
ARCADIA ECONOMICS

AN OVERVIEW OF THE SILVER MARKET IN LATE 2025, AND THE PROBLEMS POSED BY THE ONGOING DEFICITS



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Preview Of This Silver Report

It's a fascinating time in the silver market, and the following report lays out an overview of the current state of the market as of September 2025.

This report discusses the events that have brought us to this point, extensive sections on both the supply and demand dynamics that have led to silver deficits over the past few years, and perhaps most importantly, the different paths forward that are possible from here.

The report also addresses several of the key questions on the minds of silver investors that rarely get addressed, but are more important to consider than ever, including:

- The risks to the market posed by the ongoing deficits
- Why the deficits are more likely to continue, or even increase, rather than go away in the years ahead
- The reason why the challenges facing the silver mine supply still don't easily get resolved even at a \$50 or \$100 silver price
- Why silver has lagged gold over most of the current rally
- What happens to silver demand if there's a recession
- How silver has actually performed over time relative to inflation, and whether silver has actually fulfilled its role as an inflation hedge
- Whether silver can be expected to serve as an inflation hedge in the years ahead
- Why the silver price declined during a decade of 0% rates and quantitative easing
- How to put the spikes to \$50 in 1980 and 2011 into a more appropriate context
- And several of the other fascinating dynamics that have left the silver market on the verge of some potentially unusual and asymmetric outcomes in the years ahead

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Introduction

The silver market has long held a unique presence in the investment world.

Because despite how many mainstream market participants have never thought all that much about silver, given its history as money, its reputation as an inflation hedge, and also the memories of the Hunt brothers in 1980, silver remains a unique asset with a still large and passionate investor base.

Additionally, given silver's increasing importance in industry (and in particular with electronic technology and solar panels), as well as silver's relatively inelastic demand amidst a tenuous supply profile, we're at a rather pivotal time in the market.

In the past year and a half, we've witnessed one of the more substantial silver rallies in history as the silver futures have gone from \$22.12 on February 1, 2024, to its current level of \$41.65. An increase of 88.2%.



Part of this move has occurred as the tariff war flared up in early 2025, which led to multiple surges in the EFP premiums in recent months (the spread between the London spot market and the COMEX futures), while large amounts of both gold and silver have flowed from London to New York.

This has also happened amidst the backdrop of industrial silver demand setting a new record in 2024, which makes it a fascinating time to understand the dynamics happening beneath the surface of the silver market. And in this report we'll discuss how the various investor perceptions have combined to form the current environment, why the silver price hasn't risen as much as many silver investors believe it should have in the past decade, and how the alarming supply/demand gap has left the market in a situation where a shortage in the years ahead cannot be ruled out.

Setting The Proper Context For Pricing Silver

The general sentiment in the silver investing community can perhaps be summed up as ‘the price is higher, and that’s good, but how come it’s not up more, or going up as fast as gold?’

To be fair, there’s often a tendency among silver investors to feel that no matter where the price is, that it should be higher (although it’s fun to imagine what the tone in the retail silver investor community would be like if the price did eventually reach the \$50 level, or even go beyond it). Yet a lot of the frustration stems from being overly anchored at times to the \$49-50 peaks in 1980 and 2011.

Which is understandable, especially given all of the credit and money that’s been created since then. Yet while the silver price did indeed spike to the \$49-50 range in both of those years, it’s also important to put those peaks in their proper context.

Because what often gets missed about the spike in 1980, is that it was an unusual situation where liquidity issues were also involved, and the price was only actually above \$49 for two days.

So while that peak is still relevant, it’s often framed in a way that doesn’t always end up being the most constructive when thinking about what to expect going forward.

Similarly, while the silver price stayed elevated for a longer period of time in 2011, there were also liquidity factors involved, so it’s important to distinguish between a long-term ongoing price, and what can happen during a short-squeeze.

January 9, 1980	\$33.15 oz
January 10, 1980	\$33.96 oz
January 11, 1980	\$36.61 oz
January 14, 1980	\$39.75 oz
January 15, 1980	\$44.00 oz
January 16, 1980	\$48.01 oz
January 17, 1980	\$43.35 oz
January 18, 1980	\$49.45 oz
January 21, 1980	\$49.00 oz
January 22, 1980	\$41.55 oz
January 23, 1980	\$38.48 oz
January 24, 1980	\$41.50 oz
January 25, 1980	\$38.30 oz
January 28, 1980	\$35.30 oz

To use a somewhat extreme example to illustrate the point, imagine if investors in the nickel market were analyzing price performance based solely on the spike high in 2022 to over \$100,000 per contract that was caused by a short squeeze on a trader known as “Big Shot”.

Yes, that price point did occur. But if you’re trying to find a true fair value, simply comparing the price to an all-time peak that occurred during a short-squeeze isn’t always the best framework from which to view the market.

This is not to suggest that the nickel and silver situations are identical, or that the fact that silver did get back up to the \$49 range in 2011 is not relevant. But rather just that having the right framework from which to view these events makes a big difference, which this report will elaborate upon throughout the upcoming sections.

It's also worth considering that this is only the third time in history that the silver price has been above the \$40 level, and while the sentiment in the silver market seems lower than one might have expected given the size and scope of the current rally, this is still rare territory for the silver price.



Of course, given the still-accelerating global debt loads, as well as the ongoing trade conditions, the current climate isn't all that many steps removed from experiencing something similar, or perhaps even more severe than what happened in 1980 or 2011. Which makes a move in the silver price to \$50 or possibly even beyond, a growing probability going forward, especially over the longer term.

Silver Starts Rallying From \$22 In February of 2024

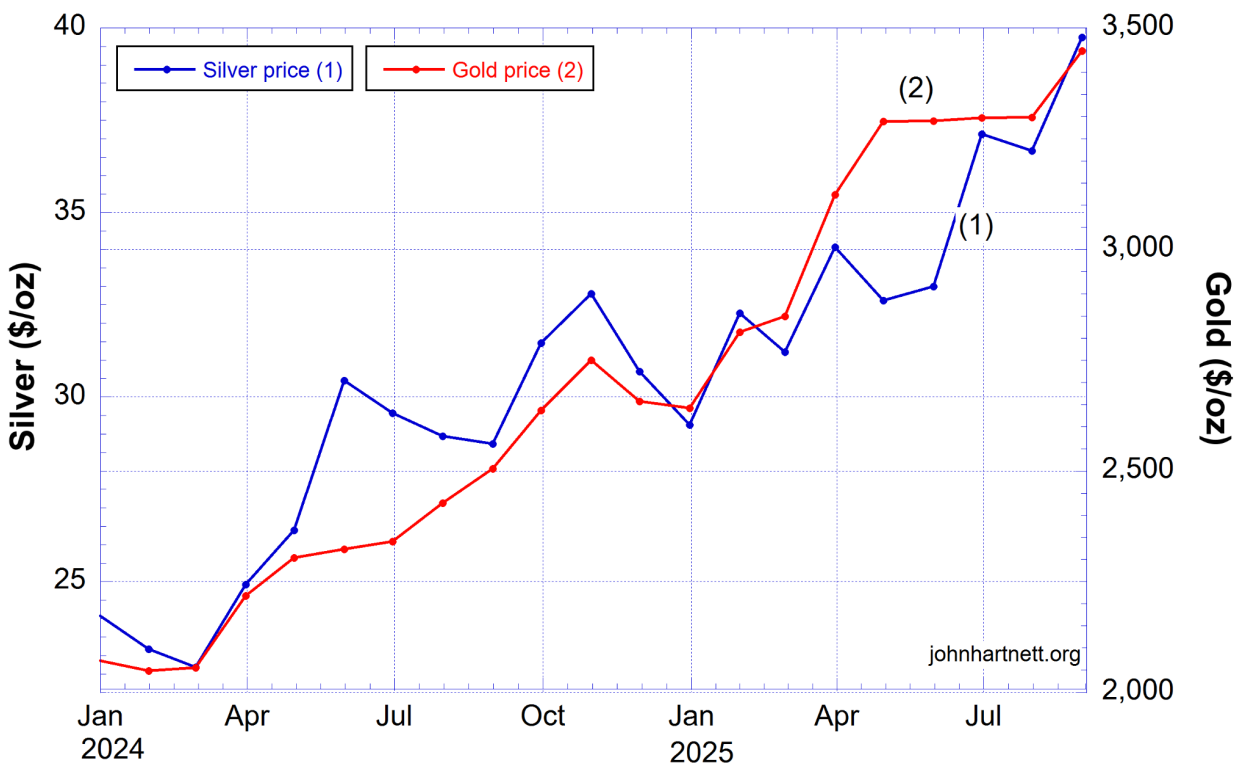
Something that's received little attention in the financial press, and even in the precious metals media, is the question of why silver actually started rallying when it did in February of 2024.

