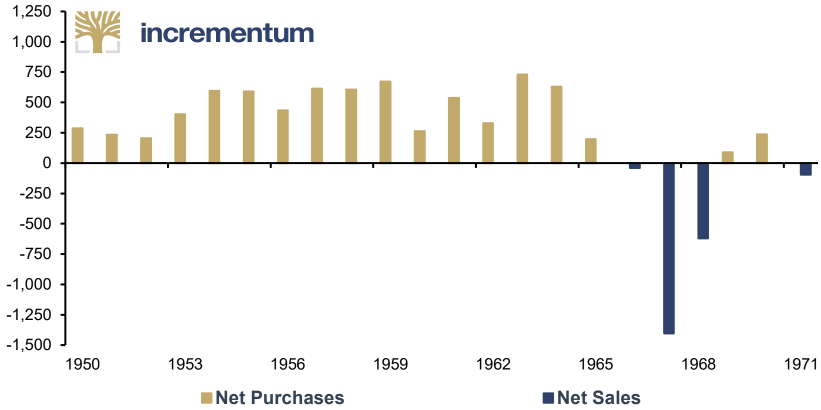
Global Central Bank Net Gold Purchases (lhs), in Tonnes, and Cumulative Net Gold Purchases since 2010 (rhs), in Tonnes, 2010–2023



Source: World Gold Council, Incrementum AG

This rate of gold buying, at more than 1,000 tonnes per year, is faster than in the late 1960s before they broke the London Gold Pool in 1968. It was that event which acted as the catalyst for a gold bull market that lasted more than a decade. **Is another gold bull market of similar length in prospect? We think there's a good chance that there is.**

Global Central Bank Net Gold Purchases , in Tonnes, 1950–1971



Source: World Gold Council, Incrementum AG

Towards a New Monetary System with Gold?

I do not think it is an exaggeration to say history is largely a history of inflation, usually inflations engineered by governments for the gain of governments.
Friedrich von Hayek

It's also worth reflecting on this central bank gold buying in another way. What are these institutions preparing for? It was policies implemented by central banks that were instrumental in creating this global debt bubble. The irony being, of course, that central banks will no doubt be tasked with resolving it.

We expect that a reset of the global monetary system will be required, something that we've believed for many years. In the intervening period, we've seen speeches and articles from mainstream sources discussing the same thing. For example, IMF Managing Director Kristalina Georgieva discussed "A New Bretton Woods Moment" in October 2020. A *Financial Times* article argued that it was "Time for a great reset of the financial system", in March 2021.

Gold will be repriced once in life; that will be much more than enough.
"Another"

When that reset happens, we expect that gold will play a prominent role and at a much higher price. In closing, we'd note that Roy Jastram also envisaged the need for fundamental monetary reform involving gold.

In 1981, a year before his retirement, Jastram gave a presentation titled "The Gold Standard" to the Security Analysts Society of San Francisco. **In this talk, he summarized his views on the need for monetary form in five points:**

1. *There must be a discipline over the money supply.*
2. *Attempts at monetary discipline when managed by men have not worked.*
3. *Therefore, I believe there must be management by law, not by men.*
4. *Those monetary laws that worked best throughout history have been based upon the discipline of the precious metals.*
5. *The precious metal that has had the most successful experience in stabilizing price levels is gold.*

No dinosaur ever approved of an asteroid.
Erik Voorhees

It is worth bearing in mind that the inflation rate in the US was in double digits during 1978–1981. Volcker's aggressive rate hikes tamed inflation, but the economy was carrying so little debt that a serious debt deflation was averted. **Jastram's parting words in his remarks to the Security Analysts Society were then premature, but they warrant rereading, given today's circumstances:**

> *We are certainly aware by now of the tremendous concern in this country for the return of a trustworthy currency. A gold Commission has been formed by an Act of Congress and I have testified before it. Economists in and out of government are working on a gold solution. The prestigious National Bureau of Economic Research is holding a four-day conference in March devoted solely to the gold standard. All this ferment leads me to believe that a way toward trustworthy currency will be found. It is my personal opinion that gold will play an important part in the solution. (Jastram, Roy:* "The Gold Standard"*, 1981, p. 3)*

IGWT Report

The Image Problem of Gold in the West

Because gold is honest money it is disliked by dishonest men.

Ron Paul

- Gold has a considerable image problem in the Western hemisphere.
- The *Narrative Machine* actually seeks the defamation of gold in the public, it has a vested interest to discourage gold as a monetary alternative to the fiat system.
- Most people have only a very shallow understanding of what gold is. Nor do they really comprehend why they have such a dislike of it. Their rejection is based more on emotional grounds than on rational arguments.
- Meanwhile central banks are fully aware of the advantages of physical gold and continue their purchases, even more so after the sanctions war between the West and Russia.
- Some change in the public awareness is under way: Gold bar sales by big retail stores including Costco and Walmart have made records.

Despite fabulous returns, gold continues to be viewed skeptically by a majority of people in the West, both professional investors and the broader public. All too often, investments in gold are alleged as being shady, unsustainable, too risky, or too speculative. Increasingly, even political inferences are explicitly drawn. **But why does a safe haven that has been so reliable for centuries, even millennia, suffer from such a bad reputation? Why is gold despised rather than eagerly sought after?**

First of all, before diving into the question itself, it should be noted that this negative association with gold predominates across the Western hemisphere, whereas countries like Türkiye, Russia, China, India, and countries in the Middle East display a far more positive attitude towards precious metals.

If you like gold and own it, then you are a Nazi with substance – and this substance is gold.
Jan Böhmermann, TV host (ZDF)

And even in the West the dismissal of gold is not across the board; it is better described as a prevailing sentiment in the population, with private gold ownership in some countries continuing to be amongst the highest in the world. For example, German private households alone possess more than 4% of global gold volumes, amounting to approximately 9,098 metric tonnes. The media landscape, however, reflects a different picture, with headlines ranging from "Gold Fools" to "Even in a crisis: gold should be treated with caution" to "The 'safe haven' asset that cost investors 30pc of their money" to "50 kilos of gold and precious metals found in Reichsbürger raid".

Most recently, the German state-TV satire show *ZDF Magazin Royale*, presented by Jan Böhmermann, dedicated a full episode to gold and its alleged linkages to the right-wing extremist scene. The culmination was Böhmermann's statement that "If you like gold and own it, then you are a Nazi with substance". One might wonder how satirical that was meant to be.

Source: ZDF Magazin Royale, September 1, 2023

Physical gold is a generational idea – no one cares until everyone will. The best ideas are those which everyone embraces… afterwards.
Simon Mikhailovich

So why this contempt for gold, especially among opinion leaders? One answer can be found in the overall societal shift towards progressivism, the rapid emergence of "woke culture", giving rise to the call for ever more rules and government controls of society. As the great socialist experiment of the 20th century had failed so badly, both in theory and practice, far-left academia's strategy to deal with this defeat was to simply double down: Rather than acknowledging defeat and revising their deeply held convictions, they began to escape into skepticism, relativism, and de-constructive nihilism. When challenged with evidence of reality, they responded with "That is only logic and evidence; logic and evidence are subjective; you cannot really prove anything; feelings are deeper than logic; and our feelings say socialism."[74]

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[74] Hicks, Stephen R. C.: "Explaining postmodernism", 2004, p. 90

When the cycles align, the tectonic plates of history shift.
Ray Dalio

But also in the broader population, a shift towards a more socialist stance was observed over the past decades, propelled by a widening of wealth distribution in society, while values and political gaps have also opened up. This is not an unusual trend in the later stages of the big economic cycles society undergoes.[75] Typically this leads to politically more extreme positions, which morphs into some form of populism. **Those on the left tend to seek the redistribution of wealth, while those on the right seek to maintain the status quo.**

The Narrative Machine on Gold

The flight into false security is a logical consequence of the psychological inability to deal with uncertainty and risk, an inability that has been building up in society for decades, perhaps even centuries.
Mattias Desmet

As society is weakening amidst social and economic disintegration, people's need for psychological safety increases. Thus, the socially fragmented society seeks unity in the group. They become more mimetic. **The Overton window narrows. In other words, the "window of allowable opinion and discourse" shrinks.** As a consequence, people become more cohesive with the group belief system, at the cost of their personal curiosity. Or as Mattias Desmet describes it, "The masses believe in the story not because it's accurate but because it creates a new social bond."[76]

We are all susceptible to the pull of viral ideas. Like mass hysteria. Or a tune that gets into your head that you keep humming all day until you spread it to someone else.
Ben Hunt

Gold is a perfect example of this dynamic. Despite its legacy in history and outstanding financial performance over the past years, people are largely dismissive of it. Actually, most of them have only a very shallow understanding of what gold is. Nor do they really comprehend why they have such a dislike of it. Hence, their rejection is based more on emotional grounds than on rational arguments. And when their stance on gold is challenged, the reaction usually turns out somewhat exaggerated, compensating for the lack of valid arguments with *ad hominem* attacks.

The conscious and intelligent manipulation of the organized habits and opinions of the masses is an important element in democratic society. Those who manipulate this unseen mechanism of society constitute an invisible government which is the true ruling power of our country.
Edward Bernays

In fact, the lack of comprehension of gold converges with the above-mentioned Overton window. Gold is currently not considered to fall within the window of "allowable opinion", in the sense that gold is not fashionable amongst those in the broad mainstream but is associated with negative connotations in the public sphere. This becomes visible in media like the above-mentioned show with Jan Böhmermann, which enhances the general perception of the topic.

So, who then shapes the direction and dynamic of allowable opinion? The answer is, thought leaders. They can be Hollywood stars, news outlet owners, politicians, think tanks, or even social media influencers. Ben Hunt famously coined the term *the Narrative Machine* to precisely describe this phenomenon. While a narrative generally describes the overarching ideas and stories that shape society's framework used to understand and place new information, the Narrative Machine is an all-encompassing system of strategic communication and game playing that shapes the way we perceive the world.

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[75] See Ray Dalio, *The Changing World Order*, 2021; *see* also "Gold in the Age of Eroding Trust," *In Gold We Trust* report 2019, "Populism and its True Cause," *In Gold We Trust* report 2017
[76] Desmet, Mattias. *The Psychology of Totalitarianism*, 2022

Science gives us knowledge, but only philosophy can give us wisdom.
Will Durant

In contrast to public opinion-making, the real thought leaders are those who advance their research independently of public approval, such as many representatives of the Austrian School of Economics. This pursuit of knowledge for the sake of knowledge, not for the sake of public approval, was and is often carried out against the fierce resistance of these opinion leaders, and even against the majority of the scientific community. The Austrian philosopher Konrad Paul Liessmann recently formulated a plea against the conformism and activism of science and in favor of scientific freedom in an essay worth reading with the telling title "Weg mit dem Bekenntniszwang!" ("Away with the pressure to pledge allegiance!"). **Democratic-political categories such as the approval or rejection of a majority are not scientific criteria.**

In the case of gold, politicians and political decision-makers certainly play an important role in shaping public opinion. With the challenging economic environment and the continuous debasement of the currency, they do have a vested interest to discourage gold as a monetary alternative to the fiat money system. A broad awareness of the contrasting juxtaposition of gold versus fiat money would highlight the inflationary decay of the latter to an uncomfortable level. In lieu thereof, restrictive policies and regulations are promoted to keep control over the narrative and maintain societal trust in the system.

Defamation Case Gold

We want what other people want because other people want it, and it's penciled-in eyebrows all the way down, down to the depths of the nth circle of hell where we all die immediately of a Brazilian butt lift, over and over again.
Dayna Tortorici

While in the past the possession of gold has sometimes been fully prohibited by law,[77] today the most prevalent restrictions on gold come in the form of the above-described societal defamations, somewhat similar to those currently experienced by the crypto community and Bitcoin as its most prominent member in particular. The most prevalent accusations being cryptocurrencies' massive energy consumption and their allegedly causing environmental damage and facilitating illegal activities such as money laundering via their alleged anonymity. In parallel and far more subtly, the Western governments led by the US have already started their crackdown on the cryptocurrency industry.

Seeing how Russia's overseas assets were frozen after its invasion of Ukraine, anti-Western countries are eager to accumulate gold holdings on hand.
Emin Yumurazu

Just to give a recent example, upon the failure of Signature Bank in March 2023, the third largest bank failure in US history, the Federal Deposit Insurance Corporation (FDIC) sold out the bank's remaining assets and deposits – except for those of crypto companies – and according to news reports, any buyer of Signature was required to give up all crypto business, which amounted to over USD 4bn. This confirmed *The Wall Street Journal's* suspicion that "Signature's seizure was motivated by regulators' hostility toward crypto".

In an increasingly geopolitically divided world and with the weaponization of the global reserve currency, the US dollar, by the US government against its enemy nations, who subsequently resort to gold amongst other assets to circumvent the US dollar, a similar crackdown on gold owners no longer seems too outrageously farfetched. **Doomberg recently imagined the dynamic of a propaganda campaign along these lines as follows:**

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[77] *See* "A Brief History of Gold Confiscations," *In Gold We Trust* report 2021

- Gold owners are rich tax cheats.
- Gold owners are Putin sympathizers.
- Gold owners are unpatriotic.
- Gold owners are being well compensated for turning in their bullion.
- Gold owners represent a national security risk.
- Gold owners enable organized crime, like illegal drugs and sex trafficking.

In light of the workings of the greater Narrative Machine, a detailed and well-differentiated analysis that looks deeper than just generalized allegations can reveal that many of those attacks on both precious metals and cryptocurrencies are actually unsubstantiated, and almost become meaningless.

Practical Impediments to Purchasing Gold

Nevertheless, on a more practical level, increasingly cumbersome legal requirements are being introduced for both cryptocurrencies and precious metals, with cash payments being restricted first and foremost.

US

Despite advances in transactions technologies, paper currency still constitutes a notable percentage of the money supply in most countries… Yet, it has important drawbacks. First, it can help facilitate activity in the underground (tax-evading) and illegal economy. Second, its existence creates the artifact of the zero bound on the nominal interest rate.
Kenneth Rogoff

For example, currently in the US, all cash transactions exceeding USD 10,000 must be reported to the IRS via Form 8300. This comprises transactions in US dollar coins, bills, foreign currencies, and cash equivalents such as traveler's checks, bank checks, and money orders. Both counterparties of the transaction are made aware of the filing. Form 8300 also allows for the reporting of suspicious cash transactions if they are deemed so by the receiving party, even though the payment sum may well be below the USD 10,000 threshold. In that case the payer remains unaware of the filing of the form.

Most recently, the US Treasury, jointly with the IRS, proposed lowering the reporting threshold for third-party payment platforms to USD 600, within the framework of the American Rescue Plan Act. This new monitoring requirement would require reporting for all in- and outflows to a bank account of USD 600 or more over the course of a year, with wages and salary payments exempt.

In the meantime, the IRS has announced a delay to the implementation of the new requirement in order to allow for a smoother transition period and ensure clarity for the public. A proposal for a higher threshold of USD 10,000 is also being discussed. The already existing threshold of USD 20,000 from over 200 transactions will remain in place and continue to require the filing of Form 1099-K. The stated purpose of the tightening of the monitoring requirements is to improve tax compliance while at the same time enhancing tax fairness and ending the two-tier tax system, under which "the wealthy" have better means to evade taxation.

EU

In the European Union, until recently there was no regulation that sets a cash transaction limit across all member states. However, in early 2024 the European Parliament agreed with the European Council to introduce a maximum threshold EUR 10,000. The stated objective is to strengthen the fight against terrorism, money laundering, and sanctions evasion. This new regulation of cash payments is part of the Anti-Money Laundering and Financing of Terrorism (AML/CFT) package.

Whenever someone says "it's not about the money", it's about the money.
Simon Mikhailovich

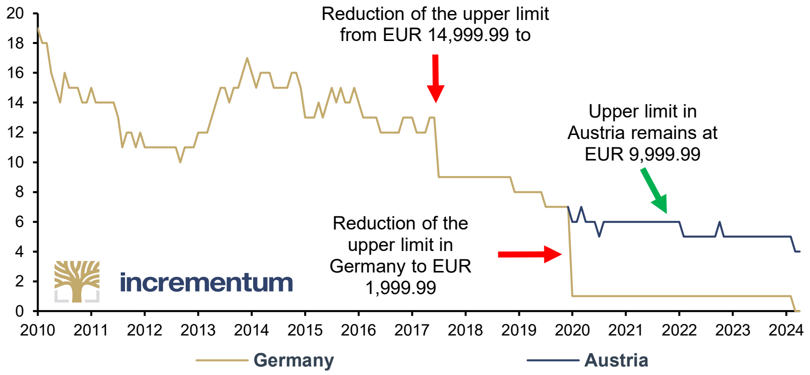
As a result of the AML/CFT negotiations, the European Parliament and Council have also agreed on the establishment of a new watchdog authority, the Anti-Money-Laundering Authority (AMLA). The AMLA, which will be based in Frankfurt, will not only be tasked with the supervision of the most-risky financial entities, but it will also bear supervisory responsibilities and function as a central hub of coordination across the EU member states.

This week's agreements are an important milestone in the fight against dirty money in the EU.
Mairead McGuiness
EU Financial Services Commissioner

EU member states with cash payment limitations below EUR 10,000 already in force on the national level may keep those in place. Currently, the lowest cash transaction thresholds are in place in France and Portugal in the amount of EUR 1,000 per transaction, and in Greece at EUR 500 per transaction. In Italy, the new government under Georgia Meloni raised the cash limit from EUR 2,000 to 5,000 at the start of 2023. In 2016 the production of the EUR 500 bill was discontinued, while the other bills remain in circulation. It should also be mentioned that the setting of an upper limit in a time of ongoing monetary devaluations means that the real limit continues to fall without any tightening of the law, i.e. it becomes more and more strict.

This effect of fiat money devaluation is also reflected in the price of gold. For example, the upper limit for the anonymous purchase of gold in Germany has only been EUR 2,000 for several years, which is why it is currently not possible to purchase even one ounce of gold anonymously, and probably never will be again. he upper limit for the anonymous purchase of gold in Germany, for example, is only EUR 2,000, which is why it is now no longer possible to purchase an ounce of gold anonymously. **As Austria and Switzerland have higher limits, a few ounces can still be purchased anonymously in the Alpine region.**

Upper limit for Anonymous Gold Purchases, in Whole Ounces, 01/2010–04/2024



Source: Reuters Eikon, Incrementum AG

Despite policy makers' focus on illicit funds, terrorism financing and the underground economy, the wide usage of cash in an economy is actually not a reliable indicator of a commensurate shadow economy, as Deutsche Bank confirms with their research. Physical gold and silver, with their physical features like recognizability and weight impeding transportation, are even less practical for those activities. Furthermore, the abolition of cash and transition to a purely digital money regime does not automatically provide for more transaction security for consumers but rather exposes them to different risks such as data leaks and data abuse. Given a more nuanced understanding of the advantages and disadvantages of the usage of cash, the question arises as to what extent these regulatory efforts are driven by a general suspiciousness and distrust by governments of the general population rather than being targeted specifically towards criminals.

Nevertheless: Central Banks Love Gold

...we are navigating by the stars under cloudy skies. In such circumstances, risk management considerations are critical.
Jerome Powell

In contrast to the broad public, Eastern central banks are aware of the advantages of gold and make use of them, as can be seen by the continuous gold purchases of central banks globally. Only in the past year, central banks around the world have increase their gold holdings by more than 1,000 tonnes, with a quarter of the banks intending to further grow their gold reserves over the coming 12 months, as per the 2023 Central Bank Gold Reserves Survey of the WGC.

In the meantime, foreign official purchases of US Treasuries – widely considered as the most trustworthy government bonds available – have plunged. This is in line with the results of the above-mentioned survey by the World Gold Council, in which a majority of central banks expressed the view that within 5 years reserves in USD will represent merely 40 to 50% of the total. The European Central Bank, for example, does not even hedge the commodity risks introduced into its asset portfolio via its gold holdings. Integration of new members into the European Currency Union still involves the transfer of physical gold to the ECB, as demonstrated most recently in the case of the admission of Croatia. Yet, the ECB has not renewed its signature to the Central Bank Gold Agreement (CBGA), even while simultaneously stating, "The signatories confirm that gold remains an important element of global monetary reserves, as it continues to provide asset diversification benefits and none of them currently has plans to sell significant amounts of gold."

The state cannot confiscate your gold by inflation or by bank failure. This is what gives gold most of its value.
BCA Research

However, a new dynamic has emerged in light of the recent weaponization of the US-Dollar against Russia and the freezing of the Russian foreign assets, with ongoing discussions about a full confiscation thereof. As a result, trust in the international monetary system has been harmed, not only amongst individuals but also central banks. Tellingly, according to a 2023 Invesco survey, "a substantial percentage of central banks are concerned about the precedent set by the US freezing of Russian reserves". This has certainly been a driver behind central banks´ increased demand for gold, as physical gold, when stored at home, is less vulnerable to sanctions than US dollars.

Complementing this dynamic is the decrease in foreign gold reserves stored in the vaults of the Bank of England, which have been decreasing over the past two years. Jerome Powell has lately also been very tight-lipped following an inquiry by Representative Alex Mooney regarding a repatriation of foreign gold holdings from the Federal Reserve to foreign nations. As of early 2024, the New York Federal Reserve vault housed approximately 507,000 gold bars, with a combined weight of 6,331 metric tonnes.

Gold Is Greener than You Think

We appear now to be trundling toward a polarized investment world where clients can choose between left- and right-wing money managers. It's a horrible prospect.
John Authers

In light of the strong gold purchases of central banks themselves, the *green argument* that gold is an allegedly useless metal in comparison to copper, lithium, cobalt, and others that are more widely needed for the green energy transition, loses weight. In absolute quantities, gold might be less demanded for that particular purpose, but as an investment it is actually highly sustainable and *far more green* than most people might assume at first thought.

The golden metal is virtually indestructible, as it does not chemically react with air or any of its components such as oxygen, carbon dioxide and other gases; thus gold can be used but not consumed. **In other words, all the gold ever mined is still in existence and can be recycled over and over again.** As we have analyzed in detail in our *In Gold We Trust* report 2022[78], in terms of CO_2 emissions generated, a widely used sustainability measure nowadays, gold actually scores excellently when compared with other metals such as platinum, iron ore, zinc or copper.

Furthermore, only a total of around 210,000 tonnes of gold have ever been mined –equivalent to the size of 3.5 Olympic swimming pools – with only 50% of that gold being mined since 1950. The social and ecological costs of gold mining can thus be spread over a very long period of time, making them converge to zero. **In combination with its endless recyclability as well as the nonexistence of gold as "waste", gold can therefore be considered the most sustainable of all metals.**

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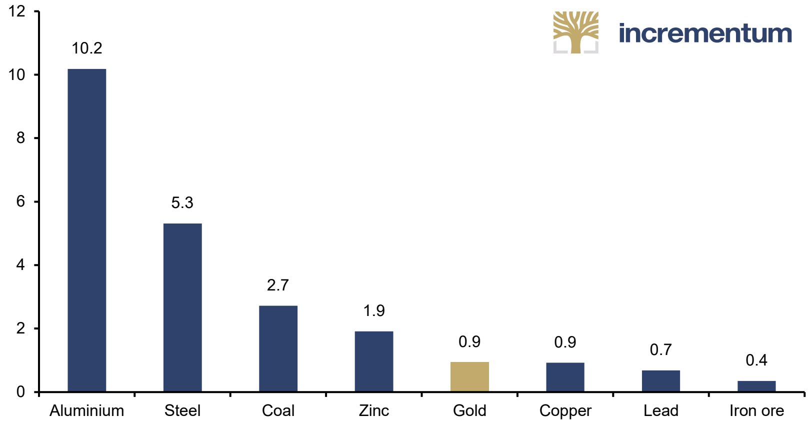
[78] *See* "The New Low-Emissions Economy: Gold as a Savior," *In Gold We Trust* report 2022

Emissions Intensity per Value Unit, in kg CO_2/USD, 2018



Source: Metals Focus, S&P Global Market Intelligence, World Steel Association & EIU, World Gold Council, Incrementum AG

Despite the importance of mined products to modern life, the reality is that industry has failed to earn the broad-based trust of society. Changing that is, first and foremost, the industry's responsibility, but it is in everyone's interest to see that happen, for never before has the world needed so much from an industry that is trusted so little.
Rohitesh Dhawan, CEO International Council on Mining & Metals

In comparison with fiat paper currencies, gold scores far better in terms of sustainability. The loss of value of gold – the "inflation rate" of gold – over time is minimal, as gold holdings do not need to be replenished in order to maintain their purchasing power, while paper currencies require perpetual reprinting and recoining. This actually results in a massive environmental impact. Worldwide there are approximately 1.5bn coins in circulation, with an estimated weight of 5.25mn metric tonnes, mostly consisting of nickel, copper and steel. In addition, the more than 200bn paper notes, which need repeated reprinting, require enormous amounts of cotton, wood, water, ink, polymers and energy, while resulting in waste at the end of their life cycle.[79] More research regarding the ecological footprint of fiat paper currencies should certainly be undertaken to raise public awareness of the impact of our monetary system.

Returning to the gold and mining industry, there are already many initiatives and certification efforts in place as to guarantee social, human rights, and environmental standards, such as for example the Initiative for Responsible Mining Assurance (IRMA), the Responsible Gold Mining Principles (RGMPs), and the Conflict-Free Gold Standard. Yet, a lot of education sector branding remains to be done as the mining sector continues to struggle with a bad reputation and prejudices.

As highlighted in a recent report by Ernst&Young, the public perception of the mining sector - despite its crucial role for the realization of the energy transition – ranks lowest of all sectors. This mostly stems from a deficit of understanding the importance of mining, such that even some universities in the UK have prohibited mining companies from recruiting on campus, when actually the opposite approach should be pursued in order to advance further change in the sector.

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[79] Stöferle, Ronald-Peter: "Gold – The Green Investment Metal?", Incrementum AG, October 2022

Gold Becomes Mainstream in the End?

Beyond that, a very important driver for gold demand are economic conditions: If households are seriously struggling with their budgets, no money is left for investing in safe assets, not even gold. As Wolfgang Wrzesniok explained at the most recent LBMA conference, the recent price rally in gold has been accompanied by an increased consumer demand across all five major markets, i.e. China, India, Türkiye, USA, and EU, with all of them facing the challenges of globally subdued economic growth. Germany is an extreme outlier from this trend, with consumer demand plummeting by a whopping 75% in 2023. The picture is even worse for German consumer demand for silver bars and coins.

Make new friends, but keep the old. One is silver, the other is gold.
Joseph Parry

Looking at the typical gold buyer in Germany, this trend can be better understood. First of all, German private gold demand is not predominantly driven by high-net-worth individuals but rather by the average citizen – middle-aged, middle class but not overly wealthy by international standards, and oftentimes a property owner. **It is these buyers who are suddenly turning away from purchasing gold. But why?**

While gold has experienced price increases in the past, its prospect for further significant gains remains uncertain, while higher interest rates than in previous years mean more investment alternatives in other areas. In addition, the ongoing elevated-inflation environment diminishes purchasing power and leaves less surplus for savings and investments, despite inflation generally enhancing demand for safe assets including gold. However, the massive rise in the cost of both electricity and natural gas has presented many households with serious challenges. In addition, the current German "traffic-light government" (a coalition of the Socialist Party SPD (red) – Liberal Party FDP (yellow) – Green Party) has imposed strict conditions on private homeowners as part of the politically desired energy-transition and climate-protection initiatives.

I have no views as to where (gold) will be (in the next five years), but the one thing I can tell you is it won't do anything between now and then except look at you.
Warren Buffett

At the same time in the US, one of the largest retailers, famous for its bulk household products, has begun to also offer gold bars to its members. Costco sold more than USD 100mn worth of gold in the last quarter of 2023. In the meantime, gold sales are said to already amount to USD 100 to 200mn per month. Most recently, Costco began selling silver coins, too, enhancing its treasure-hunt brand image. Retail giant Walmart has followed suit and even opened its own precious metals online shop. Unsurprisingly, this immediately triggered doomsday prepper headlines in the mainstream media, such as this one published by CNBC: "How doomsday preppers made gold and silver precious end-of-the-world assets".

Such articles do not stint in referencing a potential economic catastrophe or other apocalypse fears, or in drawing climate-change-denial parallels. The CNBC article went so far as to liken people investing in gold with a turn towards authoritarianism, citing Yale professor William Berger: "The turn toward gold is like the turn toward authoritarian leaders, toward the ideal of someone who knows what is true and right and who has the courage to return a nation to its former truth and greatness". **Of course, Putin and Trump name-dropping was not missed, either.**

Conclusion

Modern propaganda is a consistent, enduring effort to create or shape events to influence the relations of the public to an enterprise, idea, or group.
Edward Bernays

So, the question arises, what can be done to improve gold's appearance in the broader public? Above all, the headlines in the news paint a distorted picture of the attitude landscape. As we have seen, private gold ownership in Western society continues to be not insignificant and gold and silver bar sales like recently by Costco and Walmart have been success stories. At the same time, central banks have been increasing their purchases of physical gold – one big driver being the ongoing sanctions war between the US and Russia, and the resulting increased awareness about the vulnerability towards a freezing of assets and reserves. In other words, the advantages of physical gold once again are the convincing factor.

Time in his aging overtakes all things alike.
Aeschylus

However, the news headlines also reveal the workings and objectives of the *Narrative Machine*, namely the defamation of gold. Whether practical impediments regarding the purchase of gold or the negative association of gold and gold ownership in general –"Nazi narrative", "Gold is dirty" –, there is a force seeking to discourage the broader adoption of gold in society. Upon closer examination, it becomes evident that these allegations hold no merit. However, considering that a significant part of society lacks comprehensive knowledge about gold, reacting instead to emotional connotations, this insight presents an optimal starting point for enhancing gold's reputation.

Nothing influences people more than a recommendation from a trusted friend.
Mark Zuckerberg

What does that mean? A broader discussion and education on the history of gold and its significance as a form of money – and thus also store of wealth! – is much needed. While an education campaign in schools might be an obvious suggestion, why not resort to more up-to-date marketing strategies such as thought leaders and influencers? **How much greater would the brand impact for gold be, if suddenly Taylor Swift and Travis Kelce announced their gold savings?!**

Gold doesn't get the credit that it deserves. Despite having a 5,000-year history in finance, it remains a controversial asset and widely misunderstood.
Charlie Morris

Furthermore, the mining sector should proactively position itself as a crucial contributor to the energy transition as well as highlighting its efforts towards sustainability and ESG. Similarly, investment funds and portfolio managers carry the task to better position gold as a superb diversifier in the portfolio that in addition is greener than assumed by many. Further points to highlight are golds differentiation from cryptocurrencies, its political neutrality as an asset, and its geopolitical and socioeconomic role in the international monetary landscape (central banks), as well as its sustainability and environmental aspects.

People are looking for permanence in a crumbling world.
Timothy Morton

Already, gold is on a great track, achieving new heights, and proving itself to more and more people as an excellent asset. **But there are many more great opportunities ahead to enthuse especially the younger generation for gold.**

IGWT Report

Calendar Anomalies and the Gold Market

Timing is everything in life and in golf.

Arnold Palmer

- **Our analysis shows that some of the most famous calendar anomalies identified on the stock markets can also be found in the gold market.**
- **Over the last twenty years, calendar anomalies such as the Day of the Week Effect, the Turn of the Month Effect, or the Halloween Effect impacted not only the share prices of gold miners but also the gold price itself.**
- **In some cases, a simple investment strategy can exploit the calendar anomaly to generate unusual returns.**
- **One must be careful not to rely on the calendar anomalies completely, as their strength varies over time.**

To be interested in the changing seasons is a happier state of mind than to be hopelessly in love with spring.
George Santayana

Numerous studies have confirmed that the global financial market, or at least some of its segments, is impacted by various seasonal patterns and calendar anomalies. Calendar anomaly is a pattern in the behaviour of asset prices that is related to a specific calendar event. It usually has the form of abnormally good or abnormally poor returns recorded during the event window. What is interesting is that no one knows for sure what actually causes the calendar anomalies. For each type of anomaly there usually exists several explanations; however, none of them is generally accepted.

Observing that the market was frequently efficient, Efficient Market Theory adherents went on to conclude incorrectly that it was always efficient. The difference between these propositions is night and day.
Warren Buffett

The sheer existence of calendar anomalies is a contradiction of the Efficient Market Hypothesis, according to which all relevant data is already reflected by the current asset price, and thus neither fundamental nor technical analysis can deliver abnormal returns. However, numerous studies have shown that the calendar anomalies can indeed be used to generate abnormal returns. Moreover, some of the calendar anomalies have only a short-term nature, a period of several days, for instance; and some of them are more long-term and may span several months. Another important feature of the calendar anomalies is that they are not permanent. **Several studies have shown that over time the frequency of their appearance, as well as their strength, changes.**

In this article we will take a closer look at whether and how some of the most famous calendar anomalies affect the most popular gold investment vehicles: the SPDR Gold Shares ETF (GLD), the VanEck Gold Miners ETF (GDX), and the VanEck Junior Gold Miners ETF (GDXJ).

The Day of the Week Effect

It's just another manic Monday
I wish it was Sunday
'Cause that's my fun day
My I don't have to run day
It's just another manic Monday.
The Bangles

Not all days are created equal. This is what one of the most famous calendar anomalies shows. The day of the week effect is based on the premise that asset returns tend to be notably higher during some days of the week, usually on Fridays, and notably lower during other days, usually on Mondays.[80] According to Keim and Stambaugh, the tendency to abnormally low Monday returns can be traced back to the late 1920s on the US stock market.[81] According to Conine, Giacotto and Tamarkin, the high Friday and low Monday returns can be explained by the pre-weekend optimism of investors that supports Friday market performance and post-weekend depression that negatively impacts Monday performance.[82]

I don't care if Monday's blue Tuesday's grey and Wednesday too. Thursday, I don't care about you. It's Friday, I'm in love.
The Cure

The next chart shows the comparison of average returns recorded by GLD, GDX, and GDXJ, since their inception until the end of 2023. As can be seen, over the investigated period, GLD recorded positive average returns during each weekday, except for Monday. The average Monday return was -0.01%. On the other hand, the highest average returns, as high as 0.11%, were recorded on Fridays. Even more negative average Monday returns (-0.12%) were observed in the case of GDX.

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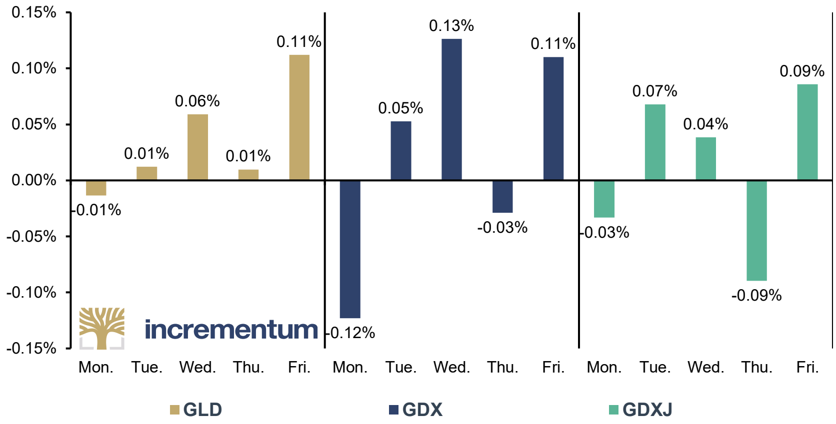
[80] Cross, Frank: "The Behavior of Stock Prices on Fridays and Mondays", *Financial Analysts Journal*, Vol. 29, No. 6 (1973), pp. 67–69; French, Kenneth R.: "Stock Returns and the Weekend Effect", *Journal of Financial Economics*, Vol. 8, No. 1, (1980), pp. 55–69
[81] Keim, Donald B., & Stambaugh, Robert F.: "A Further Investigation of the Weekend Effect in Stock Returns", *The Journal of Finance*, Vol. 39, No. 3 (1984), pp. 819–835
[82] Conine, T., Giacotto, C. and Tamarkin M.: "On Risk-adjusted Returns and the Weekend Effect", presented at the Financial Management Association Meetings, Toronto, Canada, 1984

However, unlike GLD, GDX also experienced negative average Thursday returns (-0.03%). The average Friday returns were positive (0.11%), although slightly lower than the average Wednesday returns (0.13%). GDXJ experienced the lowest average returns on Thursdays (-0.09%) and the highest average returns on Fridays (0.09%). In its case, too, the average Monday returns were negative (-0.03%).



Source: Reuters Eikon, Incrementum AG
*Start Date: GLD = 11/2004, GDX = 05/2006, GDXJ = 11/2009

It is important to note that the investigated time periods for each of the ETFs differ, due to the different dates of their establishment, which may at least partially explain the notable differences in the results. It is, however, possible to observe some common features: **In all the three cases, the average Monday returns were negative, and in all the three cases the average Friday returns were highly positive.** Therefore, it is possible to conclude that the day of the week effect affects GLD, GDX, and also GDXJ.

Your best work involves timing. If someone wrote the best hip hop song of all time in the Middle Ages, he had bad timing.
Scott Adams

This finding can hardly be used in long-term investment strategies; however, it may be useful for short-term traders. For example, since its inception, until the end of 2023, GLD generated returns of 330.8%. However, a simple strategy of avoiding Mondays, which means investing in GLD during the rest of the week but staying aside on Monday, would improve the return to 412.1%. GDX and GDXJ have recorded since their inception losses of 16.7% and 62.8% respectively. **If one was able to avoid Mondays, the 16.7% loss would turn into a 204.2% profit, and the 62.8% loss would be reduced to a 38.1% one.**

The Turn of the Month Effect

Every new beginning comes from some other beginning's end.
Seneca

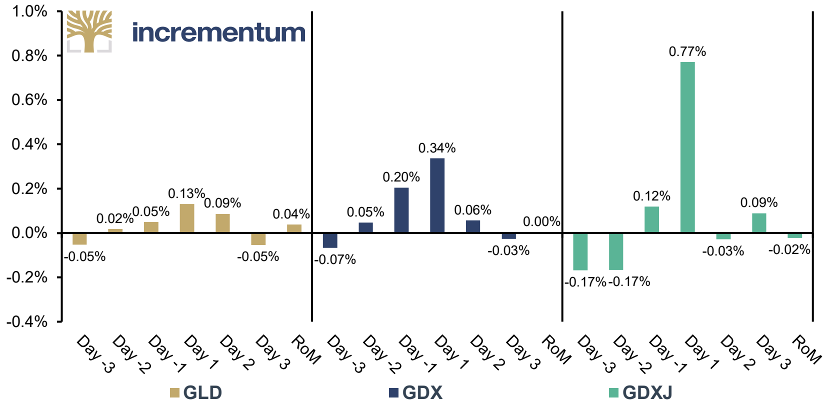
The main feature of the turn of the month effect is abnormally high returns recorded when an old month is coming to an end and a new one begins. However, there is not a single rule regarding the exact length of the turn of the month window. Although the existence of this calendar anomaly has been confirmed by numerous studies, the results show relatively big differences, depending on what days are included in the turn of the month window.

According to Ariel, between 1963 and 1981, the majority of US stock market returns were recorded during the turn of the month periods.[83] Ogden believes that the turn of the month effect is attributable to standardisation of payments that leads to higher liquidity around the end of the month.[84] On the other hand, Nikkinen attributes this calendar anomaly to US macroeconomic news release dates that usually fall around the end of the month.[85]

Far more money has been lost by investors preparing for corrections, or trying to anticipate corrections, than has been lost in corrections themselves.
Peter Lynch

As shown in the next chart, the turn of the Month effect also impacts the gold market and gold mining companies. Because, as mentioned above, there is no generally accepted length of the turn of the month window, the chart compares average returns recorded over the last three days of an old month (Day -3, Day -2, Day -1), the first three days of a new month (Day 1, Day 2, Day 3), and over the remaining days (RoM – rest of the month). As can be seen, all three ETFs tend to record significantly higher returns on the first day of the month. In the case of GLD, the average returns from Day -1 and Day 2 are also higher than the RoM returns. On the other hand, the Day -3 and Day 3 average returns are negative. In the case of GDX, the average RoM returns are close to zero. And although the Day -3 and Day 3 average returns are negative, the Day -2, Day -1, Day 1 and Day 2 average returns are positive, significantly higher than the RoM average returns. For days -1 and 1, the average returns are 0.20% and 0.34% respectively. Even bigger differences can be seen with GDXJ. The Day -3, Day -2, and Day 2 average returns are lower than the RoM average returns of -0.02%. However, the Day -1 and Day 3 average returns are highly positive, and the Day 1 average returns are high, at 0.77%.

Average Daily Return (Turn of the Month and Rest of the Month), 11/2004*–12/2023



Source: Reuters Eikon, Incrementum AG
*Start date: GLD = 11/2004, GDX = 05/2006, GDXJ = 11/2009

As can be seen, for GLD, GDX, and also GDX there is a clear pattern of positive returns recorded on trading days during the turn of the month period. As with the day of the week calendar anomaly, this finding can be useful mainly for some short-term traders.

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83 Ariel, Robert A.: "A Monthly Effect in Stock Returns," *Journal of Financial Economics*, Vol. 18, No. 1 (1987), pp. 621–628
84 Ogden, Joseph P.: "Turn-of-Month Evaluations of Liquid Profits and Stock Returns: A Common Explanation for the Monthly and January Effects," *The Journal of Finance*, Vol. 45, No. 4 (1990), pp. 1259–1272
85 Nikkinen, Jussi, Sahlström, Petri et al.: "Turn-of-the-month and Intramonth Anomalies and U.S. Macroeconomic News Announcements on the Thinly Traded Finnish Stock Market," *International Journal of Economics and Finance*, Vol. 1, No. 2 (2009), pp. 3–11

The Month of the Year Effect (January Effect)

In the depth of winter, I finally learned that within me there lay an invincible summer.
Albert Camus

The month of the year effect means that abnormally high or low returns tend to be recorded during a particular month of the year. Numerous studies have shown that the month of January is atypical for abnormally high positive returns. This phenomenon is called the January effect, and it was first described by Wachtel in 1942.[86] According to Keim as well as Moller and Zilca, the majority of the January returns are concentrated in the first half of the month.[87]

What is the difference between a taxidermist and a tax collector? The taxidermist takes only your skin.
Mark Twain

According to Wachtel, the January effect is related to tax-loss selling.[88] **Tax-loss selling occurs when investors decide to sell assets at a loss, in order to offset capital gains taxes from other investments.** This may lead to a situation when assets that recorded losses on a year-to-date basis experience further declines at the very end of the year. According to Klock and Bacon, the underperforming stocks tend to record abnormal negative returns in November and December and abnormal positive returns in January.[89] On the other hand, Lakonishok et al. as well as Park and Moskalev opine that the January effect is caused by "window dressing", that is, at the end of the year portfolio managers may try to improve the image of their funds by selling the losers and buying the winners.[90]

If I had my way, I'd remove January from the calendar altogether and have an extra July instead.
Roald Dahl

The next chart captures average monthly returns recorded by GLD. A strong January effect can be seen, as the average January returns are 3.31%. January is also the most successful month in terms of probability of positive returns, as out of 19 Januaries, 13 were positive. On the other hand, the least successful month, over the investigated period, was March, with 14 negative occurrences in 19 years. However, the average March return of -0.34% is only the third lowest, as May and September have average returns of -0.54% and -0.66% respectively.

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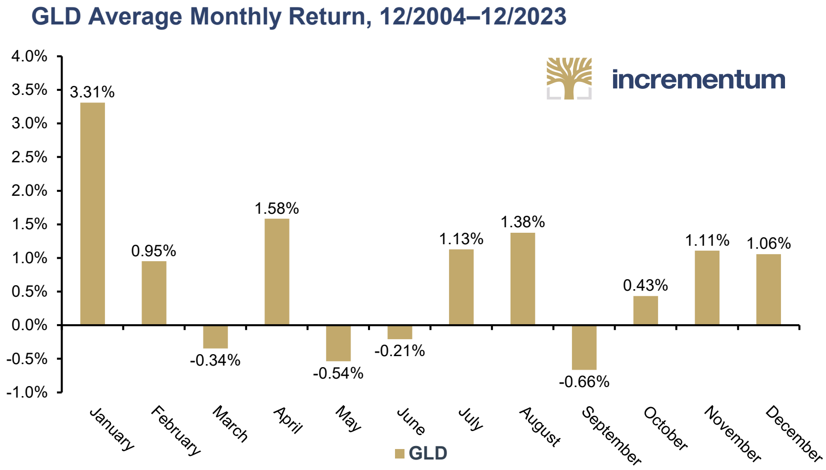
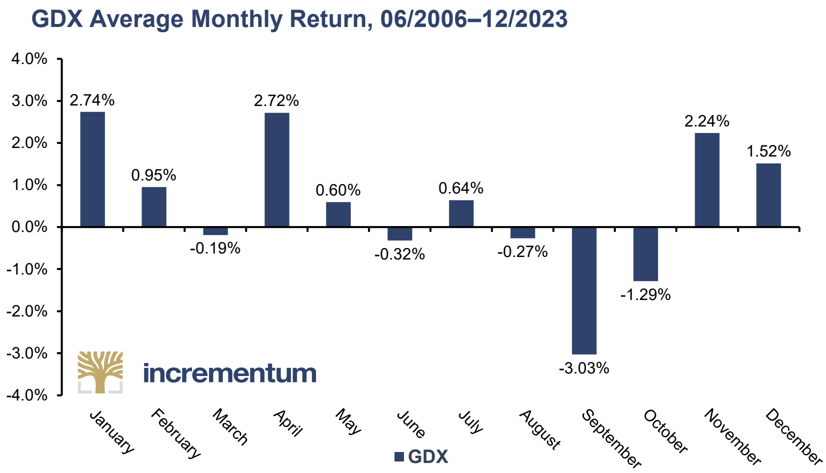
[86] Wachtel, Sidney B: "Certain Observations on Seasonal Movements in Stock Prices," *Journal of Business of the University of Chicago*, Vol. 15, No. 2 (1942), pp. 184–193
[87] Keim, Donald B.: "Size–Related Anomalies and Stock Return Seasonality: Further Empirical Evidence", *Journal of Financial Economics*, Vol. 12, No. 1 (1983), pp. 13–32; Moller, Nicholas and Zilca, Shlomo: "The evolution of the January effect," *Journal of Banking & Finance*, Vol. 32, No. 3 (2008), pp. 447–457
[88] Wachtel, Sidney B: "Certain Observations on Seasonal Movements in Stock Prices," *Journal of Business of the University of Chicago*, Vol. 15, No. 2 (1942), pp. 184–193
[89] Klock, Shelby. and Bacon, Frank W.: "The January Effect: A Test of Market Efficiency," *Journal of Business Behavioral Sciences*, Vol. 26, No. 3 (2014), pp. 34–42
[90] Lakonishok, Josef, Shleifer, Andrei et al.: "Window Dressing by Pension Fund Managers," *American Economic Review*, Vol. 81, No. 2 (1991), pp. 227–231; Park, Seung–Chan and Moskalev Sviatoslav A.: "The 52–Week High and the January Effect," *Journal of Business & Economics Research*, Vol. 8, No. 3 (2010), pp. 43–58



Source: Reuters Eikon, Incrementum AG

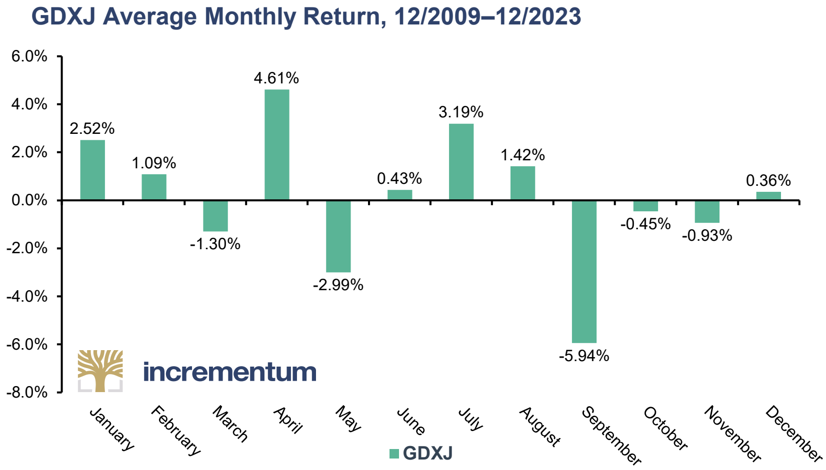
Wake me up when September ends…
Green Day

Similar statistics, but for GDX, are presented in the next chart. Also in this case, the highest average monthly returns were recorded in the month of January. They amounted to 2.74%. However, the average April returns (2.72%) are only slightly lower. When looking at the success rate, 10 out of 17 Januaries were positive, and 9 out of 17 Aprils were positive. It is also important to note that while for GLD the negative months saw similar average returns, for GDX September clearly stands out. **There were 12 negative Septembers in 18 years, and the average September return for the 18-year period was -3.03%.**



Source: Reuters Eikon, Incrementum AG

The results for GDXJ are shown in the next chart. Most striking is the fact that January has only the third highest average returns (2.52%), as it was outperformed by July (3.19%) and April (4.61%). Also, the January success rate is unimpressive, with 6 positive returns in 14 years.