Why then in particular?

The silver supply deficit issues that we'll discuss in this paper had already existed for years by that point. And when silver did finally start rallying, it was also at a time when the markets were being disappointed by Federal Reserve rate cuts continuously getting pushed back until they finally began last September. Which means that this wasn't a rally that was driven by unexpected or additional easing by the Fed.

So what actually sparked the silver move?

Often in financial markets there isn't just one single reason why a market experiences a move, and there were multiple elements present during this silver rally. Although in this particular case, I still think the single most likely driving factor for why silver is up over 88% since February of 2024 is because of the gold rally that started the month prior. And even though there have been times when the correlation between gold and silver has broken down in 2025, it still seems as if the main reason that silver has rallied at the specific time that it did is largely because of what's been happening in the gold market.



In terms of the divergence that the precious metals pricing has experienced at times over the past few months, the most glaring example was on April 23, 2025, when the silver futures were up 60 cents, even while gold was down \$120 on the day.

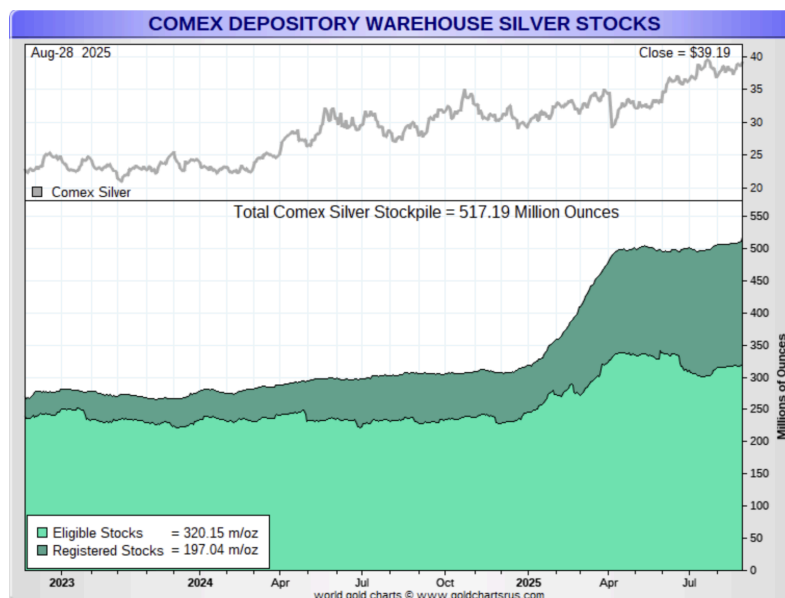
Gold	3,298.74	-120.66	-3.53%
Silver	33.508	+0.602	+1.83%

I believe the reason we've seen this kind of divergence is because gold has taken on a more overt monetary premium this year, especially in response to the tariff policies. The tariffs also come on the heels of the central banks turning to gold in record amounts ever since Russia was sanctioned in 2022, and an increase in the use of gold as collateral internationally as the BRICS nations have continued their emphasis on de-dollarization.

The gold and silver rally over the past year and a half has also been highlighted by [repeated bank price target upgrades](#). In fact, the gold price in particular was often rising so quickly, that on several occasions the banks were forced to [revise their targets](#) just a few weeks after the previous ones had been blown through. The silver supply and demand dynamics have also received [increasing coverage on the bank level](#), which means that institutional investors and funds are also becoming more familiar with the pressures that are building on the market.

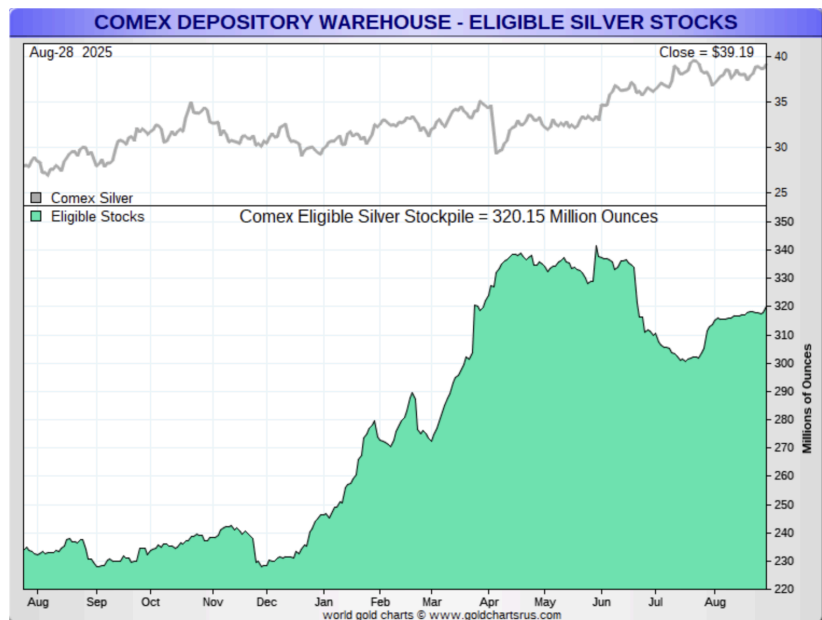
There was also some unusual (and historic) activity in the first half of 2025, as while the markets awaited clarity on the gold and silver tariff policies following Trump's inauguration (which ultimately did end up [excluding gold and silver](#)), metal started flowing from London to New York.

The chart below shows how the COMEX silver inventories went from right around 300 million ounces in late 2024, to over 500 million ounces in the first few months of 2025 as the world awaited a ruling on the status of gold and silver.

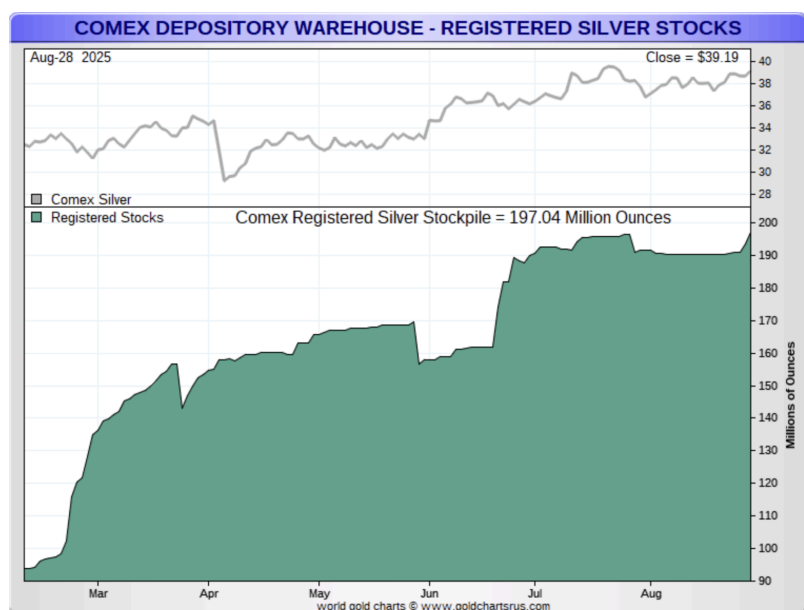


In the next chart you can see how after the eligible stockpile surged from about 230 million ounces in late November of 2024 to a peak of over 340 million ounces by late May of 2025, 40 million ounces were removed between May and July, and then 20 million ounces were deposited back in since then.