Source: Reuters Eikon, Incrementum AG

So, the question arises, how much of the difference between GLD, GDX, and GDXJ is explainable by the different time periods examined? During the same 14-year period, GDX recorded 8 and GLD 9 positive Januaries. The worst month for GDXJ is usually September. Similarly to GDX, September shows not only the lowest average return (-5.94%) but also the lowest success rate, as GDXJ recorded a positive September monthly return only in 3 out of 14 years.

October: This is one of the peculiarly dangerous months to speculate in stocks. The others are July, January, September, April, November, May, March, June, December, August and February.
Mark Twain

The monthly patterns revealed in the charts above indicate some potential for the creation of successful investment strategies. For example, investing in GLD during each month except for the weak 4-month period between March and June would have generated gains of 327.1% between December 2004 and November 2023. During the same period, a simple buy & hold strategy would have generated a gain of 336.5%. However, if one would have been able to generate only some tiny gains during the March–June periods, for example by investing in bonds or money market instruments, the buy & hold strategy would have been beaten.

For GDX, during the June 2006–November 2023 period, a strategy of avoiding the weak 3-month period between August and October would have led to a gain of 180.3%. At the same time, a long-term buy & hold strategy would have generated a 20.2% loss. Similarly, during the period between December 2010 and November 2023, GDXJ's share price declined by 65.2%. **But a strategy of avoiding the weak period of September and November would have generated a gain of 51.9%.**

The Halloween Effect

I'll bet living in a nudist colony takes all the fun out of Halloween.
Charles S. Swartz

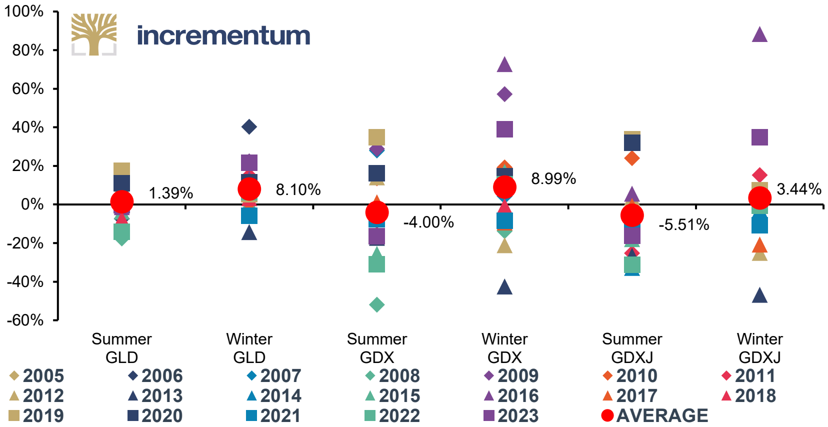
The Halloween effect, also known as "Sell in May and go away" or "Sell in May and return after Halloween" is based on the observation that the markets tend to do much better during the winter half of the year, approximately between the end of October and beginning of May, than during the summer half of the year. According to Bouman and Jacobsen, the Halloween effect can be traced to the British stock market in late 17th century.[91] Although the majority of studies have focused on investigating this calendar anomaly in stock markets, some studies have discovered its presence also in commodity markets.[92]

There is an old myth that says that on Halloween the ghosts chase the bad returns away, and they dare to return only after six months have passed. But there are also Hong and Yu, who opine that the reason for the winter half-year outperformance is the holiday season in combination with low trading activity during the summer months.[93] According to Cao and Wei, the Halloween effect should be blamed on the weather, as during the cold winter months investors are more aggressive, while during the hot summer months they tend to be apathic.[94] Kamstra et al. opine that the reason is Seasonal Affective Disorder, according to which the behaviour of investors is affected by different amounts of daylight in winter and in summer.[95]

The oldest and strongest emotion of mankind is fear, and the oldest and strongest kind of fear is fear of the unknown.
H. P. Lovecraft

The results of the Halloween Effect investigation look very persuasive. The average returns recorded during the winter periods (November–April) are notably higher than the average returns recorded over the summer periods (May–October). In the case of GLD, an average return of 1.20% was recorded during the summer periods, while an average return of 8.10% was recorded during the winter periods. In the case of GDX, the average summer period returns amounted to -4.00%, compared to the average winter period returns of 8.99%, And for GDXJ, the average returns amounted to -5.51% and 3.44% respectively. Thus, the differences between the summer and winter periods equal to 6.71 (GLD), 12.99 (GDX) and 8.95 (GDXJ) percentage points respectively. **In all the three cases, the difference is clearly in favour of the winter period.**

Semiannual Return (Summer and Winter), 05/2005*–10/2023



Source: Reuters Eikon, Incrementum AG
*Start date: GLD = 05/2005, GDX = 11/2006, GDXJ = 05/2010

Investing in GLD only during the winter periods and staying out of the market during the summer periods – which means no summer returns at all – would have

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[91] Bouman, S. And Jacobsen, Ben: "The Halloween indicator, 'Sell in May and Go away': Another puzzle," *American Economic Review*, Vol. 92, No. 5 (2002), pp. 1618–1635
[92] Arendas, Peter: "The Halloween Effect on the Agricultural Commodities Markets," *Agricultural Economics*, Vo. 63 (2017, online first)
[93] Hong, Harrison G. and Yu, J.: "Gone Fishin': Seasonality in Trading Activity and Asset Prices," *Journal of Financial Markets*, Vol. 12, No. 4 (2008), pp. 672–702
[94] Cao, M. and Wei, J.: "Stock Market Returns: A Note on Temperature Anomaly," *Journal of Banking and Finance*, Vol. 29, No. 6 (2005), pp. 1559–1573
[95] Kamstra, Mark J., Kramer, Lisa A. and Levi, Maurice D.: "Winter Blues: A SAD Stock Market Cycle," *American Economic Review*, Vol. 93, No. 1 (2003), pp. 324–343

led to a gain of 263.9% in the May 2005–October 2023 period. Holding shares of GLD for the whole time would have generated a 324.7% gain. At first look, the buy & hold strategy looks superior; however, the difference wouldn't be so persuasive if one were able to generate at least some mediocre returns during the summer periods.

I'd be a bum on the street with a tin cup if the markets were always efficient.
Warren Buffett

The situation looks much better in the case of GDX and GDXJ, where a strategy of simply staying out of the market during the summer periods is clearly superior. During the May 2006–October 2023 period, the share price of GDX declined by 24.8%, but the strategy of investing only during the winter periods would have generated gains of 155.7%. During the May 2010–October 2023 period, GDXJ lost 71.4% of value, while the strategy of holding its shares only during the winter periods would have generated a loss of only 9.5%.

Conclusion

The average investor's return is significantly lower than market indices due primarily to market timing.
Daniel Kahneman

In some fairytales, the magic must be performed at an exact time, under very specific conditions, for it to work. With calendar anomalies, the situation is similar. Fortunately, you don't have to go with your laptop into the heart of the forest at midnight under the full moon to confirm your trading order. All it takes is to follow some patterns that have been observed over the years; and although the reasons for their existence are not fully clear, the data show that they are simply *there*.

As shown in this chapter, the calendar anomalies can also be observed in the gold market, represented by the SPDR Gold Shares ETF (GLD), the VanEck Gold Miners ETF (GDX), and the VanEck Junior Gold Miners ETF (GDXJ). Although the results obtained for the three ETFs differ quite notably, it is possible to find several patterns with potential to be utilized as a part of investment strategies. Especially, the month of the year effect and the Halloween effect, due to their longer-term nature, offer several relatively easy ways of generating abnormal returns that beat the simple long-term buy & hold investment strategy.

Probably the easiest way of exploiting a calendar anomaly is to focus on the Halloween effect. All it takes is to purchase gold or gold stocks at the very end of October and sell them at the very end of April. The rest of the time, the money can be held in a savings account, which will generate some additional return. This assumes only two trades per year, so transaction costs should be negligible. The tax impacts obviously depend on the country of residence and its specific tax rules.

However, it is important to be reminded of the well-worn advice that historical results are no warranty of future ones. Moreover, numerous studies have shown that the strength of the calendar anomalies changes over time.

An Alternative Perspective for Framing the Gold Price Based on Fundamentals

Get the fundamentals down and the level of everything you do will rise.

Michael Jordan

- **A fundamental based method for framing the gold price is presented along with a method for identifying its recurring support/resistance zones.**
- **A simple tool for timing the gold price using the fed funds rate cycle.**
- **The historical long-term cycle for gold suggests its ultimate peak is still 5 to 10 years out.**
- **A case for a gold price target of USD 9,000 to USD 11,000 in the next 5 to 10 years can be made.**
- **The divergence between gold and TIPs based real yields can be interpreted as gold expressing a different opinion on inflation expectations.**

Chris Rutherglen
Chris Rutherglen is a Ph.D. level scientist/engineer and the publisher of *Gold Investor Research* which provides weekly, in-depth, data-driven analysis catering to gold investors.

While some might mistakenly consider value investing a mechanical tool for identifying bargains, it is actually a comprehensive investment philosophy that emphasizes the need to perform in-depth fundamental analysis, pursue long-term investment results, limit risk, and resist crowd psychology.
Seth Klarman

In the world of value investing, as the name suggests, understanding an asset's valuation is fundamental to the approach. However, translating valuation to the gold market becomes tricky, because the lack of cashflows precludes standard valuation methods. The question then becomes, what is the best way to understand gold's value?[96] Many participants use technical analysis as their primary means through which to view it. However, what technical analysis lacks is an anchor that can fundamentally frame the value of gold throughout its cycles to something other than itself. Since gold has been a monetary asset for thousands of years, it is only natural to begin within that framework to best understand it. Starting from two simple assumptions, a richer and more fundamentals-based perspective on the gold price can be gained.

Assumption #1: Gold's Relationship to Money Supply

Our first assumption is: *The market value of the world's investable gold supply (MV_{Au}) is proportional to the market value of the USD money supply (MV_{M2}).*

From this simple assumption, a scaling relationship for the gold price can be derived that accurately tracks its long-term trend. Mathematically, this can be represented as,

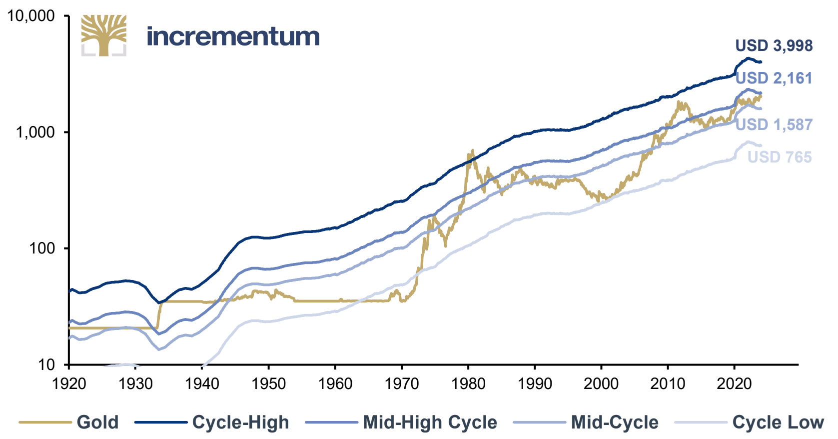
$$MV_{Au} \propto MV_{M2}$$

which implies that gold's scaled price into the future, *G(t)*, can be expressed as,

$$\mathrm{G}(t) = \mathrm{G}(t_0)\frac{1 + g_{M2}}{1 + g_{Au}}$$

By this method, a historical gold price, $G(t_0)$, can be projected through time using the growth in M2 money supply, g_{M2}, and discounting by the growth in the world's investable gold, g_{Au}, assuming a gold supply growth rate, g_{Au}, of 1.5% per annum.

Gold Price Cycle Levels (log), in USD, 01/1920–01/2024



Source: Gold Investor Research, Global Financial Data, Incrementum AG

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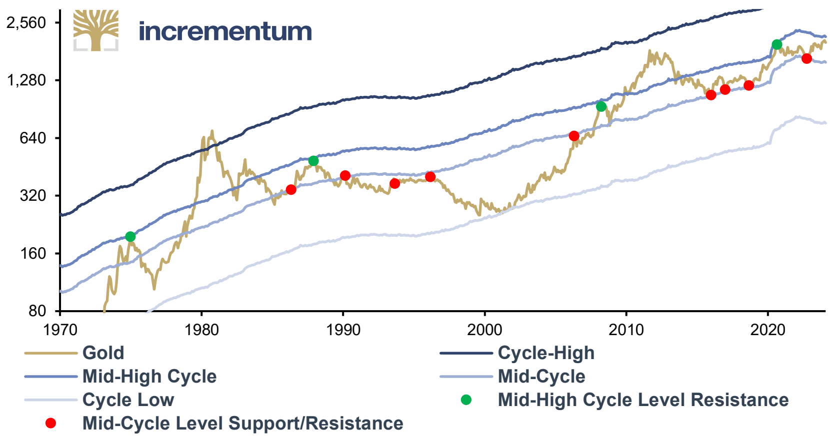
[96] *See* also "The Synchronous Equity and Gold Price Model," *In Gold We Trust* report 2022

Gold was an objective value, an equivalent of wealth produced. Paper is a mortgage on wealth that does not exist, backed by a gun aimed at those who are expected to produce it.
Ayn Rand

How does this help us to better understand gold's value? It creates a convenient method to map out the various cycle levels for the gold price by projecting through time historical high-, mid-, and low-cycle levels for gold into the present by adjusting for embedded monetary inflation. For example, the post-revaluation gold price from 1934 of USD 35 per oz can be used as one such starting point. Here it is referred to as the *cycle-high level* since it only intersects the actual gold price near its long-term cycle highs, i.e. in 1934 and 1980. Other historical gold prices that represent mid-cycle and low-cycle levels can be similarly defined. Although this does not answer the question, "what's the value of gold today?" it does provide a simple and fundamental-based method to frame where the gold price stands within its long-term cycle.

Gold Price Cycle Levels (log), in USD, 01/1920–01/2024



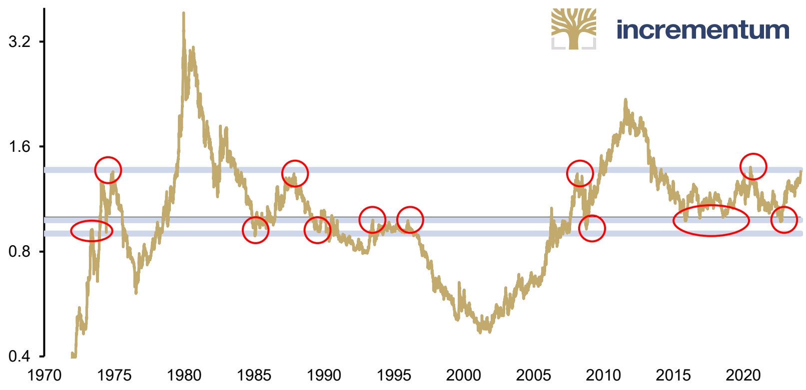
Source: Gold Investor Research, Global Financial Data, Incrementum AG

Recurring Support / Resistance Levels

Cycles exist because it is so difficult to reverse them.
Coleen Hoover

The utility of these long-term cycle levels does not end there. It turns out that some of them have had a tendency to reoccur as support/resistance zones going back nearly 50 years. This can be seen in the cycle chart above but even more clearly by normalizing, or taking the ratio of, the gold price to its mid-cycle level. For example, the normalized gold price corresponding to 38% above the mid-cycle level has functioned as a major resistance level four times over the last 50 years: the December 1974 high, the November 1987 high, and most recently in the current bull market, the March 2008 and August 2020 highs. Then there is the mid-cycle level itself, which has functioned as long-term support. For example, in the past ten years, the gold price has rebounded from this level four times, including the important December 2015 and November 2022 lows.

Gold Normalized to Mid-Cycle Level (log), 01/1970–03/2024

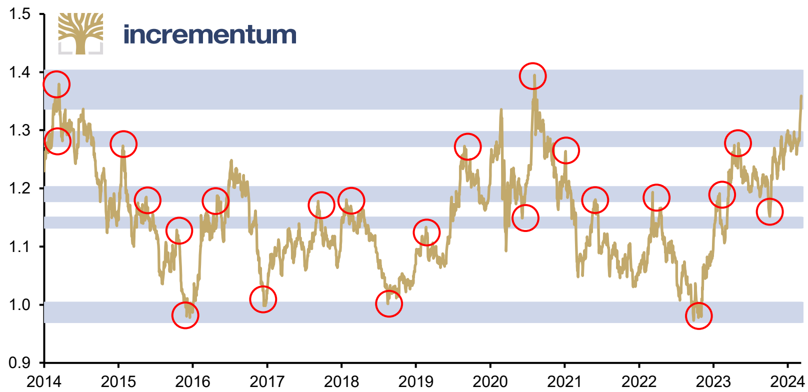


Source: Gold Investor Research, Global Financial Data, Incrementum AG

I believe in the resistance as I believe there can be no light without shadow; or rather, no shadow unless there is also light.
Margaret Atwood

In addition to half-century timescales, finer levels of recurring support/resistance can also be identified by zooming into the shorter periods. An example of this includes the level +19% above mid-cycle, which has experienced multiple tags as support/resistance over the past ten years. Mapping out and identifying these recurring support/resistance levels can be useful for gold investors to help target potential entry and exit points when the price gets near them. They can even be translated back into the gold price chart itself to complement more traditional technical analysis methods such as moving averages.

Gold Normalized to Mid-Cycle Level, 01/2014–03/2024

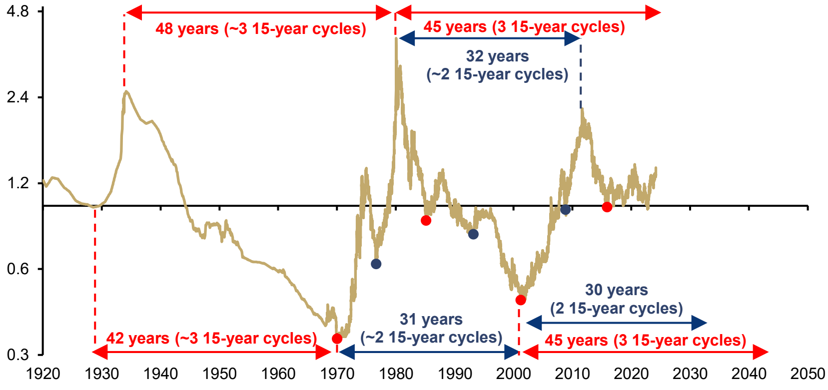


Source: Gold Investor Research, Global Financial Data, Incrementum AG

For every action, there is an equal and opposite reaction.
Isaac Newton

Zooming out to the very large 100-year timescale provides additional nuggets of information regarding gold's long-term cycle. Since 1920, the gold price appears to have a long-term cyclical period of approximately 30 or 45 years. Interspersed within these are the more commonly known ~7.5- or 8-year cycles as well as the ~15-year cycles, which can be thought of as harmonics of the long-term cycle. Another important takeaway point is that, historically, the magnitude by which the gold price overshoots its mid-cycle level is about equal and opposite to the degree it undershoots it at the low. This was seen for the low-to-high period from 1970 to 1980 as well as in the period from 2001 to 2012.

Gold Normalized to Mid-Cycle Level: Long-Term Gold Cycles (log), 01/1920–03/2024



Source: Gold Investor Research, Global Financial Data, Incrementum AG

Projections of Future Gold Prices

The best way to predict the future is to study the past, or prognosticate.
Robert Kiyosaki

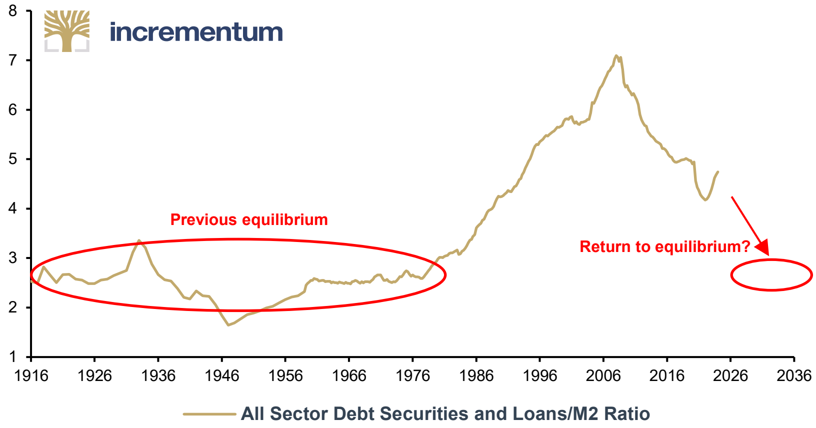
In addition to identifying potential near-term price targets, the framework can also be used to help explore where gold price cycle levels may be in the future. Leveraging gold's relationship with the quantity of money, if an opinion can be expressed on where US money supply is likely to trend, then it is straightforward to project a *cone of possibilities* on where the gold price cycle levels may be at some future date.

One approach to help quantify this using first-order analysis is to observe that from 1915 to 1978, the ratio of United States *all-sector debt securities and liabilities* to M2 money supply was fairly stable around an equilibrium level of 2.5. In other words, during both the interwar and Breton Woods monetary periods, the US economy functioned well with one unit of money supply supporting ~2.5 units of debt. From the late 1970s to the GFC in 2007/2008, debt expanded much quicker than money supply, pushing the ratio up to a peak of 7 units of debt supported by one unit of money supply.

We must not let our rulers load us with perpetual debt.
Thomas Jefferson

This high relative level of debt was presumably unsustainable, because immediately following the GFC, the Federal Reserve radically changed their monetary policy and began growing the money supply at over twice the rate of debt, primarily via their new quantitative easing (QE) programs. Since then, the debt-to-money supply ratio has been on a general downward trend with a small countercyclical upswing in the past year or so as the money supply has contracted. If it is assumed that the ratio will continue on its general path towards the ~2.5 level, then a corresponding range of expectations can be set on where the gold cycle levels may be. For example, assuming all-sector debt securities & liabilities continue to grow at around 5% per year, then an M2 money supply of USD 50trn or USD 65trn would be needed for the ratio to regain the 2.5 level in the next 5-year and 10-year periods, respectively. **This would translate into a gold price cycle-high level of approximately USD 9,000 and USD 11,000, respectively.**

US All Sector Debt Securities and Loans/M2 Ratio, Q4/1916–Q1/2024



Source: Federal Reserve St. Louis, Incrementum AG

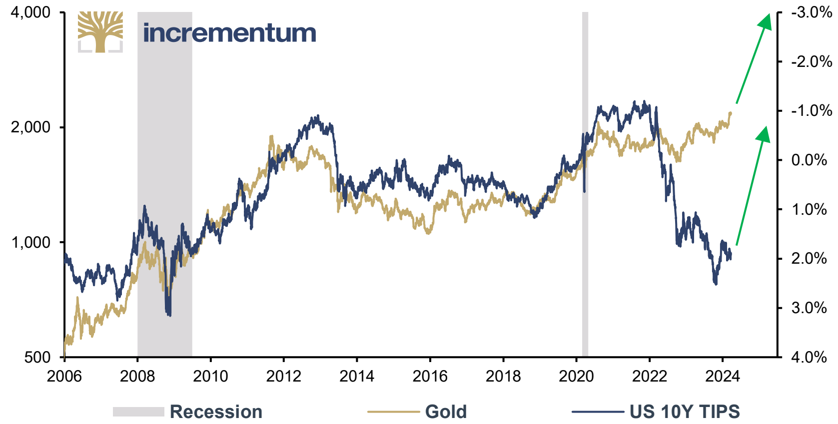
Assumption #2: Gold's Relationship to Real Yields

Our second assumption is: *The gold price is inversely proportional to real yields.*

I like everyone to be on an equal footing.
Jack Nicholson

Although it is well acknowledged that the gold price and the Treasury inflation-protected securities (TIPs) based 10yr real yield have had a fairly consistent inverse relationship, few take the analysis beyond that point to understand the relationship at a potentially more fundamental level. By digging deeper, an explanation can also be put forward as to why the broadly observed divergence developed between the two and what it may portend. To do so, it is useful to reframe the gold price from its dollar value into a real-yield equivalent, $y_{real,au}$, thereby putting gold on an equal footing with that of yields.

Gold (lhs, log), and US 10Y TIPS (rhs, inverted), 01/2006–03/2024



Source: Reuters Eikon, Incrementum AG

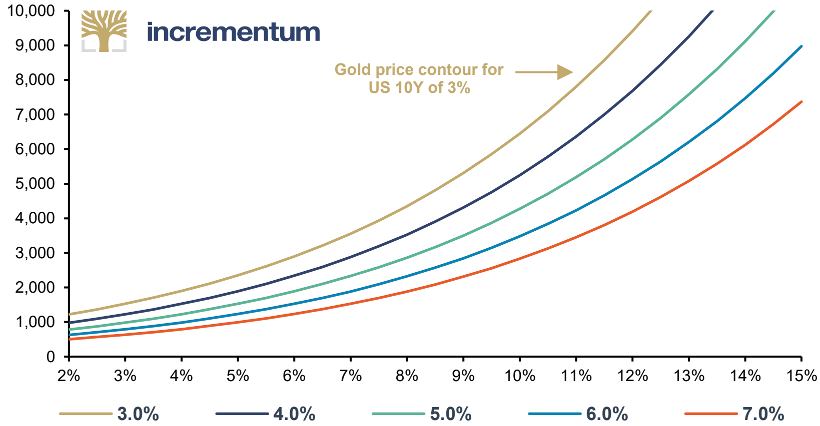
The inverse correlation between real yields and the gold price can be mathematically expressed in continuous compounding terms as:

$$G = C \cdot e^{-T \cdot y_{real,au}}$$

People who buy government debt deserve to be punished and taught a lesson.
Doug Casey

Within this framework, the gold price, *G*, takes the same form as a zero-coupon bond with a time to maturity, *T*, compounding based on a real yield, $y_{real,Au}$, and with a coefficient *C* that is similar to the principal for a bond. But unlike in the case of bonds, this coefficient *C* is not always constant but is subject to adjustments higher due to the cumulative effects of inflation. The other difference is, since gold obviously has no maturity date like a bond, it is more appropriate to refer to *T* as gold's real duration, which based on the fitting is equal to approximately 22.6 years. In the case of a zero-coupon bond, its *time to maturity* and *duration* are the same since the only cash flow payment is at maturity. In practical terms, this means that the gold price has a lot of leverage – or convexity – to changes in real yields, similar to how long-maturity bonds also have a lot of price leverage to changes in nominal yields.

10-Year Inflation Expectation (x-axis), and Gold (y-axis), in USD, under different US 10Y Yield Sceanrios



Source: Gold Investor Research, Incrementum AG

From 2008 to 2022, the gold-based real yield, $y_{real,au}$, was roughly equivalent to the TIPS-based 10yr real yield, $y_{real,TIPs}$, which is why the correlation was fairly strong. But starting in early 2022, the two began to diverge. Why?

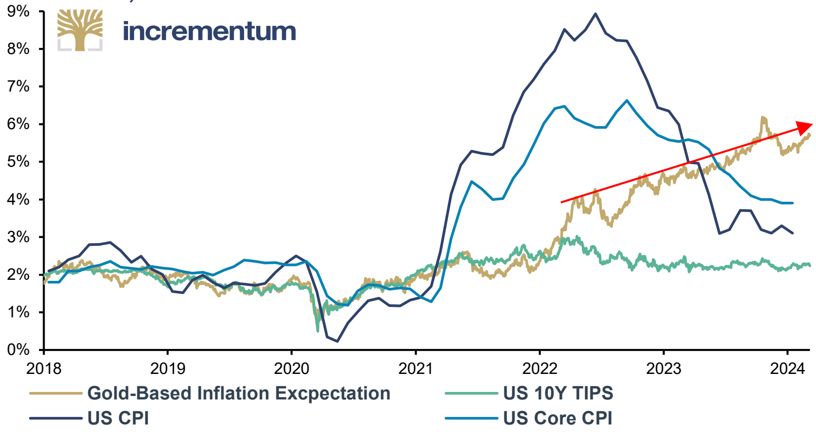
There are likely two reasons. To address them, it is helpful to break out $y_{real,Au}$ into its component form.

$$G = C \cdot e^{-22.4 \cdot \left(\frac{y_{10} - i_{Au}}{1 + i_{Au}}\right)}$$

Most of all, differences of opinion are opportunities for learning.
Terry Tempest Williams

In lieu of a ~23 year zero-coupon bond yield as an input, the 10yr Treasury note yield, y_{10}, is used due to its high liquidity, long time series, and the fact that we are comparing it to the 10yr TIPS. Since both the gold price and the 10yr yield are known, the only unknown is the derived gold-based inflation expectation, i_{Au}. In other words, the entirety of changes in the dollar gold price that are *not* due to the 10yr yield can be captured in the term i_{Au}. This shows that the divergence between the gold-based inflation expectation and TIPS 10yr breakevens began in March 2022 just as CPI inflation rate was nearing its peak. **From then on, gold has been in a rising trend and clearly expressing a different opinion on inflation expectations than the TIPS 10yr breakevens do.**

Gold-Based Inflation Expectation, US 10Y TIPS, US CPI, and US Core CPI, 01/2018–03/2024



Source: Federal Reserve St. Louis, Incrementum AG

Over the last 18 months, its central bank buying that has been the main support – an overwhelmingly predominant support for gold.
Adrian Day

Large and increasing purchases of gold by central banks in the second half of 2022, as the divergence continued to widen, provide solid support that major market participants have been willing to pay this higher inflation expectation premium in order to gain exposure to gold. In October 2023, the gold-based inflation expectation had continued trending higher and was implying a level just over 6%, even as the YoY CPI inflation rate had trended lower to just under 4%. **Is this gold overshooting its inflation expectation, or is something else going on?**

Yeah, what's going on? Tell me what's going on.
Marvin Gaye

The possibility that something else is going on brings up the second potential contributing cause of the divergence, which is that the coefficient *C* may be in the process of resetting higher. Over the 2008 to 2022 period, when the correlation between TIPS- and gold-based real yields was strong, *C* was steady at approximately USD 1,525. Over the same period, gold's fundamentals-based mid-cycle level, as discussed in the previous section, more than doubled from ~USD 750 to ~USD 1,600, meaning that the long-term cumulative effects of monetary inflation had embedded an approximate doubling in its price. As these cumulative effects continue to build, eventually they need to be reflected as a change in the coefficient.

In theory, theory and practice are the same. In practice, they are not.
Albert Einstein

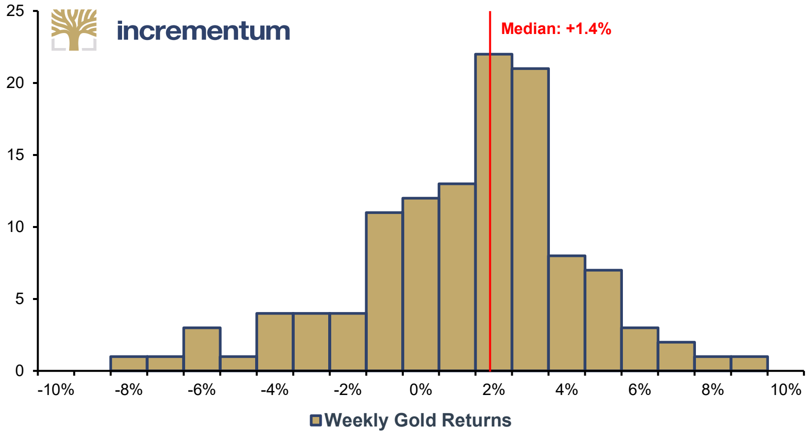
During the first half of the 1970s, for example, *C* was much lower and likely closer to ~USD 80 in order to best fit the CPI inflation rate and the derived gold-based inflation expectation curves at the time. However, by the mid to late 1970s, the assumed correlation had increased to ~USD 200 or above. In the present inflationary environment, it may be that *C* is no longer constant and is going through one of its adjustments higher. If that is the case, there are two unknown variables, *C* and i_{Au}, which makes disentangling their individual changes more difficult until a new steady state condition returns. A method does exist to overcome this limitation but is beyond the scope of this piece. For more on this, interested reads are referred to the article titled "Towards a comprehensive framework for understanding the gold price: From 1971 to today".

The Sweet Spot for Gold

My, oh my, hit the sweet spot tonight.
Jennifer Lopez

Despite the shortcomings of using market-based real yields as a long-term valuation tool for gold, utility still exists in the gold real-yield-equivalent framework, since it identifies two primary drivers for the gold price, which are (i) falling yields and (ii) rising inflation expectations. This is not to say that every drop in the 10-yr Treasury note yield will produce positive returns for gold, since the two drivers can also work to offset each other. However, from 2000 to 2023, instances where the 10yr Treasury note yield declined by 15bp or more on the week produced a distribution of weekly returns for gold that is clearly positively biased, with a median value of +1.4%.

Distribution of Weekly Gold Returns When US 10Y Falls by ≥ 15bp, 01/2000–10/2023



Source: Gold Investor Research, Global Financial Data, Incrementum AG

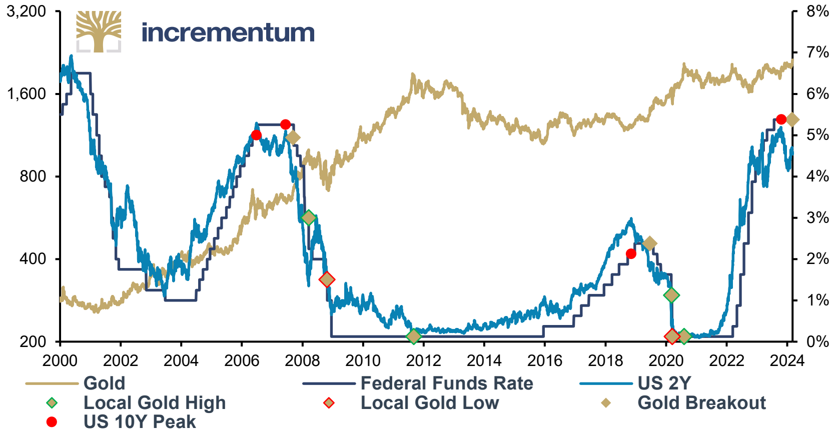
Rate cuts are likely on the way. That would be a good environment for gold.
Joe Cavatoni, World Gold Council

Not surprisingly, gold does its best during periods of persistently falling yields, which tend to occur late in the interest rate cycle, usually in anticipation of future rate cuts as the economy slows into a recession. For example, during advancing phases for gold, such as the current period from 2000 to present as well as in the 1970s, the gold price consistently reached an important local high midway through the Federal Reserve funds rate-cutting phase. This was seen at the gold price cycle highs in December 1974, March 2008, and March 2020 and is generally associated with the first half of a recession. Although the fed funds rate is not formally linked to the gold price through the gold real-yield-equivalent framework discussed above, in general, declining short-term rates are an anticipatory sign that the economy is slowing. Specifically, due to the time lag between the rate hikes and their actual effect on the economy, the inflation rate tends to remain elevated even as short-term rates are being cut.

You get the best of both worlds
Chill it out, take it slow
Then you rock out the show.
Hannah Montana

This creates a *sweet spot* for the gold price because it provides the best of both worlds: that is, (i) elevated inflation expectations, and (ii) falling long-term yields as they price in lower future short-term rates. However, this sweet spot for gold that ultimately produces the cycle high is only temporary, because the time lags involved with the rate hikes ultimately do catch up with the economy. In the recession's late stages, long-term yields begin to slow their rate of decline, thus removing a positive driver for the gold price, while inflation expectations themselves decline, which pushes the gold price down and ultimately to a cycle low. Examples of this include the October 2008 low during the GFC and the late-March 2020 low during the Covid shutdown.

Gold (lhs, log), in USD, Federal Funds Rate (rhs), and US 2Y (rhs), 01/2000–03/2024

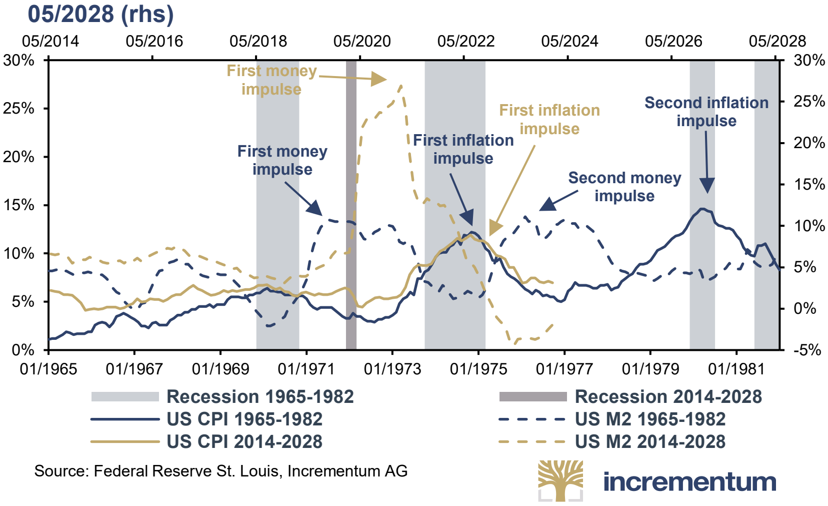


Source: Gold Investor Research, Federal Reserve St. Louis, Global Financial Data, Incrementum AG

The only thing that an increased money supply does then, is it dilutes the purchasing power of the preexisting dollar.
Murray Rothbard

Recent history has shown that in such an environment, the Federal Reserve and US Treasury typically step in with aggressive stimulus, which then sets the stage for an even higher gold price in the coming months and years. This secondary and more aggressive cycle high for gold has historically been driven by money supply expansion and rising inflation expectations, as seen in September 2011 and August 2020. Similarly in the late 1970s, when a second monetary impulse drove the gold price to ~USD 850 in January 1980. If the inflationary parallels between the current period and the 1970s were to play out and produce a second wave of inflation later in this decade, the trigger would likely be another money impulse near the end of the anticipated recession just ahead.

US CPI, yoy, and US M2, yoy, 01/1965-01/1982 (lhs), and 05/2014–05/2028 (rhs)



Source: Federal Reserve St. Louis, Incrementum AG

To summarize, if a similar dynamic were to roughly play out during the current interest rate cycle, the template could be:

– First, the gold price breaks out of its 3.5 year consolidation pattern above USD 2,100 which did occur on March 1, 2024.

- Second, the gold price reaches a local-high (potentially up to USD 3,000) midway through the rate cutting phase driven by the 'sweet spot' of elevated inflation expectations and/or a declining 10yr Treasury Note yield. If the timing between the gold price breakout and its local-high were to follow the prior two interest rate cycles, it would suggest a high roughly between late-Q3 to Q4/2024.
- Third, gold falls to a cycle-low and retraces much of the advance above the consolidation breakout level sometime in the late-stage of the recession, and
- Fourth, an aggressive move to an even higher cycle-high months to years later is driven by a presumed Federal Reserve and US Treasury stimulus action that is ostensibly meant to recover from the recession.

Conclusion

We have presented a framework for valuation and price analysis of gold that leans primarily on its fundamental drivers, which are (i) money-supply, (ii) inflation expectations, and (iii) long-term yields. It shows that a simple method exists to frame the gold price and identify its relative positioning within the long-term cycle.

And baby we're so high
Walking on cloud 9.
John Legend

Furthermore, viewing the gold price in a real-yield equivalent framework remains instructive for highlighting it primary drivers. **Looking forward as the current interest rate cycle nears its end, history suggests the *sweet spot* for gold should emerge and take the gold price to a new local-high in 2024 roughly midway through the rate cutting phase.** So far gold has indeed broken out of its 3.5-year consolidation pattern above USD 2,100 and is well on its way to the potential USD 3,000 target. Here we have shown that incorporating this alternative framework into an investor's toolkit, it can provide a broader perspective and a more refined appreciation of *how* and *when* to best participate in this notoriously cyclical market and do so without solely relying on technical analysis.

IGWT Report

The New Playbook for Bitcoin

I do believe the role of crypto is digitizing gold, in many ways.

Larry Fink

- The new playbook for Bitcoin is characterized by absolute scarcity, which Bitcoin is rapidly approaching, and a world of Bitcoin ETFs, where institutional and sovereign players are increasingly using Bitcoin as an asset class.
- The US Securities and Exchange Commission (SEC)'s approval of Bitcoin spot ETFs has far-reaching, positive consequences. The possibility of a Bitcoin ban seems to be off the table in the West.
- As the number of bitcoins held by ETFs increases, so does the risk of a *mega-drawdown*. In the event of a liquidity crisis, ETF holdings technically can be liquidated very rapidly. Bitcoin is, therefore, likely to remain significantly more volatile than gold.
- Following the halving in mid-April, Bitcoin has become the hardest monetary asset and now has a stock-to-flow ratio around twice as high as gold. Digital gold is thus increasingly competing with analog gold, whereby the overall demand for non-inflationary assets will continue to rise structurally.
- Bitcoin is now rapidly approaching absolute scarcity: almost 95% of all Bitcoin has already been mined. Within the next 10 years, 99% of all available Bitcoin will have been mined.
- According to the new playbook for Bitcoin, as absolute scarcity is approached, the influence of the halving cycles will continuously decrease as the newly created amount of Bitcoin gradually becomes less significant.

Running bitcoin.
Hal Finney

Bitcoin has been an integral part of our *In Gold We Trust* report for eight years. We have been dedicating a chapter to the dominant cryptocurrency every year since 2016, as we view the decentralized network protocol as a **potentially revolutionary monetary invention**. While the perspective we hold is not universally embraced among gold enthusiasts and often faces criticism from the broader gold community, it is evident from the present situation that our consistently communicated positive stance on Bitcoin as an asset class has been validated. Without engaging in undue self-congratulation, we assert that our optimistic outlook has proven to be accurate thus far.

I can't love stocks, but I love bitcoin and gold.
Paul Tudor Jones

Our investment strategy, consisting of a combination of gold and Bitcoin, which we first presented five years ago as part of the *In Gold We Trust* report,[97] has proven to be remarkably successful not only in theory but also in practice. This is evidenced, not least, by the live track records of our two funds, which have been implementing these combined strategies for over three and four years, respectively.

Incrementum Gold Bitcoin Strategy and Incrementum Gold Silver Crypto Strategy, 100 = 02/26/2020, 02/2020–04/2024

Source: Reuters Eikon, Incrementum AG

Bitcoins have no dividend or potential future dividend, therefore not like a stock. More like a collectible or commodity.
Satoshi Nakamoto

In previous years, we extensively **analyzed the similarities and differences between gold and Bitcoin**. We also looked at valuation methods and how the Bitcoin phenomenon fits into the monetary theory of the Austrian school of economics.

For readers who want to know more about these topics, we would recommend reading the following chapters of previous *In Gold We Trust* reports, which we believe are still highly relevant today.

- *In Gold We Trust report* 2023: "Showdown in Sound Money"
- *In Gold We Trust report* 2020: "The Plan B Model: The Holy Grail of Bitcoin Valuation?"
- *In Gold We Trust* report 2019: "Gold and Bitcoin: Stronger Together?"

This year, we are maintaining our positive stance on the young asset class. However, in addition to the changing of the *playbook for gold,* the

[97] *See* "Gold and Bitcoin: Stronger Together?," *In Gold We Trust* report 2019

playbook for Bitcoin is also changing. We consider the main changes for Bitcoin to be the following:

- ETF approval by the SEC, thus ensuring long-term legal certainty is a fundamental game changer.
- Bitcoin's rise to become the hardest monetary asset
- The halving's impact on supply, and especially issuance, as we approach the maximum number of coins available

In conclusion we will also introduce some thoughts this year regarding a new theoretical concept , which is based on a previously presented concept from the world of gold: **Freebitcoin, corresponding to Freegold.**

Bitcoin ETFs and Legal Certainty as Game Changers

Something has happened again.
Nikolaus Jilch

Back in 2013, the Winklevoss twins submitted their first application for approval of a Bitcoin ETF to the US Securities and Exchange Commission (SEC). This and other early applications were rejected due to concerns about market manipulation, lack of market surveillance, and the volatility of cryptocurrencies. Over time, growing institutional interest, improving market infrastructure, advances in technology, and international examples of crypto ETFs led the SEC to rethink its position.

We need to ensure that crypto markets are free from fraud and manipulation.
Gary Gensler

On January 10, 2024, the time had finally come: The SEC approved 11 Bitcoin spot ETFs. The approval of Bitcoin ETFs by the SEC has far-reaching implications for Bitcoin and the general perception of Bitcoin by financial market participants.

Spot Bitcoin ETF Overview, 04/30/2024

Issuer	Ticker	Market Share	Holdings (₿)	Holdings (USD mn)	Fee
Grayscale	GBTC	35.8%	296,186	17,731	1.50%
BlackRock	IBIT	33.2%	274,459	16,431	0.25%
Fidelity	FBTC	18.3%	151,205	9,052	0.25%
21Shares	ARKB	5.2%	42,981	2,573	0.21%
Bitwise	BITB	4.1%	33,996	2,035	0.20%
Invesco	BTCO	0.8%	6,555	392	0.25%
VanEck	HODL	1.1%	9,279	555	0.25%
Valkyrie	BRRR	0.7%	6,192	371	0.25%
Franklin Templeton	EZBC	0.5%	4,437	266	0.19%
WisdomTree	BTCW	0.1%	1,227	73	0.30%

Source: hildobby, Incrementum AG

The three most important consequences of this decision are:

1. Regulatory clarity and legal certainty: The classification of Bitcoin as a commodity and the authorization of ETFs results in a changed regulatory landscape. Bitcoin falls under the supervision of the Commodity Futures Trading Commission (CFTC) and is regulated differently than all other cryptocurrencies, which remain under the supervision of the SEC as securities. Bitcoin's status as *digital gold* has been confirmed by the regulator's decision.

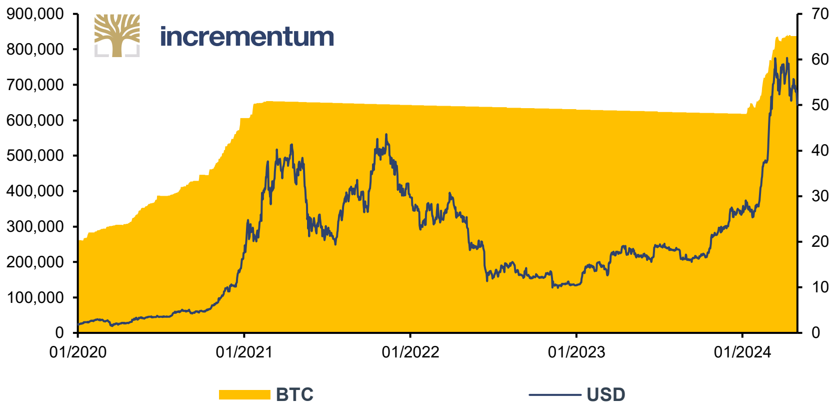
The sword of Damocles of a Bitcoin ban is off the table – at least for the US and probably also for all other Western countries. This legal certainty is a game changer for institutional investors in particular.

2. Market acceptance and investor interest: The introduction of Bitcoin ETFs increases the acceptance of Bitcoin as a legitimate asset class and reduces career risk for asset managers who have been reluctant to take Bitcoin positions for their clients. **The availability of ETFs also opens the way to a much broader range of investors**, particularly those who are familiar with traditional investment vehicles and can now easily integrate Bitcoin into their existing trading, custody, and reporting infrastructure.

IBIT is the fastest growing ETF in the history of ETFs. Nothing has gained assets as fast as IBIT in the history of ETFs.
Larry Fink

Just a few months after the approval of Bitcoin ETFs, it is evident that the event has led to increased demand, resulting in a jump in the price of Bitcoin. Since the ETFs were approved, there have been net inflows of around USD 15bn. Including the Grayscale Bitcoin Trust, which was converted to an ETF as well, all US Bitcoin spot ETFs have a combined volume of USD 50bn.