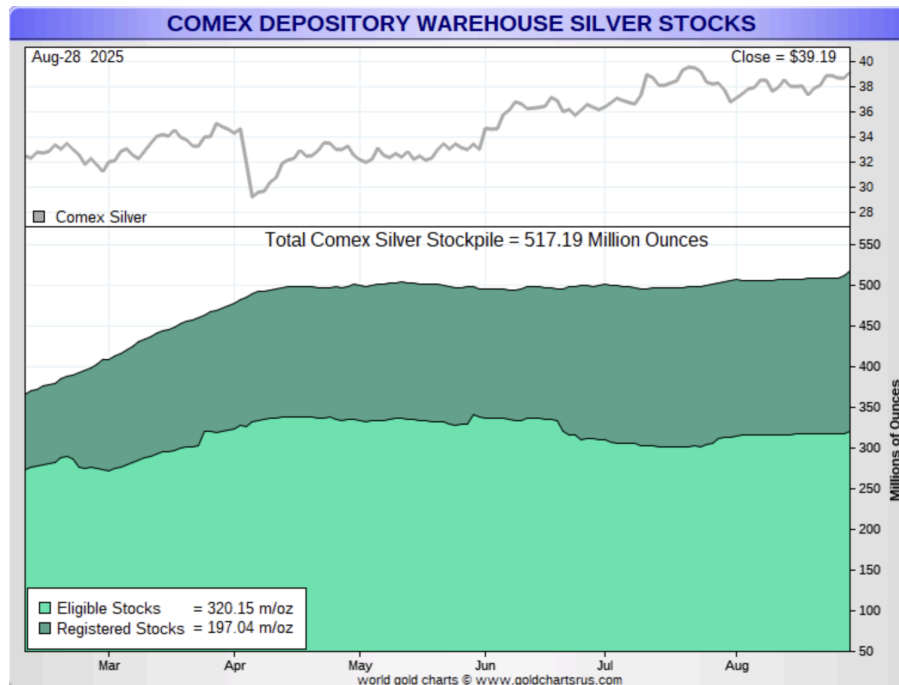
However, even though the eligible stock pile is still below its peak, it is about 40% higher than that low mark from November 2024.



Some of the reduction from the peak eligible inventory in late May has also been offset by continued deposits into the registered stockpile, where almost 40 million ounces have been added since late May (if you're not clear on the distinction between the eligible and registered categories [click here and scroll down to the section right before the summary at the end](#)).

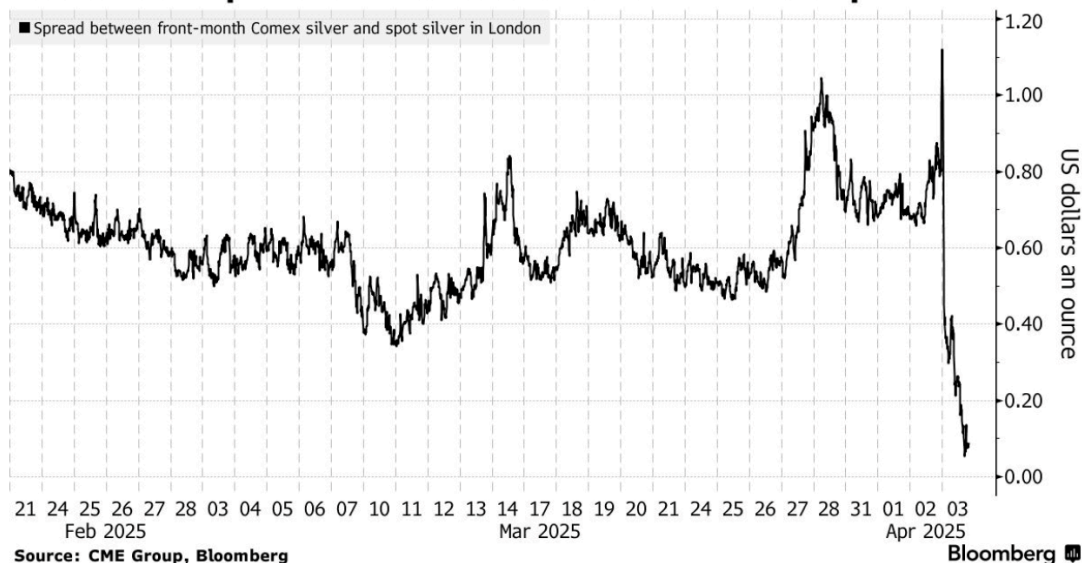


Then in the next chart, you can see how the combined inventories are now at a high point for 2025.



As this metal was flowing from London to New York there were several spikes in the EFP premiums, with the futures in New York at one point trading over a dollar higher than the spot market in London (well in excess of normal levels, and an indication of stress in the market).

Silver EFP Spread Unravels After US Tariff Exemption

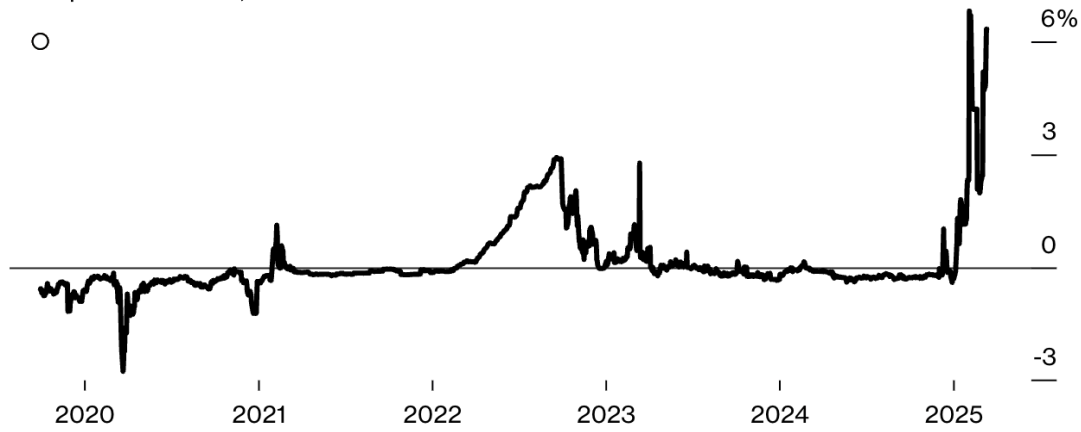


Further indications of stress in the silver market at that time can also be seen in how the lease rates spiked.

Silver Lease Rate Soars as Tariff Fears Expose Tight Market

One-month rates remain elevated amid drawdown in London stockpile

Implied lease rate, 1-month



Source: Bloomberg, CME

Note: Implied silver lease rate based on SOFR, net forward of silver swaps

Similarly, there was also a surge in the SLV borrow rate.

SLV Borrow Fee (CTB) Latest

As of **2025-02-05 07:15:03 PM EST**, there were **100,000** shares available with a fee of **0.89%**.