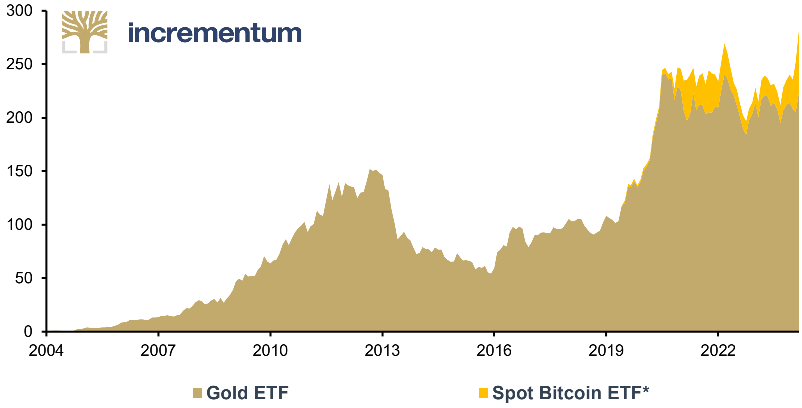
Spot Bitcoin ETF AuMs*, in BTC (lhs), and USD bn (rhs), 01/2020–04/2024



Source: hildobby, Reuters Eikon, Incrementum AG
*GBTC Holdings for the Period prior to Spot Bitcoin ETF Trading (01/11/2024)

3. Possible impact on volatility and drawdowns: Bitcoin enthusiasts have often emphasized that spot ETFs are a powerful gateway for financial investors. Under the right conditions, such as a loosening monetary policy environment or the halving cycle, a wave of investment by financial investors via ETFs can bring about noticeable price gains. This has already been impressively demonstrated in the first few months since ETFs were approved. The total volume of Bitcoin ETFs of USD 50 billion already corresponds to around a quarter of the volume of all gold ETFs.

Gold ETF and Spot Bitcoin ETF Holdings, in USD bn, 01/2004–03/2024

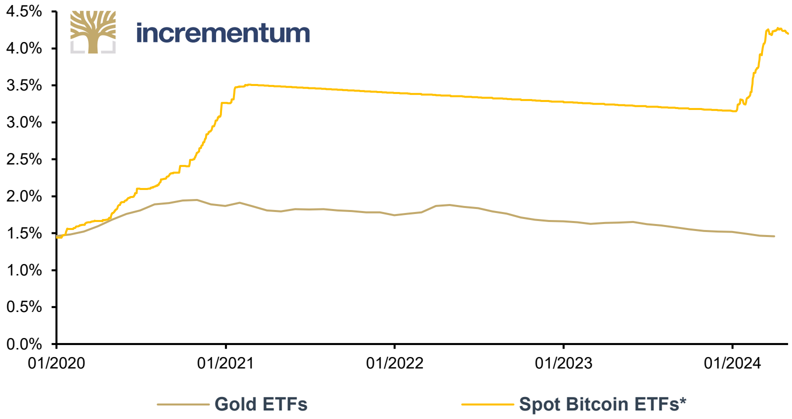


Source: hildobby, Reuters Eikon, Incrementum AG
*GBTC Holdings for the Period prior to Spot Bitcoin ETF Trading (01/11/2024)

I prefer a volatile appreciating asset over a stable depreciating one.
Michael Saylor

However, it should also be noted that this open gate also enables rapid outflows. The higher the Bitcoin holdings held by ETFs, the greater the potential selling pressure that can emanate from ETFs in the event of a sell-off. ETF holders generally act more tactically than typical Bitcoiners, who generally hold for the long term, often in self-custody, and without rapid access to exchanges.

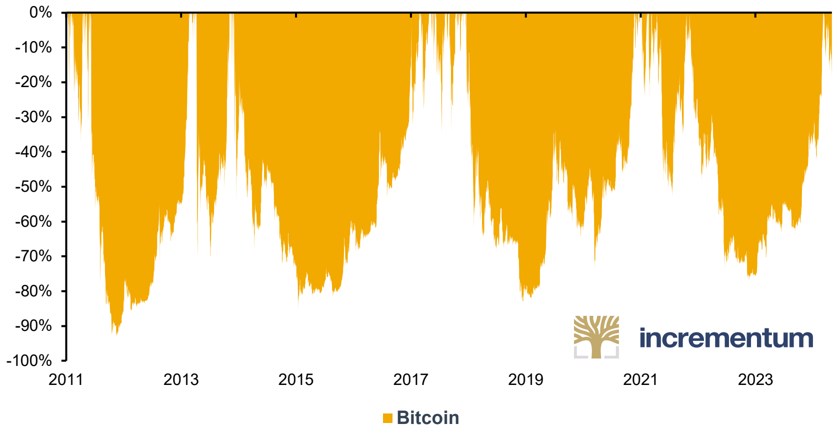
Share of ETF Holdings versus Mined Supply, 01/2020–04/2024



Source: World Gold Council, hildobby, Incrementum AG
*GBTC Holdings for the Period prior to Spot Bitcoin ETF Trading (01/11/2024)

Therefore, we do not assume that ETFs will reduce Bitcoin's volatility. The opposite may be true. **Should ETFs hold substantial amounts of Bitcoin in the medium term, a sudden sell-off by financial investors, for example due to a liquidity crisis, could trigger a massive drawdown.** Bitcoin is therefore likely to remain highly volatile, which, in our view, strengthens the argument in favor of the multi-asset approach we advocate in combination with precious metals.

Drawdowns of Bitcoin, in USD, 01/2011–04/2024



Source: coinmarketcap.com, Reuters Eikon, Incrementum AG

Bitcoin's main benefit is not that it's fast or efficient; its main benefit is that it is decentralized.
Andreas Antonopoulos

4. Decentralization aspects: The decentralized nature of Bitcoin played a decisive role in the regulatory classification of Bitcoin as a digital commodity. **It must be emphasized that the underlying Bitcoin protocol and its decentralized structure are not affected by the ETFs.** At the heart of this decentralization is not only the proof-of-work (PoW) consensus mechanism but also the network of nodes.

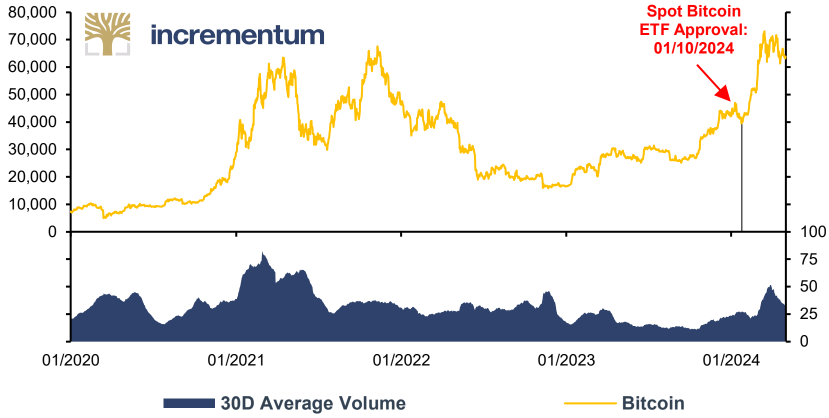
5. Liquidity and market depth: Following the launch of Bitcoin ETFs and the associated developments on the Chicago Mercantile Exchange (CME) and in the trading volumes of the ETFs themselves, there was a clear market reaction. Total derivatives trading volumes on the CME rose by 35% to USD 94.9 billion in January, marking the highest level since October 2021.

Certain commodities came to be money quite naturally, as the result of economic relationships that were independent of the power of the state.
Carl Menger

In addition, the Bitcoin spot ETFs got off to a remarkable start with a trading volume of around USD 1.6bn just minutes after the exchange opened, underlining the high initial demand for these products. This volume rose to over USD 2bn in a short space of time, reflecting the momentum and investor interest in these new ETFs.

The liquidity of crypto exchanges reported on coinmarketcap has also increased significantly, but interestingly is still well below the peak levels of the last bull market. This is presumably due to the fact that the increase in derivative transactions and now ETF transactions – which net the inflows and outflows at the level of the ETFs – means that a smaller proportion of all transactions are actually processed on the blockchain.

Bitcoin (lhs), in USD, and 30D Average Volume (rhs), in USD bn, 01/2020–04/2024



Source: coinmarketcap, Incrementum AG

The commodities, which under given local and time relations are most liquid, have become money.
Carl Menger

We want to point out the relevance of the approval of Bitcoin ETFs and the associated increase in liquidity in the context of Carl Menger's theory regarding the marketability of a good. Menger, the founder of the Austrian School of Economics, argued that the most marketable goods become money. In this sense, the introduction of ETFs is certainly helpful in Bitcoin's journey to becoming a widely used money. We do not assume that Bitcoin will become universal money in the near future; but in Hayek's sense, the higher marketability certainly helps to increase the *moneyness* of Bitcoin. At this point, we would like to refer you to the more detailed explanations in the chapter "Showdown in Sound Money" of the *In Gold We Trust* report 2023.[98]

In summary, the most important factor in connection with the ETF approvals from our point of view is that there has been a significant reduction in legal risks. For a long time, many investors have seen legal uncertainty as a key risk factor. **The dread of a ban on Bitcoin has considerably decreased, especially in the Western hemisphere.**

The Rise of Bitcoin as the Hardest Monetary Asset

...we can say that bitcoin is behaving like a leveraged-up and digital version of gold. Alternatively, we can say that gold is behaving like a leveraged-down and physical version of bitcoin. Either way, to understand bitcoin, we must understand gold. And to understand gold, we must understand bitcoin.
BCA Research

The halving is a fundamental mechanism of Bitcoin that occurs every 210,000 blocks, and therefore, approximately every four years. The reward that miners receive approximately every 10 minutes for mining a new block is halved. Initially, this was set at 50 bitcoins per block. With each halving, the growth in the supply of newly available Bitcoin decreases. The last halving, which occurred in April, was the fourth time this had happened. The block reward was reduced to 3.125 bitcoins per block.

—
98 *See* "Showdown in Sound Money," *In Gold We Trust* report 2023

Halving Effects

Halving	Reduction of New Supply per Block	Total Reduction over 480 Days (mn)	Outstanding Bitcoins (mn)	Reduction in New Supply as Percentage of Outstanding	Reduction in New Supply as % of Previous Halving
2012	25 BTC	1.7	10.5	16.5%	
2016	12.5 BTC	0.9	15.8	5.5%	33.0%
2020	6.25 BTC	0.4	18.4	2.4%	43.0%
2024	3.125 BTC	0.2	19.7	1.1%	47.0%

Source: Glassnode, Incrementum AG

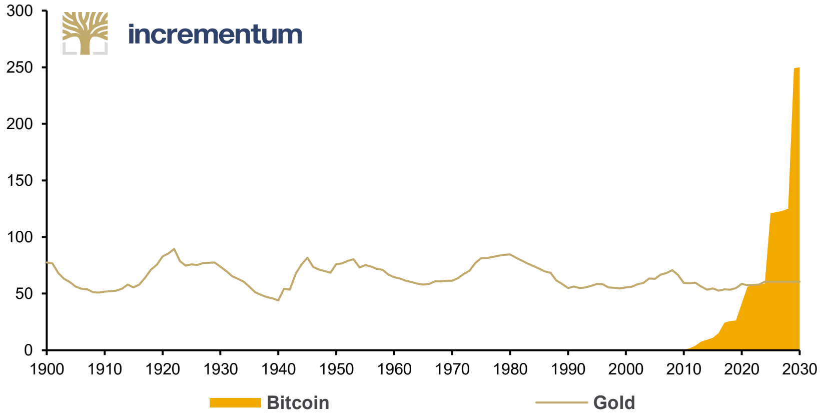
The halving is not only a technical process but also an economic event that has a profound impact on the Bitcoin economy, the mining industry, and the market as a whole.

Whatever assumes a monetary role will have a reliably high stock-to-flow ratio.
Saifedean Ammous

Halving has a direct impact on the stock-to-flow ratio (S2F) of Bitcoin, as the *flow* – i.e. the rate at which new Bitcoin is generated – halves and the *stock* grows more slowly. The S2F ratio of Bitcoin has doubled again with the halving. This increased scarcity can theoretically increase the price of Bitcoin, provided that demand remains constant or increases.

Gold has a relatively stable S2F ratio in the long term, as its annual production remains relatively constant in relation to the amount available. Bitcoin's S2F ratio, on the other hand, is now higher than that of gold (after the 2024 halving), making Bitcoin the hardest monetary asset, at least by this specific metric.

Stock-to-Flow Ratio for Gold and Bitcoin, 1900-2030e



Source: blockchain.com, USGS, World Gold Council, Incrementum AG
*Gold Production (2024-2030) = average growth rate (2004-2023)

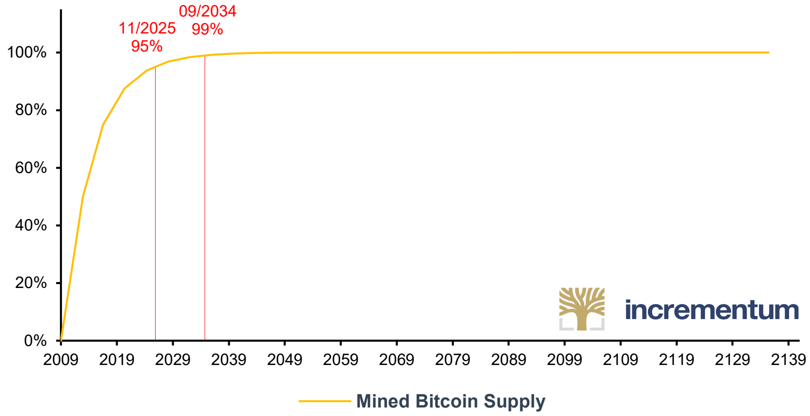
In contrast to Bitcoin, the stock-to-flow ratio of gold will remain relatively stable, as the annual production and available supply of gold worldwide are subject to only minor fluctuations.

Halving and Absolute Scarcity

One day, you wake up and see bitcoin at USD 100k, without any important news or event. Then USD 200k and more. Some will say it's a bubble, others realize bitcoin transitioned to the next phase.
PlanB

Currently, almost 95% of all 21 million bitcoins that will ever be available have already been mined. We are moving towards a figure of 99% in 2033. In around 8 years' time, we will be entering a new era for Bitcoin – an era of *almost* absolute scarcity.

Mined Bitcoin Supply, 01/2009–12/2140

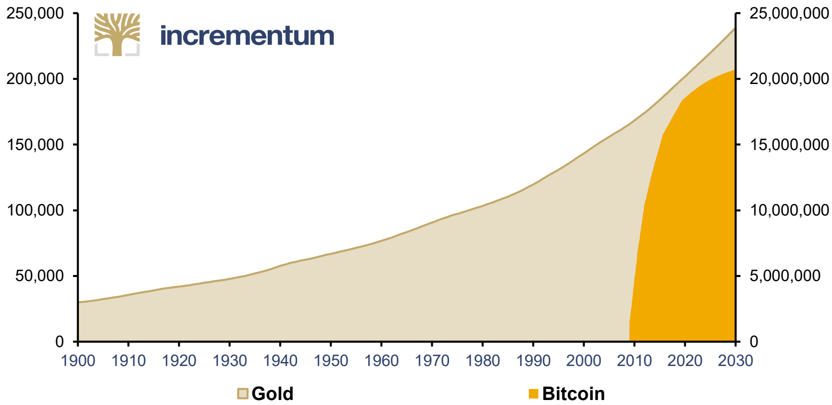


Source: Incrementum AG

There are remarkably few financial assets in the world that you can hold for a long time without trusting a centralized counterparty to hold it for you.
Lyn Alden

Bitcoin is often referred to as *digital gold*, a description that may be a helpful analogy, from our perspective. Approaching the maximum circulating supply of 21 million coins reinforces Bitcoin's position as the ultimate scarce resource in the digital age. **This scarcity could further solidify the perception of Bitcoin as a store of value and potentially lead to a reassessment of its value**. The absolute scarcity of Bitcoin relative to the relative scarcity of gold is particularly striking when viewed over the long term.

Gold Stock (lhs), in Tonnes, and Bitcoin Stock (rhs), in Coins, 1900-2030e

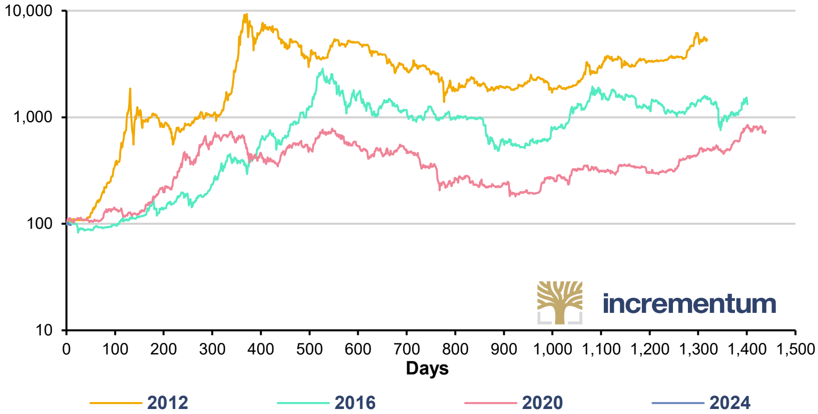


Source: blockchain.com, USGS, World Gold Council, Incrementum AG
*Gold Production (2024-2030) = average growth rate (2004-2023)

Halvings have significant impacts on Bitcoin's economics, but their effects may diminish as Bitcoin matures.
Adam Beck

For investors, the marginal growth of the newly mined Bitcoin potentially means a change in investment dynamics. As we approach the age of absolute scarcity for Bitcoin, this could have a noticeable impact on the future development of the Bitcoin market, particularly with regard to the influence of halving cycles. So far, the Bitcoin price has followed a recognizable pattern that has been strongly influenced by the halvings, experiencing strong increases in each of the following 350 to 500 trading days after a halving.

Bitcoin Performance after Halvings (Halving = 100, log), 11/2012–04/2024



Source: blockchain.com, Reuters Eikon, Incrementum AG

Both force and money are impotent against ideas.
Ludwig von Mises

The continuous approach to the maximum quantity of 21 million Bitcoin will change this playbook. With the majority of all Bitcoin already mined, the relative influence of halvings on the total supply should become less and less. In the early stages of Bitcoin, halvings had a huge impact because they affected a significant portion of the volume yet to be mined. As we approach the limit, each additional cut in the reward will represent a smaller and smaller percentage of the remaining total supply. This could result in the price effects of halvings being less intense than in previous cycles.

If you ... owned all of the bitcoin in the world and you offered it to me for $25, I wouldn't take it.
Warren Buffett

Bitcoin's current four-year cycle so far has had the effect in terms of performance that three calendar years with positive returns were followed by one year with negative returns. This pattern is obviously closely linked to the expectations and speculation surrounding halving events. However, if halvings have a diminishing effect on Bitcoin's growth rate, the associated cycles could also become less important, and we will see increasing deviations from this pattern.

Bitcoin Performance in Major Currencies, 2011–2024 YTD

Year	USD	EUR	GBP	AUD	CAD	CNY	JPY	CHF	INR	Average
2011	1,473.3%	1,526.8%	1,479.7%	1,474.9%	1,509.0%	1,402.6%	1,391.7%	1,480.2%	1,765.8%	1,500.5%
2012	186.2%	180.7%	173.9%	181.4%	178.6%	183.3%	222.7%	179.5%	196.9%	187.0%
2013	5,481.1%	5,257.9%	5,373.3%	6,404.5%	5,874.4%	5,323.1%	6,675.3%	5,342.7%	6,172.3%	5,767.2%
2014	-57.4%	-51.6%	-54.7%	-53.5%	-53.4%	-56.4%	-51.6%	-52.6%	-56.6%	-54.2%
2015	33.8%	49.1%	41.4%	50.1%	59.4%	40.0%	34.5%	34.9%	40.6%	42.7%
2016	124.9%	132.3%	168.7%	127.1%	118.3%	140.6%	118.5%	128.5%	130.9%	132.2%
2017	1,385.6%	1,202.1%	1,256.3%	1,274.1%	1,291.2%	1,292.2%	1,332.2%	1,322.1%	1,295.6%	1,294.6%
2018	-73.5%	-72.2%	-71.9%	-70.6%	-71.2%	-71.9%	-74.2%	-73.3%	-71.1%	-72.2%
2019	87.8%	92.1%	80.6%	88.7%	78.9%	90.2%	86.2%	85.2%	92.7%	86.9%
2020	305.0%	271.7%	292.9%	269.5%	297.0%	279.6%	285.0%	270.4%	314.6%	287.3%
2021	59.8%	71.6%	61.5%	69.3%	58.6%	55.5%	78.1%	64.6%	62.9%	64.6%
2022	-64.3%	-62.1%	-60.1%	-61.9%	-61.7%	-61.2%	-59.3%	-63.8%	-60.3%	-61.6%
2023	157.0%	149.3%	144.2%	157.1%	151.2%	164.5%	176.5%	133.9%	158.5%	154.7%
2024 YTD	40.8%	45.7%	43.6%	48.2%	46.5%	43.7%	57.6%	53.9%	41.3%	**46.8%**
CAGR	**149.8%**	**154.1%**	**154.0%**	**158.5%**	**155.9%**	**151.6%**	**162.6%**	**149.5%**	**161.8%**	**155.3%**

Source: Glassnode, Reuters Eikon (as of 04/30/2024), Incrementum AG

It might make sense just to get some in case it catches on.
Satoshi Nakamoto

It is therefore to be expected that the Bitcoin market eventually will evolve towards other, less predictable patterns that are more strongly influenced by global macroeconomic factors, regulatory developments and technological advances.

Bitcoin's Potential Path to Global Adoption

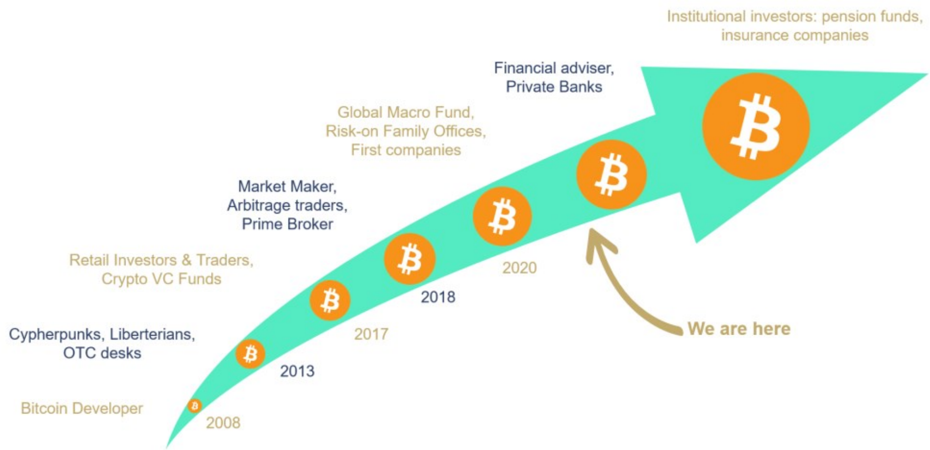
While many critics argue that Bitcoin has "failed" due to its slow adoption as a currency, it's important to highlight Bitcoin's significant achievements. We must consider that the global implementation of network goods systems such as of automobiles and roads, telephone networks, electrical grids, railways, and the internet often spans decades, especially when they aim to replace existing systems.

Bitcoin is valuable because it has a fixed supply and it is also volatile for the same reason.
Parker Lewis

Money, arguably the ultimate economic network good, presents a formidable challenge when there is a competition against an established monetary system. Bitcoin started in 2009 with just two enthusiasts running a new kind of code on their computers. Today, it stands as a trillion-US dollar asset. The Bitcoin ecosystem has navigated numerous hurdles, including security breaches, regulatory hurdles, divisions within its community, and various scams and fraudulent schemes that exploit the public's lack of familiarity with this innovative technology.

The next chart shows the different stages of adoption. The next frontier is large companies and pension funds investing in Bitcoin, followed by (more) nation-state adoption. It is worth noting that already one large company and one nation-state have embraced Bitcoin.

- Microstrategy adopted its Bitcoin strategy on August 10, 2020. Since then, its share price has skyrocketed by more than 1,000%.
- El Salvador declared Bitcoin a legal tender and also opted to use Bitcoin as a reserve asset in 2021, and was met with widescale ridicule from the media and financial institutions such as the IMF and World Bank. But since then, El Salvador has been doing remarkably well economically, enjoying GDP growth far above average and paying off a USD 800mln loan in January.



Source: Finoa, Incrementum AG

The adoption curve of Bitcoin

Other companies and nation-states are watching this process unfold, waiting on the sidelines as Bitcoin becomes more mainstream. Let's examine some prospects in that regard.

The majority of news regarding this topic centers around Bitcoin mining. Countries and also companies are able to monetize stranded energy by mining Bitcoin. An example of this is Bhutan, which partnered with Bitdeer Technologies Group in 2023 to mine Bitcoin using stranded hydroelectricity. Another example is the Ethiopian government's deal with 21 Bitcoin miners, mostly from China, to mine Bitcoin with energy from the Grand Ethiopian Renaissance Dam.

Bitcoin is a compelling asset for institutions seeking diversification and inflation protection, and I expect adoption to accelerate in 2024.
Paul Tudor Jones

Various oil and gas companies are also partnering with Bitcoin miners to mine using stranded flared gas. This is a remarkably beneficial endeavor for all parties involved, **as stranded gas and flared gas are considered waste products in the oil and gas industry and are often burned off or disposed of at a cost, mainly for safety and environmental reasons.** Recently, Argentina has announced to engage in this technology.

This also extends to governments. Marathon Digital announced in 2023 that they have entered into an agreement with Zero Two, a company backed by Abu Dhabi's sovereign wealth fund, ADQ, to "[d]evelop and operate two digital asset mining sites with a combined capacity of 250 megawatts."

Other Gulf nations are following suit, with Oman announcing that they will support Bitcoin mining. Interestingly, this came after Oman found Bitcoin to be in line with Islamic law – following rigorous discussion – and accepted its intended use. Speculation is rife about Qatar also climbing onto the Bitcoin bandwagon, with the Emir of Qatar visiting El Salvador's President Bukele last year, and a private jet, donning Qatari insignia, being spotted at the Madeira airport at the time of the Bitcoin Atlantis Conference.

Iraq's Deputy Prime Minister, Muhammad Ali Tamim, also has the rumor mills spinning after mentioning that the Iraqi government is widening partnerships and conducting agreements to be able to "use technologies to capture flaring gas" in a recent interview. And Argentina, under its new president Javier Milei, recently announced that it will also be introducing this technology.

It is irrational to love gold and hate bitcoin on purely financial or economic grounds. You might disapprove of bitcoin's environmental impact or have doubts about the technology or infrastructure, but the economics between gold and bitcoin have much in common. That statement will become increasingly obvious over the coming decade.
Charlie Morris

Meanwhile, Switzerland is experiencing a significant push from Bitcoin advocates to include Bitcoin in the Swiss National Bank's reserves. A group of Bitcoin enthusiasts is leading a campaign to change the country's constitution and demand Bitcoin alongside gold as a mandatory reserve asset.This movement is spearheaded by 2B4CH, a nonprofit organization established in 2017 with the aim of promoting Bitcoin and blockchain technology. The initiative is gathering momentum, with plans to collect over 100,000 signatures from Swiss citizens, which would initiate a referendum on the matter.

Paraguay recently introduced a bill in their congress, proposing the adoption of Bitcoin as an experimental legal tender, following the precedent set by El Salvador.

As expected, governments have been slow in their adoption, with smaller states being able to move more quickly because of direct governmental control. However, what would happen if central banks widely adopt Bitcoin as a reserve asset? **We thought it would be interesting to run a thought experiment, based on the Freegold concept.**

A Thought Experiment, Freegold and Freebitcoin

When I further investigated how central banks operate, I realized that in the absence of their self-imposed accounting rules, Gold Revaluation Account entries can be moved to a central bank's Capital with the stroke of a keyboard.
Jan Nieuwenhuijs

Antal Fekete's quote, "Gold is the ultimate extinguisher of debt", and the *Freegold* thesis, according to which the gold reserves of central banks enable a recapitalization of the fiat system through price increases, provide an interesting basis for designing a hypothetical *Freebitcoin system*. Such a system would put Bitcoin in a similar role to gold in the Freegold thesis, but with some adjustments to the digital nature and specific properties of Bitcoin.

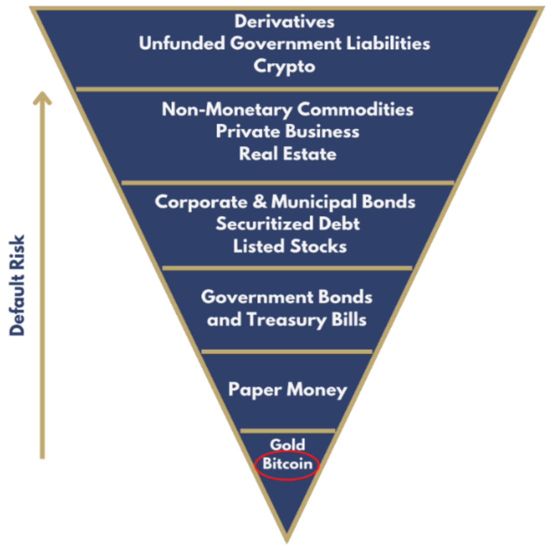
Bitcoin as the ultimate debt extinguisher: Echoing Fekete's statement about gold, in a Freebitcoin system, Bitcoin would act as the ultimate means of debt settlement. This would mean that Bitcoin was increasingly seen as a global store of value, whose value existed independently of national fiat currencies, so that it could be used to pay off debts on an international scale.

Systemic integration into fiat currency systems: As with the Freegold thesis, a Freebitcoin system would allow central banks to hold Bitcoin as currency reserves in addition to conventional government bonds. These reserves could be used for recapitalization in times of heavy balance sheet losses. By accumulating Bitcoin, central banks could benefit from its price increases, which would help them to strengthen their balance sheets and stabilize the fiat system, especially in times of severe overindebtedness and inflation.

Price flexibility: A key aspect of the Freegold concept is the idea that the price of gold should be flexible and free to fulfill its role as a recapitalization tool. Applied to a Freebitcoin system, this would mean that the Bitcoin price is freely determined in the market, without fixed pegs or price limits, so that its valuation serves as a true market indicator of supply and demand.

Bitcoin is the people's money, gold is God's money, and fiat is fake money.
Robert Kiyosaki

This thought experiment can be further extended to a combined *Freegold/Freebitcoin system*. This potentially represents an innovative synthesis of traditional and digital stores of value that leverages the strengths of both assets to create a robust, resilient, and dynamic financial system. In this model, gold and Bitcoin complement each other to achieve the goals of debt reduction, store of value, and recapitalization of global financial systems. Here are the key elements and mechanisms of such a system:



I think the real bogey, when you talk about, if the status quo continues, the real interesting thing is not Bitcoin eating gold, it's Bitcoin eating the bond market.
Luke Gromen

Double sound money reserves: Central banks and financial institutions hold both gold and Bitcoin as part of their official reserves. This diversification makes it possible to get the best of both worlds: **the stable, physical, and timeless store of value of gold and the digital, limitless, and efficient store of value of Bitcoin.** In times of high overindebtedness and negative equity, "a smoother recapitalization" via the portion of reserves held in Bitcoin is possible, relative to a scenario with a sharp appreciation of the gold price.

The world ultimately will have a single currency. I personally believe that it will be Bitcoin.
Jack Dorsey

Debt extinguishment and recapitalization: Both assets, gold and Bitcoin, serve as "ultimate debt extinguishers" in such a system due to their nature as pure assets without counterparties, in that they can be used to repay and hedge against global debt. Their acceptance and value provide a solid basis for the recapitalization of banks and governments in times of crisis. **A rapidly appreciating reserve currency such as Bitcoin can contribute to a faster recapitalization of the overindebted system.**

Store of value: By combining gold and Bitcoin, the system can marry the traditional security of gold with the modern efficiency and potential of Bitcoin, resulting in a diversified and robust store of value strategy. A combination portfolio of Bitcoin and gold reserves may also appear attractive from a central bank risk/return perspective.

Challenges and final considerations: One of the biggest challenges would be to create a regulatory framework that encompasses both digital and physical stores of value at an international level. This would require cooperation among governments, central banks, and international financial institutions.

If people only talked about what they understood, the world would be very quiet.
Albert Einstein

At present, it seems inconceivable that the relevant institutions, such as the BIS or the IMF, would promote such a system. Nevertheless, we should not completely ignore the possibility that Bitcoin could be integrated into the architecture of the current monetary system via the back door, as this could be beneficial for the existing system, which is partly plagued by negative equity.

It remains to be seen whether the ongoing developments and increasing acceptance of gold and Bitcoin can lead to sustainable integration into the global financial system, especially in an environment dominated by traditional institutions. The integration of Bitcoin could serve as an evolutionary step towards a more diversified and resilient monetary future.

We always overestimate the change that will occur in the next two years and underestimate the change that will occur in the next ten.
Bill Gates

The vision of such a synthesis of gold and Bitcoin may still be distant for some, but such a combination could revolutionize the way we think about stores of value and monetary security. The potential for integrating Bitcoin into the existing monetary system should not be hastily dismissed but seriously considered as a way to strengthen the global monetary and financial architecture.

Breakout or Fake-out: Is this Silver's Golden Moment?

I think silver is the biggest bargain on planet earth.

Robert Kiyosaki

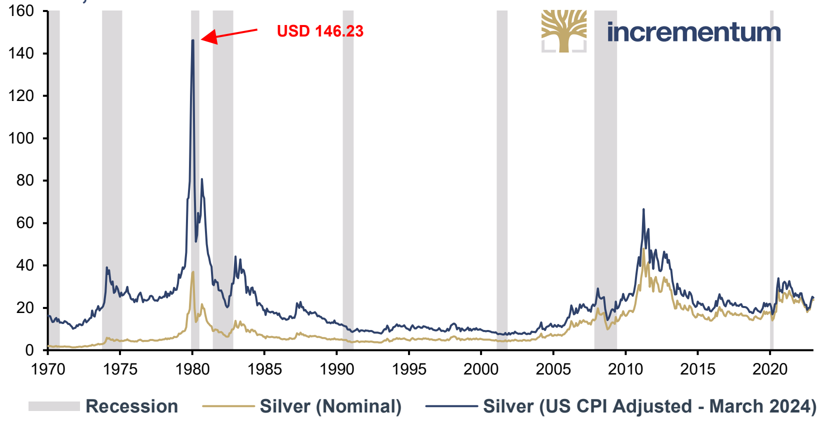
- Total silver demand fell by 7% in 2023, as jewellery, silverware and net physical investment demand categories retreated from 2022 highs. This offset the 64% yoy rise in silver's solar PV demand.
- A 1% increase in recycling and a -1% decrease in mine production rendered supply insufficient to meet total demand in 2023, producing a 3rd consecutive supply deficit of 184.3 Moz.
- Silver's supply deficit will widen to 215.4 Moz in 2024, as China dominated solar PV becomes the largest silver demand category with 232 Moz consumed. This will further erode above ground stockpiles.
- Silver has outperformed gold in 6 of the last 7 silver bull markets since 1967, but will rely on interest rate cuts, in addition to gold's continued rise, for investment demand to be meaningfully enticed.

Introduction

Take hold of that golden moment. For once it's gone, it never comes back. You cry, still it won't come back. It's gone and never comes back again.
Frank Sinatra

There are brief periods during economic cycles when catalysts converge to produce generational investment opportunities. For silver, these "golden moments" have been characterized by explosive highs, separated by decades of stagnation. In fact, 2023 saw more of the latter, as the silver price displayed an indifference towards its otherwise excellent fundamentals, which at that time, included 3 consecutive years of supply deficits. **Despite this, silver is turning over a new leaf in 2024.**

Silver (Nominal), and Silver (US CPI Adjusted - March 2024), in USD, 01/1970–03/2024



Source: Reuters Eikon, Incrementum AG

The silver price has deviated considerably from its supply-demand fundamentals. A recalibration of this dynamic is long overdue.
David Morgan

Namely, the embers of vindication were visible in the silver price from February this year, as a USD 22.11 annual low functioned as resistance for a sharp rise to a 3-year high of USD 28.89 by April. Still, the nascent "shine" of the silver price, which we rhetorically questioned in last year's *In Gold We Trust* report[99], could either dull or glisten in light of the forthcoming market conditions. Therefore, the following chapter will conduct a supply-demand analysis to determine silver's prospects.

Silver's Solar Eclipse

As solar becomes the largest source of energy, indispensable silver is the new oil. Yet, it's so undervalued, it will act like the next uranium.
Peter Krauth

Starting with what will be silver's largest demand segment by 2024, solar photovoltaic offtake consumed 193.5 Moz of silver in 2023, representing a 64% increase from 2022 and a quadrupling over the last decade. This unprecedented growth came in the context of a 32.2% rise in global solar capacity additions between 2022 and 2023 – the year in which solar contributed 345.5 GW, or nigh on three quarters of renewable capacity additions globally.

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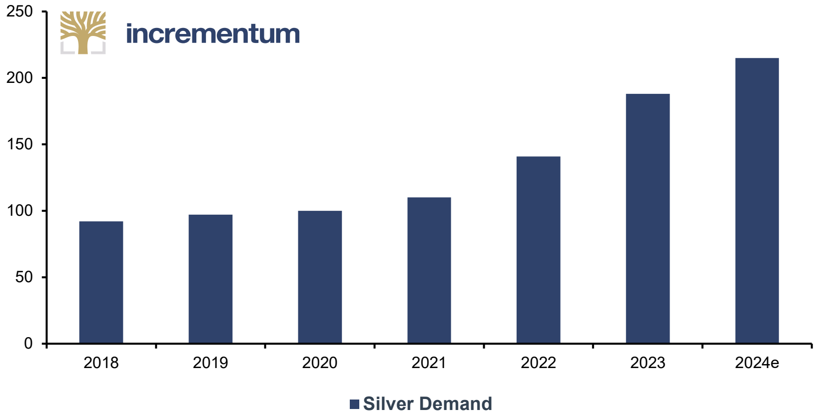
[99] *See* "Silver's Time to Shine?," *In Gold We Trust* report 2023

Global PV Silver Demand, in moz, 2018–2024e



Source: The Silver Institute, Incrementum AG

The IRA is supercharging solar deployment.
Abigail Ross Hopper, SEIA President & CEO

In part, silver's stellar demand growth from solar PV can be explained by the opening line from our chapter on silver in the *In Gold We Trust* report 2023: "Silver works when government policy is favorable towards it."[100] In the US, this is observable in the Biden administration's Inflation Reduction Act, which pledged a 30% tax credit for those who install a PV system from 2022 to 2032. As such, 2023 saw a record 32.4 GW of US solar capacity additions, marking a 37% increase from the previous record in 2021.

That said, the US's efforts waned in comparison to China, whose 63% share of 2023 global solar capacity additions broadened Xi's solar stronghold by a record 216.9 GW. This dwarfed the 87.4 GW of solar capacity commissioned by China in 2022 and amounted to more than the world's capacity additions in 2022. Not to mention, China's capacity additions, in the past year alone, were 23.8% more than the entire 175.2 GW capacity of the US – the world's second largest solar market. .

The great rejuvenation of the Chinese nation is no walk in the park or mere drumbeating and gong-clanging.
Xi Jinping

Undoubtedly, this renders China's solar industry as a key determinant of silver's expected fourth consecutive annual supply deficit, and by extension, the critical foundation for the further development of the silver price. This is evidenced further by China's 80–95% share of global solar PV supply chains, which allows President Xi to price Chinese solar panels at 50% lower than Europe, and 65% cheaper than the US, by virtue of vastly superior economies of scale.

In contrast, Europe – the supposed bastion of net zero – produces less than 3% of the necessary solar panels to achieve their goal of 42.5% renewable energy generation by 2030. Therefore, if China cannot maintain record low solar panel prices to offset potential increases in the silver price, adoption of silver-laden solar panels may slow. As part of this, some level of sustained disparity between solar capacity and demand will be an essential condition for the affordability of solar panels.

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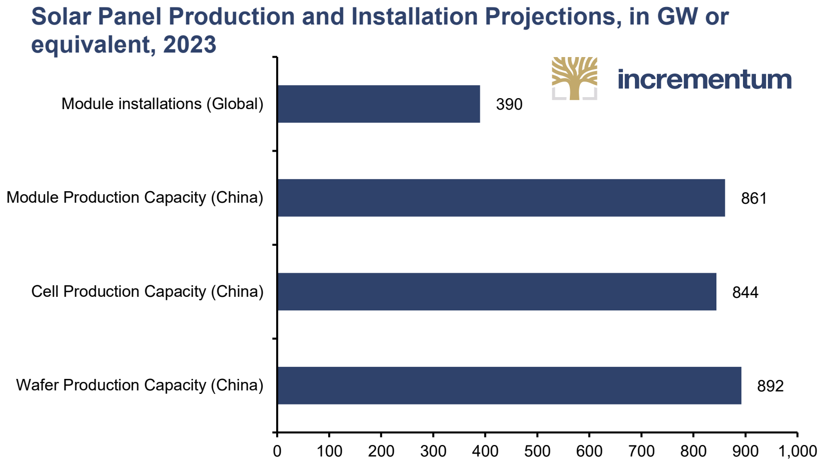
100 "Silver's Time to Shine?," *In Gold We Trust* report 2023.



Source: China Photovoltaic Industry Association, Incrementum AG

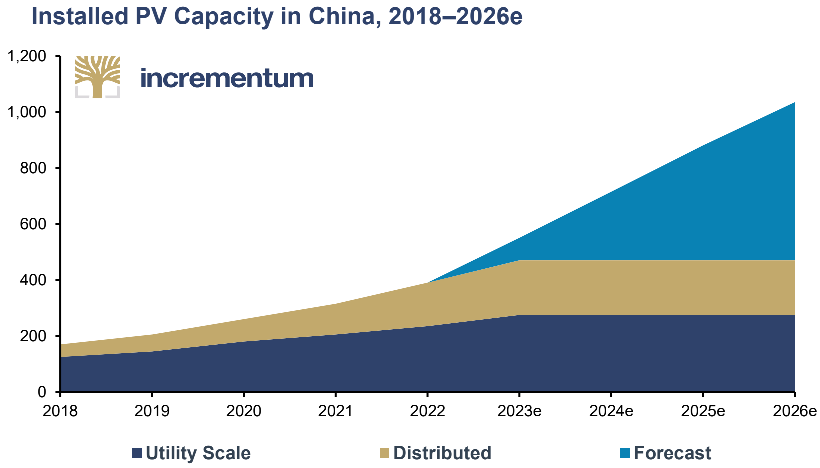
Three things cannot be long hidden: the moon, the sun, and the truth.
Siddharta

As for why this capacity may be reduced, Longi, one of the world's largest, China-based, solar panel manufacturers stated in March that it expected to cut 5% of its 80,000-strong workforce. Meanwhile, China's 5 largest solar firms were purported to have "high" or "very high" exposure to the Xinjiang region, where alleged human rights violations are provoking a potential Western reshoring of solar capacity, as illustrated by the US's passing of the Uyghur Force Labor Prevention Act in 2023.

Beijing is expected to resist growing market pressure for much stronger stimulus to spur China's economic recovery… Xi Jinping focuses on turning the country into an advanced manufacturing superpower.
Joe Leahy, *Financial Times*

Notwithstanding this, the concern of a reduction in China's solar capacity is largely confined to smaller manufacturers. This trend is facilitating industry consolidation amongst larger firms, as evidenced by Chinese solar firm Tongwei, who announced plans for a USD 4bn solar factory in December. Simultaneously, Chinese firms, Jinko Solar and Longi, are sidestepping the threat of Western protectionism by establishing their own supply chains in Vietnam, Malaysia, India, and even the US.

Therefore, China is evading reduced solar capacity by astutely relocating to other countries whilst counting on its largest solar manufacturers to offset the collapse of smaller firms. At the same time, President Xi is refraining from economic stimulus, instead depending on growth from industries like solar to manufacture his way out of an economic downturn. **This "do or die" strategy is precisely why China's solar capacity is set to grow immensely, to 1TW by 2026.**



Source: Rystad Energy, Incrementum AG

Consequently, silver investors should feel emboldened: At 1TW of solar capacity in 2026, China will have consumed a substantial 685 Moz of silver, based on calculations from First Majestic, which state that 685,000 Oz of silver are required to generate 1 GW of solar capacity. Moreover, even in a scenario where President Xi's gamble falls flat on its face, emerging markets stand ready to take on the baton from China.

My resolution got further strengthened that the people of India should have their own solar rooftop system on the roof of their houses.
Narendra Modi

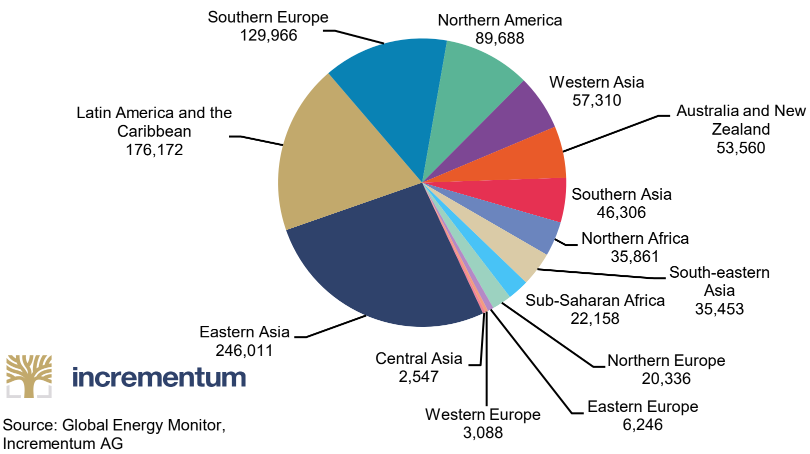
Firstly, the IEA expects India to witness the largest energy demand growth of any country or region in the world over the next 30 years, as an "expedited auction schedule for solar PV" and "improved financial health of distribution companies" delivers "accelerated growth". As part of this, Prime Minister Modi's focus on India's Rooftop Solar Program should add considerably to India's rooftop solar panel capacity, which grew from 1.8 GW in March 2019 to 10.4 GW in November 2023.

Furthermore, Adani Green Energy just unveiled the world's largest renewable energy plant in India: At 5 times the size of Paris (an incredible 500 square kilometres, mostly consisting of solar panels), its capacity is set to expand by at least 5GW every year. In part, this explains the record 70.7 Moz of silver imported by India in February 2024 – the equivalent of 64% of the country's annual silver imports in 2023, and more silver than the US Mint produced in American Silver Eagle coins over the past three years combined.

In Brazil, they don't care what you do. They just want the beach, the sun and the fun.
Candice Swanepoel

Coinciding with this, the IEA expects Brazil's solar capacity – which reached a record in 2023 – to be boosted further by the displacement of government-run auction schemes by free-market-based bilateral agreements. Here, 65% of solar capacity is in the pre-construction phase, which if completed, would see silver become a beneficiary of what Reuters project to be a fivefold increase in Latin America's solar capacity, growth that is second only to East Asia's.

Solar Power Capacity in Pre-Construction by Region, in MW, 2023



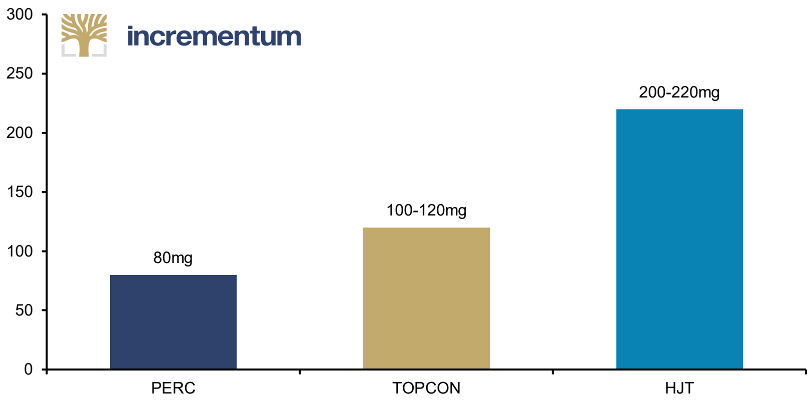
Source: Global Energy Monitor, Incrementum AG

Critically for silver investors, this means that global solar capacity will outstrip demand for the foreseeable future. This will ensure the continued affordability of solar panels, which allow room for the silver price to increase, without compromising silver offtake. Moreover, even as China's rate of new installation growth is forecast to slow from 217 GW to 190 GW next year, solar's consumption of silver is set to rise 20% in 2024 to a record 232 Moz.

And its high ho silver lining. And away you go, now baby. I see your sun is shining.
Jeff Beck

Notably, this comes as more silver is used per solar panel. For a more extensive reminder of this dynamic, we refer to our chapter on silver in the *In Gold We Trust* report 2023.[101] In short, the previously preferred solar panel technology, PERC, contains 80 mg of silver per panel and is being increasingly displaced by solar panel innovations boasting a higher silver loading. These innovations, referred to as TopCon and HJT, contain 100–120mg and 200–200mg of silver per solar panel, respectively.

Silver Usage per Solar Panel, in mg



Source: Silver Institute, Incrementum AG

According to Bank of America, **TopCon will increase its market share of silver PV technologies from just over 20% in 2023 to more than 50% in 2024.** Extrapolating out further, TopCon is forecast to account for an 80% market share by 2025, before it cannibalizes what is left of PERC's share in 2026, finishing up with a 90% monopoly over the market. **Importantly, this additional 20–40 mg of silver per solar panel could be key for the silver price to sustain its redemptive trajectory.**

You do your due diligence, you read as much as you can… it's about bringing as much truth and honesty to the portrayal as possible.
Cillian Murphy

Still, failing to consider thrifting and substitution would be doing a disservice to investors. Thus, according to research published in the journal *Progress in Photovoltaics* , "Plating is an alternative silver-lean metallization solution for industrial silicon solar cells by mainly using copper to form metal contacts".[102] **This suggests that silver may be replaced by copper,** but the authors Yuan-Chih Chang and Yuchao Zhang note that challenges remain:

> *The material cost of copper is about 1% of that of silver… However, despite the promising performance benefits of plating, the major deviation away from industrially preferred printing technology, the added complexity of manufacturing, waste management and high capex make the implementation of plating technology in mass production challenging and have yet to obtain any significant market share.*

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[101] *See* "Silver's Time to Shine?," *In Gold We Trust* report 2023.
[102] Chang, Yuan-Chih et al.: "Silver-lean metallization and hybrid contacts via plating on screen-printed metal for silicon solar cells manufacturing", *Progress in Photovoltaics*, March 22, 2024

Silver markets may be set up as the most exciting trade in the energy transition theme across the entire commodities complex.
Daniel Ghali, TD Securities

Therefore, as copper-plated solar panels remain the most likely alternative to silver, yet presently face a complicated and cumbersome road to market, TopCon is likely to deliver on forecasts and become the preferred choice by industry. As a result, the silver price looks to have found a solid first line of defense in solar, which as the legendary German footballer Franz Beckenbauer would provide stability and drive until the deadlock was broken.

Ancillary Industrial Demand

Beyond this, silver industrial demand also stands to benefit as the transition to hybrid and electric vehicles ensues. As we noted in last year's *In Gold We Trust* report, EVs contain 10 to 35 grams more silver per vehicle than ICE vehicles, as well as 16 to 32 grams more silver than hybrid vehicles.[103] Going forward, the Silver Institute projects this usage to increase further, thanks to silver's quality as "the metal with the highest electrical conductivity".

Baby, you can drive my car
Yes, I'm gonna be a star.
The Beatles

In terms of exact quantities, the Silver Institute forecasted in October 2022 that annual silver demand from the global automotive sector would approach 88 Moz (2,500 tonnes) by 2025. This is almost concurrent with the Bank of America and Bloomberg's 2023 projections for car manufacturers to consume around 3100 tonnes of silver a year by 2025, at which point, over 50% of silver demand is expected to be derived from non-ICE usage.

Prior to this threshold being reached, silver demand from car manufacturers is still forecasted to increase by roughly 250 tonnes between 2023 and 2024. During this period, S&P Global estimates 3.6 million more units per year of battery electric passenger vehicles will be sold globally, rising from 9.6 million units in 2023 to 13.3 million by 2024. Subsequently, this would see the BEV share of global passenger vehicle sales rise from 12% to 16.2%.

Estimated BEV Market Share, 2024

Region	BEV Share Estimates (2024)	yoy (2024 vs. 2023)
Europe (Central/Western)	22.2%	+41.0%
USA	13.2%	+66.4%
China	28.6%	+28.0%
India	4.1%	+39.0%
Global	16.2%	+39.5%

Source: S&P Global Mobility, Incrementum AG

Tesla is here to stay and keep fighting for the electric car revolution.
Elon Musk

If these projections come to fruition, automotive sector demand will join solar in its exploitation of a struggling silver supply. However, it is worth noting that BEV sales are encountering short-term headwinds: Q1/2024 sales of China's largest EV manufacturer, BYD, fell 43% compared to the fourth quarter of 2023 whilst Tesla also notched its first year-over-year quarterly sales decline in nearly four years, with a 9% decrease in vehicles sold.

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[103] *See* "Silver's Time to Shine?," *In Gold We Trust* report 2023.

Despite this, there are emerging industrial applications that stand to reinforce silver demand over the long term. In 2023, Oxford University researchers discovered that morphologically controlled silver nanoparticles could be used as a substitute for platinum in PEM electrolysers. According to the study, this resulted in "higher rates of hydrogen production at higher applied potentials", whilst also "significantly decreasing the cost of PEM electrolyser electrodes".

A nuclear power plant is infinitely safer than eating because 300 people choke to death on food every year.
Dixie Lee Ray

In addition to this, control rods comprising an alloy of 80% silver, 15% iridium and 5% cadmium are the preferred choice for pressurized water reactors, which account for 64% of operational nuclear reactors and 84% of those under construction. Therefore, as an estimated 56,000 oz of silver are required for every 1 GW of nuclear energy added, commitments made at COP28 to triple nuclear capacity by 2050 from 413GW to 1,239GW would see 23 Moz of silver consumed.

Ultimately, the above-noted industrial versatility is precisely why a group of silver mining stakeholders recently came together to call for silver to be included in the next edition of Canada's critical mineral list. Doing so would follow in the footsteps of France, who already identified silver as a critical mineral as part of its 2021 assessment. However, for the same to occur in Canada, a number of criteria must be fulfilled.

You miss 100% of the shots you don't take.
Michael Scott,
The Office

Naturally, an open letter intending to satisfy these criteria was penned by First Majestic's ESG director, Jillian Lennartz, to the Canadian Minister of Energy and Natural Resources, Jonathan Wilkinson. With signatures from the Silver Institute, as well as 19 silver mining company CEOs, the letter makes a compelling case for silver to be acknowledged on Canada's critical mineral list, which Natural Resources Canada expects to be published by the time the House rises in June.

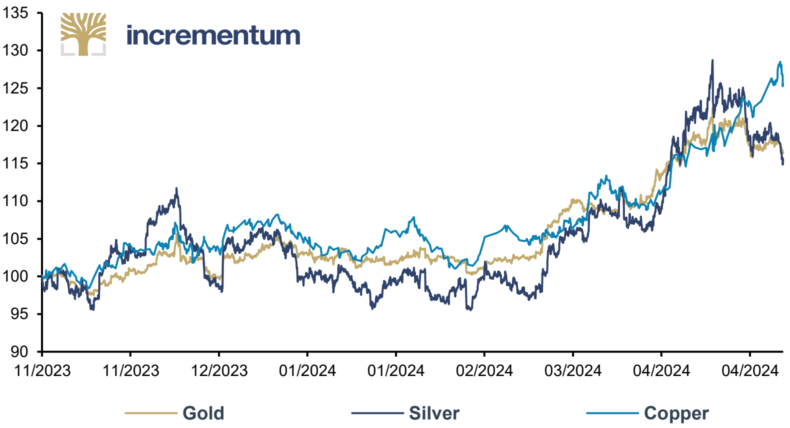
A green light from Canada would be complementary to the existing multilateral recognition of silver as a critical mineral. As outlined in the open letter, those who have done so include the World Bank, OECD, IEA, and IRENA – all of whom view silver as an essential component in low-carbon technologies. Consequently, silver's industrial demand could rise further, as the "insulating effect" of government policy ensues.

Gold-Silver Dynamics

Even "Darth Silver" is bullish on silver… (However) I do think that it's material and relevant that silver's industrial side is taking on a greater role.
Lobo Tiggre

As a result of the growth in silver's aforementioned industrial component, some experts have put forward the notion that silver may be decoupling from its historical monetary quality, and by extension, from gold. Endearingly referred to by some corners of the silver community as "Darth Silver", the esteemed analyst Lobo Tiggre has encouraged investors to entertain this possibility, noting that "silver looks more like copper than gold" in the intraday charts.

Gold, Silver and Copper, 100 = 11/01/2023, 11/2023–04/2024



Source: Reuters Eikon, Incrementum AG

Raw materials increasingly 'dance to their own tune'.
Bank of America

Undeniably, whilst silver has traded closely with gold over the last 6 months, it has also danced hand in hand with copper. This latter friendship has strengthened in recent decades, as silver and copper prices rose and fell in the same direction on an annual basis for every single year from 1998 to 2020, compared with only 5 out of 13 times from 1985 to 1997. Importantly, cosying up to copper may not be deleterious for the silver price, especially if a wave of inflation is on the horizon.

For example, Bloomberg analysis shows that for every 1% rise in the CPI since 1992, copper prices rose 18%. In fact, copper outperformed all other major asset classes aside from energy during this period, in which it rose twice as much as gold. More recently, analysis from Global X ETFs proved that this continued into the high-inflation environment of 2022, as copper sustained a 0.75 correlation with the 10-year breakeven inflation rate, dating back to 2001.

In a commodities reflationary boom, the fear factor goes away, and gold the bid goes down, but silver's industrial demand holds it up… there's a scenario where silver outperforms gold because of its increasingly industrial side.
Lobo Tiggre

Therefore, if silver joins copper in a commodities reflationary boom scenario, it may not need its monetary component to outperform gold. However, the nuance here is that a recession could dampen silver and copper's industrial demand: Our analysis in the *In Gold We Trust* report 2023, based on the *Incrementum Recession Phase Model*, showed silver returning an average -9% in the 8 recessions dating from 1970 until 2000, although silver tended to pick up in the later stages (phase 5) of a recession, averaging a return of 17.4%.[104]

Despite this, whether you see present-day silver as rich man's copper or poor man's gold, silver's industrial demand growth does not necessarily equate to the death of its historical monetary component. Namely, history casts its vote in favor of silver's ability to rise in response to price leadership by gold – a byproduct of the strong historical correlation between gold and silver prices, which has averaged 0.92 since 1988, 0.87 since 2000, 0.55 since 2010, and 0.82 since 2021.

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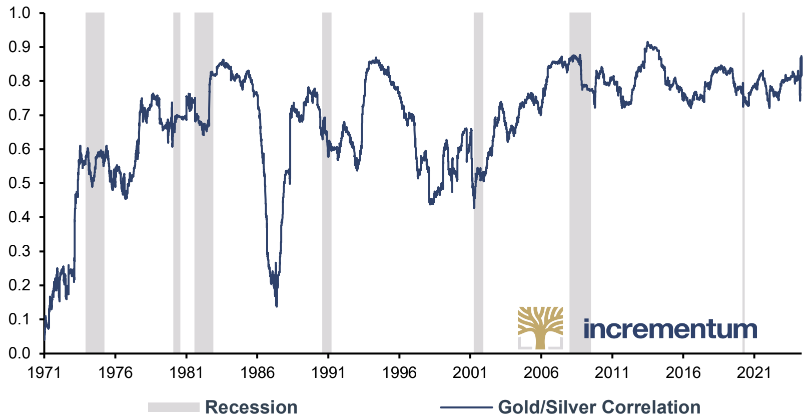
[104] *See* "The Showdown in Monetary Policy," *In Gold We Trust* report 2023.

Gold/Silver Correlation, 01/1971–04/2024



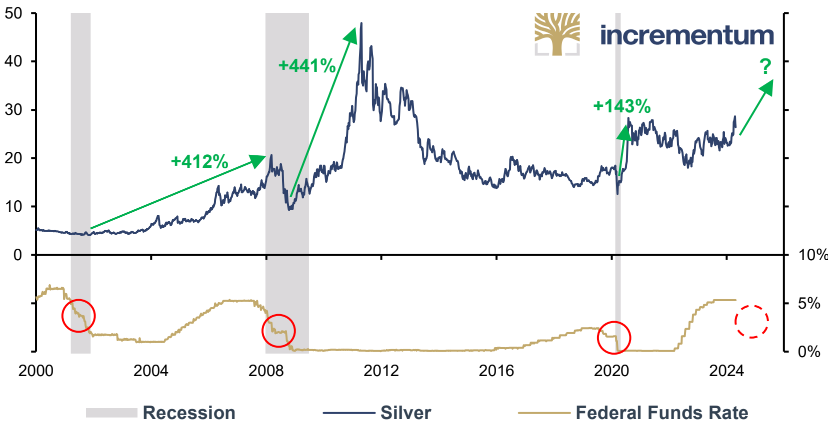
Source: SD Bullion, Reuters Eikon, Incrementum AG

Strong fundamentals will support its [silver's] price. This in large part also underpins our expectation that silver will outperform gold in the second half of 2024 and into next year.
Silver Institute

As outlined in the *In Gold We Trust* report 2023, this correlation has often brought about a delayed "silver slingshot effect" on the back of gold price increases.[105] More specifically, silver outperformed gold in 3 of the last 7 *gold* bull markets spanning from 1967–68 to 2015–2020. These were in 1976–1980, 1993–1995, and 2001–2011. However, silver went on to outperform gold in 6 of the last 7 *silver* bull markets from 1967–2021, with 1971–1974 being the only time silver's relative growth did not exceed gold's.

Admittedly, the last silver bull market, ending in early 2021 with a USD 29.42 silver price, was preceded by a substantial drop in the silver price to USD 11.77 in March 2020. This saw the gold/silver ratio balloon to a historical high of 123.4, leaving many pundits questioning silver's identity. However, the silver price returned 250% from March 2020 to February 2021, as interest rates were slashed. **This helped silver to average a 332% return over the last 3 rate cutting cycles.**

Silver (lhs), in USD, and Federal Funds Rate (rhs), 01/2000–04/2024



Source: Reuters Eikon, Incrementum AG

[105] *See* "Silver's Time to Shine?," *In Gold We Trust* report 2023.

I think silver will serve as a monetary metal for the masses.
Luke Gromen

Perhaps, then, just as gold serves as the monetary refuge for financial institutions during times of rate-cut-induced inflation, silver can also fulfil the same remit for the general population. As evidence of this, Türkiye's interest rates were cut from 19% in September 2021 to 8.5% in June 2023, as inflation soared from 19.5% in September 2021 to 85.5% in October 2022. In response, Turkish silver bullion imports almost tripled from around 400 tonnes in 2021 to 1,100 tonnes in 2023.

At the same time, the US Federal Reserve faces the prospect of rate cuts this year, which could unleash a second wave of inflation. This would come in the context of a financially challenged US consumer, who has seen the real value of their dollar erode substantially. This also comes at a time where Costco are 'reading the room', having started selling 20-coin silver eagle tubes in December 2023. Costco's "sales have been brisk for the 20-coin silver eagle tubes". Naturally, silver's accessibility, and more importantly its relative affordability versus gold, could spur retail investment demand from low- to mid-income US citizens, who may opt for silver as a means of protecting their purchasing power.

A small 18-carat (gold) earring weighing less than a gram is more than 3,000 pounds. I can't afford that as a gift anymore, so I bought a silver necklace for around 1,900.
Eman Mahmoud, Egyptian mother

In fact, this is a trend that has already extended itself in countries such as Egypt. Namely, the price of a gram of 21 carat gold rose by over 120% to 3,875 Egyptian pounds (USD 126) between this January and the last. In a country where roughly 60% of the 105 million population is estimated to be below or close to the poverty line, this has provoked some Egyptians to substitute gold for silver. Still, total silver jewellery demand took a tumble in 2023, from its decade high of 234.5 Moz in 2022. However, it is expected to rebound by 4% in 2024 and may be incentivized to do so by the extent of silver's historical undervaluation.

The relative discount of silver is evident in the research of Mike Maloney. Silver is the only metal to have not surpassed its 1980 highs in a group that includes gold, copper, lead, nickel, zinc, tin, iron, platinum, palladium and rhodium. More specifically to gold, a return to the 30:1 historical median of the gold/silver ratio would correspond to an USD 80 silver price, based on a gold price of USD 2,400.

Silver Price Matrix, in USD, Gold/Silver Ratio (x-axis), and Gold (y-axis), in USD

	120	110	100	90	80	70	60	50	40	30	20	10
2,700	23	25	27	30	34	39	45	54	68	90	135	270
2,600	22	24	26	29	33	37	43	52	65	87	130	260
2,500	21	23	25	28	31	36	42	50	63	83	125	250
2,400	20	22	24	27	30	34	40	48	60	80	120	240
2,300	19	21	23	26	29	33	38	46	58	77	115	230
2,200	18	20	22	24	28	31	37	44	55	73	110	220
2,100	18	19	21	23	26	30	35	42	53	70	105	210
2,000	17	18	20	22	25	29	33	40	50	67	100	200
1,900	16	17	19	21	24	27	32	38	48	63	95	190
1,800	15	16	18	20	23	26	30	36	45	60	90	180
1,700	14	15	17	19	21	24	28	34	43	57	85	170
1,600	13	15	16	18	20	23	27	32	40	53	80	160

Source: Incrementum AG

I've never seen a secular bull market in gold that didn't cause other metals to follow.
Tavi Costa

Importantly, whilst a return to a 70:1 gold silver ratio makes for a far more sober estimate, the 30:1 median dates back to the 1800s, and is more conservative than the 19:1 abundance of gold to silver in the earth's crust. Moreover, whilst it would be foolish to discount the possibility of a return to the 123:1 gold/silver ratio achieved in 2020, one must also be cognizant of recency bias – an ignorance of silver's historical tendency to (eventually) outperform gold.

When can their glory fade? O the wild charge they made!
Alfred Lord Tennyson

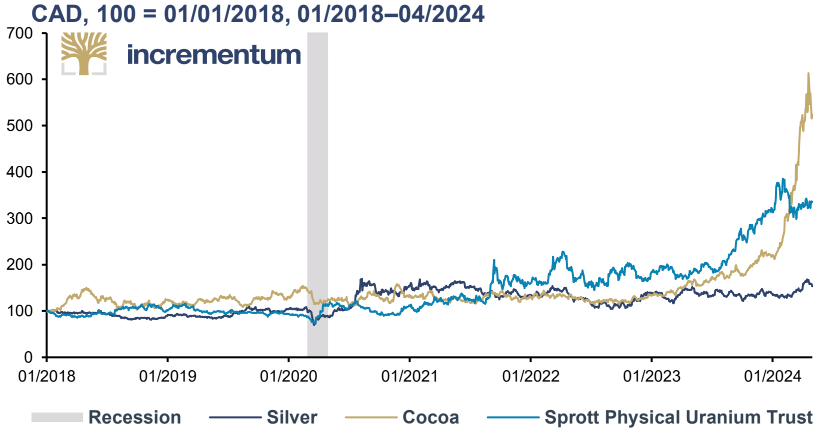
Therefore, by virtue of silver's historical relationship with gold, the silver price is not only likely to follow gold's as it charges into unchartered teritory, it also possesses an 85.7% chance of outperforming gold in a silver bull market, based on data since 1967/68. As part of this, silver's investment demand will be a fundamental contributor: **Akin to Usain Bolt's reaction to the sound of the starter's gun, it will be quick off the mark to buoy the silver price, once interest rate cuts and inflation take hold.**

Silver's Supply Shortfall

Five years ago, we became uranium bulls… the market had quietly slipped into a structural deficit, with reactor demand outstripping mine supply. Fuel buyers used so-called "secondary supplies" to fill the gap.
Goehring & Rozencwajg

All things considered, with the above drivers, silver demand will have exceeded silver supply for four consecutive years by the end of 2024. Typically, the result of a structural deficit of this kind is a higher price of the commodity in question, as is observable in the uranium and cocoa markets of late. Until recently, silver was evading the same fate, thanks to aboveground inventories meeting the demand that mined production and recycling could not satisfy. Now, however, we are starting to see the unsustainability of this solution.

Silver and Cocoa, in USD, and Sprott Physical Uranium Trust, in CAD, 100 = 01/01/2018, 01/2018–04/2024



Source: Reuters Eikon, Incrementum AG

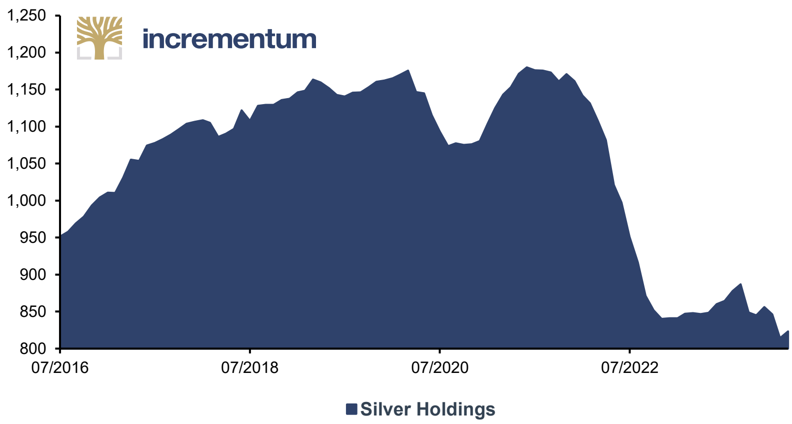
Aboveground inventories are the umbrella term for silver inventories held by futures exchanges, ETFs, and private owners. Interchangeably referred to as *secondary supply* by Peter Krauth, aboveground inventories, in their full form, are virtually impossible to quantify. This is due to the tendency of private owners to refrain from publicly declaring their silver holdings, which only become visible once they reappear via recycling or on the inventories held by exchanges.

While the silver market is currently in a structural deficit, above-ground stocks of silver will be mobilized to meet the demand.
Phillips Baker
CEO of Hecla, Chairman of the Silver Institute

Despite this, what is visible is the decrease in silver inventories held on futures markets since early 2021: At the COMEX, silver inventories peaked at just under 400 Moz in January 2021, and have since fallen by nearly 30% to 291 Moz as of April 15. Importantly, registered silver inventories, which refers to silver that is actually available for delivery, have also fallen from 150 Moz in early 2021 to 46.7 Moz as of April 15, showing that silver is becoming increasingly difficult to obtain.

Meanwhile, silver inventories on the Shanghai Futures Exchange tell a similar story, having reached a high of just under 3,100 tonnes (99.7 Moz) in January 2021, before plummeting 68% to 993.6 tonnes (31.9 Moz) as of April 16. As with the COMEX, registered inventories on the Shanghai Gold Exchange fell from 167 Moz in mid-2020 to 45 Moz as of January. **Notwithstanding this, the LBMA is the most significant factor in a potential silver squeeze.**

LBMA London Vault Silver Holdings, in moz, 07/2016–03/2024



Source: LBMA, Incrementum AG

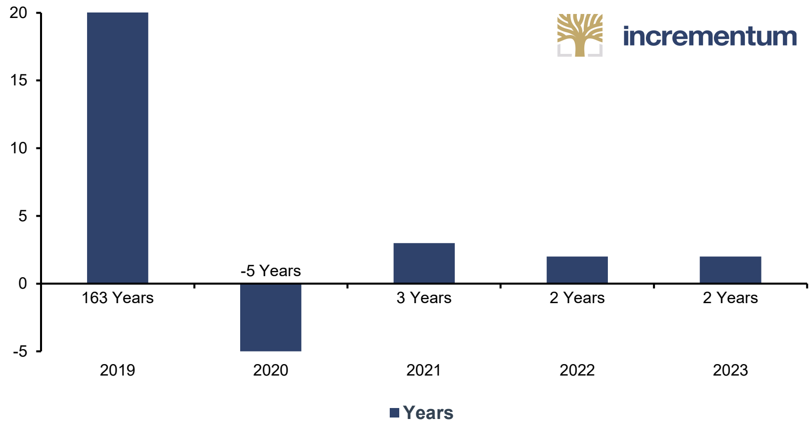
All it takes is for one big consumer to say… 'I want my silver.' And for the exchange to say, 'oops, sorry, we're out of silver'.
Peter Krauth

Accounting for around 75% of silver inventories within the largest global trading venues, LBMA silver inventories peaked at 1,180 Moz in June 2021 and have since fallen some 30% to 823 Moz as of March 31, 2024. However, just as with registered inventories at the COMEX and SFE, this number fails to wholly represent the silver that is available for delivery. Instead, the LBMA silver inventories figure is around 260% more than what TD Securities posit as a "free float" of just 311 Moz of silver.[106]

As part of their reasoning, TD Securities claim that "Headline LBMA inventories overstate the amount of silver that is freely available for purchase", since it "includes bullion held by UK-vaulted ETFs, which they estimate at close to 500 Moz of the LBMA's total silver inventories. As per these assumptions, TD Securities notes that the LBMA *free float* of silver would be depleted in the space of 2 years, based on the current pace of silver demand growth at a 3yr CAGR.

[106] *See* TD Securities: "Market Musings", April 2, 2024

Years to Free-Float Depletion from Total Demand Growth, 2019–2023



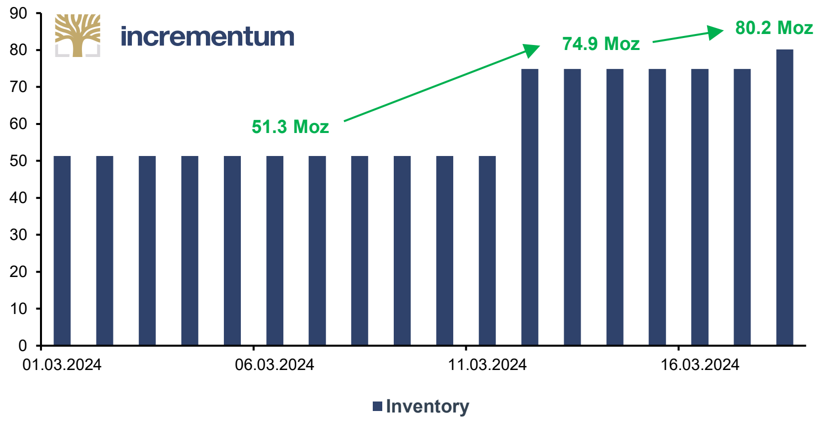
Source: TD Securities, WSS, Metals Focus, LBMA, Incrementum AG

Stockpiles are finite... eventually this draw-down will create tight physical market conditions and ultimately fuel price rallies.
Silver Institute

Shockingly, 163 years of demand growth would have been required to deplete the LBMA free float in 2019. However, as the combined 2021 and 2022 deficits more than offset the cumulative surpluses of the past 11 years, silver is unprecedentedly scarce in 2024.

Almost certainly, this level of buying activity, if realised, would reverberate across the Atlantic, where the largest silver ETF, SLV, has already bled almost 40% of its silver inventories since peaking in 2021 at around 670 Moz. Until February, the price of SLV had remained unperturbed in the face of falling inventories. However, a sharp increase in the SLV price can be observed over the last 2 months, at a time when other ETFs are also restocking inventories.

Wisdom Tree Silver ETF Inventory, in Moz, 03/01/2024–03/18/2024



Source: Reuters Eikon, Incrementum AG

As the liquidity buffer is ground lower, the risk of a substantial spike in silver prices appears severely underpriced. This is an extreme upside convexity trade.
TD Securities

So long as the silver is available to replenish inventories, a price squeeze can be avoided. However, as exchanges have been drained yet continue to be relied upon to plug the gap in the supply deficit, a scenario could arise where exchanges are unable to source the silver required to satiate deliveries. In this event, it may only take one of the notoriously resolute SLV investors to stand for delivery, at which point silver prices and premiums would increase, perhaps dramatically, as the news of insufficient physical silver transmits itself across the market.

The low silver price right now depresses the biggest source of silver production, which is recycling… at $24-$25 silver, the value of the money recovered in recycling operations is not enough to justify the recycling.
Rick Rule

Of course, this is unless the unknown quantity of privately held silver can be lured out of the opaque hole in which it lives. Although, the prisoner's dilemma here is that private holders may only part with their silver if a higher silver price provides the incentive. Incidentally, the same applies to recycling, which despite rising marginally by 1% in 2023, is expected to remain flat in 2024 at 178.9 Moz, and is therefore unlikely to close the deficit until a higher reward for recycling transpires.

As a result, the only remaining solution to increase supply and keep higher silver prices at bay would be an immediate increase in mine production. There are some 'shovel-ready' projects that will contribute to domestic increases in silver mine production in 2024. For example, the US is forecasted to increase 3.5 Moz yoy as Coeur Mining's Rochester expansion accelerates, and as Hecla's Lucky Friday recovers after last year's temporary closure. Meanwhile, Mexico is expected to recover 5.6 Moz since last year, as Newmont's Peñasquito mine returns to optimal production after last year's strike action; and Morrocco should also see a yoy increase of 5.5 Moz, as Aya Gold and Silver's Zgounder mine comes on-stream.

Still, an expected 17.9 Moz decrease in Peruvian silver mine production for 2024, derived from hold-ups at the projects of Hochschild Mining and Buenaventura, is set to obviate the above increases, resulting in a forecasted 0.8% year-on-year decrease in global silver mine production to 832.5 Moz in 2024. **This is set to fall short of total demand, manifesting a 2024 silver supply deficit of 215.3 Moz – approximately 17% more than 2023's 184.3 Moz deficit.**

Therefore, as a widening deficit further erodes secondary supply in 2024, the increasing scarcity of silver will demand an increasingly higher price. This stands to eventually reverse the chronic capex shortages that have plagued primary silver miners, as profit margins become more attractive than in previous years. For context, the AISCs of ten leading silver miners are forecasted to average USD 18.89 from 2022–2024,[107] during which the silver price will average USD 23.10 on annual basis.

I don't think of an investment in silver mines with the current prices. I'm always considering what would this project look like at USD 50 an ounce or triple digits?
Tavi Costa

Going forward, however, Bank of America forecasts a USD 30 silver price by this time next year. This will be accompanied by a decrease in AISCs to an average of USD 16.69, offering far more incentive for capital to pour into primary silver miners, who account for 27.8% of total silver mine production. This would also come at a time when they are already historically undervalued, as evidenced by the divergence between the silver price and the major silver miners ETF, SIL.

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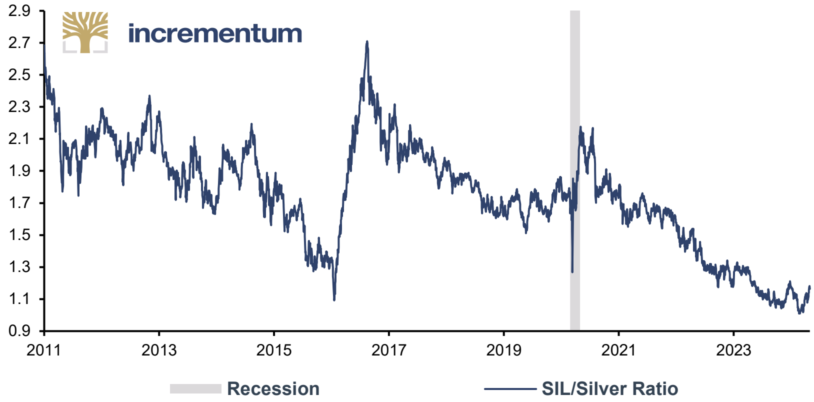
107 BMO Capital Markets: „The SilverPages", April 2, 2024, p. 6

SIL/Silver Ratio, 01/2011–04/2024



Source: Reuters Eikon, Incrementum AG

Conclusion

In summary, the conditions for a materially higher silver price are strengthening with each year of supply deficit that goes by. Thanks largely to industrial demand derived from solar PV, and an expected gold-linked monetary demand from persistent inflation, we expect that a continued depletion of secondary supply will make it hard to meet silver demand in the years to come.

All of my best investment ideas are things nobody can stop, everybody needs and nobody understands.
Michael Saylor

Frankly, this unsustainable trajectory will be characterized by demands of higher silver prices from recyclers and private holders, until mine production rises sufficiently to close the supply deficit. Although, as we mentioned in the *In Gold We Trust* report 2023,[108] mining project development lead times for silver average 15 years. **Therefore, *higher silver prices for longer* is the likely outcome here.**

I believe that the remaining recorded silver inventories are owned by investors which are not inclined to sell their holdings until silver prices are sharply higher.
Ted Butler

Importantly, several variables could either prevent or delay this scenario. For one, a global recession could see silver demand fall to the extent where a supply deficit becomes a surplus and aboveground inventories are not needed. However, total silver demand is expected to rebound by 2% in 2024, and even if that recessionary scenario did arise, accompanying decreases in mine production, and thus supply, would likely result in the maintenance of a deficit.

On this basis, the demand side is unlikely to be the principal obstruction to rises in the silver price. Instead, the factors standing in the way of a higher silver price would be a rise in silver recycling, a near-term increase in silver mine production, or the sale of privately held silver to replenish inventories on exchanges. Yet, much to the dismay of silver bears, the incentive of higher silver prices will be an unavoidable prerequisite for all 3 of these supply-side phenomena to materialize.

Silver is the new uranium.
Mark Valek

As a result, we are bullish on silver and silver miners for 2024 and beyond, both as a uranium-esque supply-deficit play and as a high-beta play on gold.

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108 *See* "Capex Comeback: A Raging Bull Market for Commodities Beckons," *In Gold We Trust* report 2023.

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The Valuation and Beta of the Gold Mining Industry

More gold has been mined from the thoughts of men than has been taken from the earth.

Napoleon Hill

- Although the gold price is naturally one of the most important factors affecting share prices of gold mining stocks, the relationship is unstable and the gold price is not a reliable predictor of gold mining stock prices.
- Production costs seem to be the main problem, as they tend to rise along with the gold price, preventing the increased value of the yellow metal from being fully transformed into better financial results for the gold miners.
- Beta values confirm that gold mining stocks behave like gold on steroids. Unfortunately, this applies in good and, even more, in bad times, resulting in their underperformance in the long term.
- Out of the investigated valuation metrics, the price-to-sales ratio and the debt-to-equity ratio tend to reflect the prevailing setting of the gold market the best, although they are not perfect.

Everything has its limit; iron cannot be educated into gold.
Mark Twain

The real world is not a fairy tale where one simply needs to wait for the magic goose to lay a golden egg. In the real world, a gold deposit needs to be found and extracted before the golden metal can be used for production of coins, bars, jewelry, etc. The hard, complex, and often dangerous work of discovering gold deposits, building mines, and extracting the precious metal from the Earth's crust is the mission of gold mining companies. The vast majority of them take the form of publicly traded companies, which offers investors around the world an option in gaining exposure to gold.

Success comes to those who have an entire mountain of gold that they continually mine, not those who find one nugget and try to live on it for fifty years.
John C. Maxwell

Gold mining stock price movements are dependent on numerous factors, but the main one is the gold price. Naturally, the higher the price, the more profit should be generated by the gold mining companies and the higher their stock prices should grow. Unless there is a major stock market decline, in which case the negative sentiment may weigh also on the stock prices of gold mining companies, regardless of gold price performance. In the pages below, we will take a closer look at the relationships among the gold mining industry, the gold price, and the broader stock market, under different gold market regimes.

What the Betas Show

The beta coefficient is one of the most popular tools for measuring the relationship between two financial assets. It is the key element of Sharpe's Capital Asset Pricing Model (CAPM), as it measures market risk. It shows to what extent the stock price moves with a benchmark asset. If the beta coefficient is higher than 1, the stock is rising or falling more strongly than the benchmark rises/falls. If it equals 1, the movements are equal. And if the beta coefficient is lower than 1, the stock is behaving defensively, recording smaller price movements than its benchmark.

Remember, benchmark performance - beta - can be had for virtually free; alpha is what active managers are paid to generate.
Paul McCulley

In the case of gold mining stocks, it is reasonable to compare stock price movements not only to the stock market benchmark, but also to the gold price alone. Here, we represent the gold mining stocks by two popular ETFs, the VanEck Gold Miners ETF (GDX) and the VanEck Junior Gold Miners ETF (GDXJ). While GDX focuses on gold mining majors, GDXJ is focused on mid-sized and small gold miners, developers, and explorers. Gold itself is represented by the SPDR Gold Shares ETF (GLD), the biggest ETF investing in physical gold.

The next chart shows the share price performance of GLD since May 22, 2006, when GDX was established, until the end of 2023. GLD's price started at USD 65.30 and ended at USD 191.17. However, it was not a nice rosy growth path the whole time. Over the first five years, despite the global financial crisis, there was a more or less direct path towards the all-time highs. However, then the gold price declined notably, and it took nearly a decade before the record highs were broken.

GLD, 01/2006–12/2023

Source: Reuters Eikon, Incrementum AG

There will always be bull markets followed by bear markets followed by bull markets.
John Templeton

The 17-year+ period can be divided into several bull and bear markets, following the generally accepted condition that a 20% hurdle needs to be overcome. In other words, the price needs to rise by 20% for the bull market to be declared or fall by 20% for a bear market to be declared. As shown in the table, four bull markets and three bear markets occurred over the period. In March 2024, the latest bull market is still underway, with the gold price reaching numerous new all-time highs.

GLD and GDX Performance and Beta

Date	GLD	GDX	Beta (GDX-GLD)
05/22/2006–03/17/2008	51.87%	47.65%	1.43
03/18/2008–11/12/2008	-29.41%	-64.71%	1.45
11/13/2008–09/02/2011	161.77%	234.59%	1.82
09/03/2011–12/17/2015	-45.15%	-79.45%	1.75
12/18/2015–08/06/2020	92.93%	231.56%	2.24
08/07/2020–10/20/2022	-21.89%	-47.59%	1.83
10/21/2022–12/29/2023	26.23%	33.78%	1.96

Source: Reuters Eikon, Incrementum AG

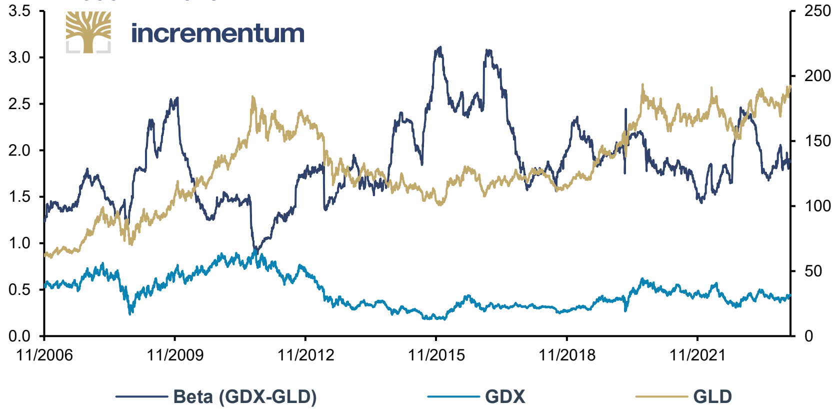
As shown in the table above, in line with expectations, GDX's beta coefficient in relation to GLD was notably higher than 1 during all the gold market phases. Thus, according to expectations, gold shares were a more aggressive investment than gold itself.

You've got to know when to hold'em, know when to fold'em, know when to walk away, know when to run'.
Kenny Rogers, The Gambler

When taking a look at the value of the beta coefficients during different gold bull and bear markets, there is no clear pattern. In general, the beta tends to be slightly higher during bull markets, but the differences are only negligible. However, the data does show two noteworthy bits of information. It looks like the gold mining stocks started to behave differently after the global financial crisis, as betas increased from the 1.45 range to values above 1.75. And during the 2015–2020 gold bull market, the beta jumped to 2.24, which is a value significantly higher than during the other observed subperiods. This means that compared to the gold price, the volatility, and therefore also the **riskiness**, of the gold miners has kept on growing.

As can be seen, the beta values differed quite notably during various investigated subperiods. The next chart helps to better track the changes in the beta coefficients. It captures 120-day moving beta values of GDX in relation to GLD. The 120-day rolling window was selected because it represents approximately one half of a calendar year. It is a time period long enough to deliver some more meaningful results and short enough to also reflect short-term changes in market behaviour.

120D Beta (GDX-GLD) (lhs), and GDX & GLD (rhs), in USD, 11/2006–12/2023



Source: Reuters Eikon, Incrementum AG

Good times, bad times, you know I've had my share.
Led Zeppelin

As shown in the chart above, for the majority of the time, GDX's beta coefficient relative to GLD remains well above 1, meaning that the gold stocks have some leverage to the gold price. During good times, gold miners tend to outperform gold, and during the bad times they usually underperform it. However, the extent of over/underperformance varies, as shown by the instability of the beta coefficient values.

While GDX is focused on gold mining majors, GDXJ is focused on smaller gold producers, as well as mine developers and explorers. Due to the nature and risk profile of the companies, the price of GDXJ tends to be more volatile than that of GDX. This is confirmed by the next table, as during all of the investigated subperiods, GDXJ's beta coefficient relative to GLD reached higher values than GDX's.

GLD and GDXJ Performance and Beta

Date	GLD	GDXJ	Beta (GDXJ-GLD)
11/11/2009–09/02/2011	67.19%	50.47%	1.64
09/03/2011–12/17/2015	-45.15%	-87.73%	2.18
12/18/2015–08/06/2020	92.93%	238.64%	2.65
08/07/2020–10/20/2022	-21.89%	-55.68%	2.14
10/21/2022–12/29/2023	26.23%	34.43%	2.15

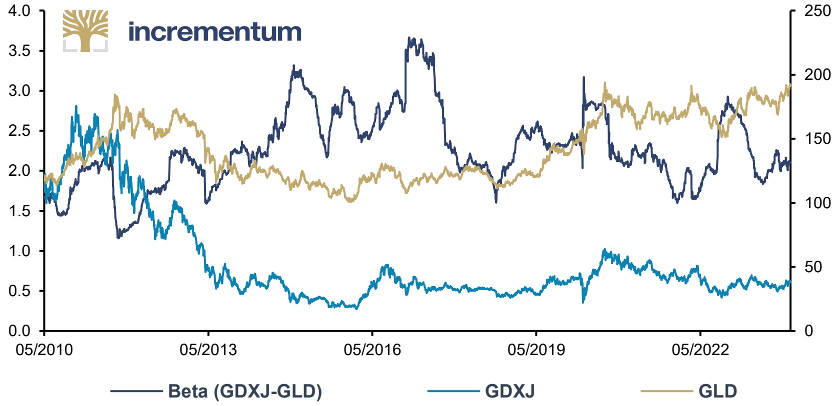
Source: Reuters Eikon, Incrementum AG

It is precisely those who disagree most with the hypothesis of efficient market pricing of stocks, those who pooh-pooh beta analysis and all that, who are least able to understand the analysis needed to test that hypothesis.
Paul Samuelson

There are only five subperiods, compared to seven subperiods for GDX, because GDXJ was established three years after GDX, in 2009. During the first tracked subperiod, the bull market following the global financial crisis, GDXJ's beta coefficient relative to GLD amounted to 1.64. Over all the remaining subperiods, the beta values exceeded 2. This is similar to GDX, where after the global financial crisis, the beta values also increased. The highest beta value is related to the gold bull market that started in late 2015 and escalated in the summer of 2020. During this period, the GLD share price grew by nearly 93%, while the GDXJ share price grew by nearly 239%. The beta value for this bull market was 2.65. During the subsequent bear market and the current bull market, the beta value has remained around 2.15.

The next chart captures the development of the 120-day moving beta coefficients of GDXJ relative to GLD. The pattern is similar to GDX's; however, GDXJ's beta didn't dip below the value of 1. The beta subsequently started to grow. But unlike GDX's, it crossed the value of 3 in late 2014, when the gold bear market was still underway. GDX got to this value only a year later, with the onset of a new bull market. At this time, in late 2015, GDXJ's beta returned back to 3, too. However, its next peak didn't come until the level of 3.5 was attained. During this period, between 2014 and 2017, a notable difference between GDX and GDXJ can be seen. GDXJ's beta coefficient was clearly more volatile. The same applies for the remainder of the observed time period, when GDXJ's beta moved in a range between 1.5 and 3. The value of 3 was briefly exceeded only in March 2020, during the Covid-19 pandemic outbreak.

120D Beta (GDXJ-GLD) (lhs), and GDXJ & GLD (rhs), in USD, 05/2010–12/2023



Source: Reuters Eikon, Incrementum AG

Leverage is the reason some people become rich and others do not become rich.
Robert Kiyosaki

As with GDX, GDXJ's beta coefficient relative to GLD proves that the gold mining stock prices have leverage to the gold price itself. In the case of GDXJ, the leverage tends to be even stronger, as the beta value never dipped below 1, grew to over 3 several times, and once even topped 3.5. And for the majority of the time its value was over 2. Also in the case of GDXJ, the beta values are instable. Unfortunately, they were highest when the gold price was declining or relatively stagnant. As a result, GDXJ underperformed GLD heavily during the 2010–2023 period.

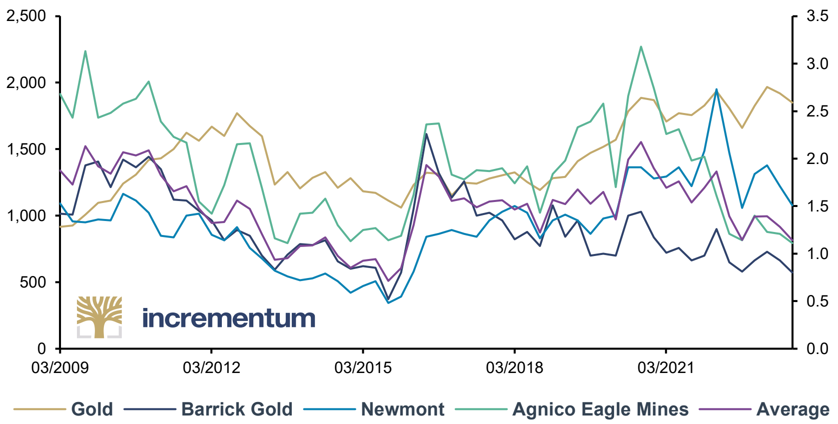
The Evolution of Selected Valuation Metrics

To evaluate the financial performance of the gold mining companies in relation to their share prices, numerous valuation metrics can be used. It is reasonable to expect that these metrics, or at least their "normal" levels, are affected by the phase of the gold market cycle. In this section, the quarterly values of some of the basic valuation metrics are presented. Due to limited data availability, the gold mining industry is represented not by GDX or GDXJ but by three major gold producers, Barrick Gold, Newmont, and Agnico Eagle Mines. The examined valuation metrics include the price-to-book ratio (P/B), the price-to-earnings ratio (P/E), the price-to-sales ratio (P/S), the debt-to-equity ratio (D/E). The investigated time period spans from Q1/2009 to Q3/2023.

Price is what you pay, value is what you get.
Warren Buffet

The price-to-book value ratio is one of the most basic and frequently used financial indicators. It measures the market value of the company in relation to its book value. The lower the ratio, the cheaper is the company. However, for different market segments, the "normal" or "typical" P/B ratios vary quite significantly. For the mining industry, the value usually moves slightly above 1. As shown in the next chart, over the investigated time period, the average P/B ratio for the three top gold producers moved in a range between 0.71 and 2.07.