SLV Borrow Fee (CTB) Changes



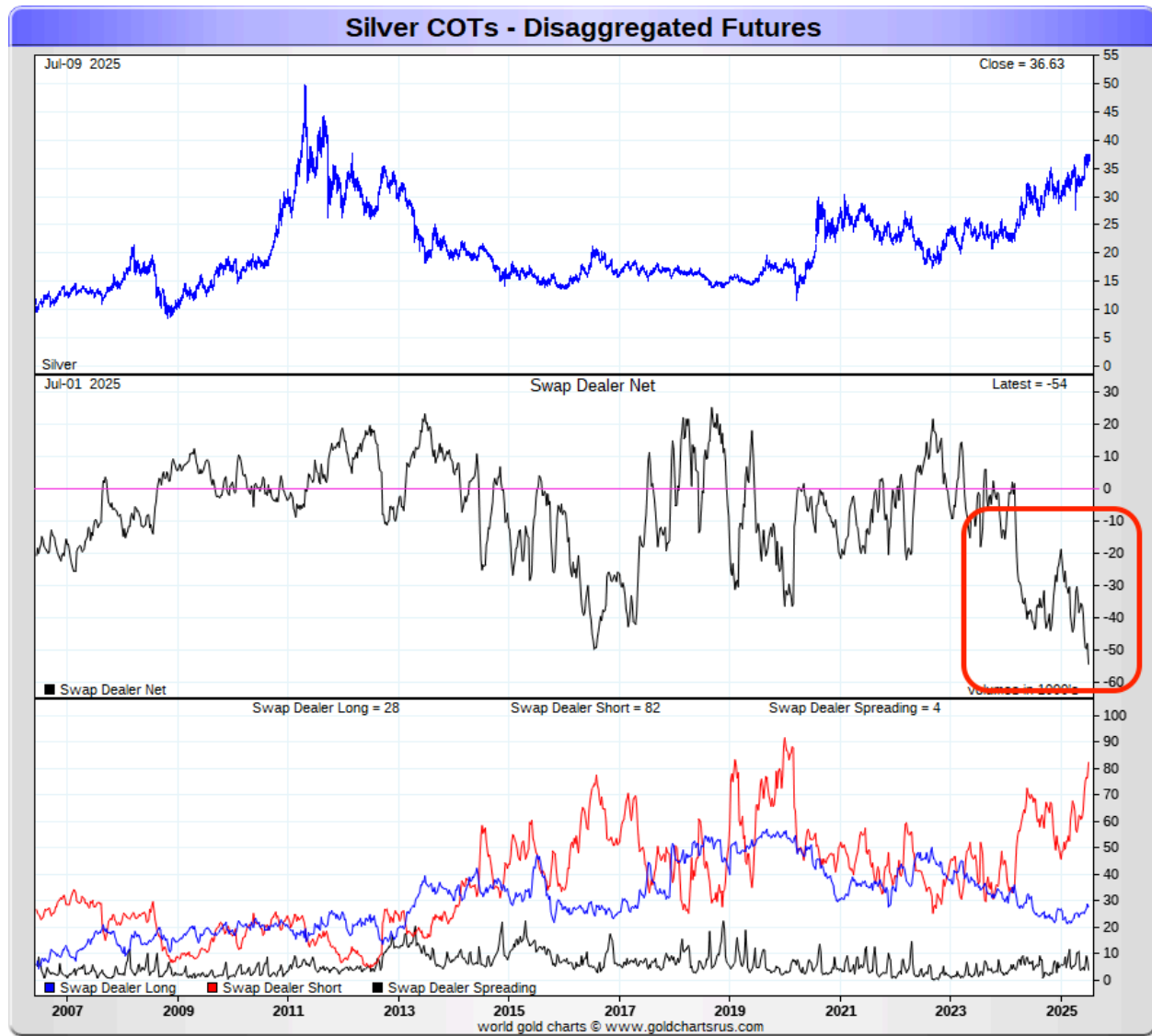
Then by late March of 2025 there was enough stress in the silver market that [former JP Morgan precious metals managing director Robert Gottlieb even went as far as to say:](#)

‘Swap dealers’ (banks) positions per the CFTC are extremely large and someone may be taking a huge position and be very exposed.’

Yet a week later, the reciprocal tariffs were announced, and the silver price, which had been over \$35 per ounce at the time of the announcement, fell below \$30 and even had a brief sub-28.50 print.

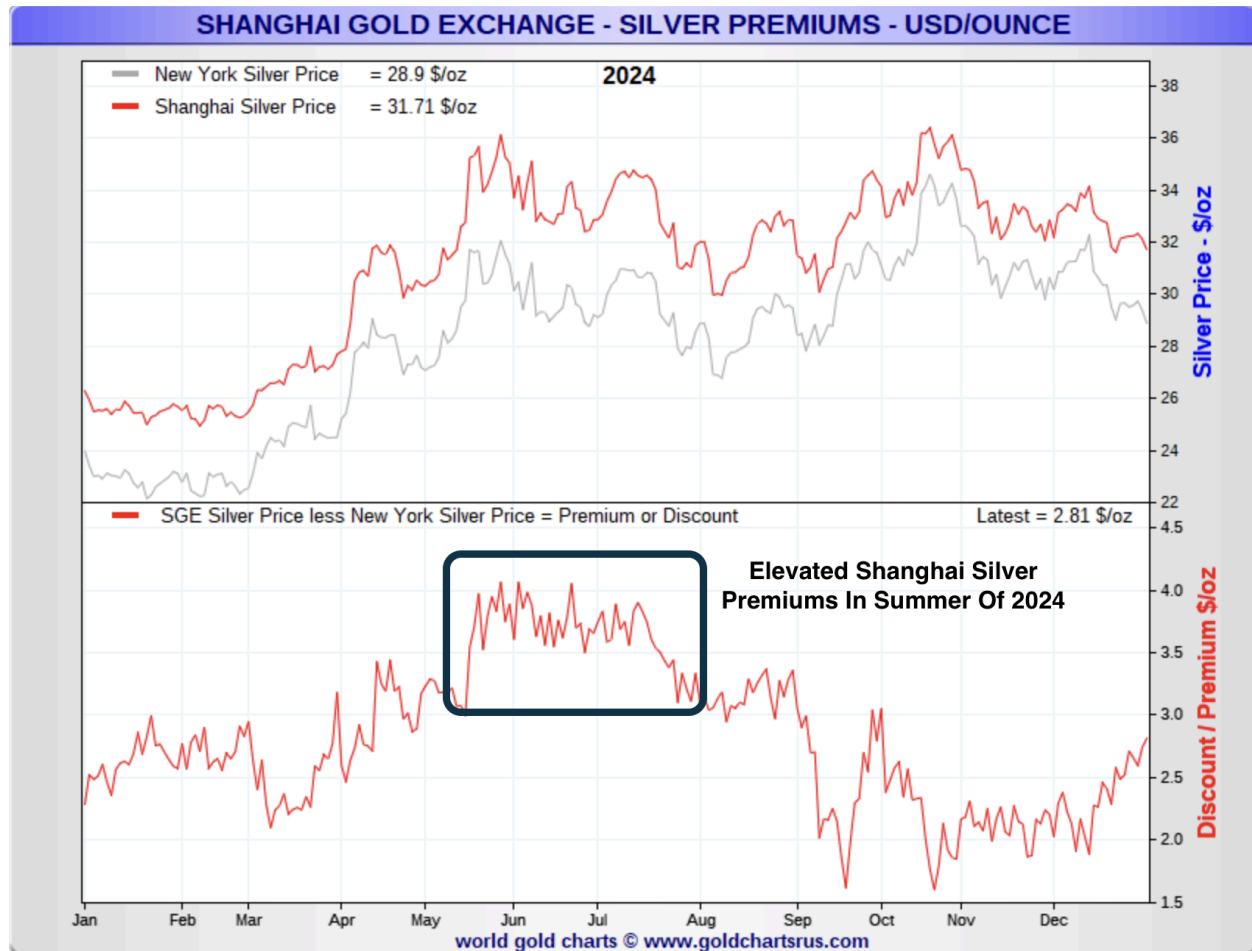


Additionally, while all of this was happening, the collective net-short position held by the banks reached an all-time record high at 54,388 contracts on July 1 of this year.



Those were some of the highlights of the unprecedented market conditions that have taken place this year. However, what fewer market participants are aware of is that last summer there was another unusual phenomenon in the form of elevated spreads between New York and Shanghai.

The spread stayed over \$3 per ounce for several months (meaning the Shanghai silver price was \$3 higher than the COMEX), which led to some interesting activity in the physical silver supply chain in order to capture the arbitrage, that's detailed further in the silver supply section of this report.



So there's been quite a bit happening during this past year and a half, and in the next section we'll look at the supply and demand profile that's left the market in a deficit in the background as all of this has been taking place.