Gold (lhs), in USD, and P/B Ratio (rhs), in USD, 03/2009–09/2023



Source: MacroTrends, Reuters Eikon, Incrementum AG

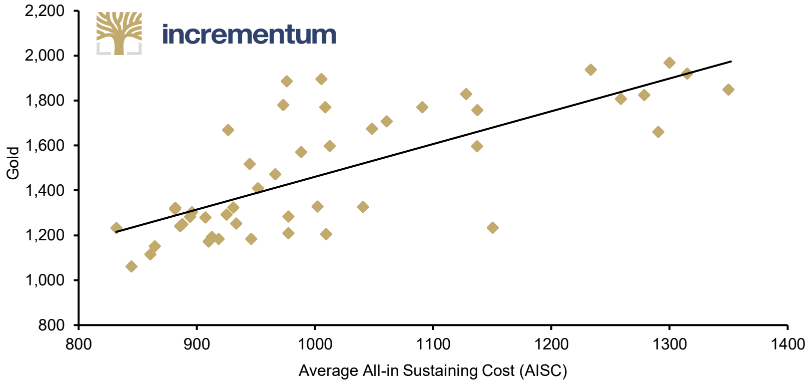
I have always worried about things more than I should.
Rowan Atkinson

What is interesting is that during the 2009–2011 bull market, the ratio declined from approximately 2 to about 1.5. This means that despite gold reaching new all-time highs, the market value of the gold miners was growing slower than their book value. This may mean that investors were afraid that the gold price would go back down, or they felt worried about the ability of the companies to convert the increased gold prices into higher earnings. The decline in the P/B ratios lasted until Q3/2015, when the abovementioned low at 0.71 was reached. Then, with the onset of a new gold bull market, over the next 3 quarters the average P/B ratio rose to 1.93. It subsequently returned to the 1.5 area and briefly shot back up over 2 when the gold price reached new all-time highs in Q3/2020, but since then it has been falling.

As of the Q3/2023, it stood at 1.14. The explanation is similar to that for 2011. Some investors may be worried about the sustainability of the current gold prices;

however, an even more important factor is probably inflationary pressure, because of growing production costs, the record-high gold prices did not lead to record-high profits. This is shown in the next chart, which captures the relationship between All-in Sustaining Costs (AISC) and the price of gold.

Average All-in Sustaining Cost (AISC) (x-axis), in USD, and Gold (y-axis), in USD, Q1/2012–Q3/2023



Source: Metals Focus Gold Mine Cost Service, World Gold Council, Incrementum AG

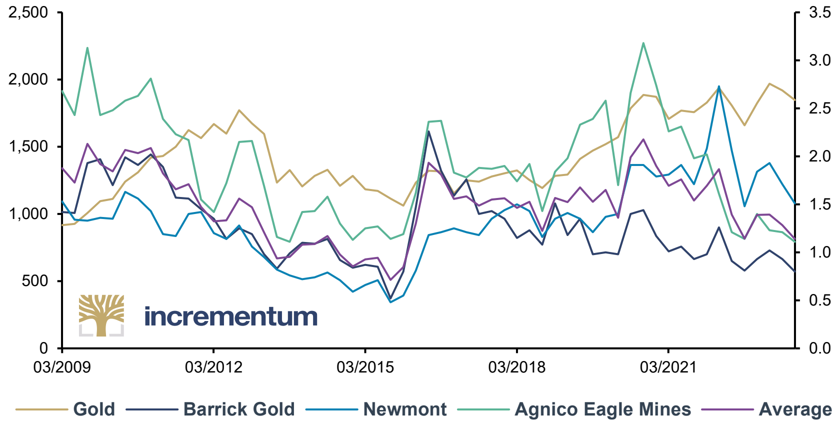
All wars are follies, very expensive and very mischievous ones.
Benjamin Franklin

With rising gold prices, production costs almost always rise, too. There are several explanations for this relationship. First of all, a portion of the costs is directly related to the gold price. For example, there are various royalties and production taxes. Moreover, at higher gold prices, the miners are motivated to reopen higher-cost operations and extract less-economic portions of the deposits. Also, the number of newly built mines, with their high production costs, tends to increase along with the gold price. And it is important to mention that gold prices are often driven by external factors that also drive up the production costs. For example, the war in Ukraine is a major political risk factor that provides support to the gold price as a safe-haven asset. At the same time, the conflict and related sanctions against Russia have resulted in higher energy costs, which pushes gold production costs higher as well.

Earnings can be pliable as putty when a charlatan heads the company reporting them.
Warren Buffett

In the next chart, price-to-earnings ratios reveal a distinctly wilder picture. Although P/E is one of the best-known financial metrics, its information value is often questionable. The ratio compares the market value of a company in relation to its net income. And companies often try to artificially limit their reported net income in order to minimise their tax burden. As a result, P/E ratios can display wild swings, especially in an industry such as mining, which is known for relatively frequent and large impairment charges.

Gold (lhs), in USD, and P/E Ratio (rhs), in USD, 03/2009–09/2023

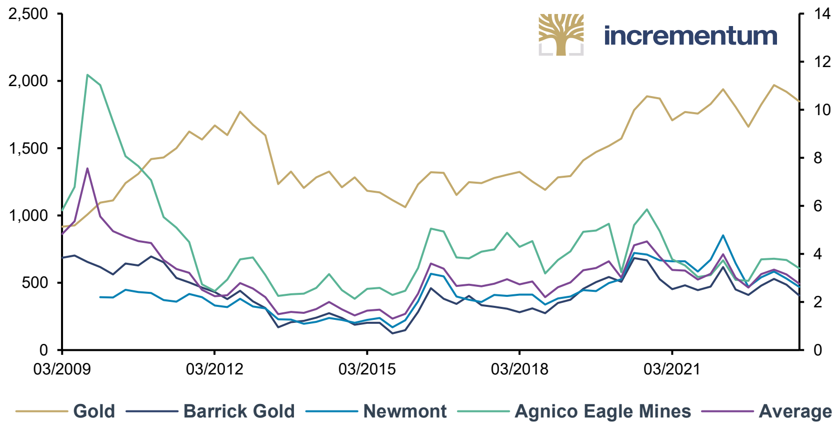


Source: MacroTrends, Reuters Eikon, Incrementum AG

I am not naive enough to settle for anything less than a reasonable valuation of my worth.
Roy Keane

The price-to-sales ratio is a much more reasonable and stable measurement than the price-to-earnings ratio, as the mining companies usually don't have much motivation to "play" with their sales numbers. That relative stability is captured in the next chart. Although the P/S ratios of the three companies, as well as the average value of this indicator, have changed quite notably over time, the changes are usually fluid. The highest average value, 7.56, was recorded Q3 2009, and it is attributable to Agnico Eagle Mines having had a three times higher P/S ratio than Barrick Gold or Newmont. As shown also by the comparison of P/B ratios and P/E ratios, Agnico Eagle Mines usually commands higher valuations than Barrick and Newmont, especially due to the fact that the majority of its operations are situated in safe jurisdictions such as Canada and Finland. However, its 2009 and 2010 P/S values were a real extreme. For the majority of the time, the three companies' average P/S ratios have moved in the 1.5–3.5 range, with several trips to the level of 4.

Gold (lhs), in USD, and P/S Ratio (rhs), in USD, 03/2009–09/2023



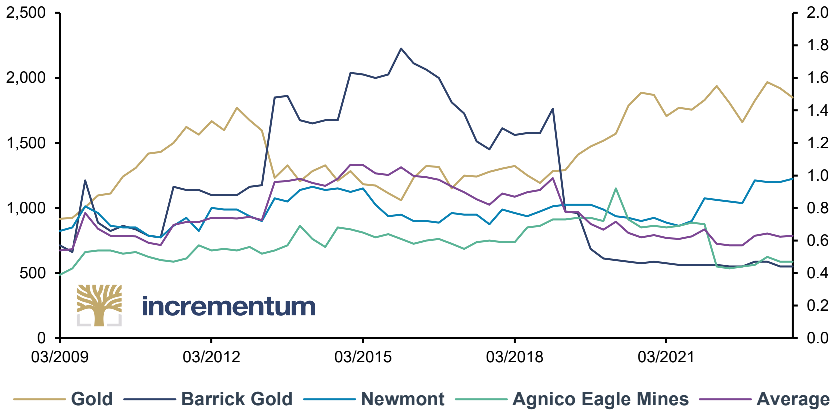
Source: MacroTrends, Reuters Eikon, Incrementum AG

In general, the shape of the P/S ratio curve is similar to that of the P/B ratio curve, but the P/S curve is more stable, and the changes are less steep. Like the average P/B ratio, the average P/S ratio started declining long before the 2011 peak in gold prices, and the decline lasted until Q3/2015, when the values started going back up, pushed by the revived gold bull market. Since then, the average P/S ratio has been moving above 2, and most of the time close to 3; and although it declined towards the end of the tracked time period, the decline hasn't been as significant as in the case of the average P/B ratio.

Some debts are fun when you are acquiring them, but none are fun when you set about retiring them.
Ogden Nash

Another important financial metric is the debt-to-equity ratio. It compares the total liabilities of a company in relation to shareholder equity. The higher the ratio, the more indebted the company is, and the more seriously the risk of bankruptcy should be taken. In theory, the D/E ratio should decline during gold bull markets, as the gold miners should generate more cash flow that can be used for debt repayment. Cash flow may also replace debt as the source for funding of further growth of the company. The next chart confirms that this assumption is to some extent valid. The average D/E ratio remained relatively stable in the 0.6–0.7 area during the 2009–2011 gold bull market, and it grew to nearly 1.1 during the subsequent bear market. Then, starting in 2016, as the gold bull returned, the ratio started going back down to a Q3/2022 value of 0.57. In Q3/2023, the value was very similar, standing at 0.63.

Gold (lhs), in USD, and Debt to Equity Ratio (rhs), in USD, 03/2009–09/2023



Source: MacroTrends, Reuters Eikon, Incrementum AG

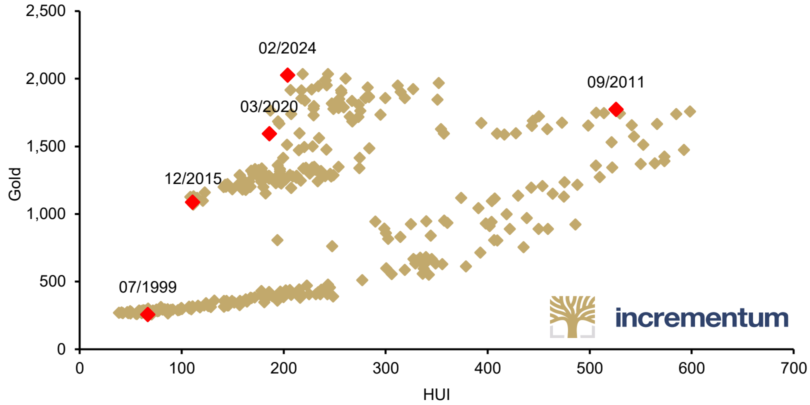
Conclusion

Genius is the gold in the mine, talent is the miner who works and brings it out.
Marguerite Gardiner

Although the gold price is one of the main factors affecting the share prices of gold mining companies, this relationship is instable and various valuation metrics often fail to reflect the actual gold market regime. The chart below shows the relationship between monthly average prices of gold (3 PM London Fixing), and the NYSE Arca Gold Bugs Index (HUI) between June 1996 and February 2024. As can be seen, although the average monthly gold price crossed the USD 2,000 in December 2023, January 2024, and February 2024, the HUI remains far closer to its all-time lows than to its all-time highs. It is only slightly higher than its March 2020 Covid-19 panic lows, and only approximately 100–150% higher than it was during the December 2015 and July 1999 gold market lows, when the monthly gold price equaled on average only USD 1,068 and USD 257 respectively. In September 2011, when the gold price set new record highs in the USD 1,900 area and the monthly average amounted to

USD 1,771, the HUI was over 526 points, which was nearly 160% higher than its level in February 2024.

HUI (x-axis), and Gold (y-axis), in USD, 07/1996–02/2024



Source: Reuters Eikon, Incrementum AG

We didn't have steroids. If I wanted to get pumped up, I drank a case of beer.
Art Donovan

However, although the gold price is not a reliable predictor of gold mining stock prices, several tendencies can be identified over the most recent 15 years. In the case of beta values, the assumption that gold mining stocks have a leverage to the gold price itself has been confirmed. For the majority of the investigated time period, the beta values for GDX and GDXJ were well above 1, meaning that the gold mining stocks behaved like gold on steroids. Unfortunately, they were on steroids not only during the good times but also during the bad ones. Therefore, as a group they underperformed the yellow precious metal notably.

Gold miners, arguably the most hated industry in today's markets, are also at their most undervalued state in 40 years based on their price-to-net-asset-value ratio… I call this the perfect storm.
Tavi Costa

Another finding is that the price-to-book value ratios of gold miners do not reflect the prevailing nature of the gold market. The ratios kept on declining during bull markets. **The price-to-earnings ratios proved their unstable nature. On the other hand, price-to-sales ratios turn out to be more useful, due to their stability.** The curve of the average P/S ratio is very similar to that of the average price-to-book value ratio; however, the price-to-sales ratio values have been less volatile. However, just like the price-to-book value ratios, they tend to ignore the gold market phase.

And finally, there is the debt-to-equity ratio. This one has been the most sensitive to the gold market regime. In line with expectations, its value increased during the long bear market and started coming back down after 2015, when the new gold bull market arrived. At present, the value of the ratio is close to its 15-year lows.

To sum it up, it is possible to conclude that while the gold price is certainly an important factor affecting share prices of gold mining companies, it is not the only factor. There are other important variables such as inflationary pressures and broader stock market sentiment. **These factors are the most probable reasons for the valuation metrics often failing to behave in line with gold market development.**


Focused on unlocking the full potential of our assets
We are focused on growing our gold reserves and production in mining-friendly jurisdictions that offer rich geological potential and where we have built a competitive advantage. We add value through our exploration and mine-building expertise, and we are well positioned to continue building on our existing assets and pipeline of high-quality projects.
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IGWT Report

Asteroid Mining and Deep-Sea Mining

Science Fiction or the Next Wave of Innovation in the Mining Space?

Innovation opportunities do not come with the tempest but with the rustling of the breeze.

Peter Drucker

- **Deep-sea mining's potential is vast, with 1,140 trillion dry tons (USD 200trn) of subsea mineral deposits presently available for extraction, according to the USGS.**
- **Pending the resolution of environmental and bureaucratic obstructions, deep sea mining could become commercially viable as soon as 2030, driven by demand for critical minerals.**
- **In 2023, asteroid mining made pioneering strides, after NASA's OSIRIS-Rex mission returned with dirt samples, and its mission to asteroid 16 Psyche was embarked upon.**
- **When asteroid mining does become commercially viable, water and ice will be the priority, with gold potentially taking on an industrial role, as part of the "lunar economy".**

I look at every business and ask: How long can this last? How can I identify the status quo and change it?
Sheldon Adelson

For the entirety of mankind's existence, the overwhelming majority of natural resource extraction has been confined to the parameters of terrestrial mining. However, with scientific developments ushering in the advent of ground-breaking practices such as asteroid mining and deep-sea mining, this status quo could be on the verge of being disrupted.

Naturally, as this new frontier of mining awaits, a barrage of questions have emerged. These pertain to feasibility, namely, whether the practices of deep-sea and asteroid mining can be profitable, or indeed, inclusive of ESG practices. Provided these hurdles can be overcome, there are further questions regarding when exactly material impacts would be dealt to the gold supply, and by extension, what implications this would have for the price of one's gold holdings.

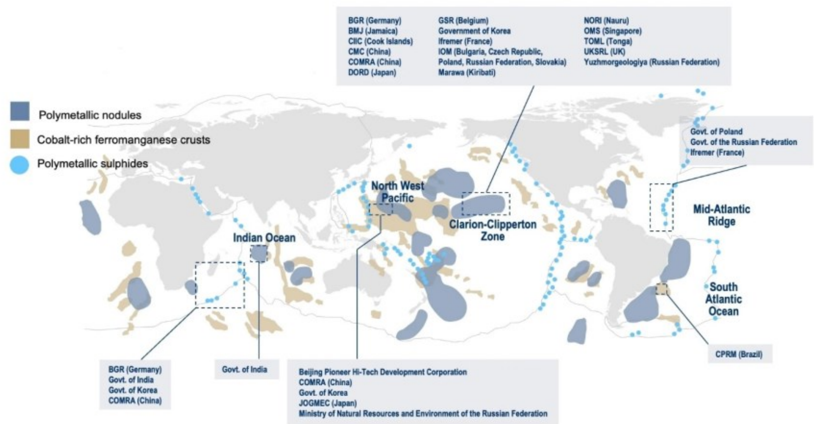
Well then, how are we gonna do that unless we give it a shot and hope for the best?
Dory, *Finding Nemo*

In order to get to the bottom of these questions, the following chapter will consider various perspectives from both industry and academia. This will encompass the thoughts of major miners, as well as hear directly from the horse's mouth in the form of asteroid and deep-sea mining company CEOs themselves. In doing so, the chapter will extract what these newly gleaned insights mean for the gold price, first and foremost, but also more broadly what the implications are for industrial metals such as nickel, cobalt, and PGMs.

Deep Sea Mining

A pessimist sees the difficulty in every opportunity; an optimist sees the opportunity in every difficulty.
Winston Churchill

The US Geological Survey (USGS) estimates that there are as much as 1,140 trillion dry tonnes of subsea mineral deposits presently available for extraction. Based on conservative estimates, this dwarfs terrestrial resources by a factor of 11 and amounts to a staggering value of at least USD 200trn.[109] Evidently, whilst not yet tapped into, the scale of the deep-sea mining opportunity is unrivalled. In addition, the distribution of resources across the world's oceans is relatively broad-based.



Source: www.deepseamining.ac

As for the geological constitution of the deep-sea deposits, the World Ocean Review categorises three main types. Firstly, there are polymetallic nodules, which

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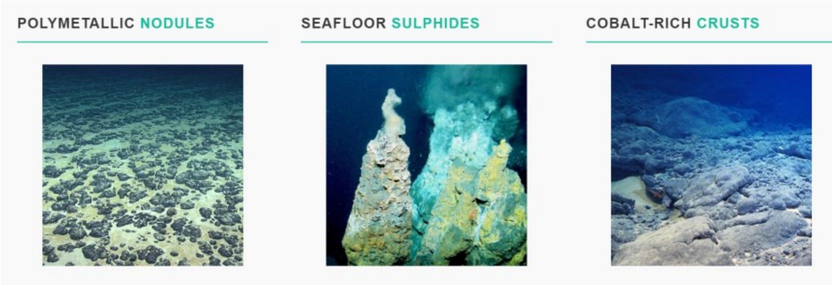
[109] Mizell, K. et. al.: "Estimates of Metals Contained in Abyssal Manganese Nodules and Ferromanganese Crusts in the Global Ocean Based on Regional Variations and Genetic Types of Nodules", in: Sharma, R. (ed.): *Perspectives on Deep-Sea Mining*, Springer, 2000, p. 54

are potato-shaped lumps that form on the deep abyssal plains of oceans and are high in quantities of manganese, nickel, copper, and cobalt. Secondly, there are cobalt-rich crusts: Formed by minerals precipitating out onto seamounts, these are mostly comprised of copper, nickel, manganese, and platinum. Thirdly, there are seabed massive sulphides. These are accumulations of minerals caused by geothermal activity, which are typically made up of copper, zinc, silver, and most relevantly, gold.



Source: www.deepseamining.ac

Geologists are never at a loss for paperweights.
Bill Bryson

With all of this considered, it is important to note that deep-sea resource extraction is not a new process. Geologists have been aware of subsea minerals since 1873, and as oil and gas moved offshore in the late 1960s, so too did the mining industry.

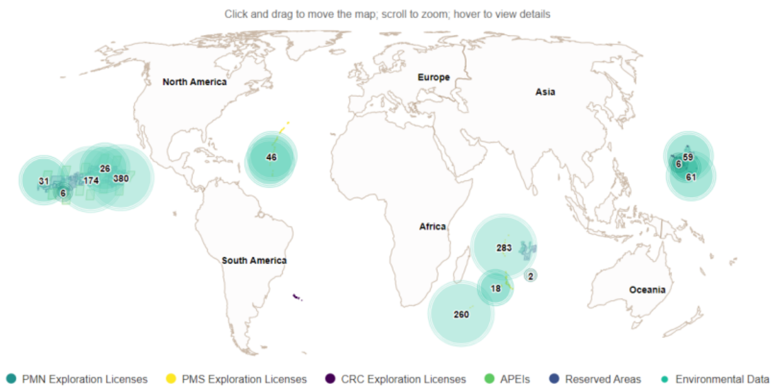
It takes repeated attempts, endless demonstrations, monotonous rehearsals before innovation can be accepted and internalized… This requires courageous patience.
Warren Bennis

Four offshore mining consortia formed in the early 1970s, including the Kennecott Consortium (Kennecott, Noranda, Consolidated Gold Fields and Mitsubishi), Ocean Mining Associates (a subsidiary of US Steel, amongst others), Ocean Management (partially owned by Schlumberger and Inco), and Ocean Minerals Company (formed with Lockheed, Billiton, Shell and Bos Kalis). These consortia successfully developed and tested a range of subsea mining technologies, but all failed to reach commercial production due to lack of regulatory environment and falling commodity prices, caused in part by the oil crisis.

The interim decades saw little technical progress. However, regulatory clarity improved, spurred by the signing of the United Nations Convention on the Law of the Sea (UNCLOS) in 1982 and the consequent formation of the International Seabed Authority (ISA) in 1994, which served to authorize and control development of mineral-related operations in the international seabed. The ISA began issuing subsea mineral exploration licenses in 2001 and has so far issued 30 exploration licenses to 22 contractors from a wide variety of countries, including Russia, China, Japan, Bulgaria, Cuba, France and India. **The US is notably absent, as it has not ratified UNCLOS. Thus, it cannot sponsor exploration activity or guide developments at the ISA.**

Bureaucracy and innovation don't mix well.
Lex Fridman

Notwithstanding this regulatory progress, extraction of metals from the deep-sea has been slow, with environmental backlash and bureaucracy standing in the way. More recently, a now-defunct deep sea mining company, Nautilus Minerals, was a victim of this environment. The Vancouver-based company was vying to develop its "Solwara 1" deep sea gold, copper and silver project off the coast of Papua New Guinea, but the project was plagued with community opposition and financial setbacks. Despite this, the tide is now changing due to a shortage of green metals – a trend that is pressuring stakeholders to take a second look at the seabed.



Source: www.deepseamining.ac

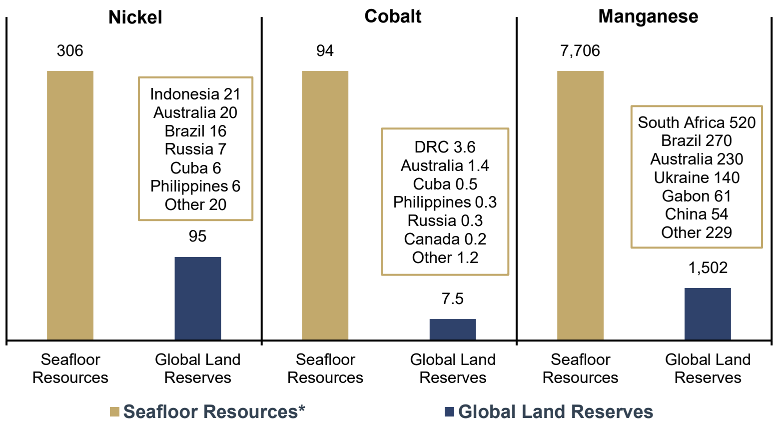
True wisdom is like an ocean; the deeper you go the greater the treasures you'll find.
Matshona Dhliwayo

This trend is evidenced by Phillip Gales' illuminating DeepData Explorer – a visual representation of the ISA's publicly available DeepData resource. It illustrates the scale of the interest in deep sea mining, in the form of exploration licenses held by various governments and companies across the world.

We are building a world-leading seabed minerals sector based on best principles and practices, with an effective, robust legal framework, to benefit the Cook Islands and our people.
Mark Brown,
Cook Islands Prime Minister

In particular, the highest concentration of licenses pertains to the metal-rich treasure trove of the Pacific Ocean known as the Clarion-Clipperton Zone (CCZ). **Here, The Metals Company (TMC), a Vancouver-based deep sea mining company with a vested interest in the CCZ, claims that tapping into the CCZ would be the equivalent of "Unlocking the World's Largest Estimated Undeveloped Source of Battery Metals".** Furthermore, TMC posits that the CCZ's seafloor contains over three times the global land reserves of nickel, over five times the land reserves of manganese, and over 12 times the land reserves of cobalt.

Nickel, Cobalt, Manganese Reserves



Source: TMC, Incrementum AG

Importantly, the scale of the deep-sea mining opportunity does not end with the CCZ, as significant subsea mineral resources exist in a variety of areas around the world. These include the Penrhyn Basin near the Cook Islands, the Peru Basin around 200nm west of Peru and Chile, the Prime Crust Zone located in the North

Pacific, as well as the Mid-Indian Ocean Ridge. Of these areas, the Cook Islands is arguably the one to watch. Here, recently adopted government commitments continue to edge the region towards commercial viability.

Estimated Cook Islands Resources

	Cook Islands EEZ (Dry Tonnes)	Clarion-Clipperton Zone (Dry Tonnes)	Total Terrestrial Reserves (Tonnes)	CI EEZ Compared to Terrestrial
Manganese	1,380,000,000	5,990,000,000	630,000,000	2.19
Titanium	108,000,000	67,000,000	420,000,000	0.26
Nickel	37,400,000	274,000,000	75,000,000	0.50
Cobalt	35,300,000	44,000,000	7,5000,000	4.71
Copper	22,700,000	226,000,000	680,000,000	0.03
Rare Earth Elements + Ytrrium	15,000,000	1,720,000	93,500,000	0.16

Source: deepseamining, Incrementum AG

You have to choose the move that feels right sometimes; that's what intuition is.
Magnus Carlsen

In addition to the Pacific, subsea minerals have been found in the seas around Europe, including in the Norwegian Exclusive Economic Zone (NEEZ) located in the North Sea. Here, as recently as January, Norway's parliament voted in favour of opening its waters for commercial-scale deep-sea mining, which was swiftly countered by a letter from EU lawmakers urging Norway to reconsider. Regardless, this progress will be music to the ears of Norway-based deep sea mining company Loke Minerals, which is tapping into a resource that is purported to contain around 310 million tonnes of minerals, including around 3 million tonnes of rare earth elements, according to the Norwegian Offshore Directorate.

Estimated Norwegian EEZ Resources

	Sulphide Deposits (Tonnes)	Manganese Crusts (Tonnes)	Total (Tonnes)
Manganese		185,000,000	185,000,000
Zinc	45,000,000		45,000,000
Copper	38,100,000		38,100,000
Magnesium		24,100,000	24,100,000
Titanium		8,400,000	8,400,000
Cobalt	1,000,000	3,058,100	4,058,100
Rare Earth Elements + Ytrrium		3,154,200	3,154,200
Vanadium		1,918,800	1,918,800
Silver	85,200		85,200
Tungsten		80,300	80,300

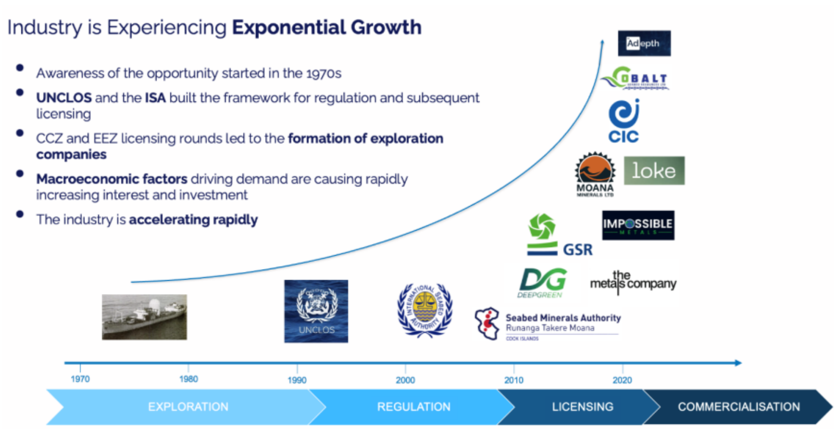
Source: deepseamining, Incrementum AG

Moreover, US behemoths like Transocean are also entering the fray, as smaller firms such as Chatham Resources Phosphate and Manuka add to the competitive environment. In the same vein, Moana Minerals and CIIC are notable companies with exploration licenses in the Cook Islands EEZ, and European dredging companies like Allseas and DEME are active in building equipment.

Government is like a baby: an alimentary canal with a big appetite at one end and no sense of responsibility at the other.
Ronald Reagan

Naturally, it is logical to focus on these private companies and the handful of capitalist countries that make the headlines. However, state-backed entities like China Minmetals, COMRA, Beijing Pioneer, JOGMEC (Japanese Metals), and the Indian Ministry of Earth Sciences also leverage huge state treasuries and unified industrial policies to quietly capture acreage and potentially dominate the seabed.

Meanwhile, capitalist fervour in the industry extends into banking, where specialist private equity firms like The Seafloor Minerals Fund are structuring investment entities for select investors to gain exposure to this space. The opportunity is certainly enticing for those with the risk appetite; work by the USGS in 2013 indicated that a 20,000km² license area of polymetallic nodules in the Cook Islands could support as many as seven concurrent mining operations, each operating for 20 years, producing around 2mn dry tonnes per site per year at an estimated value of USD 1,111 per ton. For context, TMC has 149,543km² of licenses for polymetallic nodules in the CCZ via their NORI and TOML subsidiaries. As a result, investors see the potential for many multi-billion-dollar *subsea mineral super-majors* and are optimistic about significant returns in the future.



Source: www.deepseamining.ac

The Responsible Use of Seafloor Resources Act will significantly reduce supply chain vulnerabilities and bolster American manufacturing and jobs, while combating Chinese production of critical minerals.
US Rep. Carol Miller

Ultimately, the scale of the resource in the aforementioned areas is precisely why deep-sea mining is being highlighted as an opportunity for Western nations to reduce their dependence on China and Russia for their critical metals supply. This is the opinion of Rep. Carol Miller, who, in March, pushed for US federal agencies to increase deep sea mining funding via the Responsible Use of Seafloor Resources Act of 2024, on the basis that the "United States should not be beholden to China for critical minerals". A similar belief is shared by Walter Soggnes, CEO of Loke Minerals, who exclusively told us in an interview that "Deep sea mining is the vehicle for the West to decouple from China and Russia"[110].

This is a tragedy: people lost their lives; others were injured; and the Gulf Coast environment and communities are suffering.
Tony Hayward, Former BP CEO

Thus, on the surface, deep-sea mining appears to be a no-brainer for the West. However, wading into the water to obtain valuable commodities has not always been plain sailing, with public fear of environmental risks being the principal stumbling block. For example, the 2010 BP Deepwater Horizon spillage left a lasting stain on the resources industry: 11 men died, and the spill damaged large swathes of marine life, including the Kemp's Ridley sea turtle, whose species

[110] Interview with Walter Soggnes at Mines and Money London on November 29, 2023, conducted by Ted Butler.

plummeted to near extinction due to the spill. The conflation of risks in the public eye, particularly in the wake of offshore oil spills like Deepwater Horizon and ocean-related incidents like the Fukushima nuclear disaster, further adds to challenges standing in the way of deep-sea mining companies today.

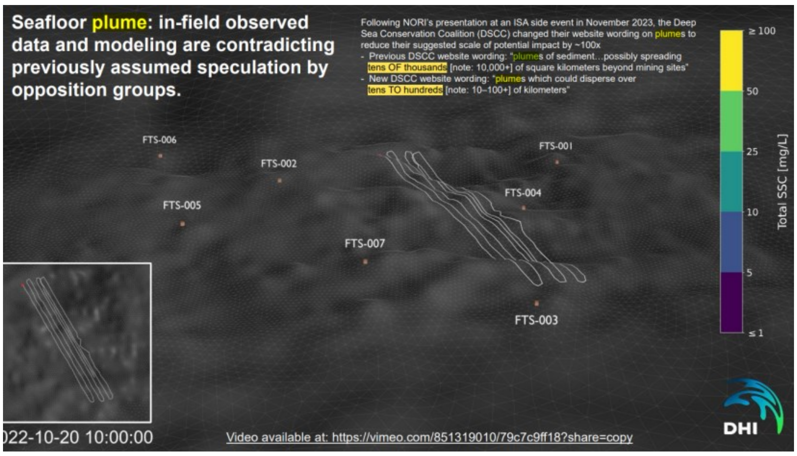
Source: NOAA

I'm the man who can't be moved.
The Script

In November 2023, Greenpeace docked a TMC vessel to protest against what they perceive as damage that deep-sea mining would do to undiscovered marine species. The protestors stayed on the vessel for a full week, until a ruling from a Dutch court ordered Greenpeace to disembark – an order they opted to obey by protesting on the water around the vessel.

The more Greenpeace and NGOs draw attention to what they perceive as an environmental problem, the more it encourages investors that there is a huge opportunity here.
Phillip Gales

Ironically, Greenpeace disrupted TMC when they were carrying out their 19th scientific test so far. As a byproduct of this research, which has drafted in academics from MIT, TMC are now confident that 92–98% of the "plume" from their pilot nodule collector vehicle either settled back down or rose only 2 meters above the sea floor. According to the research, this means the suffocating effect that the plume has on marine life has been overstated.



Source: The Metals Company, p. 40

Unsurprisingly, Greenpeace maintained their opposition, responding in a press release via a quote from Alex Rogers, professor of biology at Oxford University: "The Metals Company has cynically attempted to subvert a democratic process and push countries into accepting commercial-scale mining before sufficient science is available to make an informed decision".

Of course, having their research disrupted by protestors is an inconvenience for TMC. However, it is not the most effective strategy devised by the environmental groups. That strategy has been to apply pressure through the mechanism of a deep-sea mining moratorium, which has resulted in companies and governments folding to their demands.

We must not promise what we ought not, lest we be called on to perform what we cannot.
Abraham Lincoln

The UK government signed the deep-sea mining moratorium a month before COP28, making an immediate U-turn, having only just sponsored Loke Minerals for licenses in the CCZ. Additionally, Andrew Forrest committed his Fortescue Metals Group, the 8th largest mining company in the world, to a similar moratorium. Meanwhile, the world's 2nd largest mining company, Rio Tinto, also came out in condemnation of deep-sea mining in their November 2023 statement:

> *Rio Tinto has no plans to carry out deep-sea mining activities. We believe that not enough is known about the impacts of deep-sea mining, and that it should not take place unless comprehensive scientific research refutes currently held evidence that it will create significant environmental and socio-economic implications.*

Of course, there is an obvious non-environmental explanation why majors would not want deep-sea mining companies to succeed: It would flood the market with a supply that would likely quash the prices of the metals they mined. Naturally, it makes sense to see TMC CEO Gerard Baron respond to terrestrial miners combatively: "We're not suggesting that this is a zero-impact activity, but what we are suggesting is that the impacts are a fraction compared to the land-based alternatives."

The main audience that needs to be won over here is the legal and technical commissions. The vast majority of the environmental work has been done on The Metals Company's part.
Craig Shesky

Despite this opposition, the silence from the likes of BHP and Glencore on deep-sea mining suggests they are at least considering the endeavour. This fits with the view of Loke Minerals CEO Walter Soggnes, who is of the opinion that "Eventually the major miners will partner with deep sea miners once they realise the opportunity"[111]. Frankly, whether the majors get involved with deep sea mining in the future will depend on the verdict of a UN-backed regulatory body, the International Seabed Authority (ISA), which has a legal mandate to deliver a code of practice for the deep-sea mining industry. However, whilst TMC expects this mining code to be finished in 2024 and adopted in 2025, the original deadlines set by the ISA in 2020 and 2023 were never met.

In summary, there are clearly still hoops to jump through before metals from the seabed enter the market. Although, if we extrapolate the current trajectory of progression and consider all the factors discussed, we expect to see the sparks of commercialisation to have been kindled by 2030. **In the meantime, investors may wish to consider building their positions in deep sea mining companies before the commodity supercycle takes on an amphibious quality, extending itself from terrestrial practices and onto the seabed.**

—
[111] Interview with Walter Soggnes at Mines and Money London on November 29, 2023, conducted by Ted Butler.

Within a few years, around 2030, we will see numerous nodules flooding the market IF we can prove that deep sea mining is less environmentally damaging than terrestrial mining.
Walter Soggnes

Initially, we expect growth in this nascent industry to stem from critical minerals, as licenses are principally being approved based on their ability to ensure energy security, amidst a time of geopolitical uncertainty. **On the other hand, we recognise that gold exploration – whilst not presently an immediate priority for most deep-sea miners – could receive interest, as financial institutions seek a sturdy mast to tie themselves to amidst increasingly choppy monetary waters.** For now, though, this threat is merely a drop in the ocean, as there are only 4.5 parts per billion of gold in the CCZ, and virtually nothing elsewhere, according to leading estimates.[112]

Asteroid Mining

That's one small step for man, one giant leap for mankind.
Neil Armstrong

Without a doubt, November 24, 2023 marked mankind's greatest step yet toward asteroid mining viability. That was the date when NASA's and MIT's "OSIRIS-REx" spacecraft arrived back from its 7-year voyage, carrying a 250-gram sample from near-earth asteroid Bennu. This marked the largest retrieval of asteroid material since Japan's Hayabusa 2 mission returned 5 grams in 2020.

And you could have it all. My empire of dirt.
Johnny Cash

However, despite this success, the composition of both asteroid sample were not metal, but mostly dirt, dust, and rocks. Therefore, the first thing to bear in mind when it comes to asteroid mining of metals is that the industry is still very much in its infancy. That being said, material progress has been made toward commercial viability in the last three decades.

Asteroid Mining Progression Timeline

Date	Mission (Country)	Objectives
10.18.1989	Galileo (USA)	Venus flyby, 1st Asteroid flyby (Gaspra), Jupiter orbiter
01.25.1994	Clementine (USA)	Lunar orbiter, Attempted asteroid flyby (contact lost)
02.17.1996	NEAR Shoemaker (USA)	Eros orbiter, 1st near-Earth asteroid flyby, 1st asteroid landing
10.24.1998	Deep Space 1 (USA)	Asteroid and comet flyby
05.09.2003	Hayabusa (MUSES-C) (Japan)	Asteroid lander, 1st sample return from asteroid
03.02.2004	Rosetta/Philae (EU)	Asteroid flybys (Steins, Lutetia), 1st comet orbiter and lander
09.27.2007	Dawn (USA)	Asteroid Ceres and Vesta orbiter
10.01.2010	Chang'e 2 (China)	Lunar orbiter, Asteroid 4179 Toutatis flyby
12.03.2014	Hayabusa2/MASCOT (Japan)	Asteroid lander, 1st sample return, 1st asteroid rover
12.03.2014	PROCYON (Japan)	Comet observer, attempted asteroid flyby (engine failure)
09.08.2016	OSIRIS-Rex (USA)	Asteroid sample return (sample returneed September 24, 2023)
10.16.2021	Lucy (USA)	Flyby of Jupiter trojans and main belt asteroids
11.24.2021	DART/LICIACube (USA/Italy)	Asteroid 65803 Didymos flyby, Asteroid moon Dimporphos impactor
10.13.2023	Psyche (USA)	Asteroid 16 Psyche orbiter

Source: eoportal, NASA, Incrementum AG

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[112] Mizell, Kira et al. "Estimates of Metals Contained in Abyssal Manganese Nodules and Ferromanganese Crusts in the Global Ocean Based on Regional Variations and Genetic Types of Nodules", *Perspectives on Deep-Sea Mining*, 2022, p. 53–80

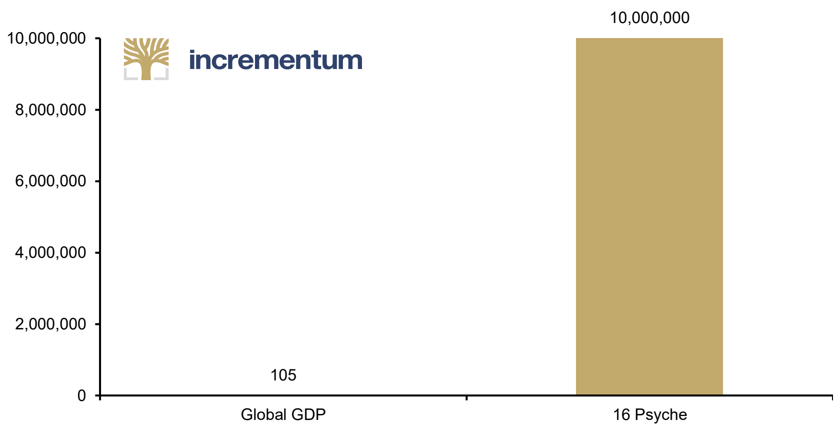
Newspaper taxis appear on the shore
Waiting to take you away
Climb in the back with your head in the clouds
And you're gone
Lucy in the sky with diamonds.
The Beatles

An example of this recent progress is NASA's Lucy mission, which will become the first spacecraft to re-enter Earth's vicinity from the outer solar system, when it returns from its trip to the Jupiter Trojan asteroids. A further example is the US-Italy backed DART mission, which accomplished the first-ever asteroid deflection on September 26, 2022, successfully changing the motion of asteroid Dimorphos upon kinetic impact. Both developments were necessary for building the foundations for commercial asteroid mining. Particularly, the DART mission helps mitigate the existential risk of asteroid mining, as it demonstrates mankind's ability to redirect the trajectory of asteroid fragments away from Earth. Despite this, neither DART nor Lucy present the biggest threat to the supply-demand balance of gold or other metals.

The universe is under no obligation to make sense to you.
Neil deGrasse Tyson

Instead, for the potential biggest "threat", we must turn to NASA's *Psyche,* a spacecraft that embarked on its maiden voyage on October 13th 2023 to study the eponymous asteroid, 16 Psyche. **For context, the distance between 16 Psyche and Earth is 580 times the distance between Earth and Moon, whilst 16 Psyche has not even 0.5% of the surface area of the Moon.** Moreover, 16 Psyche is classified as an M-type asteroid and is believed to have a 60% nickel-iron core, as well as significant veins of gold mineralization. Consequently, ***Forbes* was one of the countless media outlets running with a USD 10,000 quadrillion total valuation for 16 Psyche – a figure that is not only 38.5 million times the value of the total gold supply on earth, but also 96.1 times the value of the USD 104trn global economy.**

Global GDP and Value of 16 Psyche (log), in USD trn, 2023



Source: IMF, Forbes, Incrementum AG

We need to study them [asteroids] in space… you can't get this information with a telescope. You've got to be in orbit around these objects, with advanced cameras to have a look at the surface in detail.
Natalie Starkey

It is no wonder, therefore, that 16 Psyche is being coined the "golden asteroid". However, before droves of investors rush off to sell their gold, we should outline the limitations of the present 16 Psyche valuation methodology. Firstly, given the lack of concrete geological data, assumptions have been made based on metrics such as density, which cannot be relied upon to tell the full metallurgical story. Consequently, even leading academics cannot be 100% sure of 16 Psyche's composition. For instance, the vice president of the Interplanetary Initiative at Arizona State University, Lindy Elkins-Tanton, stated in a recent academic paper: “Whether Psyche is a whole body or a rubble pile is unknown”, adding “There are still contradictions in the compilation of all current data”.[113]

Goddammit! I don’t want another estimate. I want the procedures, NOW!
Gene Krantz, Apollo 13

In light of these insights, the USD 10,000 quadrillion value seems more like a stab in the dark than a realistic estimate. However, even if we assume the figures are accurate, there are still numerous reasons to suggest that commercial asteroid mining remains (light) years away.

The cost to extract gold from an asteroid does not seem worth it, especially if you’re flooding the market with new supply when you bring it back. The price would most likely tank even before it came back to Earth.
Robert Mennella

Firstly, the current gold price would almost certainly not cover the AISC, a point confirmed by Bloomberg opinion columnist Javier Blas, who calculated that the price of a precious metal such as gold would need to jump 140,000-fold for asteroid mining to become profitable. Secondly, the incentive to secure a resource such as 16 Psyche is invalidated by the nature of its overabundance in gold. That is, miners would be foolish to spend billions of dollars on capital expenditure to mine the gold and arrange for its transportation back to Earth, as it would overwhelm the terrestrial gold supply, sending the gold price into the red, along with the miners’ bank balance.

Frankly, even if mining on 16 Psyche were to go ahead, the time it would take to return the gold to Earth would be relatively *astronomical*. Consider that the planning for 16 Psyche began way back in 2011, when a team of scientists began work on a preliminary report that eventually grew to 1,000 pages by 2016. Following this, NASA incorporated space marines into their program in 2017, marking the start of a 6-year R&D period that lasted until Psyche’s eventual launch in 2023. From here, the Psyche spacecraft is expected to dock with the asteroid in late July 2029, before arriving back on Earth around 2034. Such is the due diligence that goes into these pioneering projects that the research which ensues will likely take a further five years, taking us to 2039 before commercial mining of 16 Psyche becomes a viable proposition.

A paradigm shift is the best a scientist can hope for. Whenever I smell an opportunity like that, I go after it.
Edward O. Wilson

It is precisely these factors – the excessive lead times and substantial cost of gold delivery from asteroid to earth – that explain why mining industry experts do not foresee asteroid-mined gold becoming a threat to the terrestrial gold supply. Instead, the consensus is that, with time, asteroid-mined gold will become an increasingly significant asset of what Canadian Asteroid Mining Corporation CEO Daniel Sax refers to as a “huge paradigm shift towards a self-sustaining space economy”[114]. A similar view is shared by Emily King, founder of Prospector, an AI-enabled search engine for institutional investors in the mining industry, who states that “Commercial extraction will be happening within the next two decades; however, the commercial space ecosystem is very much focused on how things will be used *in space* as opposed to bringing the resources back to Earth.”[115]

Sax, whose company is focused on contributing to the lunar infrastructure, also added, “The value in mining gold from asteroids would come down to its industrial value in space rather than the monetary incentives back on earth”[116], suggesting that the terrestrial gold price may be somewhat insulated from asteroid mining

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[113] Elkins-Tanton, Lindy T. et al.: “Observations, Meteorites, and Models: A Preflight Assessment of the Composition and Formation of (16) Psyche”, *JGR Planets*, Vol. 125, Nr. 3, March 2020
[114] Interview with Daniel Sax via Zoom on November 15, 2023, conducted by Ted Butler.
[115] Interview with Emily King on November 15, 2023, conducted by Ted Butler.
[116] Interview with Daniel Sax via Zoom on November 15, 2023, conducted by Ted Butler.

supply risks, at least until a robust industrial (or monetary) demand is sought in space.

Incidentally, gold is not currently being sought out in space at all and is missing from the exploration shopping lists of most asteroid miners today. According to Sax, this is because "For the most part, the focus is on ice, water, and helium 3 – the latter of which is used in fusion reactors and slotted to come online within the next 10 years"[117]. Therefore, when Neil deGrasse Tyson posits that the "The first trillionaire there will ever be is the person who exploits the natural resources of asteroids" (min 11:10), it is likely that he is referring to a different type of gold rush, driven by a demand for water and ice, and not necessarily for precious metals.

Ice, ice, baby.
Vanilla Ice

This conclusion is reinforced by examples such as the aforementioned OSIRIS-REx mission, whose prime motivation was to find water and ice, as well as by private space logistics start-up TransAstra, which recently received funding from NASA's Innovative Advanced Concepts (NIAC) programme, specifically for the development of water and ice mining technologies. Here, whilst CEO Joel Sercel makes the case that it will eventually "make sense to harvest precious metals from smaller asteroids", the immediate objective of TransAstra is to travel to an asteroid about the size of a house and extract from it some 100 tonnes of water – enough to fill a small backyard swimming pool. Given the cost of sending water into orbit, "that 100 tons of water is worth about $1 billion in space," Sercel says, coinciding with King's market bifurcation prediction of "a space economy where price is separate from the price determined on Earth".[118] **Thus, there is a possibility that asteroid mining activities may be relatively inconsequential for the prices of metals back on Earth, including gold.**

Mining precious metals from asteroids in the next 10 years is just nuts.
Joel Sercel

Despite all of these challenges, the scale of the asteroid mining opportunity is undoubtedly attracting capital from places where traditional mining seldom ventures. Founded in 2022, asteroid mining company Astroforge – which is particularly targeting asteroids containing platinum group metals – is one of these entities. It raised a substantial USD 13mn of capital in May 2022. Similarly, a startup from the Colorado School of Mines, Lunar Outpost, raised USD 12mn last year to fund its rollout of robotic lunar rovers, with the school more broadly being a recipient of funding from NASA, specifically for the development of water and ice mining technologies.

On one hand, these start-ups' ability to raise capital may be down to the implied attractiveness of asteroid mining versus terrestrial mining practices. In 2015, it became even more attractive, as the US passed the Commercial Space Launch Competitiveness Act. This replaced the 1967 Outer Space Treaty, which prohibited national governments from staking claims to control over "celestial bodies" such as the Moon. Since then, private companies have been less restricted and more incentivised to undertake mining work beyond Earth.