Silver Supply and Demand

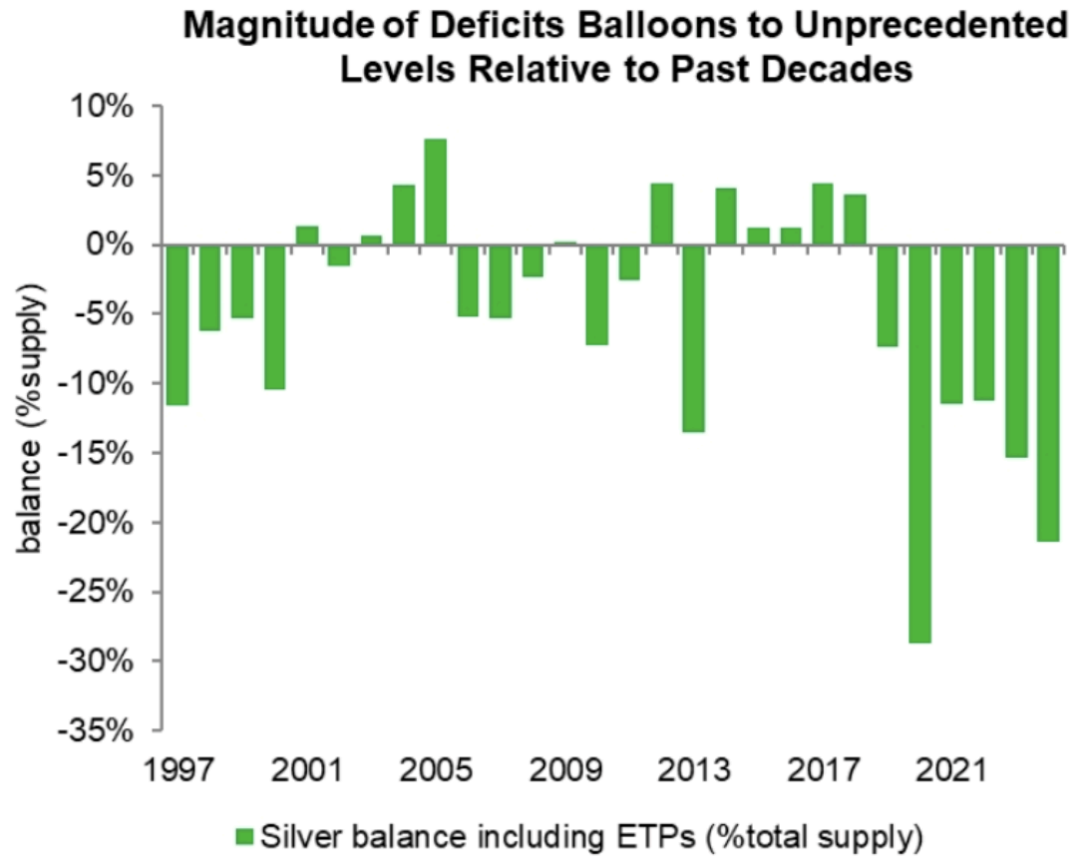
The silver market experienced another deficit in 2024, with Metals Focus (who compiles the data for the Silver Institute's World Silver Survey) noting that [“this deficit will persist for the foreseeable future.”](#)

Silver Supply and Demand

	Year on Year											
Million ounces	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025F	2024	2025F
Supply												
Mine Production	900.1	863.9	850.8	837.4	783.8	830.8	839.4	812.7	819.7	835.0	1%	2%
Recycling	156.3	160.2	162.3	163.8	180.5	190.7	193.5	183.5	193.9	193.2	6%	-0.4%
Net Hedging Supply	0.0	0.0	0.0	13.9	8.5	0.0	0.0	0.0	0.0	0.9	na	na
Net Official Sector Sales	1.1	1.0	1.2	1.0	1.2	1.5	1.7	1.6	1.5	1.5	-9%	4%
Total Supply	1,057.4	1,025.1	1,014.3	1,016.2	974.0	1,023.1	1,034.6	997.8	1,015.1	1,030.6	2%	2%
Demand												
Industrial (total)	491.0	528.0	525.8	525.4	511.9	564.1	592.3	657.1	680.5	677.4	4%	-0.5%
Electrical & Electronics	309.0	339.1	330.4	326.6	321.4	350.7	370.7	444.4	460.5	465.6	4%	1%
...of which photovoltaics	81.6	99.3	87.0	74.9	82.8	88.9	118.1	192.7	197.6	195.7	3%	-1%
Brazing Alloys & Solders	49.1	50.9	52.0	52.4	47.5	50.5	49.2	50.2	51.6	52.9	3%	3%
Other Industrial	132.9	138.0	143.5	146.4	142.9	162.9	172.4	162.6	168.4	158.9	4%	-6%
Photography	34.7	32.4	31.4	30.7	26.9	27.7	27.7	27.3	25.5	24.2	-7%	-5%
Jewelry	189.1	196.2	203.2	201.6	150.9	182.0	234.5	203.1	208.7	196.2	3%	-6%
Silverware	53.5	59.4	67.1	61.3	31.2	40.7	73.5	55.1	54.2	46.0	-2%	-15%
Coin & Net Bar Demand	212.9	155.8	165.9	187.4	208.1	284.3	338.3	244.3	190.9	204.4	-22%	7%
Net Hedging Demand	12.0	1.1	7.4	0.0	0.0	3.5	17.9	11.5	4.3	0.0	-62%	na
Total Demand	993.3	972.9	1,000.8	1,006.4	929.0	1,102.4	1,284.2	1,198.5	1,164.1	1,148.3	-3%	-1%
Market Balance	64.1	52.2	13.5	9.8	45.1	-79.3	-249.6	-200.6	-148.9	-117.6	-26%	-21%
Net Investment in ETPs	53.9	7.2	-21.4	83.3	331.1	64.9	-117.4	-37.6	61.6	70.0	na	14%
Market Balance less ETPs	10.2	45.1	34.9	-73.5	-286.1	-144.3	-132.2	-163.0	-210.5	-187.6	29%	-11%
Silver Price (US\$/oz, London price)	17.14	17.05	15.71	16.21	20.55	25.14	21.73	23.35	28.27	-	21%	na

Source: Metals Focus

The chart below from TD Securities and Metals Focus shows how these deficits have started to add up in recent years.



Source: TD Securities, Metals Focus, GFMS

As a result of the deficits, we've seen a decline in the silver inventories, which is detailed further in the silver supply section.

Silver Demand

Despite lower levels of silver investment amidst a continuation of a wave of retail selling that's occurred over the past two years, the silver market still logged another sizable structural deficit for the fifth consecutive year in a row (five years when accounting for silver that went into the ETFs, and three years if you leave the ETFs out the surplus/deficit calculation).

Market Balance	64.1	52.2	13.5	9.8	45.1	-79.3	-249.6	-200.6	-148.9	-117.6	-26%	-21%
Net Investment in ETPs	53.9	7.2	-21.4	83.3	331.1	64.9	-117.4	-37.6	61.6	70.0	na	14%
Market Balance less ETPs	10.2	45.1	34.9	-73.5	-286.1	-144.3	-132.2	-163.0	-210.5	-187.6	29%	-11%
Silver Price (US\$/oz, London price)	17.14	17.05	15.71	16.21	20.55	25.14	21.73	23.35	28.27	-	21%	na

Source: Metals Focus

This was largely driven by global industrial demand, which according to the Silver Institute and Metals Focus data, **'rose by 4% to another record of 680.5 million ounces in 2024.'**

This record industrial demand drove total silver demand to its third highest figure in the time since Metals Focus started publishing the data back in 2010, just under the 2022 and 2023 figures, largely as a result of the drop off in investment demand in 2024.

Million ounces	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025F	2024	2025F
Demand												
Industrial (total)	491.0	528.0	525.8	525.4	511.9	564.1	592.3	657.1	680.5	677.4	4%	-0.5%
Electrical & Electronics	309.0	339.1	330.4	326.6	321.4	350.7	370.7	444.4	460.5	465.6	4%	1%
...of which photovoltaics	81.6	99.3	87.0	74.9	82.8	88.9	118.1	192.7	197.6	195.7	3%	-1%
Brazing Alloys & Solders	49.1	50.9	52.0	52.4	47.5	50.5	49.2	50.2	51.6	52.9	3%	3%
Other Industrial	132.9	138.0	143.5	146.4	142.9	162.9	172.4	162.6	168.4	158.9	4%	-6%
Photography	34.7	32.4	31.4	30.7	26.9	27.7	27.7	27.3	25.5	24.2	-7%	-5%
Jewelry	189.1	196.2	203.2	201.6	150.9	182.0	234.5	203.1	208.7	196.2	3%	-6%
Silverware	53.5	59.4	67.1	61.3	31.2	40.7	73.5	55.1	54.2	46.0	-2%	-15%
Coin & Net Bar Demand	212.9	155.8	165.9	187.4	208.1	284.3	338.3	244.3	190.9	204.4	-22%	7%
Net Hedging Demand	12.0	1.1	7.4	0.0	0.0	3.5	17.9	11.5	4.3	0.0	-62%	na
Total Demand	993.3	972.9	1,000.8	1,006.4	929.0	1,102.4	1,284.2	1,198.5	1,164.1	1,148.3	-3%	-1%

The record industrial demand was largely driven by strong solar silver demand, which Silver Institute and Metals Focus reported at 197 million ounces in 2024. Installed solar capacity rose again last year, and the current outlook suggests a high probability of a continued increase going forward (albeit at a somewhat slower pace).

There are of course also some new variables that enter into the solar equation with Trump getting elected, as he's been far more of a critic of green energy than his predecessors. Although as we will discuss shortly, even if Trump does remove the solar subsidies, the U.S. is still only one part of the overall solar demand.

Retail Investment Silver Demand

Throughout the past year and a half, one of the primary themes in the precious metals industry in the U.S. has been the wave of retail selling, particularly on the silver side.

This lower investment demand was reflected in the data, and as shown in the chart below.

Physical Investment*

Million ounces	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Y/Y
United States	124.8	101.1	55.7	47.4	48.2	94.3	138.2	135.6	120.8	64.9	-46%
India	110.4	36.5	40.5	54.0	56.5	8.7	27.6	79.4	49.3	59.8	21%
Germany	23.6	26.1	24.4	27.6	37.8	46.5	50.3	48.9	13.3	9.9	-25%
Australia	4.3	5.1	3.3	3.6	3.5	11.4	16.0	20.7	12.4	9.3	-25%
Canada	7.6	7.2	4.7	4.6	5.0	7.5	10.6	12.0	7.9	6.4	-18%
China	13.9	13.8	9.4	9.0	7.9	8.7	7.8	7.4	6.2	5.5	-10%
Other Europe	7.8	12.8	10.6	12.9	13.4	12.5	15.1	16.4	13.5	11.6	-14%
Other East Asia	8.3	8.7	6.9	7.3	13.6	13.4	12.8	12.0	9.9	10.8	9%
Others	1.8	1.9	1.7	1.6	1.2	3.3	3.5	5.2	5.0	5.0	0%
Global Total	302.6	213.1	157.2	167.9	187.2	206.1	281.8	337.6	238.2	183.3	-23%

Source: Metals Focus. *These figures differ to coin + net bar demand as they exclude commemorative coins and take into account swings in dealer stocks.

Net retail demand was elevated in 2021-2023 following COVID, although last year investment demand dropped back to the lowest level since 2019, which followed two years of lower demand in 2017-2018.

Some Of The Silver Being Sold Back To Dealers Is Being Melted Into Industrial Bars

I've heard multiple reports from bullion dealers and wholesalers about how some of the retail silver coins and bars that are being sold back [are getting melted down into 1,000 ounce bars](#) to meet industrial demand.

Contacts at multiple U.S. refiners have told me they are melting low-grade .999 fine bullion into 1,000 ounce bars.

The lack of retail demand means the only way local coin shops can make any money is on the buy side, purchasing \$3-4 under spot and selling to refiners \$1-2 under.

Sellers are outnumbering buyers at local coin shops 10 or 12 to 1. The buyers are doing larger transactions, but dealers are still getting more metal from retail sellers than they can move to other retail buyers. [Matt Riley, owner of wholesaler EF Bullion](#)

Here's what [Brian Kuszmar, owner of Commercial Rare Coins in South Florida](#) has been experiencing:

We haven't personally seen a big increase in selling, but we have seen less buying from retail over the past two years.

The people who are selling are not the stackers, but usually people who need cash for an expense like buying a house, or people who have inherited the silver and don't want to hang on to it.

Metals Focus also offered the following comment in [a June 2025 update](#).

On the silver side, the trend is similar. Retail investment in the US fell by a marked 46% y/y in 2024, while early 2025 saw some dealers report net disinvestment. Feedback suggests continued coin and bar buybacks at heightened levels and a further rise in dealer stocks, a portion of which are destined for melt.

There is some variation amongst the dealer reports, with some reporting more extreme patterns like what Matt Riley described, and others still noticing selling, but at a somewhat less intense pace than what Brian Kuszmar mentioned. Although you can also see direct evidence of what these dealers are reporting in how the silver premiums have crashed in the past two years.

This wave of selling also further supports the World Silver Survey's view that the market has been in a market deficit. The decline in the public retail inventories also builds on the trend that started in 2022, when the COMEX and LBMA inventories declined, and in 2023 when the ETF inventories dwindled.

Unfortunately, there's not a specific metric that offers a realistic estimate of just how much silver has actually been sold back in the past year and a half. But the dealer reports I continue to receive suggest it's been a substantial amount. Yet regardless of what that actual amount is, it still means that the net overall silver supply has come down.

This might not matter today or tomorrow. But with no end to the deficits in sight, these are the kinds of items that do add up, and have the potential to eventually make a noticeable impact.



And when issues like these continue on long enough and then finally do come to surface, they have the ability to move the market substantially.

As one example, just take a look at what happened to the cocoa price after that market finally ran into a supply shortage.



It's also interesting to wonder what might have happened to the silver price in 2024 had retail investors not been selling.

Because if silver rallied as much as it did with retail selling, what would have happened to the price if retail had been a buyer, or even just neutral?

In reality, despite how many silver investors are often frustrated when the price doesn't react to what's happening on the retail level, that's generally been the case (Oxford Economics actually put out a great report on the topic of [what actually does move the silver price](#), that's well worth reading for further insight).

Yet for all of the frustration silver investors had during the times when the public was buying silver but the price didn't move higher, hopefully 2024 came as a welcome reprieve when the silver price rose substantially, even in the face of large-scale retail selling.

Additionally, given the somewhat fragile conditions in the current economic landscape, it's very possible that, perhaps even in the second half of 2025, what's happening on the retail level could look substantially different—especially given that [generalist money has now finally started coming back into the silver market](#).

Also worth noting, is that on the retail side, what really gets people to stop what they're doing to pick up the phone and buy precious metals, is when there is market chaos.

When the banks failed in 2023, when the Nikkei was down 12% in a day in 2024, or when COVID first broke out, these are the kinds of events that really cause the phones to start ringing for the gold and silver dealers.

So if the tariff war and/or the debt issues deliver another COVID, Lehman, or Silicon Valley Bank moment, those are the types of events that drive the larger surges in physical gold and silver investment demand.

Each Crisis Creates New Buyers

For those who are newer to the precious metals markets, it's worth noting that there was a new wave of interest into the gold and silver markets following the housing bubble crash, and then again after COVID. Both crises created a new segment of investors who started thinking about the Fed's role in the markets, the endless boom and bust cycles, the global government debt burdens, and by extension the gold and silver markets.

How close another event like that might be remains an open question. But each time something like that happens, the audience of precious metals investors grows. And aside from the Western investing mindset, there continues to be an awareness, understanding, and appreciation of gold particularly in the Far East right now.