On the other hand, the real incentives for asteroid mining may lie in the sheer amount of IP attached, where huge volumes of potential patents – e.g. from AI

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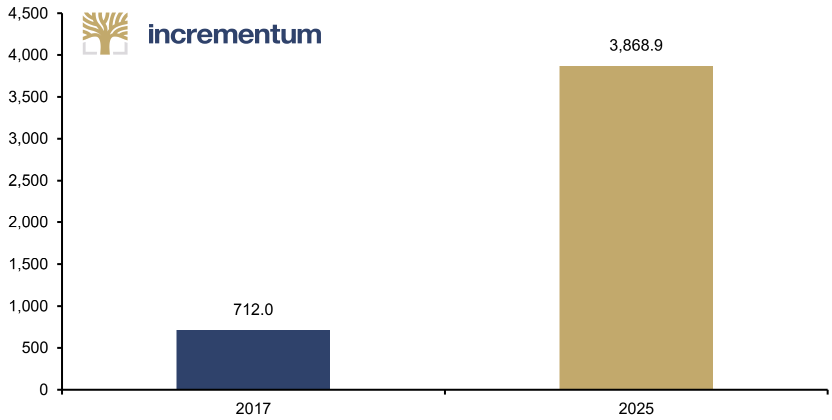
117 Interview with Daniel Sax via Zoom on November 15, 2023, conducted by Ted Butler.
118 Interview with Emily King on November 15, 2023, conducted by Ted Butler.

applications and NASA's recent patent listing for "modular" refining systems in space – are enticing investment. With the global market value of the asteroid mining industry forecasted to increase to some USD 3.87bn by 2025 – from USD 712mn in 2017 – the gravitational pull of this opportunity is not going away any time soon.

Market Value of Asteroid Mining, in USD mn, 2017–2025



Source: Statista, Incrementum AG

Conclusion

If the future does not include being out there among the stars and being a multi-planet species, I find that incredibly depressing.
Elon Musk

As alluded to earlier, commercial asteroid mining is more an inevitability than a probability, especially as trailblazing entrepreneurs such as Elon Musk continue to bang the drum for a future in which we exist as an interplanetary species. Meanwhile, the proximity of deep-sea mining to commercial viability appears closer than that of asteroid mining, as stakeholders will likely opt for practices sharing homogeneity with terrestrial mining and oil drilling practices, when the increasingly urgent need for commodities hits home.

Still, the question of interest for you, esteemed readers, pertains to whether the gold price will be negatively affected by the practices of either asteroid mining or deep-sea mining. **In summary, we are of the disposition that the gold price will be largely insulated from the risks of a seabed-sourced or an asteroid-sourced oversupply.**

Look up at the stars and not down at your feet. Try to make sense of what you see, and wonder about what makes the universe exist. Be curious!
Stephen Hawking

This is because critical minerals will be the immediate priority for those scouring the seabed, as the world tentatively straddles the gap from brown to green energy. Meanwhile, the incentive structures to encourage asteroid mining are shaped towards creating a lunar economy, at least as things stand. **Consequently, the terrestrial price of gold may dodge the proverbial bullet, as far as a flooding of the gold supply is concerned.**

IGWT Report

Mining Stocks – Fundamental and Technical Situation

The secret to investing is to figure out the value of something – and then to pay a lot less.

Joel Greenblatt

- The performance of mining shares was disappointing in 2023. Operating performance, on the other hand, was excellent.
- While the gold price reached new all-time highs in the spring, the valuation of gold mining companies does not yet reflect the sharp rise in profitability.
- We believe there are many good reasons to invest in the mining sector, including first and foremost high and rising free cash flows, share buyback programs, historically high dividend yields, stable balance sheets, more conservative management teams, and greatly reduced debt. We are also likely to be at the beginning of an M&A cycle.
- We expect that the gushing cash flows of producers will lead to their replenishing their shrinking reserves through takeovers and mergers. The biggest beneficiaries of this development will be junior producers, fully financed developers, and explorers with world-class discoveries in Tier 1 regions. We also expect increasing M&A activity in the copper and silver sectors.
- Despite the largely positive developments, there are still few sectors that are more underweighted by the investment community than the mining sector. This is reflected in the sector's almost dwarfed market capitalization. In this respect, we expect mining stocks – and their shareholders – to reap a rich harvest over the next few years after a grueling dry spell.

Volatility is a symptom that people have no idea of the underlying value.
Robert Shiller

“No vola, no cola” is what we wrote at the beginning of this chapter last year.[119] The ups and downs of the last 12 months have put even gold investors who are used to suffering to the test. “**Unloved, undervalued, underowned” was – until a few weeks ago – a succinct description of the situation for mining stocks.**

Gold miners dig with dreams that soar so high, But when the market dips, their profits say “bye-bye”. Volatility’s a beast that loves to play, Stealing golden smiles, turning hair to gray!
Chat GPT

Although the gold price has recently reached new all-time highs on an almost daily basis, the NYSE Arca Gold BUGS Index (HUI) is still trading around 60% below its all-time high of 635 in September 2011. Nonetheless, we are of the opinion that the valuation discrepancy is greatly exaggerated, particularly in view of the sector’s significantly improved fundamentals.

Gold and HUI, 100 = 01/2000, 01/2000–04/2024

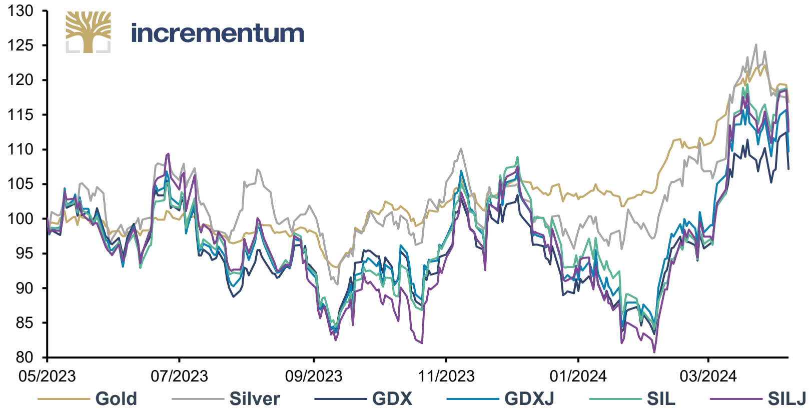
Source: Reuters Eikon, Incrementum AG

Volatility is like a wild horse – you can’t control it, but you can learn to deal with it.
Paul Tudor Jones

What has happened in the last 12 months? After the publication of the *In Gold We Trust* report 2023 on May 24, a pronounced phase of weakness set in. The support level of 198 points in the HUI was successfully tested in October 2023 and also in mid-February and early March. This was followed by a powerful rally, during which miners made strong gains. Over a 12-month period, the most important mining indices are up between 15 and 20%. **Once again, it has been shown that returns are the reward for exploiting volatility.**

[119] “Mining Stocks – Fundamental and Technical Position,” *In Gold We Trust* report 2023.

Gold, Silver, HUI, GDX, GDXJ and SIL, 100 = 05/24/2023, 05/2023–04/2024

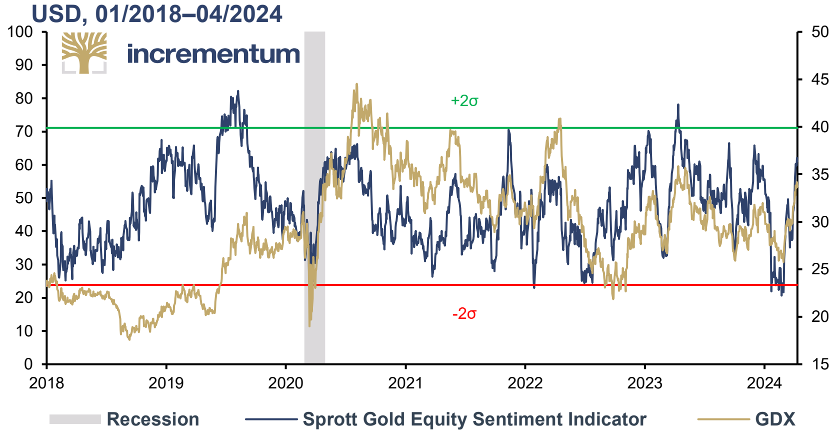


Source: Reuters Eikon, Incrementum AG

There is nothing as disastrous as a rational investment policy in an irrational world.
James Montier

A look at the Sprott Gold Equity Sentiment Index[120] confirms our continued optimistic basic stance. Sentiment reached a low point in February. At almost two standard deviations, this negative sentiment was extremely pronounced. Since then, the sentiment index and the GDX have recovered, but we are still a long way from euphoria levels. The index is currently in neutral territory. In this respect, the technical starting point for further price increases appears to be excellent.

Sprott Gold Equity Sentiment Indicator (lhs), and GDX (rhs), in USD, 01/2018–04/2024



Source: Sprott Asset Management LP, Reuters Eikon, Incrementum AG

The Specifics of Mining Investments[121]

You gotta make hay while the sun shines, especially in the Klondike.
Tony Beets

We would now like to take a step back and look at the specifics of mining investments. Commodities, and mining stocks in particular, are considered a highly complex and demanding asset class. Fortunes are made and also quickly wiped out. The micro level of the industry is characterized by complex interactions among price trends, technical challenges in extraction, capital market risks, and political risks – think of the court decision in Panama in

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[120] The data was kindly provided to us by our premium partner “Sprott Asset Management”.
[121] See chapter “Mastering the New Gold Playbook” in this *In Gold We Trust* report, in particular the presentation of the *Incrementum Active Aurum Signal*

autumn 2023 that ordered the closure of the First Quantum Minerals copper mine – but also technical progress. To a certain extent, the so-called *hog cycle* also occurs as an industrial metal cycle, except that the time to "harvest" is much longer in the mining sector than in the rearing of bristle cattle.

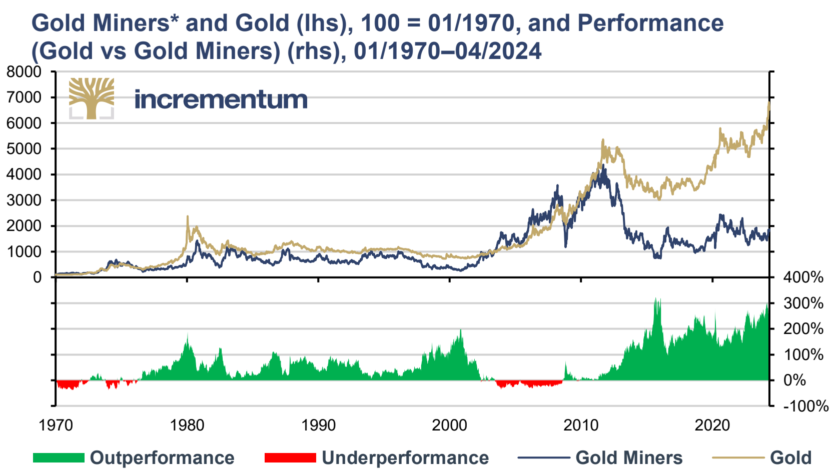
At the risk of oversimplifying, gold equities display above-average volatility because they are affected by an above-average list of externals. Trading profits aside, daily volatility in gold shares seldom corresponds to relevant change in underlying corporate fundamentals.
Trey Reik

"Conventional" commodity investments are therefore already challenging, but investments in gold and silver stocks represent the champions league of investing. On the one hand, this is due to their enormous volatility, and on the other, to the anomaly due to the stock-to-flow ratio. The cycles of mining stocks are also significantly influenced by changes in the monetary structure. These factors can provide the entire asset class with tailwinds or headwinds for years, sometimes even decades. **This has the following far-reaching consequences for mining companies and their investors:**

- Historically, bull and bear markets in gold shares have lasted longer than average mining stocks cycles.
- The supercycle is triggered by fundamental changes in monetary conditions.
- After extended boom phases, structurally high margins have often led to a suboptimal use of company resources.
- Extensive periods of depression force the industry to undergo massive consolidation, forcing the remaining companies to become unconditionally efficient.
- After years of consolidation, investors now have opportunities to engage with risk-reward profiles that are highly asymmetric.

The beauty of stocks is that they do sell at silly prices from time to time. That's how Charlie and I have gotten rich.
Warren Buffett

We are convinced that the unusually high top-down influence of monetary policy events on this asset class – in particular the interaction between inflation and deflation – requires active timing when investing in mining stocks.

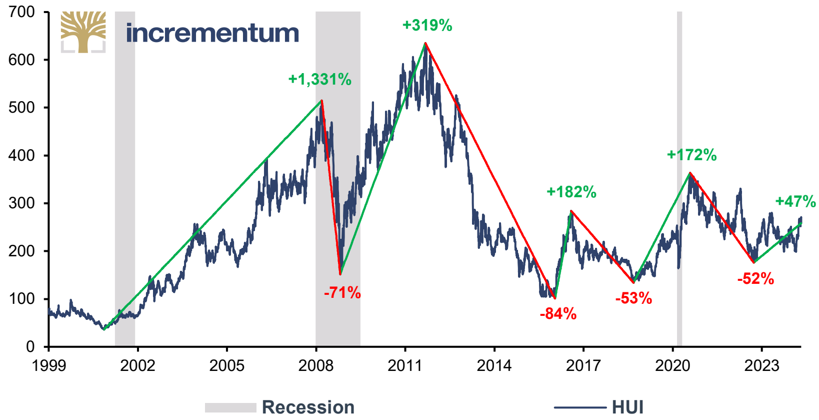


Source: Nick Laird, Reuters Eikon, Incrementum AG
*1970–2000 BGMI, 2000–Today HUI

Gains are overrated. Avoiding loss is underrated.
D. Muthukrishnan

Market and sector developments account for 80% of a mining stock's price movement, whereas a company's fundamentals only have an impact of around 20%. The chart below illustrates the important fact that gold mining stocks are anything but buy-and-hold investments and, in our opinion, need to be actively managed.

HUI, 01/1999–04/2024



Source: Reuters Eikon, Incrementum AG

Jason Goepfert from Sentimentrader, whom we hold in high esteem, excellently summarized the current technical situation of miners and the dilemmas facing mining investors:

> *More and more gold mining stocks are recovering from a brutal few years. As of late last week, enough stocks had recovered that it usually coincides with persistent bull market conditions in the typical sector.* ***The issue for goldbugs is that this is not a typical sector – it has periodic returns of astronomical proportions that punctuate long periods of malaise.***
>
> *Those periods of malaise have a nasty habit of punishing investors who try to jump on positive momentum. Just when the outlook for miners starts to look sunny, it is overshadowed by thunderstorms of sellers. The biggest clues as to whether this time is different (gulp) is if buyers persist in the coming weeks. We rarely see that during periods of malaise, so it would be a good sign that we're in the beginning stages of one of those once-a-decade positive environments.*[122]

Building and operating gold mines is one of the longest-duration endeavors on the planet. It is somewhat incongruous that equities of such long-term assets are tossed around so fickly by fluctuating economic data.
Trey Reik

In his highly readable report "A Call to Arms", our dear friend Trey Reik describes the extreme duration risk of the mining sector. Using Warren Buffett's moat analogy, Reik suggests that there are few companies as immune to competition as a well-run gold mine on a world-class deposit. As long as management does its job and milestones are achieved, volatility in a gold stock is a side effect that has to be accepted but should not be confused with structurally higher risk.

The gold mining sector still struggles with a reputation for poor financial discipline. Going back to write-downs in the industry in the early 2010s, we believe that this reputation is now unfounded. Among leading management teams in particular, there is a strong emphasis on sound financial management. The sector has learned from the mistakes of the past. The deleveraging process can be seen in the following chart. It shows that the majors have been able to massively reduce their debt over the last seven years.

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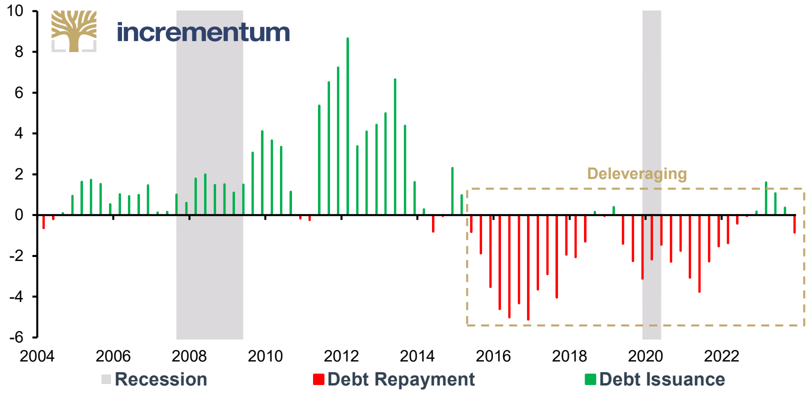
[122] Goepfert, Jason: "Gold miners try again", *Sentimentrader*, April 4, 2024

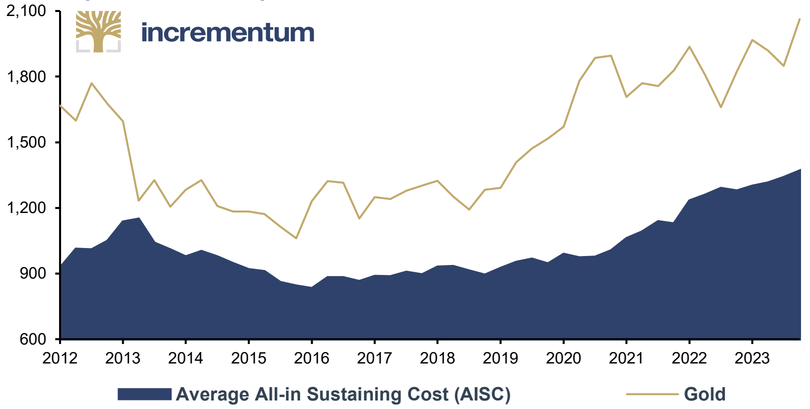
Aggregate Trailing 12 Month Net Debt Issuance for Top 10 US and Canadian Gold and Silver Miners by Market Cap, in USD bn, Q1/2004–Q4/2023



Source: Crescat Capital, Reuters Eikon, Incrementum AG

Inflation is easing, but costs, particularly for energy and labor, remain high. **The global all-in sustaining costs (AISC) of gold producers exploded by more than 20% to USD 1,276 per ounce in 2022.** In 2023, AISC inflation seems to have leveled off at around 6%, and we expect it to be around 5–7% in 2024. The chart clearly shows that the cost curve of the gold mining sector tends to follow the gold price, as the industry reacts to higher gold prices by increasing marginal supply. **If the gold price remains firm, gold mining companies will continue to generate record-high margins despite the ongoing inflationary pressure**.

Average All-in Sustaining Cost (AISC) of Global Gold Mining Companies, in USD per Ounce, and Gold, in USD, Q1/2012–Q4/2023



Source: Metals Focus Gold Mine Cost Service, World Gold Council, Incrementum AG

Mining Stocks as Value Plays?[123]

Be right, when everyone else is wrong, at scale.
Naval Ravikant

Well-known macro investors with a penchant for contrarian investments are now beginning to notice the return to profitability of gold mining companies and the high quality of their balance sheets. Both Elliott Management (Paul Singer) and Stanley Druckenmiller have made

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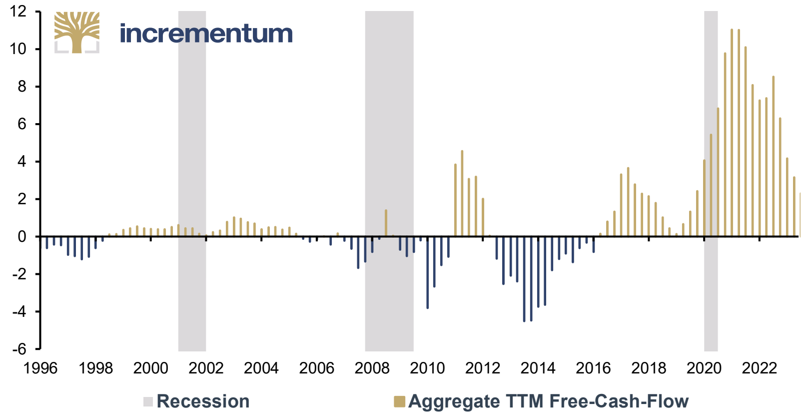
[123] Many thanks to our friends Tavi Costa and Kevin Smith from Crescat Capital for providing the data. Crescat's publications are always worth reading and can be subscribed to via the following link: www.crescat.net/investment-research/investor-letters.

substantial investments in mining stocks in recent months. Elliott Management, a hedge fund with USD 65bn in assets under management, founded a new subsidiary called Hyperion in November 2023, which specializes in investing in mining companies. Interesting detail: Hyperion is headed by Sandeep Biswas, the former CEO of Newcrest Mining. Hyperion has already invested several billion US dollars in mines, including gold, copper and lithium mines. “Legendary” Stanley Druckenmiller also acquired gold mining shares in Barrick Gold and Newmont Mining in Q4/2023.

The best investments are usually made when you feel most uncomfortable about making them.
Stanley Druckenmiller

However, there are still no signs that broader investor groups are discovering the value proposition of the mining sector. **What matters to us: The sector produces healthy free cash flows (FCF). In the previous year, profitability suffered from high inflation, but total FCF is expected to soar in 2024.**

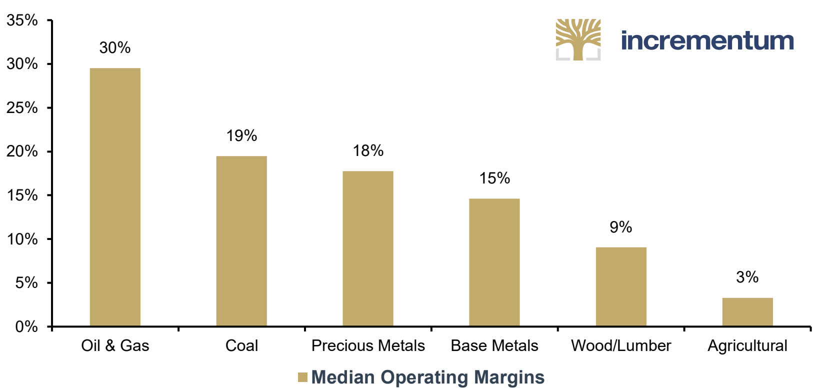
Aggregate TTM Free-Cash-Flow of Gold & Silver Miners*, in USD bn, Q1/1996–Q4/2023



Source: Crescat Capital LLC, Reuters Eikon, Incrementum AG
*Top 10 Miners by Market Cap in the Canadian & US Stock Exchanges

Within the commodities sector, currently only the oil and gas industry, along with the coal sector, achieve higher profit margins than producers of precious metals.

Median Operating Margins by Commodity*, 2024



Source: Crescat Capital LLC, Tavi Costa, Bloomberg, Incrementum AG
*Companies with market cap above USD 1 bn. in the Canadian and US stock exchanges

Financing 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

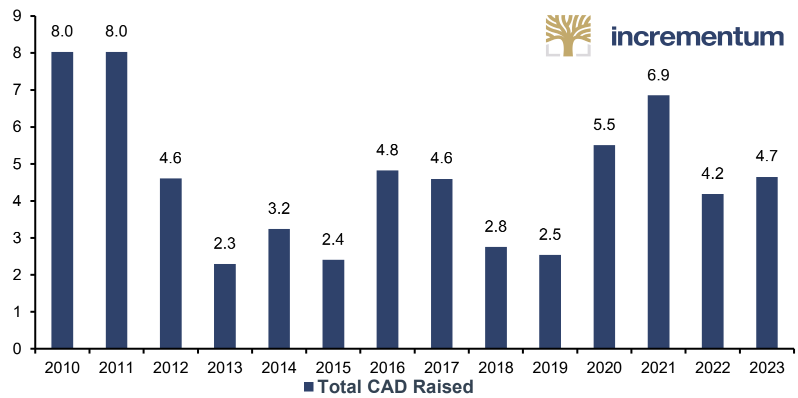
Let's now take a look at the funding activities of junior miners over the past 12 months. In 2021, our friend Kai Hoffman first provided us with an introduction to and interpretation of his proprietary *Oreninc Index*.[124] The index measures the financial health of the junior mining sector on a weekly basis, tracking and logging up to 41 data points per financing.[125]

Investors have yet to recognize the new gold price reality

A good ore body is like a beautiful woman. It reveals its secrets slowly.
Terry Crebs

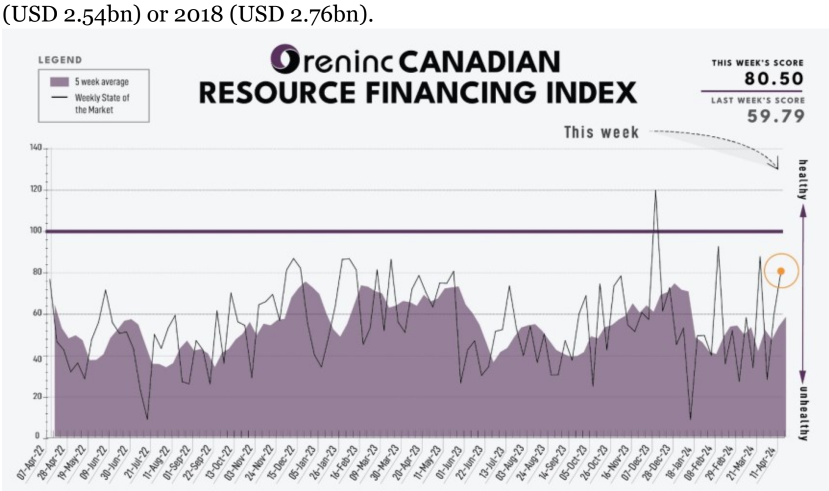
The financing trends of 2022 continued in 2023. While market sentiment was and still is bleak for junior mining and exploration stocks, select companies were able to raise funds. As mentioned in our *In Gold We Trust* report 2023, "Showdown", it is typically companies that are further along on the Lassonde curve that are able to attract investor capital.

Total CAD Raised, in bn, 2010–2023



Source: Oreninc.com, Incrementum AG

2023 saw a slight uptick in total dollars raised to USD 4.65bn compared to USD 4.19bn in 2022. Of course, these numbers are much lower than in 2021 (USD 6.85bn) and 2020 (USD 5.50bn), but also much higher than in 2019 (USD 2.54bn) or 2018 (USD 2.76bn).



124 See "Golden Opportunities in Mining," *In Gold We Trust* report 2021.
125 You can register for the weekly newsletter at www.oreninc.com.

Despite an increase in total US dollars raised, investor sentiment has suggested a very different picture. The attitude towards junior miners has completely decoupled from the gold price. That said, we do see an increase in financing activity when the gold price trends upward; but even in 2024, the numbers are far behind expectations. **It is becoming abundantly clear that the sector is lacking an inflow of new capital.** Existing investors are tapped out or are rotating positions. New investors are needed to lift our industry back into the limelight.

That said, in 2023 we also saw investors chasing trends, in particular lithium and copper. These trends also diverted much-needed risk capital for gold and silver juniors into other pockets of the market. With lithium prices crashing and looming global recession fears, these trends cooled off in the second half the year and investors refocused on precious metals.

Outlook for 2024 and beyond

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

At the time of writing, the gold price has broken through USD 2,400 per oz, and yet junior exploration stocks are still struggling. Financing activity has yet to see an uptick, and new investors are still missing. Companies keep having to go back to the same financing sources, which are still hesitant or are completely tapped out. Bought deals saw a drop of roughly 50% in the first 14 weeks of the year. The proprietary Oreninc Index has seen no meaningful increase in activity and keeps hovering slightly above the 50-point level.

Much-needed risk capital is still not being allocated in our sector. It is tough to make a prediction as to whether this will change in the coming months, because, as witnessed with the gold price, it didn't really need a trigger to send it soaring. One can only dream…

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 based on the sentiment in the sector. The market does not yet seem to have sufficiently realized that many miners have significantly strengthened their balance sheets, margins and business models in recent years. We suspect that many investors would be surprised by the key figures as of Q1 2024. **In fact, the Arca Gold Miners Index (GDM) compares extremely favorably with the S&P 500.**

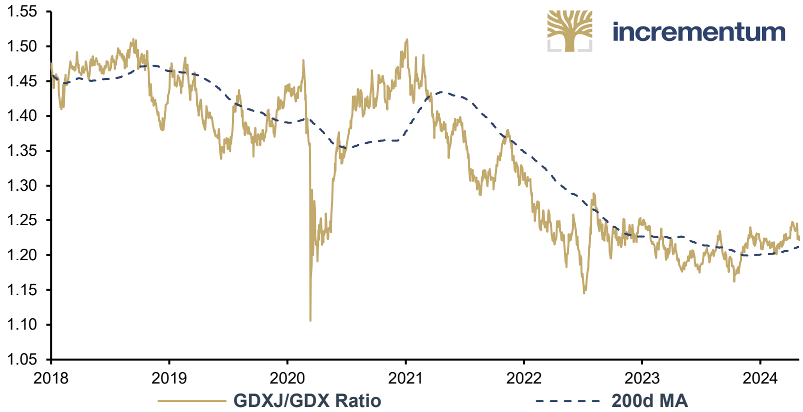
Financial ratios: S&P 500 and Arca Gold Miners Index

Index	Dividend yield	Current ratio	Net debt/EBITDA	Debt/EV	Debt/Equity
S&P 500	1.36%	1.20x	1.36x	0.25x	117.08%
GDM Index	1.89%	1.86x	0.73x	0.14x	23.14%

Source: Bloomberg, Incrementum AG

The interest rate hike cycle has had a significant impact on investors' risk tolerance. The wheat is being separated from the chaff. The slightly growing risk appetite can be seen in the following chart. Since 2021, the junior miners (GDXJ) have shown relative weakness compared to the seniors (GDX), although a certain stabilization of the ratio is now slowly becoming apparent.

GDXJ/GDX Ratio, 01/2010–04/2024

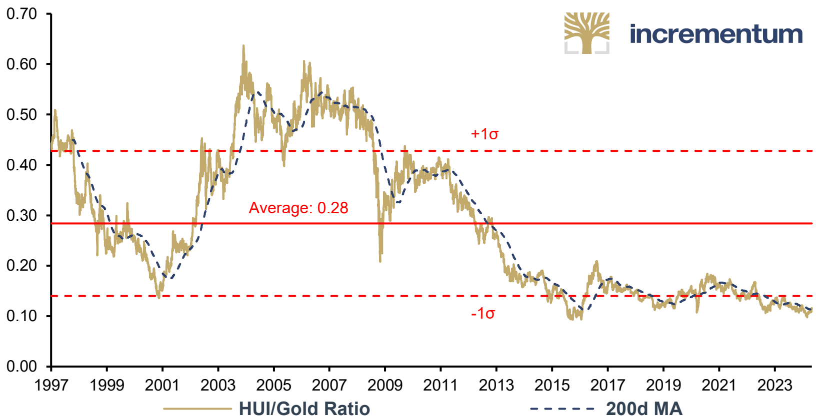


Source: Reuters Eikon, Incrementum AG

One of the things I have learned as a portfolio manager – maybe "the" hardest thing to do as a PM – is to do nothing.
Steve Eisman

Let's take a brief look at the relative valuation of mining shares compared to gold. In bull market environments, 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 the past 8 years. Based on this indicator, gold stocks appear to be blatantly undervalued.

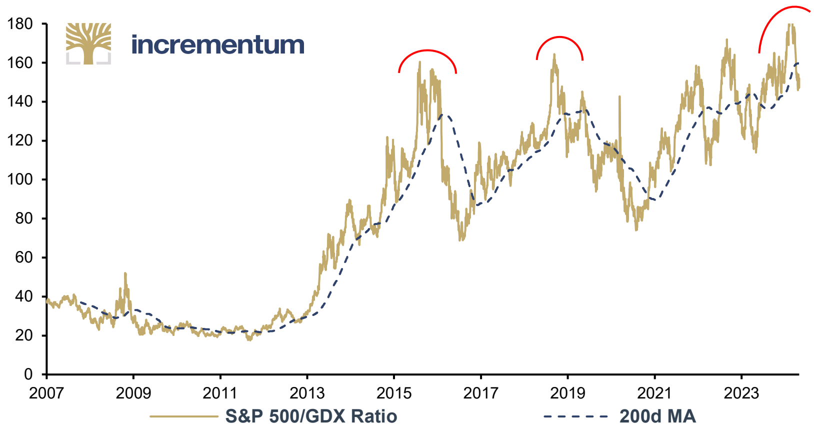
HUI/Gold Ratio, 01/1997–04/2024



Source: Reuters Eikon, Incrementum AG

Relative to the overall market (S&P 500), however, we could imagine that the mines will now enter a phase of strength. This is also suggested by the following chart.

S&P 500/GDX Ratio, 01/2007–04/2024

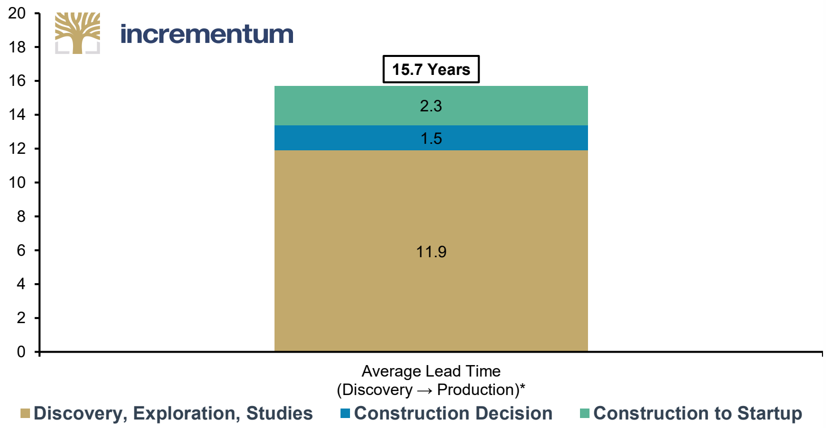


Source: Crescat Capital, Tavi Costa, Reuters Eikon, Incrementum AG

You only get a shot at a motherlode once; you better be ready for it.
Parker Schnabel

Despite all the confidence, we do not want to leave the structural challenges of the mining sector unmentioned.[126] **A study by S&P Global, which is well worth reading, shows that it takes an average of more than 15 years from the discovery of a deposit to the start of production at mines.** The study examined 127 mines (gold, silver & base metals). The lead time to commercial production averaged 15.7 years, but varied widely from six to 32 years, depending on factors such as the mining and processing method, location, and type of deposit.

Average Lead of Mines from Discovery to Production*, 2002–2023

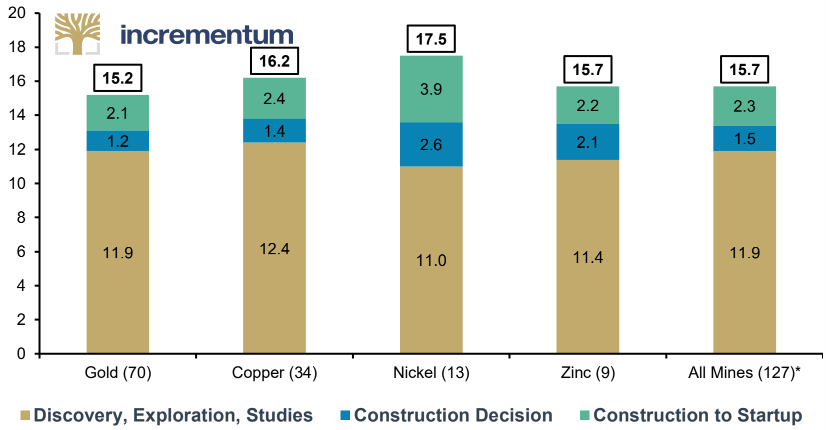


Source: S&P Global, Incrementum AG
*127 mines are included in this study (Gold, Copper, Nickel, Zinc and Silver)

With an average lead time of 15.2 years, gold mines tend to have shorter lead times than mines in the copper (16.2 years) or nickel (17.5 years) space. The transition to a lower-carbon economy and the associated revision of laws and regulations could accelerate development processes, especially for mines that supply critical minerals.

126 *See* "The Challenges of the Gold Mining Industry," *In Gold We Trust* report 2022.

Average Lead Time by Commodity, 2002–2023



Source: S&P Global, Incrementum AG
*One silver mine is included in the study but not shown in this chart

In a study, the *Colorado School of Mines* has analyzed a frequently underestimated challenge for the mining sector: the impending shortage of skilled workers. More than half of the current 221,000 US mining workers will retire by 2029. That is an average of more than 20,000 per year. However, only 4,000 university graduates went to work in mining in 2023.

You make most of your money in a bear market; you just don't realize it at the time.
Shelby Cullom Davis

According to estimates, the demand for engineers in the mining sector is expected to increase by 20% over the next ten years. A 2023 study by the *National Mining Association* found that the US mining industry will need 80,000 new workers by 2025. The retirement wave is not just limited to the US; Canada has a similar problem: 30% of the mining workforce will retire in the next ten years.

Despite these two structural challenges, we believe there are many good reasons to invest in the mining sector, including first and foremost high and rising free cash flows, share buyback programs, historically high dividend yields, stable balance sheets, more conservative management teams, and greatly reduced debt. We are also likely to be at the beginning of an M&A cycle.

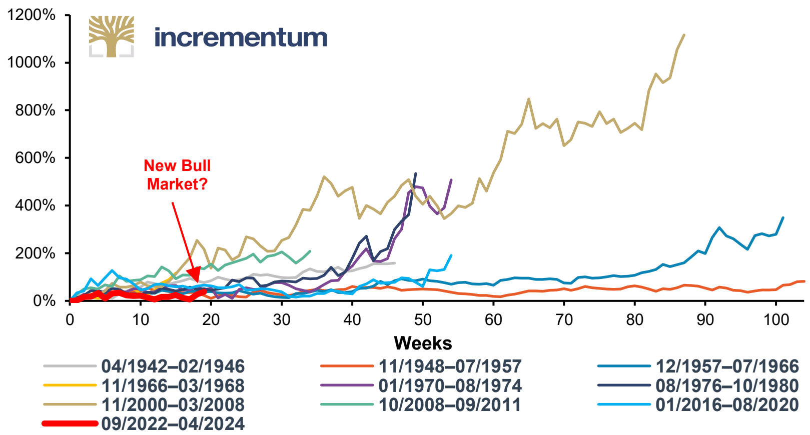
If Dr. Copper has a PhD in economics and is an expert on the business cycle, then gold is a professor with a Nobel Prize in monetary debasement.
Charlie Morris

Due to the ongoing supply deficits and the "greener" perception of copper, majors from the gold segment will increasingly diversify into copper. This was likely the backdrop to Newmont's acquisition of Newcrest, as copper currently accounts for around 25% of Newcrest's total net revenue and the company hopes to increase this to 50% by 2030. Copper is currently at the center of the commodities industry due to its vital role in the energy transition and because of rapidly dwindling global supplies. **In this respect, we expect that explorers and developers with significant gold-copper deposits in safe jurisdictions will be on the "menu" of the majors.**

Let's now take a look at one of the most popular charts from previous *In Gold We Trust* reports. The chart shows all the bull markets of the Barrons Gold Mining Index (BGMI) since 1942 and demonstrates that the current uptrend is still relatively weak compared to previous bull markets. If we really are at the beginning of a pronounced trend phase for mining companies – which we assume – there should still be sufficient upside potential. **In addition, we can see that every bull market has always ended with a parabolic uptrend that**

lasted an average of 9 months and resulted in at least a doubling of share prices.

Gold Mining Bull Markets*, 01/1942–04/2024

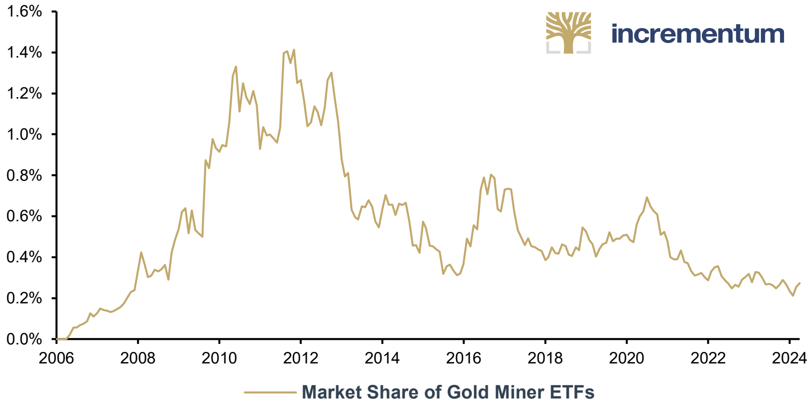


Source: Nick Laird, Reuters Eikon, Incrementum AG
*1942–2000 BGMI, 2000–Today HUI

Never be the first to arrive at a party or the last to go home and never, never be both.
David Brown

A look at the market share of mining ETFs in the overall ETF market also shows this: The party has not yet started. Gold mining ETFs currently account for just 0.27% of all assets invested in ETFs. At its peak in 2011, the share was 1.4% and therefore 5 times as high.

Market Share Gold Miner ETFs (Gold Miner ETFs AUM/All Equity ETFs AUM), 01/2006–04/2024



Source: Topdown Charts, Incrementum AG

In the short term, the technical situation seems somewhat overbought to us. The second half of the year tends to be weaker for mining stocks, with seasonal weakness being particularly pronounced in July and October. In line with this seasonality, a setback in the fall could offer excellent buying opportunities.

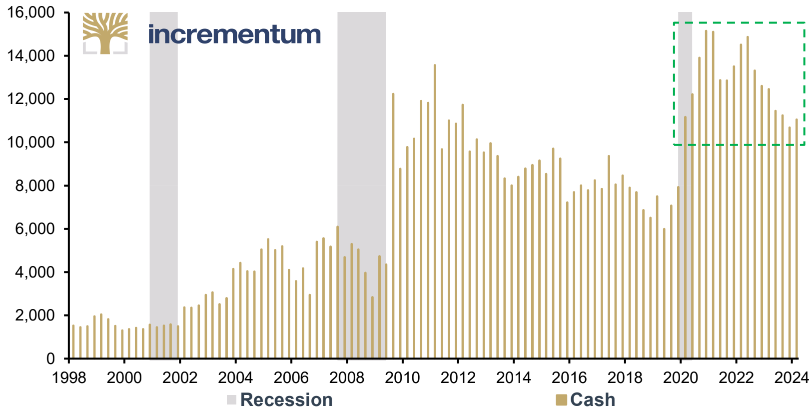
Source: Seasonax

Great investors possess seven cardinal virtues: curiosity, skepticism, discipline, independence, humility, patience, and above all courage.
John Templeton

We expect that the gushing cash flows of producers will lead to their replenishing their shrinking reserves through takeovers and mergers. The biggest beneficiaries of this development will be junior producers, fully financed developers, and explorers with world-class discoveries in Tier 1 regions. We also expect increasing M&A activity in the copper and silver sectors. **This is why we are currently focusing our research and investment allocation on these segments in particular.**

The balance sheet strength of mining companies is an important factor that generally anticipates M&A cycles. The largest gold and silver mining companies currently have the highest cash holdings 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–Q1/2024

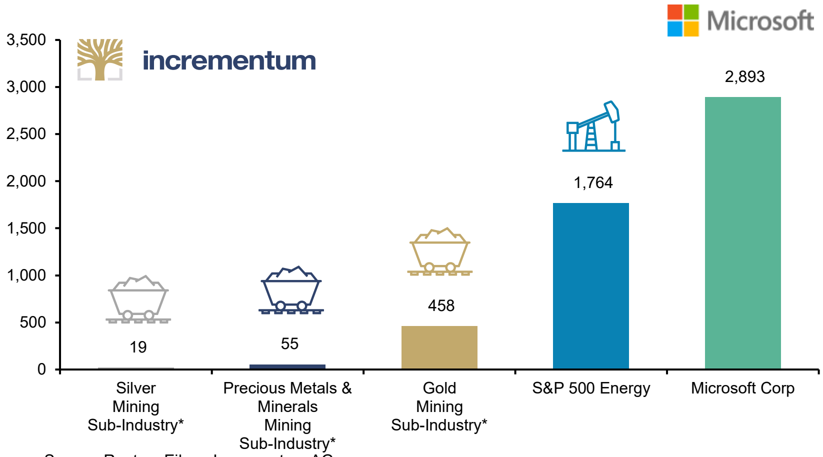


Source: Crescat Capital, Reuters Eikon, Incrementum AG

We believe that some investors still suffer from "battered gold stock bull syndrome".
Larry Lepard

Despite the largely positive developments we have described above, there are still few sectors that are more underweighted by the investment community than the mining sector. This is reflected in the sector's almost dwarfed market capitalization. In this respect, we expect mining stocks – and their shareholders – to reap a rich harvest over the next few years after a grueling dry spell. However, it is now up to the sector to deliver on the promises made in recent years and build new investor confidence.

Market Capitalization, in USD bn, 04/2024



Source: Reuters Eikon, Incrementum AG
*GICS classification (Global Industry Classification Standard)

Technical Analysis

The truly flexible man in the market is the man who can be foolish at times, bullish at times, bearish at times, borrow money at times, be short at times, the person who can learn to be an expert on gold stocks in one period and some other style of stock in some other period. These men are exceedingly super-super rare.

But they exist. And these are the men to watch, the men to learn from, they are the men who really make money on Wall Street.

Gerald M. Loeb, The Wizard of Wall Street

- **The gold price flirted with a new USD all-time high for some time. The breakout from the cup-and-handle formation has now finally been successful. The price target of this formation is USD 2,700 and subsequently USD 3,100.**
- **The major correction or consolidation that began with the all-time high of USD 1,920 in late summer 2011 has now finally come to an end after thirteen and a half years. The technical playbook has also changed as a result.**
- **In view of the current market sentiment, seasonality and the CoT report, we would not be surprised to see gold taking a breather lasting several weeks.**
- **The Optix stands at 64 and is therefore in neutral territory. Sentiment is thus therefore fundamentally constructive and far from exuberantly optimistic. The Optix is also still only cautiously optimistic about silver and miners in particular.**
- **The Midas Touch Gold Model™ switched from bullish to neutral on April 15th, 2024. Typically, the ongoing pullback should sooner or later lead the gold price back to the breakout level in the range of approximately USD 2,075 to USD 2,150. Following such a healthy consolidation, the bull market is expected to gain momentum, with price targets surpassing USD 3,000. At that point, mining stocks are poised to finally catch up and then surge ahead.**

Following the comprehensive macroeconomic and fundamental analysis, we now turn to the technical analysis of the gold price. We wrote about this last year:

> ***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.***[127]

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

This technical assessment proved to be correct. A few days after the publication of the *In Gold We Trust* report 2023, a downward trend set in, which only bottomed out at USD 1,800. This final bearish wash-out was accompanied by extremely negative sentiment for gold, silver and mining stocks. This low provided a solid foundation for a rally of almost USD 600.

The long-term cup-and-handle formation that we described last year has now been resolved. After consolidating sideways in US dollars from August 2020 to February 2024, the gold price has now broken out. In general, we have always believed that sideways consolidations are the most positive correction patterns, as they indicate that the forces of supply and demand are in balance. **From a long-term perspective, consolidation phases are often precursors to significant price movements.**

What is our current technical assessment of the gold price? We are again using the Coppock indicator to determine the longer-term position.[128] The advantage of this indicator is that it reliably identifies major trend changes. The Coppock indicator is still a buy, but has formed a small divergence to the price. By contrast, the KST[129] turned impulsively upwards in Q4/2023 and generated a buy signal.

Source: Tradingview, Incrementum AG

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127 "Technical Analysis," *In Gold We Trust* report 2023, p. 386
128 Specifically, these are two time-weighted momentum curves that are added together and whose long-term moving average represents the Coppock line. We use a slightly modified Coppock with somewhat longer periodicities.
129 Martin Pring's *Know Sure Thing* (KST) indicator measures the price momentum of four different price cycles.

It is impossible to produce a superior performance unless you do something different from the majority.
Sir John Templeton

Let us now take a look at the market sentiment. If we look at the forecasts from the beginning of May 2024 for the end of 2024, the median price is expected to be USD 2,134. A decline is therefore expected over the remainder of the year. The median price targets for the end of the following years are USD 2,115 (2025), USD 2,000 (2026), USD 1,850 (2027) and USD 1,750 (2028). In fact, analysts expect a correction until the end of 2024, followed by a sideways trend and a bear market from 2027. We consider this divergence between the price trend and analyst sentiment to be an extremely valuable bullish signal. At the end of a secular trend, forecasts should be much more euphoric. Incidentally, the analyst with the optimistic forecasts is also the author of these lines.

Bloomberg: Analyst consensus for gold: 2024–2028

Gold $/t oz | 99) Browse | As Of 05/05/24 | Ticker Type Actual
Quarterly Forecast | Yearly Forecast
Overview | Curve Analysis | Ranking
Firms: Standard | Custom | Rank All | Updated Last 6 Months

Consensus	Spot	As Of	2024	2025	2026	2027	2028
Median		04/29/24	2134.00	2115.00	2000.00	1850.00	1750.00
Mean		04/29/24	2157.05	2464.10	2032.24	2060.69	1805.00
High		04/29/24	2450.00	11000.00	3100.00	3600.00	2430.00
Low		04/29/24	1962.50	1851.00	1500.00	1550.00	1500.00
Forward	2301.74	05/03/24	2279.24	2448.36	2568.88	2628.68	2662.00
Diff (Median - Curr)			-145.24	-333.36	-568.88	-778.68	-912.00

Source: Bloomberg

To be an impeccable member of a flock of sheep, you have to be a sheep first and foremost.
Albert Einstein

The picture is similar for silver. A median price of USD 24.8 is expected at the end of the year. The price is then expected to rise to USD 25.8 in 2025. However, the consensus is no longer really meaningful, as the number of active coverages by banks has fallen significantly in recent years. **This confirms our hypothesis that silver remains as popular in the financial sector as a pork knuckle and a pint of beer among vegan teetotalers**.

Bloomberg: Analyst consensus for silver: 2024–2028

Silver $/t oz | 99) Browse | As Of 05/05/24 | Ticker Type Actual
Quarterly Forecast | Yearly Forecast
Overview | Curve Analysis | Ranking
Firms: Standard | Custom | Rank All | Updated Last 6 Months

Consensus	Spot	As Of	2024	2025	2026	2027	2028
Median		04/29/24	24.83	25.80	25.75	25.00	23.63
Mean		04/29/24	25.35	27.06	26.88	26.84	23.98
High		04/29/24	32.00	36.00	39.00	42.00	31.28
Low		04/29/24	22.20	21.00	20.00	20.00	20.00
Forward	26.56	05/03/24	26.29	28.49	30.18	30.77	31.21
Diff (Median - Curr)			-1.46	-2.69	-4.43	-5.77	-7.59

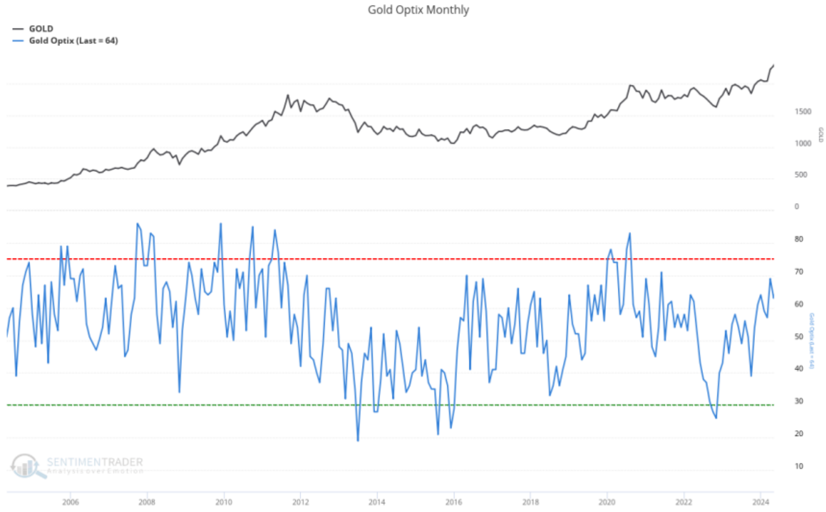
Source: Bloomberg

One of our favorite sentiment indicators is the Optix from SentimenTrader. It tracks the most common sentiment indicators as well as data from the futures and options market. The logic behind this barometer is very simple. If 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 rises above the red dotted line at 75 points, it is time to become more cautious. If it is at 30 points or below, on the other hand, pessimism is pronounced, and the downside risk is limited. The monthly Optix currently stands at 64 and is therefore still in neutral territory. A comparison of the current level with the last high in July 2020 reveals a clear divergence. Although gold has reached new all-time highs, sentiment remains fairly subdued, which can be interpreted as a clearly positive sign.

Optix indicator and gold price, 2004–2024



Source: Sentimentrader.com

History never repeats itself. Man does.
Voltaire

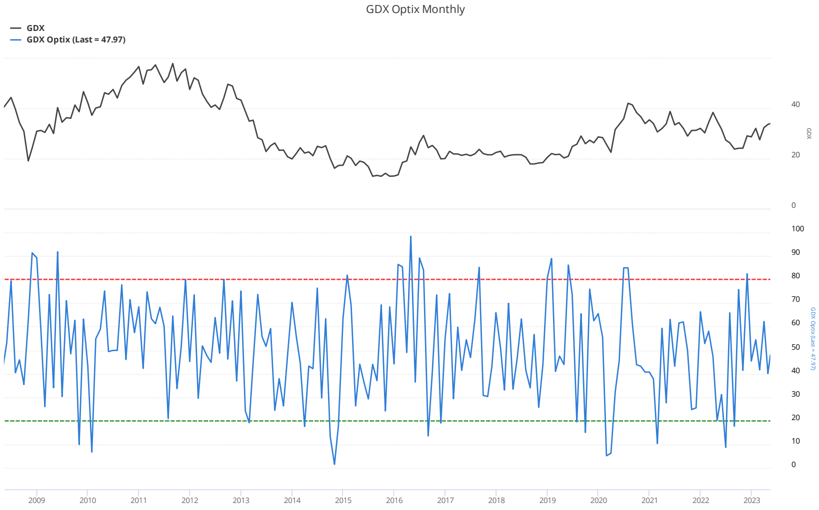
The Optix for silver currently stands at 66, which is also still in neutral territory. With regard to the sentiment in the silver sector, we once wrote: "The party doesn't seem to have really started for silver yet, although the guests are slowly arriving." More party guests have indeed arrived in the meantime, but others have quickly left the party in frustration. This somewhat listless and frustrating development is confirmed by the price trend, but also by the sentiment.

Optix indicator and silver price, 2004–2024

Source: Sentimentrader.com

Finally, if we look at the mood among mining investors, there is no exuberant euphoria to be found here either. The Optix is currently trading at 47 and is therefore also in neutral territory.

Optix indicator and GDX, 2008–2024



Source: Sentimentrader.com

I have seen the future and it is very much like the present, only longer.
Kehlog Albran

This year, too, we would like to take a brief look at the seasonal patterns.[130] The following chart shows the annual performance of gold in the years of US presidential elections. You can clearly see that a seasonally weaker phase begins in July and only ends in November.

Seasonality of gold in election years

Source: Seasonax.com

A seasonal downward trend can also be seen in silver from August to the end of November.

Seasonality of silver in election years

Source: Seasonax.com

[130] The seasonal charts were provided to us by our friends at www.seasonax.com.

Let's take a brief look at the performance of the US dollar in election years. The greenback typically flexes its muscles, particularly in the weeks leading up to the election at the beginning of November, before a period of weakness sets in.

Seasonality of the USD in election years

Source: Seasonax.com

The Midas Touch Gold Model™[131]

> *My simple stock market formula is: stock market trend = liquidity + psychology. The most important factor is liquidity. When the world is swimming in money, the stock markets rise.*
>
> André Kostolany

Some people have a Midas touch; they turn everything they touch into gold. I turn everything into a deep philosophical lesson; I can't help it.
Jordan Peterson

As usual, we would like to provide an update on the current status of the Midas Touch Gold Model™ and present Florian Grummes' short- to medium-term outlook for the gold market. The Midas Touch Gold Model™ analyzes the gold market from various perspectives with a rational and holistic approach. It stands out for its versatility and quantitative measurability. Despite the abundance of data, the model succeeds in presenting a comprehensive and in-depth analysis concisely in a table format and reaching clear conclusions.

Gold in USD (monthly chart)

Source: Midas Touch Consulting, Tradingview

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[131] We would like to thank Florian Grummes for this excursus. Florian is the founder and managing director of Midas Touch Consulting. Our readers can sign up for free updates and the associated newsletter at the following link: http://eepurl.com/ccKg2r

Nothing moves in a straight line is the point. But picking bottoms is best left to the proctologists.
Dave Rosenberg

A year ago, at this very spot, we forecasted a pullback in the gold market and defined two price targets for the correction at USD 1,900 and USD 1,850 respectively. Ultimately, the anticipated pullback, starting from USD 2,070, extended until early October. Only after the paper jugglers at the Comex leveraged the trade-free *Golden Week* in Shanghai for a price suppression down to USD 1,810 did the gold market undergo a complete cleansing with this final panic sell-off.

This was followed by a rapid recovery, which finally culminated in a sharp price spike to a new all-time high of USD 2,149 on December 4, 2023. This basically put an end to the three-and-a-half-year correction and at least began to break through the strong resistance at USD 2,075. Nevertheless, it took another two and a half months before the foreseeable and long-awaited breakout rally actually got underway. After all, the steep rise since the beginning of October first had to be digested primarily over time and with a tricky consolidation.

Just in time for the next big rise, the last weak hands were shaken off with a small bear trap and another setback below the psychological USD 2,000 mark on February 13. However, the bulls immediately re-entered the market from the low of USD 1,985. Just two weeks later, the price of gold determinedly reached the important weekly closing price above USD 2,080.

Encouraged by this bullish signal and the strong physical demand for the Chinese New Year, the bulls took complete control and drove gold prices to a new all-time high of USD 2,431 by April 12 in a brilliant rally without any major setbacks. This meant that the gold price had rallied by USD 446 or around 22.5% from its low of USD 1,985 in just two months. From the panic low of USD 1,810 on October 6, 2023, it even recorded an unprecedented rise of USD 621 or 34.3% at its peak.

There is no training, classroom or otherwise, that can prepare for trading the last third of a move, whether it's the end of a bull market or the end of a bear market.
Paul Tudor Jones

Although there has been no sign of excessive euphoria among gold bugs so far, the rally has stalled in the last three weeks. Rapid profit-taking in the form of two major downward spurts recently led to a hangover and a first correction low at USD 2,277. Although the gold price is still well above its level at the start of the year (USD 2,063) at around USD 2,300, there are increasing signs of a short to medium-term trend reversal and therefore probably also of an extended correction. In view of the strong price gains, the overbought situation and the unfavorable seasonality from now on, a setback to the breakout level in the USD 2,075 to USD 2,150 range would only be healthy and completely normal.

Great opportunities do not come every year.
Charles Dow

Overall, a look at the monthly chart makes it clear that the major correction or consolidation, which began with the all-time high of USD 1,920 in late summer 2011, has finally come to an end after thirteen and a half years. With the breakout above USD 2,075, the repeatedly described cup-and-handle formation was completed in exemplary fashion and resolved on the upside. Although cup-and-handles are extremely rare, they are also among the most reliable bullish continuation patterns. In this respect, a new chapter has now been opened on the gold market, which is directly related to the bull market of 2001 to 2011 and should lead to its continuation!

However, our first price target of around USD 2,535, derived from the inverted shoulder-head-shoulder formation within the handle, has so far been missed by just under USD 100. Nonetheless, the formation has done its job and should now be more or less completed.

In the big picture, the depth of the cup can also be used to derive an overarching price target in the region of around USD 3,100. Once the current correction has been completed, we expect the gold price to clear both price targets in the next one to two years.

Midas Touch Gold Model™

The Midas Touch Gold Model™ May 4th, 2024 (Version 1.4)

Gold USD - Monthly Chart	USD 2,302.68	Buy signal 02/28/23, reversal @ USD 1,959.19	Bullish		
Gold USD - Weekly Chart	USD 2,302.68	Buy signal 03/04/24, reversal @ USD 2,146.92	Bullish		
Gold USD - Daily Chart	USD 2,302.68	Sell signal 04/15/24, reversal @ USD 2,373,85			Bearish
Gold Volatility CBOE Index	16.05	Since 04/12/24, goldmarket volatility has been falling strongly		Neutral	
Gold CoT-Report	-227,498	Commercial shortposition too high			Bearish
Gold Sentiment	64	Sentiment is slightly too optimistic			Bearish
Gold Seasonality	May	Until at least end of June negative seasonal cycle			Bearish
Ratio DowJones/Gold	16.75	Sell signal 04/03/24, reversal @ 18.10; Gold outperforming Dow Jones	Bullish		
Ratio Gold/Silver	86.69	Buy signal 02/19/24, reversal @ 88.82; Silver outperforming gold	Bullish		
Ratio Gold/Oil	29.56	Buy signal 04/08/24, reversal @ 25.81; Gold outperforming oil	Bullish		
Ratio Gold/Commodities (GNX)	4.02	Buy signal 04/03/24, reversal @ 3.69; Gold outperforming commodities	Bullish		
Ratio Bitcoin/Gold	27.43	Sell signal 04/15/24, reversal @ 34.40; Gold outperforming Bitcoin	Bullish		
SPDR Gold Trust Holdings (GLD)	830.47t	Minus 1.43t during the last two weeks			Bearish
Gold in $, €, £, ¥	3 out of 4	Gold up against EUR, GBP & JPY, down against USD over one month		Neutral	
Gold in Indian Rupee - Daily Chart	INR 192,011	Sell signal 04/15/24, reversal @ INR 197,422			Bearish
Gold in Chinese Yuan - Daily Chart	CNY 16,666	Sell signal 04/15/24, reversal @ CNY 17,191			Bearish
Shanghai to NY Spot premium	+0.97%	Shanghai premiums are falling quickly		Neutral	
GDX Goldminers - Daily Chart	USD 33.44	Buy signal 04/26/24, reversal @ USD 32.66	Bullish		
GDX Goldminers Sentiment	37.52	Sentiment is neutral		Neutral	
US-Dollar Index - Daily Chart	USD 105.07	Sell signal 04/26/24, reversal @ USD 106.49; bullish for gold	Bullish		
US-Dollar CoT-Report	-2,189	Very small commercials shortposition on the US-Dollar		Neutral	
US Real Interest Rate	+3,05%	3-month T-bill yield (5.38%) - change in the CPI (2.33%)			Bearish

Midas Touch Gold model is in neutral/sideways mode since April 15th, 2024

in gold we trust .report — © 2024 Midas Touch Consulting/Florian Grummes — MIDAS TOUCH CONSULTING

Source: Midas Touch Consulting

The Midas Touch Gold Model™ last switched from bullish to neutral on April 15, 2024, thus recognizing the trend reversal on the gold market extremely quickly. In particular, the sell signals on the daily charts for the gold price in US dollars, Indian rupees and Chinese yuan put an end to the bullish conclusion on April 15, 2024. This was reinforced by the seasonal component, which is now clearly negative for the gold price until the height of summer.

Overall, the following conclusions can currently be drawn from the Midas Touch Gold Model™:

- **Buy signals are still active on both the monthly and weekly charts.** The buy signal on the monthly chart in particular is firmly in place and is currently only turning at USD 1,959. The buy signal on the weekly chart, on the other hand, could be overturned in the course of a correction lasting several weeks. At present, however, this would only be the case at a gold price of USD 2,146. This threshold on the weekly chart rises by over USD 30 per week, i.e. in around three weeks it would only take a price drop to around USD 2,240 to turn the weekly chart bearish.
- **The CoT report has hardly changed in the last 12 months.** A year ago, we recorded a cumulative commercial short position of 222,515 contracts sold short at a gold price of USD 2,011. This short position currently stands at 227,498 contracts, although the gold price is around USD 300 higher. This confirms our decision to abandon our detective-like observation of the CoT

report, as prices are now being set in Asia, while Western paper jugglers have massively lost influence on pricing.

- **Seasonality clearly calls for caution, restraint and, above all, patience.** Statistically speaking, the precious metals sector is not in for a good phase until July. June in particular is traditionally an extremely weak month for the gold price.
- **It is astonishing that the brilliant rally has not yet led to completely exaggerated euphoria among gold investors.** On the contrary, especially in March, it seemed as if the outbreak on the gold market was not even noticed by most market participants due to the strong equity and crypto markets.
- **The behavior of the gold price against the stock markets is also somewhat atypical.** Although the model gave a buy signal for the gold price against the Dow Jones on April 3, it has not yet produced more than a sideways movement.
- **By contrast, the performance of the silver price was disappointing.** Despite breaking out of its three-and-a-half-year consolidation triangle, it was only enough for a very short-lived price spike to USD 29.73. The typical final spurt on the home stretch of every precious metal rally basically did not take place this time. Although the gold/silver ratio still activated a buy signal in favor of the silver price, there is not much left for a reversal signal.
- **The weak demand for gold ETFs is also surprising.** Instead, physical demand from institutional and private buyers from Asia was responsible for the price increase.
- **Mining stocks must also be included in the list of disappointments.** Although the mining ETF GDX temporarily gained 39.25% from the end of February, its overall performance is weak in view of the high gold price. While the gold price is currently trading around 20% above its summer 2011 high, the GDX is trading at a discount of 47% to its all-time high at the time. We therefore believe that mining stocks have a great chance of catching up in the medium term and, despite a possible correction on the gold market, see only limited potential for a setback.
- **The US dollar does not quite match our correction scenario at the moment.** A new sell signal for the greenback was only issued on April 26. While the somewhat stronger US dollar has not stood in the way of the strong rise in gold prices over the last three months, a weaker US dollar could presumably cushion the anticipated correction on the gold market.

Gold in USD (daily chart)

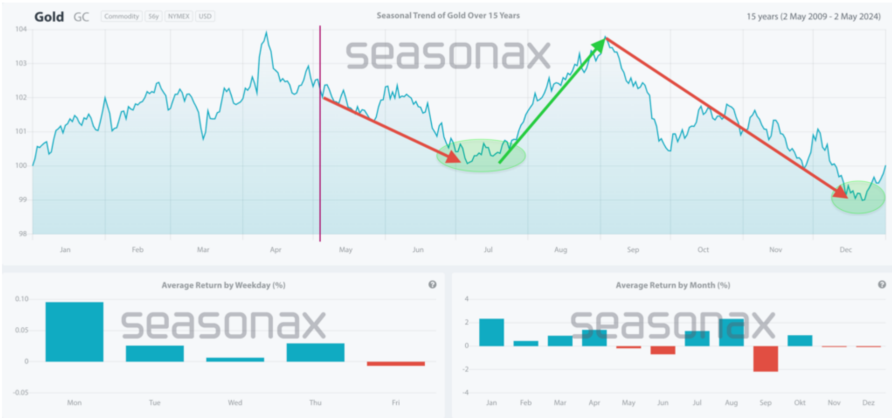
Source: Midas Touch Consulting, Tradingview

On the daily chart, the price of gold is now around USD 130 below its new all-time high of USD 2,431 reached on April 12. At its peak, the setback has so far been relatively moderate at USD 154 or 6.3% in the last three weeks. Nevertheless, there is much to suggest that a correction phase has begun on the gold market.

Markets usually change when beliefs change, not fundamentals.
David Darst

In the past, any setbacks after a breakout rally have always led back to the breakout level. At present, this zone between USD 2,075 and USD 2,150 certainly seems quite far away. Nevertheless, a dark red seasonal component awaits the gold bulls in June. Should the strong gold buying from Asia fail to materialize for a while, demand in the West is unlikely to be sufficient to stabilize the gold price. The lack of interest has repeatedly made life difficult for spoiled German gold traders, for example, over the past year. Instead of buying, many gold investors had to sell physical positions due to the recessionary real economy in order to create urgently needed liquidity.

From a technical chart perspective, the large gap to the rising 200-day line (USD 2,037) also suggests that there is a need for significantly more correction. However, as long as the support level of USD 2,280 can be defended on a weekly closing basis, the clearly oversold situation on the daily chart could lead to a major recovery at any time. Nevertheless, the picture will only brighten significantly above USD 2,380. New all-time highs would then also be conceivable. However, given the lack of courage and strength shown by the gold bulls over the past two weeks, this bullish scenario seems rather unlikely to us.



Source: Midas Touch Consulting, Seasonax

In case of doubt, a sideways consolidation around USD 2,300 is therefore likely to continue in May. Before the height of summer, the gold price could then typically enter a sell-off, which should bottom out from mid-July. A small summer rally could then be expected. However, the seasonal component is not really well-disposed towards the gold market until mid-December.

Patience is key when it comes to patience.
Proverb

Overall, we are approaching the next few months with caution and patience in line with the old stock market adage "Sell in May". The strong rallies on the equity and crypto markets do not yet seem to have been digested after a small setback. Should more trouble arise here, the precious metals sector is unlikely to be able to escape it. At the same time, central bankers are always ready with new support measures, so that further excesses on the upside are conceivable during the weak summer months within the current crack-up boom. However, it seems more likely that we will see a healthy breather and thus weaker prices into the fall, which should then finally make the lagging mining stocks in particular highly interesting again.

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 therefore important for us to understand the *big picture* not only from a fundamental but also from a technical perspective.

A bubble is a bull market in which the user of the word 'bubble' has not fully participated.
Jim Grant

In our opinion, we have experienced a paradigm shift in recent months that has ushered in a new phase of the bull market. Bob Farrell, whom we hold in high esteem, described this change in the rules of the game as follows:

> *Change of a long-term or secular nature is usually gradual enough that it is obscured by the noise caused by short-term volatility … Moreover, in a shift of secular or long-term significance, the markets will be adapting to a new set of rules while most market participants will be playing by the old rules.*

You may say I'm a dreamer, but I'm not the only one.
John Lennon

Sentiment is in no man's land. In view of the fact that the gold price is hardly attracting any attention despite new all-time highs, we interpret this as clearly positive. In our opinion, the combination of continued relatively low interest in gold and silver on the part of (Western) investors and the lack of price expectations on the part of analysts is a good basis for further price advances.

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

From the perspective of current market sentiment, seasonality and the CoT report, we would not be surprised to see gold taking a breather lasting several weeks. This would not come as a surprise after the impulsive breakout from just under USD 600. However, we do not expect a deep correction, as great buying interest is waiting on the sidelines, leading to a buy the dips. The recent slight increase in the relative strength of silver and mining stocks also gives us confidence. **In this respect, the conditions for the continuation of the new bull market appear excellent from a technical perspective.**

Quo vadis, aurum?

Any well-diversified portfolio should contain gold, and, at present, we'd recommend an aggressive overweight. That will act as a hedge against geopolitical and fiscal risks, offer a safe harbor against a breakdown in the equity bull-run, and give positive exposure to the coming easing cycle and period of dollar weakness. Don't be afraid to go in at current levels.

Dave Rosenberg

- **The geopolitical showdown continues. In addition to the ongoing military conflicts, the showdown is also increasingly taking place on a geo-economic level. This is reflected, among other things, in the persistently high central bank demand for gold.**

- **The harsh end to the zero interest rate policy is reflected in sharply rising interest rates for overindebted Western countries. The continued restrictive monetary policy harbors the risk of further tightening.**

- **As the country with the highest level of debt, Japan has reached the limits of its debt sustainability. The central bank can only half-heartedly combat the rise in inflation with minimal interest rate hikes, while continuing to monetize government bonds. In response, the price of gold in yen has more than doubled since 2020.**

- **The new gold playbook suggests investors give precious metals and real assets a higher weighting in their portfolios as long as there is no sustained stabilization in the development of debt and inflation.**

- **We present a modified version of the traditional 60/40 portfolio, which is derived from the new gold playbook. This consists of 60% equities and bonds and 40% alternative asset classes. These include physical gold, silver, mining stocks, commodities and Bitcoin.**

- **We are sticking to our gold price forecast of USD 4,800 by the end of 2030, which we presented in 2020. Achieving this price target requires an annualized return of just under 12%. By way of comparison, the return in the 2000s was over 14% p.a., compared with around 27% p.a. in the 1970s.**

On a team, it's not the strength of the individual players, but it is the strength of the unit and how they all function together.
Bill Belichick

In the world of sports, new and innovative playbooks have regularly overturned existing paradigms. Bill Belichick of the New England Patriots has had a lasting impact on the NFL with his ability to adapt game plans precisely to the opponent, with the flexibility of his offensive and defensive systems, but also with his psychological warfare. Under Belichick's guidance, Tom Brady, who was selected as only the 199th draft pick in 2000, quickly developed into a true *difference maker*. Their partnership led the Patriots to six Super Bowl victories and made the two the most successful quarterback-coach team in NFL history. Belichick's most famous line is "*Do your job*". This reflects his philosophy that everyone on the team must perform their role precisely to ensure overall success.

The same applies to asset allocation. Each asset class has its role to play. If used correctly, gold could become a real *difference maker* in the portfolio within the framework of the new gold playbook.

Gold Vigilantes – Gold as an Early Warning of a Geo-economically Induced Recession?

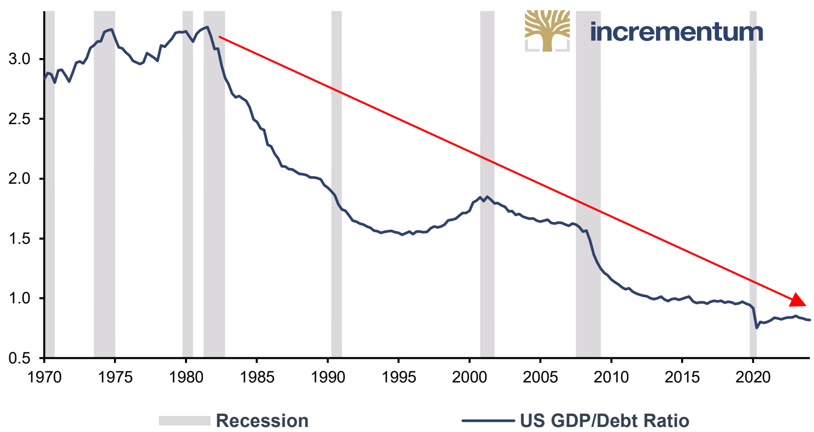
Hence now that almost every market guru has walked back their recession call, wouldn't it be just typical if the US economy now slides into recession?
Albert Edwards

"The biggest financial event of 2023 has been the recession that never arrived," says our friend Trey Reik. We had also described a US recession as a likely scenario in the *In Gold We Trust* report 2023, "Showdown". To our surprise (but not only ours), this has so far failed to materialize**. But why has the US been spared a recession so far despite a sharp rise in interest rates?** The still very high budget deficit and the continuing spending spree of consumers, fueled by strong nominal wage increases and the robustness of the labor market, are two important reasons. In addition, the US is benefiting from increasing re-industrialization and the still very loose financing conditions for US companies.

Keynesians think that you can take water from the deep end of the swimming, pump it into the shallow end of the swimming pool, and somehow the water level of the swimming pool will rise.
Tom Woods

However, the following chart will occasion little joy in the camp of Keynesian-minded admirers of the current "economic miracle". It shows GDP divided by national debt. You can see the diminishing marginal return of an additional unit of debt on GDP. As soon as the dose of debt is not further increased, the withdrawal symptoms will likely be painful.

US GDP/Debt Ratio, Q1/1970–Q1/2024



Source: Reuters Eikon, Incrementum AG

Landings require precise body control and the skillful dissipation of substantial body momentum.
Science of Gymnastics journal

Even if *nevercession* and *no landing* are now the consensus view on economic development in the US, we remain suspicious of the various goldilocks and landing scenarios. **After all, history shows that tightening cycles have almost always ended in a recession.**

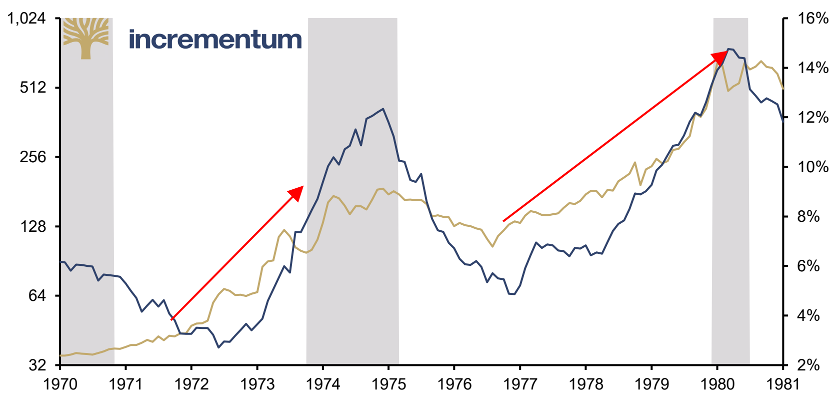
Federal Funds Rate, 01/1970–04/2024

Source: Reuters Eikon, Incrementum AG

The West dreamt of the BRICS as a lapdog, that they would accumulate dollars and recycle them into Treasuries, but instead of that they are renegotiating how things are done.
Zoltan Pozsar

Perhaps the gold price is once again proving its portfolio characteristic as the sixth sense of the financial markets? Let's ignore the scenario of a recession in a "conventional" economic cycle for a moment. In the 1970s in particular, gold price outbreaks were preceded by recessions that had geo-economic triggers. After the gold price outbreak in 1972, for example, the US entered a recession in November 1973. This was triggered by the oil embargo in response to Western support for Israel in the Yom Kippur War in October 1973. After the gold price outbreak of 1978, the US slipped into recession in February 1980 as a result of the energy crisis triggered by the Iranian Revolution, while the inflation rate in the US rose to just under 15%.

Gold (lhs, log), in USD, and US CPI (rhs), 01/1970–12/1980



Source: Reuters Eikon, Incrementum AG

The fate of reserve currencies is to decline over time.
Martin Murenbeeld

It is little known that the rise in oil prices in the early 1970s was a direct reaction of the OPEC states to the closure of the gold window on August 15, 1971. This "temporary" decoupling of the US dollar from gold was interpreted by OPEC members as a devaluation of the US dollar, which reduced their real oil revenues accordingly. This is documented by the minutes of the 25th (extraordinary) meeting of OPEC on October 7, 1971, in Vienna, which OPEC was kind enough to provide to us exclusively:

having considered the report of the Secretary General concerning the recent international monetary developments and their adverse effects on the purchasing power of the oil revenue of Member Countries;

noting that these developments have resulted in a de facto devaluation of the United States Dollar, the currency in which posted prices are established, vis-à-vis the currencies of the major industrialized countries;

recalling Resolution XXI.122 which calls, inter alia, for adjustment in posted or tax-reference prices so as to offset any adverse effect resulting from de facto or de jure changes in the parity of monies of major industrialized countries;

resolves

1. that Member Countries shall take necessary action and/or shall establish negotiations, individually or in groups, with the oil companies with a view to adopting ways and means to offset any adverse effect on the per barrel real income of Member Countries resulting from the international monetary developments as of 15th August, 1971.

2. that the results of negotiations shall be submitted to the next Conference. In case such negotiations fail to achieve their purpose, the Conference shall determine such action as necessary for the implementation of this Resolution.

Source: OPEC

Even today, there is sufficient potential for a geo-economically induced recession as part of the geopolitical showdown. In fact, this historic OPEC document reminds us of the statement made by Gazprom CEO Alexei Miller in June 2022: "The game of nominal value of money is over, as this system does not allow to control the supply of resources. Our product, our rules. We don't play by the rules we didn't create."

The risk of an oil or commodity shock deliberately caused for political reasons is underestimated by many market participants despite the ongoing spiral of sanctions. To paraphrase Mark Twain, imagine that the BRICS+ countries artificially shortage large parts of the commodities market (oil, natural gas, agricultural commodities, copper, nickel, rare earths, etc.) in a rhyming repeat of the 1970s. This would trigger another wave of inflation, which would have the potential to cause much worse economic turbulence than that of the past few quarters. **Political and social unrest could be expected in this case.**

We now stand on the brink of a geopolitical and monetary rupture.
Russell Napier

Even without such concerted action, there are sufficient indications that the commodity-rich emerging markets are continuing the process of de-dollarization that has been going on for some time. **The geopolitical implications of this decoupling process are reflected in the following recent quote from US presidential candidate Donald Trump:** "I would not allow countries to go off the dollar because when we lose that standard, that will be like losing a revolutionary war. That will be a hit to our country." It can be assumed that the geopolitical showdown towards a multipolar order will be with us for some time to come. In the best-case scenario, it will continue to take place on a regional basis; **in the worst-case scenario, we are already in the *Thucydides Trap* without having realized it yet**.

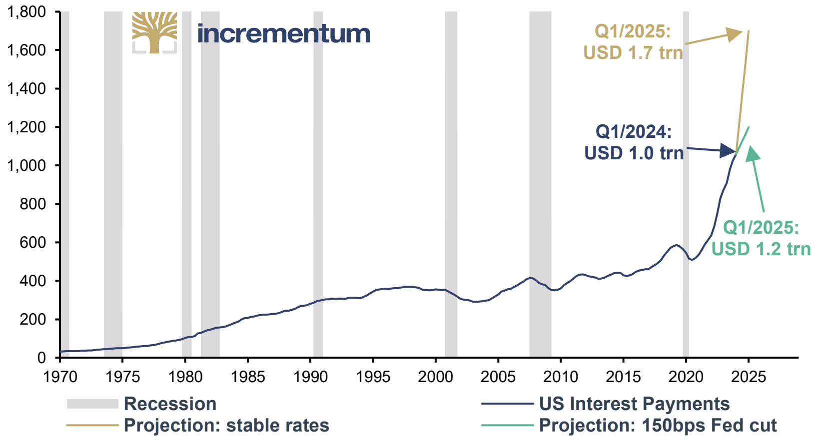
The New Gold Playbook and the Limits of Debt Sustainability

I have never seen the market so confused. With public debt and deficits out of control, it is hardly surprising gold is strong. Debasement seems inevitable, and gold is the safest port in the storm. There is no need to be confused.
Charlie Morris

Any remnants of fiscal sanity were finally thrown overboard by Western countries as part of Covid-19 policy. This *monetary climate change*, as we called it in 2021, is still in full swing and has by no means reversed even after the end of the pandemic. In addition to costly initiatives such as the *Inflation Reduction Act,* the *Green New Deal,* and the sharp rise in spending on a social system that is structurally underfunded as a result of the demographic situation, there is now also the need to cope with the financing of military rearmament.

In addition, the fiscal situation of many countries is deteriorating due to persistently high budget deficits and the recent significant rise in refinancing costs. The significant increase in national debt in the wake of the Covid-19 pandemic is now also taking its toll. Compared to Q4/2019, i.e. on the eve of the Covid-19 pandemic, US debt has risen by USD 11trn or around 50% (!). **And there seems to be no end in sight to the debt binge.**

US Interest Payments, in USD bn, 01/1970–01/2025e



Source: BofA Global Investment Strategy, Reuters Eikon, Incrementum AG

History and logic show that when there are big risks that the debts will either 1) not be paid back or 2) be paid back with money of depreciated value, the debt and the money become unattractive.
Ray Dalio

A decisive factor here is the financing structure and the remaining term of the bonds already issued. This has a significant influence on how quickly the rise in interest rates will affect interest payments. **The average maturity of US federal debt is currently only 70.7 months.** In recent years, a particularly large number of short-term debt instruments have been issued, which has further increased interest rate sensitivity. It can be assumed that the increasingly short financing should limit the rise in long-term yields. On the other hand, this also implicitly gives the Federal Reserve a greater incentive to lower interest rates sooner rather than later.

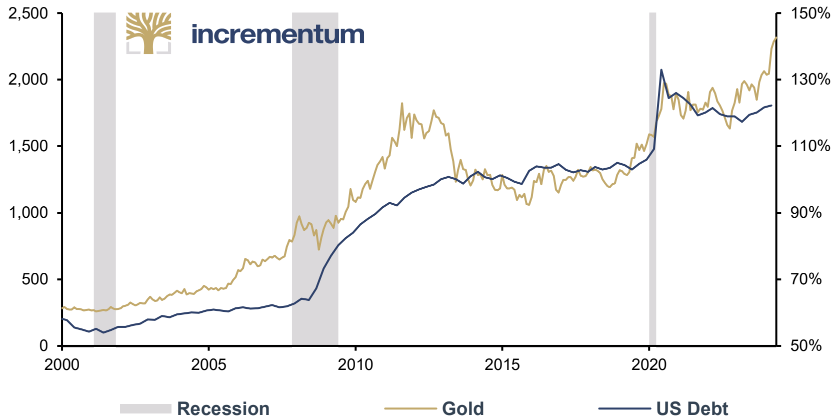
With a rebel yell she cried more, more, more.
Billy Idol

For its long-term forecast, the CBO assumes an average interest rate on US government debt of 4% over the next three decades. This is significantly higher than the current average interest rate of around 3.2%, but at the same time significantly lower than the current yield. The consequence of an increase in the average interest rate to the 4% assumed by the CBO would be a US budget deficit of around 10% of GDP. Every further increase of a percentage point would raise interest payments by an additional USD 2.8trn over 10 years. **That would be around 75% more than the entire (!) current deficit.**

If I can convince my wife, I am going to get two dogs. I will call one "financial" and the other "repression". That's going to be my forward-looking statement on what's coming.
Jonathan Ruffer

Increased recourse to the many different instruments of financial repression therefore seems as certain as the "Amen" that concludes a prayer. Possible measures range from interest rate caps and quantitative and qualitative easing to hidden or open non-servicing of debt, particularly in the case of social security benefits. Capital controls, competitive devaluations ("currency wars"), and significantly higher income and, especially, wealth taxes are also likely to be on the political agenda. We have already dealt with the various facets of financial repression several times in the *In Gold We Trust* report. [132]

Gold (lhs), in USD, and US Debt (rhs), as % of GDP, 01/2000–04/2024



Source: Reuters Eikon, Incrementum AG

Peace is deflationary, wars are inflationary.
Louis-Vincent Gave

In an extremely perspicuous commentary, Niall Ferguson presents another lesson from the rich history of fiscal intemperance, providing an additional argument for why the current period of geopolitical instability will be with us for some time to come:

> *My sole contribution to the statute book of historiography – what I call Ferguson's Law – states that any great power that spends more on debt service (interest payments on the national debt) than on defense will not stay great for very long. True of Hapsburg Spain, true of ancien régime France, true of the Ottoman Empire, true of the British Empire, this law is about to be put to the test by the US beginning this very year, when (according to the CBO) net interest outlays will be 3.1% of GDP, defense spending 3.0%. Extrapolating defense spending on the assumption that it remains consistently 48% of total discretionary spending (the average of 2014-23), the*

[132] *See*, among others, "Exclusive Interview with Russell Napier: Save Like a Pessimist, Invest like an Optimist," *In Gold We Trust* report 2023; "Yield Curve Control, the Biggest Mistake of the ECB So Far! – Exclusive Interview with Russell Napier," *In Gold We Trust* report 2021

gap between debt service and defense is going to widen rapidly in the coming years. By 2041, the CBO projections suggest, interest payments (4.6% of GDP) will be double the defense budget (2.3%). Between 1962 and 1989, by way of comparison, interest payments averaged 1.8% of GDP; defense 6.4%.

The last moments of life are the most expensive from a healthcare perspective. We are willing to spend infinite money on any treatment advertised to forestall the inevitable. Similarly, the elites in charge of Pax Americana and her vassals are willing to do whatever it takes to preserve the current world order because they have benefited the most from its existence.
Arthur Hayes

But 2024 is also the year of elections. Around half of the world's population will elect a new president or parliament this year. The most relevant election for international world affairs will undoubtedly take place – no, not in Austria – in the US. The key question for gold investors is, will the expected mud-slinging and its outcome have a direct impact on the gold price? Our answer: If at all, then only in the short term. After all, fiscal math in the US and elsewhere cares very little about the question of who the incumbent president or the ruling party (coalition) is. Rather, the fiscal legacy of political leaders' predecessors provides either a narrower or a broader framework. Luke Gromen suggests that the US election has much in common with the classic "coyote versus roadrunner" sequence, in which the squabble over who gets to hold the stick of dynamite with the burning fuse.

In the eurozone, it is slowly being realized that not only Italy is a potential problem child, but also France. In mid-April, France had to revise its deficit forecast upwards from an already high 4.4% to 5.1%. France is now as far away from meeting the Maastricht criteria as Vaduz is from Vanuatu. The relaxation of EU debt rules finally agreed at the end of April – packaged as greater consideration for the debt situation in the respective EU member states – will not bring Vaduz any closer to Vanuatu, nor will it make politicians who are happy to spend more disciplined.

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

Moreover, in France – in contrast to Italy, for example – the corporate sector and private households also have above-average levels of debt. In other words: **At almost 330% of GDP, the total debt of all three economic sectors in France is the highest in Europe. This is around 80 percentage points higher than in Italy and more than 60 percentage points higher than in the US.** Japan leads the world with just over 400%.

Japan on the brink of debt sustainability?

I've never really wanted to go to Japan. Simply because I don't like eating fish. And I know that's very popular out there in Africa.
Britney Spears

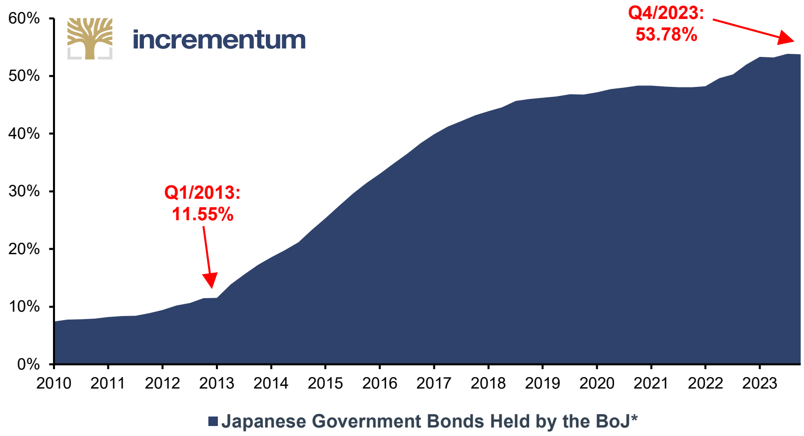
While the central banks of Western industrialized nations have all implemented significant monetary tightening in the last two years, the Bank of Japan (BoJ) has steadfastly maintained its zero interest rate policy. In response to the neo-Keynesian mantra that Japan has all too often been plagued by falling consumer prices over the past two decades, the recent rise in inflation is now being hailed as a cure for the supposed deflationary plague. Inflation, which is now well away from deflationary territory, should under no circumstances be jeopardized by monetary policy countermeasures.

It is well known that Japan is the global leader in terms of national debt.[133] This is not recognized as a serious problem by the majority of investors and analysts, as it is commonly argued that the government debt is held domestically. In reality, however, the BoJ now holds more than half of Japan's

—
133 *See* chapter "The Akuma Afterglow: Japanification of the West?" in this *In Gold We Trust* report

outstanding government bonds on its balance sheet. This restricts the central bank's ability to act, as a sale of debt instruments by the central bank into the market – i.e. quantitative tightening – would make the government's financing costs skyrocket.

Japanese Government Bonds Held by the BoJ*, Q1/2010–Q4/2023



Source: Bank of Japan, Incrementum AG
*excl. Treasury Bills

The falling Yen is about Japan's high debt, which forces BoJ to cap yields. Weak Yen is all about #MMT being wrong on debt...
Robin Brooks

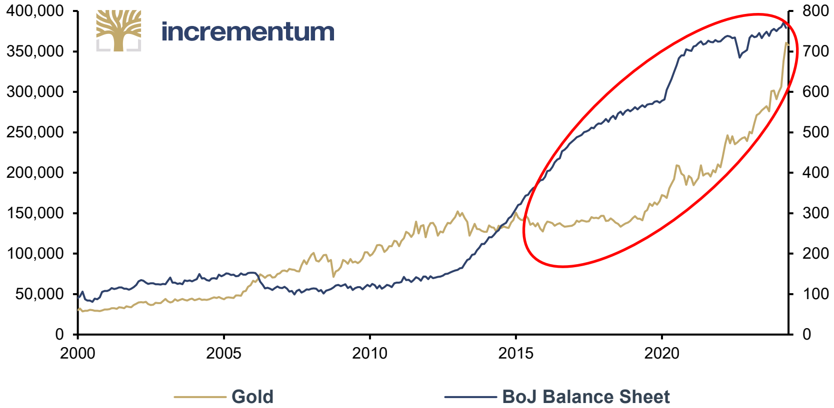
The Japanese yen has come under increasing pressure over the past year due to the interest rate differential between the BoJ and other major central banks. In response, the Bank of Japan (BoJ) recently introduced a new monetary policy strategy that could act as a blueprint for a new playbook for (Western) central banks. On March 19, the BoJ raised interest rates moderately, meaning that nominal interest rates are no longer negative for the first time in 17 years. The BoJ also announced the end of its yield curve control (YCC) policy. It is particularly noteworthy that, in an unprecedented but unsurprising move in view of government debt of 263% of GDP, it is maintaining its QE program with monthly JGB purchases of USD 40 billion.

Geopolitics rarely matters to investors as it is akin to the slow grinding of great tectonic plates. However, sometimes things speed up and earthquakes follow. Things are speeding up with the decline of the yen and the rise of the US dollar.
Russell Napier

This is the first time that a central bank has combined conventional interest rate hikes with balance sheet expansion through QE. This amounts to a monetary policy oxymoron, as it effectively means tightening while easing monetary policy conditions. Has the BoJ once again positioned itself as a trendsetter for the monetary policy vanguard? In any case, the yen has continued its downward trend since then. At the end of April, it broke through the 155 mark against the US dollar for the first time since 1990. The exchange rate proceeded to fall below the 160 mark until a sharp correction caused the yen to appreciate by around 3% in a very short space of time.

Japanese investors, confronted with a depreciating currency and low interest rates, are increasingly turning to gold as a means of storing value. This is particularly evident in the heavy rush for the *MUFG Gold ETF*, which recorded a premium of 12.5% above its net asset value due to immense demand. No wonder, given the fact that the gold price in yen rose by almost 25% in the first four months of the year, after gaining +21.6% in the previous year. Since 2019, the increase has been more than 150%. Investor demand – which is very volatile in Japan – exploded by 228% in 2023 compared to 2022.

Gold (lhs), in JPY, and BoJ Balance Sheet (rhs), in JPY trn, 01/2000–04/2024



Source: Reuters Eikon, Incrementum AG

The next Ursus magnus could well be a solvency crisis among developed world sovereign borrowers, due to the gross mismanagement of government budgets in many of the OECD countries over the last 15 years.
Charles Gave

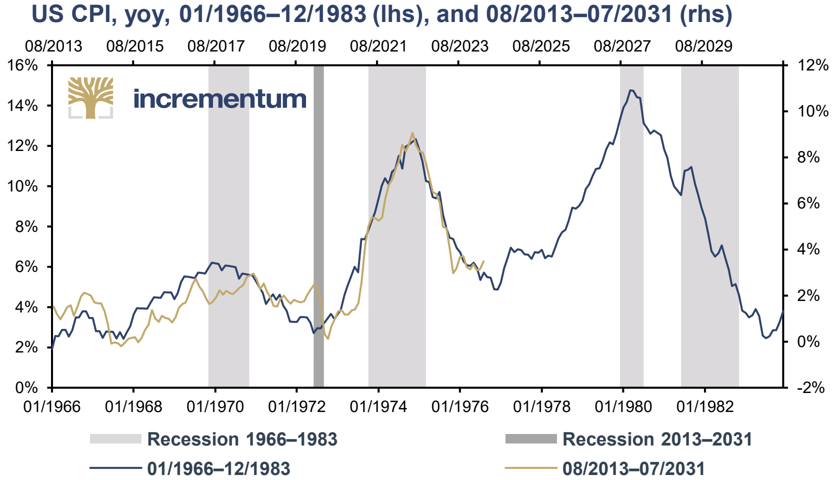
In view of these unpleasant facts, we are more convinced than ever that **financial and sovereign debt crises could soon no longer be the exclusive domain of developing and emerging countries, but could also become part of everyday (economic) policy in one industrialized country or another**. The crucial question is whether the response will be in the form of (nominal) payment defaults or currency devaluation**.**

The New Gold Playbook in the Age of Elevated Inflation Rates

It's a great business to be in, central banking. We print money and people believe it.
Adrian Orr,
Governor, Reserve Bank of New Zealand

"The age of the Great Moderation is over" has been a central message of our keynotes and studies in recent years. Due to the increasing fiscal dominance, it is unlikely that the monetary authorities will be able to consistently combat inflation. We continue to expect structurally higher inflation rates and persistently high inflation volatility. The last few months have shown just how persistent inflation can be. Looking back at the three waves of inflation in the late 1960s and 1970s, the similarity to the current development is indeed striking.