So if there is another market event (which seems to get more likely over time given the compounding nature of the debt burden), that would likely change the current retail silver investment demand profile. And if that does occur, it would be another demand driver added to a silver market that's already in a deficit.

Costco Starts Selling Silver

While overall investment silver demand was down in 2024, one positive for the industry on the retail level was that Costco started selling silver (they had already been selling gold), which if nothing else, seems to at least serve as good marketing.

Despite the growing debt loads and the seeming lack of answers about how they'll ever be addressed (let alone resolved), I still don't personally think we're at, or even a step or two away from the point where regular people who have never thought of buying silver before suddenly get in the car to go to their local coin shop.

Put another way, if my mother didn't know me, I don't think she would be close to calling up her local precious metals dealer just because the latest CPI report came out hot.

I point this out largely because there's often a different perception about silver inside of the precious metals community than exists in the rest of the mainstream public, which I think often gets glossed over by many gold and silver investors.

I'm a silver investor myself, and became one because I was (and remain) concerned about how the debt issues will ultimately be resolved, as any possible path I can conceive of includes further dollar devaluation. Yet aside from whether other people *should* be concerned or on high alert, I don't think the average Western investor *is* on the verge of feeling the need to go out and reduce their dollar exposure by buying physical gold and silver. However, in terms of the kind of events that could at least start to make an impact in changing that dynamic, the Costco news is the type of development that does start to add up over time.

That's not to say that the Costco news in and of itself will have a significant impact. But what if there is another wave of inflation similar to what just happened over the past few years (which unfortunately I think is becoming [an increasing likelihood](#))? Do some of these developments start to make an impact in the minds of the investors who currently have no gold and silver exposure?

It's also worth noting that the way investors are viewing gold today would probably have seemed somewhat far-fetched to most market participants even 5 or 10 years ago. Which I mention just to highlight that things do change, and now here we are a couple of years later, and central banks are setting records for the amount of gold they've purchased. So it has at least crossed my mind that whether it's in the exact same manner or path as gold, it is possible that events could change the current perception around silver at some point as well.

This isn't to suggest that we're about to go back to a silver standard, rather just that perceptions change over time, especially in financial markets. And while I don't know if silver will ever be fully embraced by the mainstream investment audience, there are enough funds and sovereign entities with financial and political motivations that have the ability to make a significant impact in this market at just about any time. Is it also possible that we could see a new modern day Hunt brother emerge at some point (with some evidence suggesting that this [has already been occurring in China](#))?

This is somewhat speculative at this point. Yet taking it as a given that the dynamics of the silver market will look exactly the same ten years from now as they do today is possibly an even more dangerous assumption, and I do think it's worth considering pricing in some probability for things like this, even if it's a low probability. Because while a 3% or 5% probability sounds small, when you start stacking a few of those together, the math starts to change.

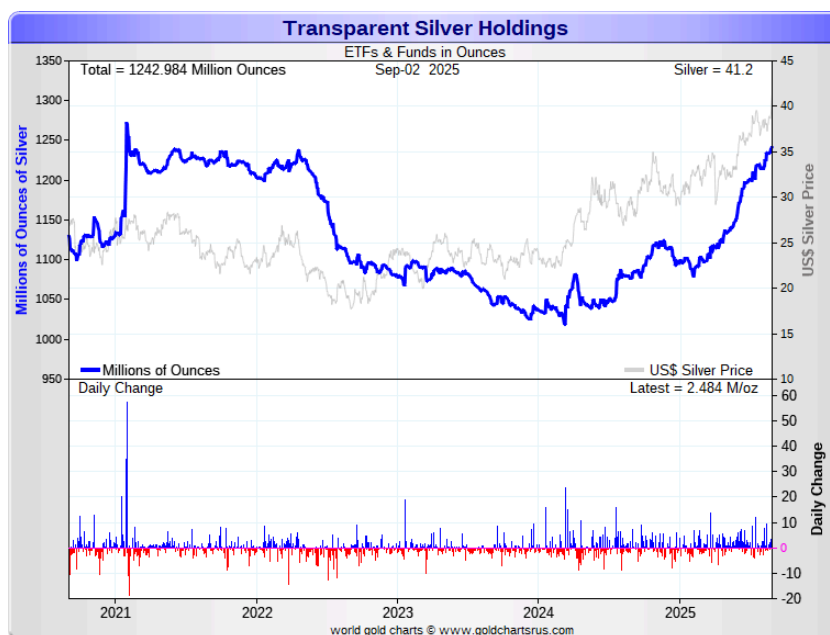
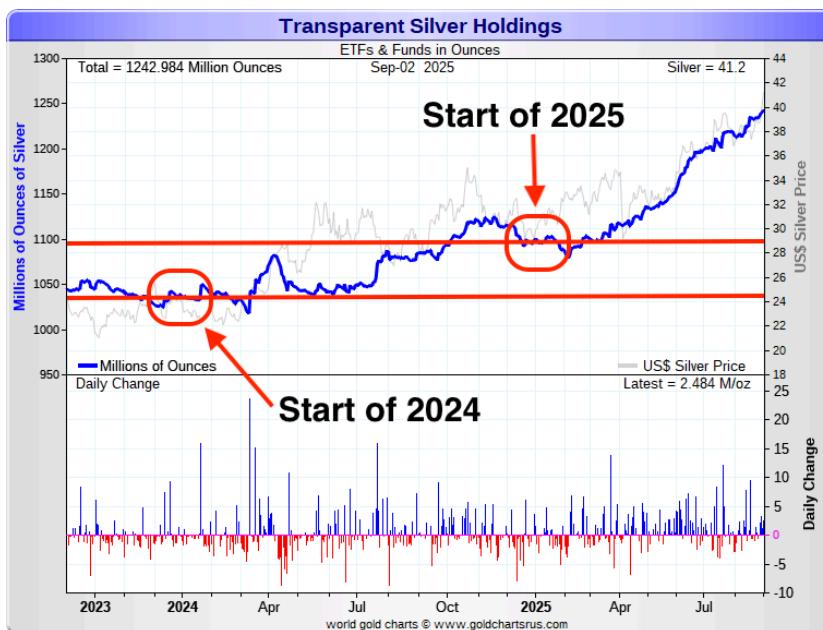
ETF Demand Returns In 2024

Interestingly, there was a bit of a different picture in the ETF segment of the market as opposed to what's been happening on the retail level, where approximately 50 million ounces were added to the silver ETFs in 2024, and almost another 150 million ounces were added in 2025.

There was a surge last July as it started to become clear that the Fed was getting ready to start cutting rates again. And you can see in the next chart how the additions to the trust that began in 2024 marked a sharp reversal from the outflows that had been occurring since February of 2021.

The ETF additions are also an indication of institutional demand re-entering the markets. Although despite the additions in 2024, we still haven't reached the point where it's become a momentum trade and new money is piling in just because the price is moving. I thought we might have seen that once silver broke \$30, yet now as price has broken the \$40 level in early September of 2025, we've just recently started to see the generalist money come back to the market.

Should that continue, it would put additional pressure on the already tight silver supply, especially if it were to be accompanied by a return of the retail buyers.



China Not Rushing Into Silver Yet

Despite the gold-buying spree that China has been on over the past year in particular, there still has not yet been a surge in Chinese silver investment demand.

The lack of data supporting a surge by the East into silver is noteworthy, as I often get the feeling that most gold and silver investors believe that China is already buying a lot of silver on the investment side. Although at least so far, that does not yet appear to be the case.