US CPI, yoy, 01/1966–12/1983 (lhs), and 08/2013–07/2031 (rhs)



Source: Andreas Steno, Reuters Eikon, Incrementum AG

*A Fed sanctioned economist publishing a paper on the Fed's website just told you the future, are you f**** listening????!!!!*
Arthur Hayes

Will price stability now be sacrificed to ensure the financial viability of government debt? In his remarkable paper for the Federal Reserve Bank of St. Louis, entitled "Fiscal Dominance and the Return of Zero-Interest Bank Reserve Requirements", Prof. Charles Calomiris paints a clear picture of this scenario. As soon as a bond auction fails, i.e. no creditors can be found at an interest rate acceptable to the US Treasury, the government would resort to non-interest-bearing bonds, i.e. the printing press, instead of interest-bearing bonds, and finance itself via the inflation tax.

> *Fiscal dominance leads governments to rely on inflation taxation by 'printing money' (increasing the supply of non-interest-bearing government debt). To be specific, here is how imagine this occurring: When the bond market begins to believe that government interest-bearing debt is beyond the ceiling of feasibility, the government's next bond auction "fails" in the sense that the interest rate required by the market on the new bond offering is so high that the government withdraws the offering and turns to money printing as its alternative.*

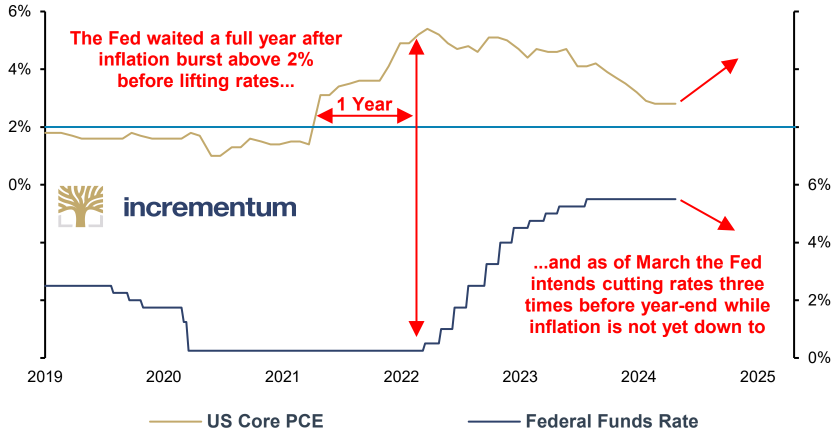
The Fed may end up spiking the punch bowl with more booze when the party is already quite tipsy.
Simon White

Even if history never repeats itself one-to-one, another wave of inflation is definitely within the realm of possibility. This is also due to the fact that the base effect with its double distortion – initially upwards for a year and then downwards for a year after the one-off price shock has subsided – will soon be completely removed from the inflation calculation. The elimination of the negative base effect in energy and food prices will no longer pull the inflation rate down any further.

Courtesy of Hedgeye

The playbook has also changed on the central bank policy side. The world's central banks appear to have an increasingly asymmetrical view of inflation. The following chart illustrates this asymmetry well. After inflation rose above 2% in 2021, the Federal Reserve hesitated for a whole year due to its misjudgment that inflation was merely "transitory". By contrast, according to the FOMC minutes of March 2024, the Federal Reserve intends to cut interest rates three times this year, even though inflation has not yet fallen to the 2% target. It is obvious that this pro-inflation bias of the central banks can also be explained by the continuing rise in debt levels and the marked increase in financing costs, even if the central banks are careful not to answer any questions about the sustainability of the debt burden, under the guise of maintaining an apolitical stance.

US Core PCE (lhs), and Federal Funds Rate (rhs), 01/2019–04/2024



Source: Canaccord Genuity, Reuters Eikon, Incrementum AG

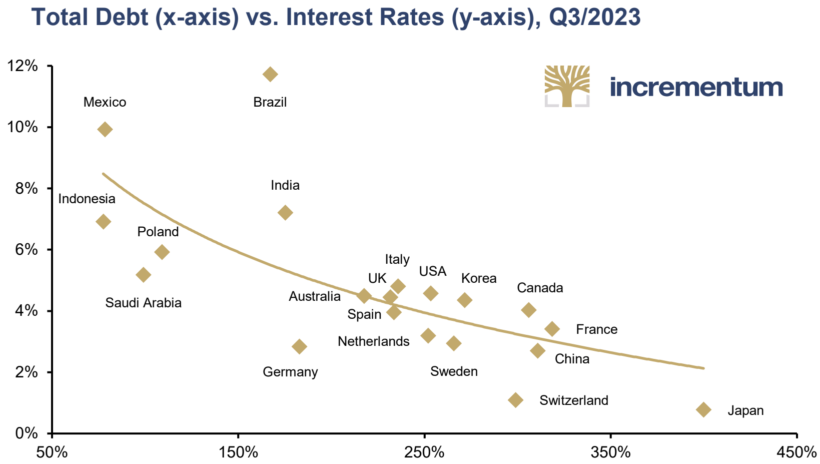
...the 2024 bears were hinging their view on a Fed committed to "avoiding the mistake of Arthur Burns". That Fed is gone.
Marko Papic

Against the backdrop of structural over-indebtedness, further adjustments to monetary policy targets, including adjustments to inflation targets, are quite likely. Olivier Blanchard, former chief economist at the IMF, has suggested, for example, that an inflation target of 3–4% could be more effective than the traditional 2% target.

Many of the leading central banks have already adapted their inflation targets in recent years. In 2020, the Federal Reserve changed its inflation target by switching to an inflation target of "2% over the long run". Shortly afterwards, the ECB followed suit and revised its inflation target in 2021 from "below, but close to, 2%" to a target of "symmetric 2% over the medium term". This superficially minor-sounding change was nevertheless significant, as it generally classifies inflation rates above 2% as tolerable and therefore allows for faster currency devaluation on average.

...because many people are unfamiliar with the concept of the inflation tax (especially in a society that has not lived under high inflation), they are not aware that they are actually paying it, which makes it very popular among politicians.
Charles Calomiris

Remarkable detail in passing: When inflation began to rise in spring 2021, the central banks of the emerging markets reacted much earlier and more decisively than those of the industrialized countries, which had long been under the illusion that inflation was just a "hump". The reason for this divergence is that inflation and therefore the fight against inflation were nothing new for the emerging markets, while the industrialized countries were lulled into a false sense of security by the Great Moderation. Applied to the world of central banks, it seems as if emerging markets are aware of the dangers of running the printing press too hot, while their Western counterparts are not.



Source: Gainesville Coins, BIS, Reuters Eikon, Incrementum AG

…monetary policy is 98 percent talk and only two percent action.
Ben Bernanke

We have seen a gradual erosion of the definition of price stability in the industrialized countries in the recent past. It is quite likely that Western central banks will allow further implicit or sometimes even explicitly higher inflation rates. **What would this mean for the population's inflation expectations, real interest rates and, by extension, gold?**

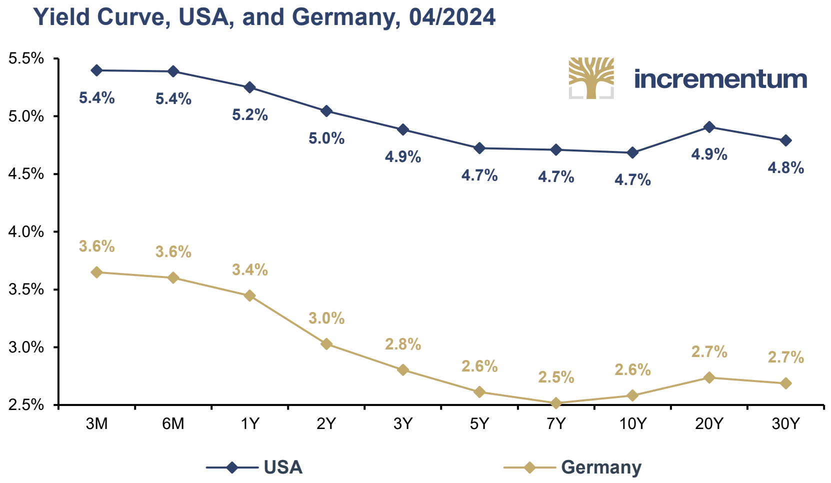
What Does the New Gold Playbook Mean for Investors?

James Bond:
Do you expect me to talk?
Auric Goldfinger:
No, Mr. Bond, I expect you to die.

Monetary climate change, the escalating geopolitical showdown, and rising financing costs, exacerbated by "higher for longer" interest rates, have far-reaching consequences. Reaching the limits of debt sustainability provides a strong systemic incentive for further inflation. In an age of immanent over-indebtedness and therefore a permanent latent risk of inflation, there is one big loser among all asset classes: bonds.

A long bond investors' worst nightmare is inflation, so ultimately, I am an inflation bull and bond bear.
Kevin Muir

"Anything but bonds" (ABB) – this pointed phrase reflects the growing skepticism towards fixed-interest government bonds in particular. Even if the zero interest rate terrain has been left behind and it is indeed possible to earn notable nominal yields on bonds again, we believe that one should not uncritically succumb to the lure of nominal interest rates. Especially when you think about investments with longer maturities, which currently continue to yield significantly less than short-term investments. Following the disastrous 2022 bond year, in which 30-year US government bonds suffered losses of over 30%, another negative performance is on the horizon this year. At the end of April, long-dated Treasuries were down almost 10%. **Falling confidence in government bonds is ultimately nothing other than increasing mistrust in the value of the government currency.** Such a loss of confidence has only occurred in part so far. **The stakes remain high.**



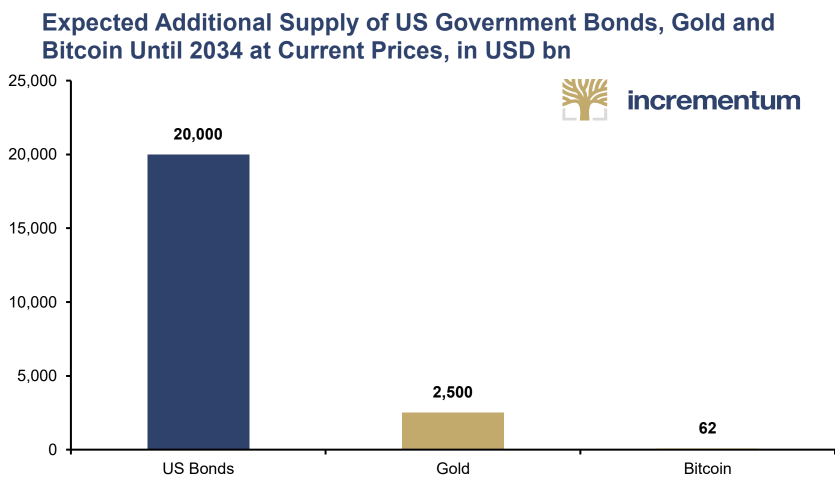
Source: Reuters Eikon, Incrementum AG

In a time of abundance, Bitcoin taught me what real scarcity is.
Gigi

This declining confidence in bonds is of course no coincidence. Our esteemed friend Lyn Alden summarizes the current fiscal situation as follows: In an era of fiscal dominance, the supply of bonds is steadily increasing. Deficits of USD 1.5 to 2.5trn – with an upward trend – are to be expected in the US in the future and will therefore also have to be financed via bonds. This means that in the coming decade alone, in addition to maturing US government bonds, a further USD 20trn or so of new US government bonds will be issued.

This current bubble is different. It is one level higher at the sovereign debt level. Wall Street does not need bailing out. Government balance sheets need bailing out. The question is, by whom?
Colly Leporal

In contrast, it is estimated that the amount of newly mined gold will only reach a value of USD 2.5trn at constant prices over the next 10 years if the production rate remains constant. The supply of bitcoins calculated on the basis of the current Bitcoin price will increase at an even lower rate. In the next 10 years, which corresponds to 2.5 halving cycles, exactly 1,025,390,925 bitcoins will be mined. At current price levels of around USD 60,000, this corresponds to a value of just under USD 62bn. Strong price increases in gold and Bitcoin are therefore to be expected, especially if investors start looking for alternative bond classes on a large scale. According to Alden, selected quality stocks are also suitable as an alternative.



Source: Lyn Alden, Reuters Eikon, World Gold Council, Incrementum AG

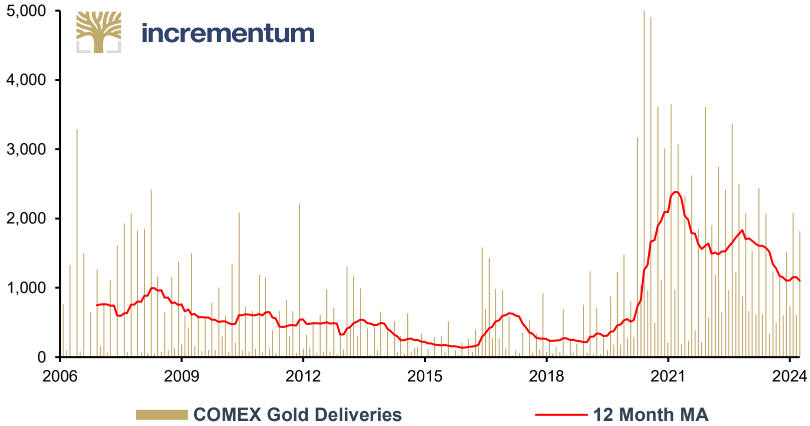
When trust is broken, everything changes.
Grant Williams

There is also the growing impression that trust in the political elites is clearly waning in many countries. This is not good news, because fundamental institutions such as the law, media, science, but also the monetary and market economy in particular, are dependent on a high minimum level of trust. We already addressed this issue in the *In Gold We Trust* report 2019, "Gold in the Age of Eroding Trust", and the issue has unfortunately become increasingly relevant. However, we could also change our perspective and ask how many politicians still trust their people or the voters of other parties.

Truth, like gold, is to be obtained not by its growth, but by washing away from it all that is not gold.
Leo Tolstoy

Another indication of eroding confidence is the fact that more and more market participants prefer physical delivery of gold. In 2020, investors increasingly began to demand physical delivery of gold when their gold futures matured. If we compare physical deliveries since before the outbreak of the pandemic, we can see that although deliveries have fallen again significantly after the explosion in physical deliveries at the beginning of the pandemic, they are still at a significantly higher level. The identity of the buyers often remains uncertain. However, we assume that they are mainly family offices, HNWIs, and government buyers who are not very price-sensitive but are critical of "paper gold ". In other words, **the higher proportion of physical delivery is a further consequence of dwindling confidence in the robustness of the financial and monetary system**.

COMEX Gold Deliveries, in Thousands of Troy Ounces, 01/2006–04/2024

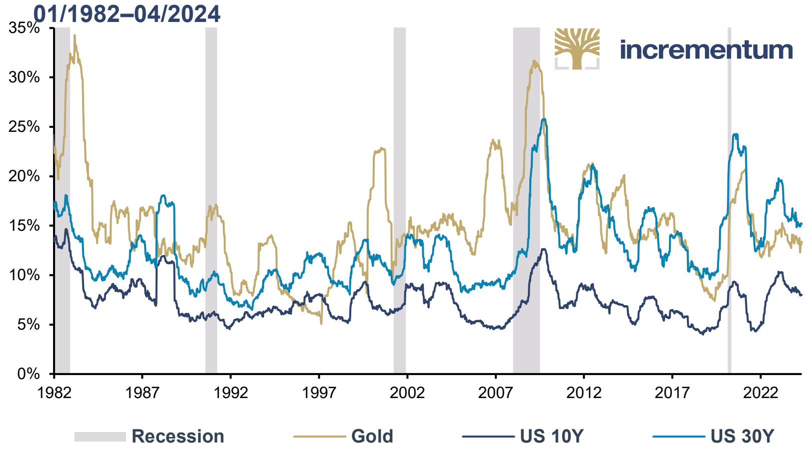


Source: Reuters Eikon, Incrementum AG

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

In addition, the central banks of those countries with export surpluses are tending to reduce the recycling of their US dollar reserves, i.e. (re-)investing less heavily in US government bonds. **To a certain extent, *de-dollarization* is also accompanied by *de-bondization*.** Conversely, however, this also means that investors are looking for alternatives to government bonds – alternatives that are liquid, have a similar volatility profile to long-dated government bonds, and ideally also protect against inflation. Gold exhibits similar volatility to long-term government bonds but has the major advantage that it has no counterparty risk.

Rolling Annualized Volatility of Gold, US 10Y, and US 30Y, 01/1982–04/2024



Source: Reuters Eikon, Incrementum AG

Do You Have Enough Non-Debt Money?
Ray Dalio

Given our skepticism towards government bonds, we assume that an increasing number of market participants will consider a higher weighting of both safe-haven gold and performance gold in the future. **Specifically, in a portfolio with a longer-term investment horizon, we consider a ratio of up to 15% safe haven gold and up to 10% performance gold to be advisable.** In view of the current situation, we view this as a prudent balance between stability and growth.

Safe-haven gold

My fondest dream is that I will give what insurance gold I have to my grandchildren. And that they will give it to their grandchildren. If that happens, nothing disastrous occurred in our lifetimes that caused us to part with the insurance gold.
John Mauldin

By safe-haven gold we refer to investments in physical gold (bars, coins). Consequently, this should be stored outside the banking system or ideally in jurisdictions with very high legal security.[134] Safe-haven gold is a fail-safe, liquid asset that is mainly used to hedge against economic and (geo)political instability, high inflation, and worst-case scenarios. Typically, physically held gold is an iron-clad reserve that ideally never needs to be drawn on and, in the best case, is passed on to the next generation. **Due to the virtually nonexistent default risk and the overall situation described in detail in this year's *In Gold We Trust* report, we are convinced that a significantly higher allocation to safe haven gold is advisable.**

Performance gold

This ain't no game. It's about making money.
Tony Beets

While the purpose of safe haven gold is to act as a nest egg with stable purchasing power, the purpose of performance gold is to achieve a higher return than physical gold. Performance gold includes asset classes as diverse as gold mining shares, silver and silver mining shares, and possibly also Bitcoin. Investments in performance gold are therefore more volatile and correlate less with traditional investments. Consequently, performance gold should be actively managed.

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[134] *See* "Gold Storage: Fact Checking Germany, Canada, and the UK," *In Gold We Trust* report 2022; "Gold Storage: Fact Checking Austria, the USA, and the Cayman Islands," *In Gold We Trust* report 2021; "Gold Storage: Fact Checking New Zealand, Australia, and Dubai," *In Gold We Trust* report 2020; "Gold Storage: Fact Checking Liechtenstein, Switzerland, and Singapore," *In Gold We Trust* report 2019

Gold mining shares

In terms of natural resource investing, you're either going to be a contrarian or you are going to be a victim. There isn't much by way of middle ground.
Rick Rule

The performance of gold and silver mining shares has been disappointing for in recent years. The divergence between the development of the gold price and gold mining shares has been truly remarkable. As the next chart shows, the shares of gold mining companies have performed significantly worse than gold. The main reasons for this were the sharp rise in costs (AISC) in 2022 and 2023 and the general lack of interest from Western financial investors. The divergence between gold and mining share performance can also be explained by the fact that investors in Asia do not usually invest in mining companies. They prefer to hold physical gold and silver. Western financial investors, on the other hand, have cut their allocations to mining stocks in line with their reductions in gold ETF holdings.

Gold (lhs), in USD, and GDX (rhs), in USD, 01/2014–04/2024

Source: Reuters Eikon, Incrementum AG

A group of people who think differently is a market.
A group of people who think alike is a mob.
Naval Ravikant

Within the equity spectrum, other topics such as AI have recently stolen the show from gold miners. Nevertheless, there is no doubt that mining stocks are undervalued on a fundamental level. In recent months, this undervaluation has attracted the attention of well-known investors who are famous for contrarian investments. Stanley Druckenmiller sold technology stocks in Q4/2023, including Alphabet and Amazon, and invested in Newmont and Barrick. Shortly thereafter, the *Financial Times* reported that Elliott Management, led by Paul Singer, is launching a fund called Hyperion to invest in precious and base metals, led by the former CEO of Newcrest Mining.

The intelligent investor is a realist who sells to optimists and buys from pessimists.
Benjamin Graham

The gold mining sector is unique in many respects. While fundamental bottom-up research is essential for careful stock selection and sensible diversification, macro-specific top-down influences play a particularly important role.[135] As far as sensitivity to monetary policy is concerned, a look at the past shows that investment times around the last interest rate hike have usually been excellent entry points.

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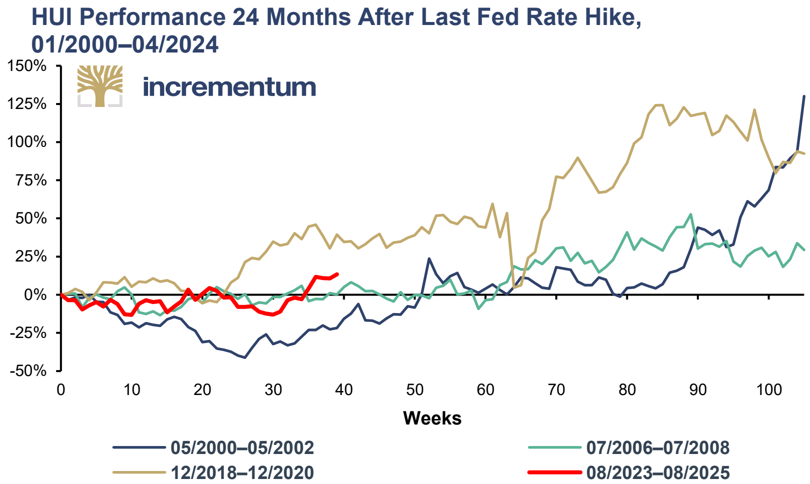
135 *See* chapter "Mining stocks – Fundamental and technical situation" in this *In Gold We Trust* report

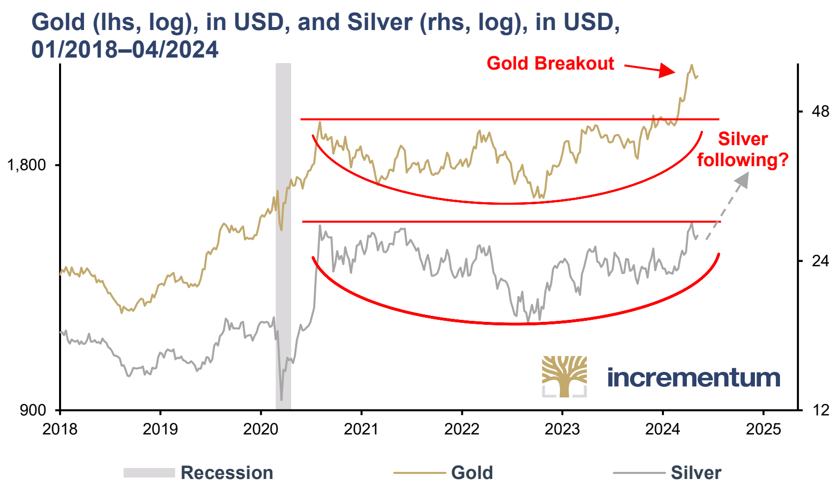


Source: Reuters Eikon, Incrementum AG

Due to the historical undervaluation of the mining sector, in mid-February 2024 we launched a top-down-driven investment strategy in line with these top-down influences and other ideas of the new gold playbook. The *Incrementum Active Aurum Signal* presented in this *In Gold We Trust* report plays a central role in the investment strategy.[136] Further information on the strategy can be found at **www.incrementum.li**.

Silver

Silver can also play a significant role as "performance gold". Silver is experiencing a supply deficit for the fourth year in a row. At 215.4 Moz, the deficit will reach a new record level in 2024. The main reason for this is the ongoing PV boom. This key sector of the energy transition, which is dominated by China, is now the largest demand category for silver, with consumption of 232 Moz. In addition, silver has outperformed gold in 6 of the last 7 bull markets since 1967. However, the price performance of the white metal is still below average to date.



Source: Reuters Eikon, Incrementum AG

Historically, it was increased investment demand that was decisive for pronounced silver bull markets. In the event of a second wave of inflation, a

136 *See* chapter "Mastering the New Gold Playbook" in this *In Gold We Trust* report

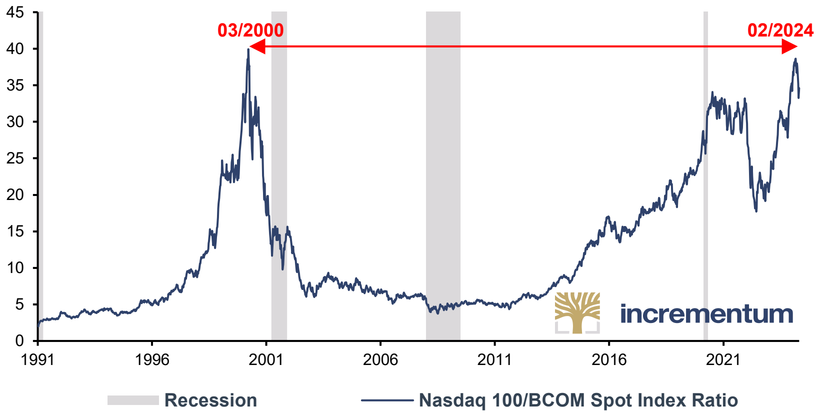
wave of FOMO could set in, and silver would probably be one of the biggest beneficiaries.

Commodities

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

The commodity supercycle, which we have regularly pointed out in recent years, has taken a breather, but in our opinion it is still intact. Price increases and supply bottlenecks have brought a potential shortage of resources back into the public eye. Just recently, Nicolai Tangen, CEO of the USD 1.5 trillion Norwegian sovereign wealth fund, warned of a possible shortage of resources and rising commodity prices. In view of the neglect in the capex cycle, which we described in detail in the *In Gold We Trust* report 2023,[137] we firmly believe that the commodity bull market is only in its early stages. The recent rally in copper and BHP's takeover bid for Anglo American could be harbingers of the next phase of the bull market.

Nasdaq 100/BCOM Spot Index Ratio, 01/1991–04/2024



Source: BofA Global Investment Strategy, Reuters Eikon, Incrementum AG

Digital gold

Just like E=mc² dictates the universal speed limit in our universe, Bitcoin's difficulty adjustment dictates the universal money limit in Bitcoin.
Gigi

For many years, we have believed that incorporating Bitcoin into traditional portfolios enhances the risk-reward profile. The approval of Bitcoin spot ETFs by the SEC and the associated increase in legal certainty reinforces this view. A Bitcoin ban is therefore off the table. One practical way of integrating Bitcoin exposure into a traditional portfolio is to use portfolio components that combine gold and Bitcoin. Here, volatility can be used to the investor's advantage through rebalancing and possibly also through an option overlay. However, such investments require extensive specialist knowledge.

The new 60/40 playbook

Traditional securities portfolios are currently still characterized by a 60/40 mix of equities and bonds. This portfolio construction has undoubtedly been able to deliver attractive risk-adjusted returns in recent decades. However, the macro environment necessary for positive performance is history with the end of the Great Moderation.

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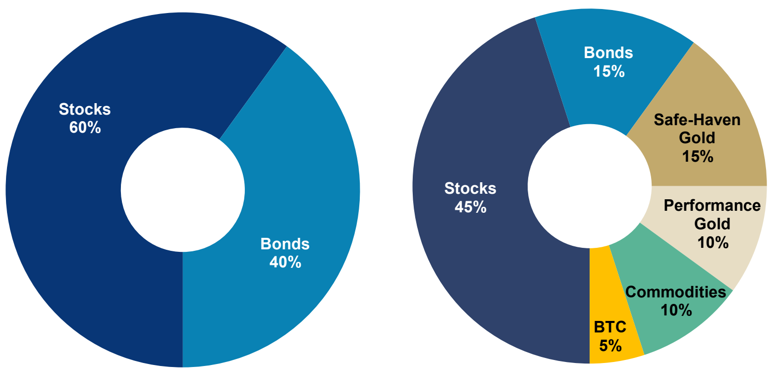
[137] See "Capex Comeback: A Raging Bull Market for Commodities Beckons," *In Gold We Trust* report 2023

Freedom and responsibility aren't interconnected things. They are the same thing.
Harry Browne

Around half a century ago, Harry Browne presented the *permanent portfolio as an* alternative to the conventional 60/40 portfolio.[138] **This is made up of 25% equities, 25% bonds, 25% cash and 25% gold.** It is striking that this portfolio became popular after the high-inflation period in the 1970s, during which the 60/40 portfolio would have performed poorly, while the 25/25/25/25 portfolio would have achieved significantly better results.

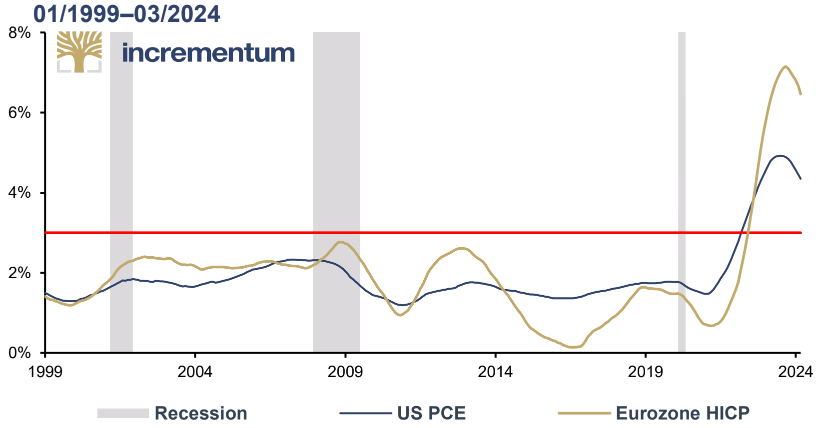
Even though the permanent portfolio can still be an interesting alternative today, we believe that there is a more contemporary implementation within the framework of the new gold playbook. **Our interpretation of a new standard portfolio for long-term investors envisages the following allocation:**



Source: Incrementum AG

The important thing is to keep the important thing the important thing.
Albert Einstein

Of course, we do not see this allocation as a rule set in stone. Rather, it is intended as a guideline derived from the current monetary, fiscal and geopolitical realities. In our view, the new gold playbook applies as long as we are in a phase of currency instability, characterized by high debt levels and geopolitical instability. A simple quantitative measure of currency stability are inflation rates. **If average inflation rates remain below 3% over a 24-month period, this would be a good indication that the situation has stabilized.**



Source: BofA Global Investment Strategy, Reuters Eikon, Incrementum AG

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

Until we return to stable monetary waters, a significant proportion of noninflationary, default-proof hard currencies, real assets and commodities in the portfolio seems advisable.

The 10 Key Points of the New Gold Playbook

Golden age, new rules clearly, what was true yesterday is rarely true today.
Always changing in fleeting endeavors, gold finds its new place in life.
Chat GPT

The meta-theme of the new gold playbook could be summarized as follows: The reorganization of the international economic and power structure, the dominant influence of the emerging markets on the gold market, the reaching of the limits of debt sustainability, and possibly multiple waves of inflation are causing gold to appreciate. This phase will continue for some time, until a new equilibrium has been established.

1.) **The high inverse correlation between US real yields and the gold price is history (for now)**. Despite the rise in real yields, the rise in the gold price could not be halted.
2.) **Central banks are a decisive factor in the demand for gold:** Demand from these institutions is not very price-sensitive. Central banks are likely to have put a floor under the gold price.
3.) **The weaponization of fiat money has lasting consequences:** The confiscation of Russian reserves and assets of Russian oligarchs in 2022 was a wake-up call for numerous states, as well as wealthy private individuals from the Gulf states, Russia and China. (Luxury) real estate in London, New York or Vancouver has always been the preferred destination for savings from the emerging markets, but this has changed in 2022.
4.) **Safe-haven assets are becoming scarce:** The list of liquid safe-haven assets is getting shorter. New and old safe-haven assets are gaining in importance.
5.) **In contrast to the *gold drain* in the US in the 1960s, the emerging markets are now experiencing a *gold gain***. China is playing a leading role in this respect but is no longer alone. The Western financial investor is no longer the marginal buyer or seller of gold. The pricing power on the gold market is increasingly shifting to the East.
6.) **Monetary climate change**: Fiscal largesse has seriously jeopardized the debt sustainability of Western countries. The explosion of the interest burden is a harbinger of the limits of debt sustainability.
7.) **The new playbook in the context of stagflation 2.0:** The Great Moderation is over. Periodic supply shocks will cause additional fluctuations in inflation.
8.) **The end of the 60/40 portfolio:** A positive correlation between equities and bonds, as in the case of structurally higher inflation rates, means that bonds offer no protection when growth slows.
9.) **The central bankers' new playbook: The holy grail of the 2% inflation target is no longer sacrosanct.** Even before the mark has been sustainably reached again, Western central banks are openly talking about a change of course to a less restrictive monetary policy.
10.) **Noninflationary investments** such as gold, silver, commodities and Bitcoin are playing an increasingly important role for investors.

And just as new styles of play in sport are refined and adapted over time, so too is the gold playbook. **The *In Gold We Trust* reports will keep you up to date on refinements and adjustments year after year.**

The true sign of intelligence is not knowledge but imagination.
Albert Einstein

The new gold playbook suggests that a positive trend for gold is likely. However, there are of course also situations in which the gold price will suffer setbacks. **The following developments are likely to have a negative impact in the short and medium term:**

- The price of gold has risen by almost USD 600 since its lows in October 2023, so profit-taking should come as no surprise.
- An actual "soft landing" could put pressure on the gold price as investors shift money from safe to riskier investments.
- A continuation of the US interest rate-hike cycle, with a sustained increase in real economic growth.
- A return to a low-inflation phase similar to the Great Moderation.
- The high gold prices are beginning to affect physical demand, particularly in price-sensitive markets such as India. In addition, the recycling supply has already reacted, for example in the US.
- In China, an easing of growth concerns, presumably accompanied by much stronger political support for the real estate sector, could reduce demand for gold.
- A crash on the stock markets or a significant worsening of the (commercial) real estate crisis could lead to gold liquidations (see 2008). The fact that gold is very liquid is a disadvantage in such exceptional situations.
- Momentum players such as CTAs, managed futures funds, and hedge funds will liquidate long positions in the event of declines or signs that the rally is faltering.
- China is devaluing the renminbi against the US dollar. This strengthens the US dollar and possibly weakens the gold price in US dollars, but not necessarily in many other currencies.
- A sustainable calming or resolution of geopolitical conflicts, e.g. between Russia and Ukraine or between Israel on the one hand and Hamas and Iran on the other could affect the gold price.

Quo vadis, aurum?

Update on the end-of-the-decade gold price forecast

Never be limited by other people's limited imaginations.
Mae Jemison

Loyal readers will remember our gold price forecast model that we published in the *In Gold We Trust* report 2020.[139] **At that time, we calculated a price target of just above USD 4,800 by the end of 2030, using the gold coverage ratio as a key input factor.**

In particular, the Federal Reserve's rigorous interest rate hikes and the temporary slowdown in inflation have kept the rise in the gold price in check over the past two years. The recent surge in the gold price is probably a

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139 "Quo vadis, aurum?," *In Gold We Trust* report 2020

harbinger of the imminent turnaround in interest rates and possibly also of an increasingly stagflationary environment in the US. We feel that the recent price action confirms our price target, and we continue to adhere to the target of around USD 4,800 for 2030 that we postulated at the beginning of the decade.

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

The next major leg up in the gold price will prove to be a religious experience for those people unfortunate enough to find themselves short.
Paul Mylchreest

If this price target sounds too ambitious to some readers, we would like to put the return derived from this target into historical perspective. Based on a current gold price of USD 2,300, this would mean a price increase of just under 12% p.a. by the end of the decade. By comparison, the gold price rose by over 14% p.a. in the 2000s and over 27% p.a. in the 1970s.

Gold is awaiting its deployment

I play with a fear of letting my team down. That's what motivates me.
Jonny Wilkinson

Louis-Vincent Gave argues that US government bonds were the *all-star asset class* for a generation. That all-star has now had its day, and portfolios find themselves in the same plight as the Chicago Bulls without Michael Jordan, the French national soccer team without Zinedine Zidane, or the England rugby side without Jonny Wilkinson. A new playbook had to be written, a new *difference maker* around whom the rest of the team would be built had to be found. **Gold has already warmed up and is just waiting to be substituted, as he can easily fill that role**.

In youth we learn, in age we understand.
Marie von Ebner-Eschenbach

In the context of the new gold playbook, we believe the outlook for gold is brighter than ever. However, any significant upward movement will inevitably be interrupted by setbacks or sideways markets. However, these unavoidable phases should not cloud the positive long-term outlook for gold. For those who invest in safe-haven gold, i.e. hold it as a safe haven with purchasing power, such setbacks are certainly annoying. Those who invest in performance gold, on the other hand, should try to recognize these setbacks early on and adjust their investment decisions accordingly in order to benefit from short-term fluctuations. **We have developed the *Incrementum Active Aurum Signal* to determine the right time to enter or exit mining stocks.**[140]

—
140 *See* chapter "Mastering the New Gold Playbook" in this *In Gold We Trust* report

The biggest danger in life is that you become too cautious.
Stefan Zweig

Regina Costello once so astutely remarked that our language is a mirror of time, a window through which we view the spirit of our era. The fact that in 2022 the *Collins English Dictionary* chose the term *permacrisis*, defined as "an extended period of instability and insecurity, esp. one resulting from a series of catastrophic events," as the *word of the year* speaks volumes. However, this linguistic reflection of the omnipresence of crises also conceals an opportunity.

Like a chess player in distress who is looking for the saving move in a seemingly hopeless position, we must learn to see opportunities as well as threats in the growing uncertainties. Only then will we be able to take action and intervene in the course of events, sometimes more actively, sometimes more passively, depending on the respective investment environment. **Like the queen on the chessboard, gold is ready to be used both defensively and offensively in the portfolio with caution and foresight.**

I am not an optimist. I am a very serious possibilist.
Hans Rosling

In our confrontation with the current permacrisis, the best inner attitude is not rigid resistance but active adaptation to the current circumstances and the courageous pursuit of creative solutions, inspired by the timeless wisdom of the game of chess to think several moves ahead and, after careful consideration, to consistently implement the decision made. This is why it's more vital now than ever before that:

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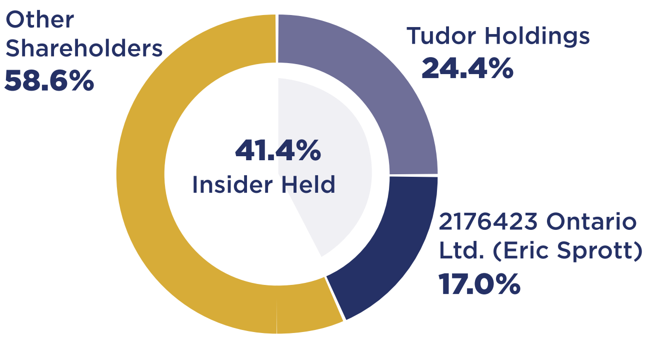

INVESTMENT HIGHLIGHTS

- **LARGE GOLD RESOURCE**
  The Goldstorm Deposit represents one of the largest gold discoveries in 30 years.
- **CRITICAL METALS**
  In addition to gold, Goldstorm hosts significant amounts of **copper and silver.**
- **PROXIMITY TO INFRASTRUCTURE**
  Mining friendly political environment with roads, power grid and seaports in place.
- **MANAGEMENT SUCCESS**
  Ken Konkin (CEO) instrumental in the discovery of VOK at the Brucejack Mine.
- **GOOD CORPORATE STRUCTURE**
  Equity ownership is 41.4% insider held, which includes Eric Sprott.
- **SIGNIFICANT INVESTMENT UPSIDE**
  Opportunity for exploration upside at Treaty Creek Property in several areas.

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TUDOR GOLD

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 VON GREYERZ AG, 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 an owner-managed and FMA-licensed investment and asset management company based in the Principality of Liechtenstein. Our core competence is the management of investment funds and asset management. We evaluate investments not only on the basis of the global economic situation, but also always see them in the context of the current global monetary system. Independence and self-reliance are the cornerstones of our philosophy, which is why the five partners own 100% of the company.

The publishing rights for the *In Gold We Trust* report were transferred to Sound Money Capital AG in November 2023. *The In Gold We Trust* report will continue to be co-branded with the Incrementum brand as usual.

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We would like to thank the following people for their outstanding support in creating the *In Gold We Trust* report 2024:

Gregor Hochreiter, Richard Knirschnig, Jeannine Grassinger, Lois Hasenauer-Ebner, Stefan Thume, Theresa Kammel, Handre van Heerden, Katrin Hatzl-Dürnberger, Ted Butler, Ahmed Ayoub, Andreas Merkle, Thomas Vesely, Fabian Grummes, Niko Jilch, Florian Grummes, Elizabeth and Charley Sweet, Max Urbitsch, Trey Reik, Tavi Costa, Louis-Vincent Gave, Brent Johnson, Grant Williams, Markus Hofstädter, Seasonax, OPEC Library, Kailash Research, Jochen Staiger, Philip Gales, Ilse Bauer, Paul Wong, Fabian Wintersberger, Leopold Quell, Match-Maker Ventures, Richard Schodde, David Schrottenbaum, the whole wonderful team at Incrementum and of course our families!

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Agnico Eagle

Agnico Eagle is a senior Canadian gold mining company, and third-largest gold producer in the world, with operating mines in Canada, Australia, Finland and Mexico, and a pipeline of high-quality exploration and development projects 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

Caledonia Mining

Caledonia Mining is a dividend-paying gold producer and explorer, with a strong growth profile; since November 2021 it has acquired Maligreen, Motapa and Bilboes. Its vision is to become a Zimbabwe focused multi-asset gold producer.

www.caledoniamining.com

DMCC

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www.dmcc.ae

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EMX Royalty

EMX has a 20+ year track record of smart deals. Experiencing a record year in 2023 with USD 37mn in cashflow, EMX looks forward to a bright future with diversification into gold, copper, battery metals, strong partners like Franco Nevada and multi-decade paying royalties.

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 operates 2 high-grade underground silver mines in Mexico. Advancing Terronera Project & exploring to become premier silver producer. Shares offer industry-leading beta to silver price, with over 60% revenue from silver.

www.edrsilver.com

First Majestic Silver

First Majestic is a silver and gold producer that owns and operates three producing mines in Mexico, one gold project in USA, and several development and exploration assets. We are also launching our own minting facility, First Mint, in USA.

www.firstmajestic.com

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www.flexgold.com

Hecla Mining Company

Founded in 1891, Hecla Mining Company (NYSE: HL) is the largest silver producer in the United States. In addition to operating mines in Alaska, Idaho, and Quebec, Canada, the Company is developing a mine in the Yukon, Canada, and owns a number of exploration and pre-development projects in world-class silver and gold mining districts throughout North America.

www.hecla.com

Karora Resources

Karora is a TSX-listed gold producer (TSX: KRR) with operations in the tier 1 jurisdiction of Western Australia. Karora has a proven management team and is growing its production to 170-185 koz for 2024.

www.karoraresources.com

Kinross Gold

Kinross Gold is a senior gold mining company headquartered in Toronto, with a diverse portfolio of mines and projects located in the United States, Canada, Brazil, Chile, and Mauritania.

www.kinross.com

McEwen Mining

McEwen Mining, a gold and silver producer, owns 48% of Los Azules copper project. Led by Chairman Rob McEwen (USD 220mn investment, USD 1/yr salary),we focus on boosting productivity and shareholder value.

www.mcewenmining.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

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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.

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Regency Silver is developing a large, high grade, gold-copper-silver system at its Dios Padre project in Sonora, Mexico. Regency Silver's social mandate is built on respect for the environment and the communities in which it operates.

www.regency-silver.com

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Tudor Gold

TUDOR GOLD Corp. is an exploration company in the Golden Triangle region of B.C., Canada, which is advancing the Treaty Creek Project that hosts an Indicated Mineral Resource of 27.9 Moz AuEQ @ 1.19 g/t AuEQ including 6.0 Moz AuEQ @ 1.25 g/t AuEQ of Inferred.
www.tudor-gold.com

Victoria Gold

Victoria Gold (VGCX) is Building a Mining Company Focused on the Yukon. Their Dublin Gulch property in central Yukon includes the Eagle Gold Mine - a long-life mine with high likelihood for mine life extension at depth & along strike. Exploration potential is excellent.
www.vgcx.com

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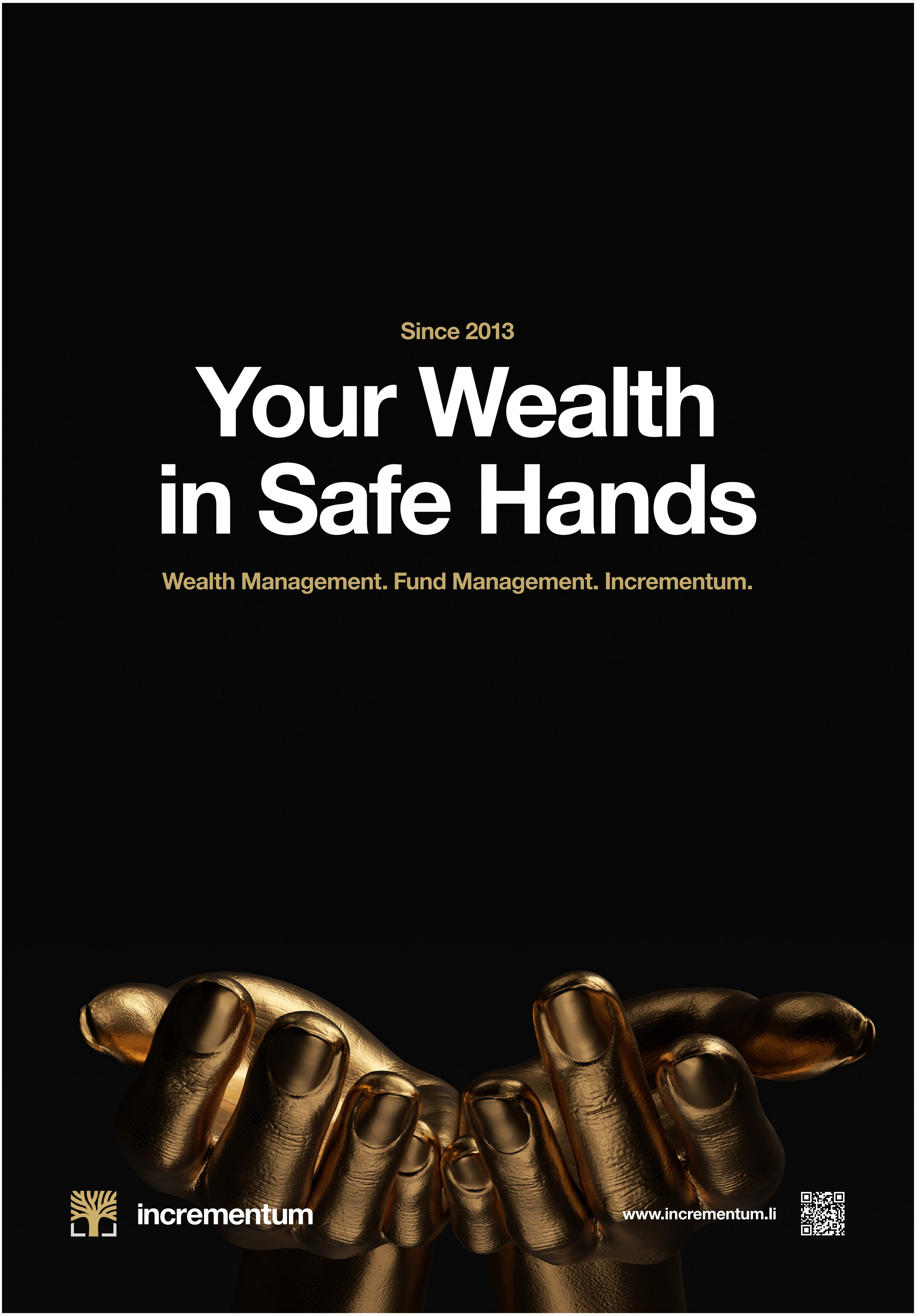
West Red Lake Gold Mines Ltd. is a mineral exploration company focused on advancing and developing its flagship Madsen Gold Mine and Rowan property in the prolific gold district of Red Lake, Ontario, Canada.
www.westredlakegold.com

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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