Physical Investment*

Million ounces	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Y/Y
United States	124.8	101.1	55.7	47.4	48.2	94.3	138.2	135.6	120.8	64.9	-46%
India	110.4	36.5	40.5	54.0	56.5	8.7	27.6	79.4	49.3	59.8	21%
Germany	23.6	26.1	24.4	27.6	37.8	46.5	50.3	48.9	13.3	9.9	-25%
Australia	4.3	5.1	3.3	3.6	3.5	11.4	16.0	20.7	12.4	9.3	-25%
Canada	7.6	7.2	4.7	4.6	5.0	7.5	10.6	12.0	7.9	6.4	-18%
China	13.9	13.8	9.4	9.0	7.9	8.7	7.8	7.4	6.2	5.5	-10%
Other Europe	7.8	12.8	10.6	12.9	13.4	12.5	15.1	16.4	13.5	11.6	-14%
Other East Asia	8.3	8.7	6.9	7.3	13.6	13.4	12.8	12.0	9.9	10.8	9%
Others	1.8	1.9	1.7	1.6	1.2	3.3	3.5	5.2	5.0	5.0	0%
Global Total	302.6	213.1	157.2	167.9	187.2	206.1	281.8	337.6	238.2	183.3	-23%

I know many investors expect that China *will* start buying silver for investment, especially given their long history of using silver as money, but that has not started to occur as of the time of the publication of this report.

Interestingly, a quick side note regarding China's history with silver, is that their silver standard came to an end in 1935, in large part due to American monetary policy. While most gold and silver investors are aware that FDR issued Executive Order 6102, which prohibited the private ownership of gold, what fewer are aware of is that FDR also issued Executive Order 6814, which required all privately held silver in the continental United States to be delivered to the government (although silver coins were exempted).

Then in 1934, the U.S. passed the Silver Purchase Act, which stated:

The Silver Purchase Act of 1934 declares it to be the policy of the United States that **'the proportion of silver to gold in the monetary stocks of the United States should be increased**, with the ultimate objective of having and maintaining one-fourth of the monetary value of such stocks in silver'.

The Secretary of the Treasury is directed to purchase silver to that end at such times and upon such terms and conditions as he may deem reasonable and most advantageous to the public interest.

However, one of the consequences of the Silver Purchase Act was that U.S. buying caused such a drain on the silver supply, that China was eventually forced to abandon its silver standard in response in November of 1935.

It was known that silver was leaving China in large quantities and no one knew exactly what to do about it. On May 12, the Minister of Finance, Dr. H. H. Kung, says, "Silver Purchase Act has caused severe drain on China's silver revenue and construction of nation's currency and credit", - he continued, saying that China was "forced to depend upon borrowings to meet current expenses". (1).

Toward the end of October 1935, the Chinese exchange began to fluctuate rather widely. On October 15, 1934, the exchange was thirty-four cents, - in May, 1935, it was forty-one cents, and the day before nationalization it was thirty-and one-half cents, a drop of 20% in two weeks.

To those who noticed this, - it wasn't too surprising when China announced, on November 4th, that she was legally leaving the silver standard for a managed paper currency.

The London times for November 4, 1935, gives the following summary of the provision of the act.

1. "A new paper currency shall take the place of the ancient silver dollar.
2. The existing bank note issue shall be withdrawn and replaced by one single note issue.
3. This note issue will be the monopoly of a modern Central Bank.

(excerpt from page 81 of *The Effect of the Silver Purchase Act of 1934 on the United States, China, Mexico, and India*, and [page 175 of this PDF](#))

Coming back to the present, the Silver Institute and Metals Focus data still shows minimal Chinese investment demand, which also matches what I've heard in conversations with market participants, and found in my own research.

I have heard some make the argument that some of the large Chinese industrial silver importers are holding some of their silver for investment, and I can allow for there being some degree to which that is the case. Yet even with that said, perhaps a good assessment is that Chinese investors and the PBOC are still not yet investing in silver like they are in gold.

India Remains The 2nd Largest Silver Investment Buyer

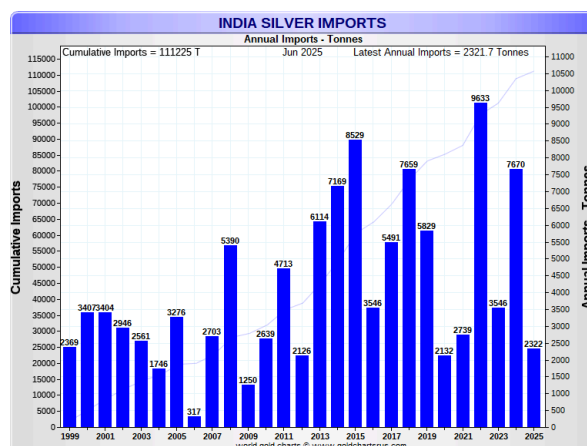
India continues to be a strong presence in the investment silver category and has been the second largest buyer for the last three years.

Physical Investment*

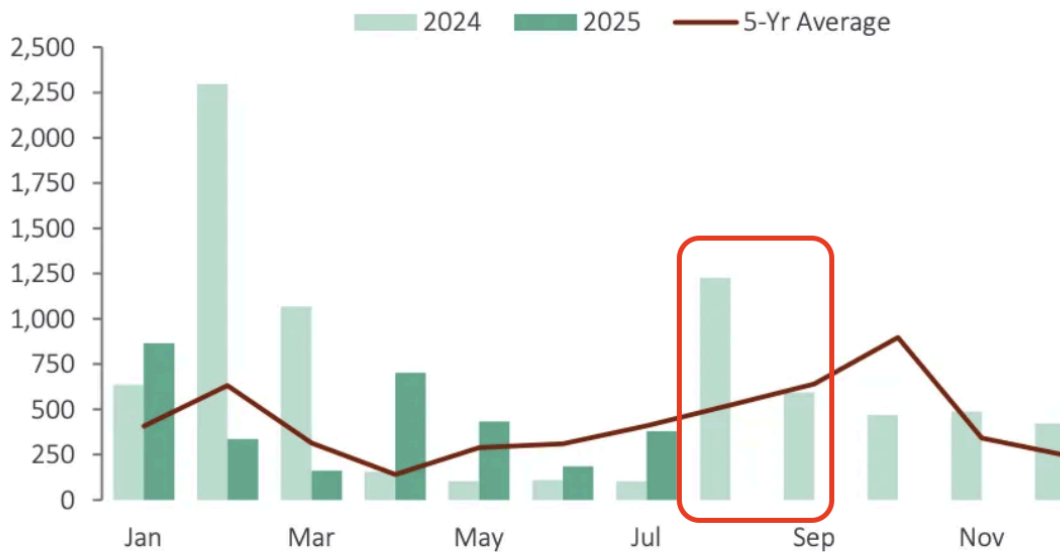
Million ounces	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Y/Y
United States	124.8	101.1	55.7	47.4	48.2	94.3	138.2	135.6	120.8	64.9	-46%
India	110.4	36.5	40.5	54.0	56.5	8.7	27.6	79.4	49.3	59.8	21%
Germany	23.6	26.1	24.4	27.6	37.8	46.5	50.3	48.9	13.3	9.9	-25%
Australia	4.3	5.1	3.3	3.6	3.5	11.4	16.0	20.7	12.4	9.3	-25%
Canada	7.6	7.2	4.7	4.6	5.0	7.5	10.6	12.0	7.9	6.4	-18%
China	13.9	13.8	9.4	9.0	7.9	8.7	7.8	7.4	6.2	5.5	-10%
Other Europe	7.8	12.8	10.6	12.9	13.4	12.5	15.1	16.4	13.5	11.6	-14%
Other East Asia	8.3	8.7	6.9	7.3	13.6	13.4	12.8	12.0	9.9	10.8	9%
Others	1.8	1.9	1.7	1.6	1.2	3.3	3.5	5.2	5.0	5.0	0%
Global Total	302.6	213.1	157.2	167.9	187.2	206.1	281.8	337.6	238.2	183.3	-23%

India set a record for the most silver they've imported in 2022 at 9,633 tonnes, which was followed by a softer year in 2023 at 3,546 tonnes, before rebounding in 2024 to India's third highest total in history at 7,747 tonnes (although to be clear, these totals include investment demand AND industrial demand).

A big driver of the surge in 2024 was the decision by the Indian government to [reduce the gold and silver import taxes in July](#), and the next chart shows how there was [a surge in imports in August and September](#) after the change in policy.

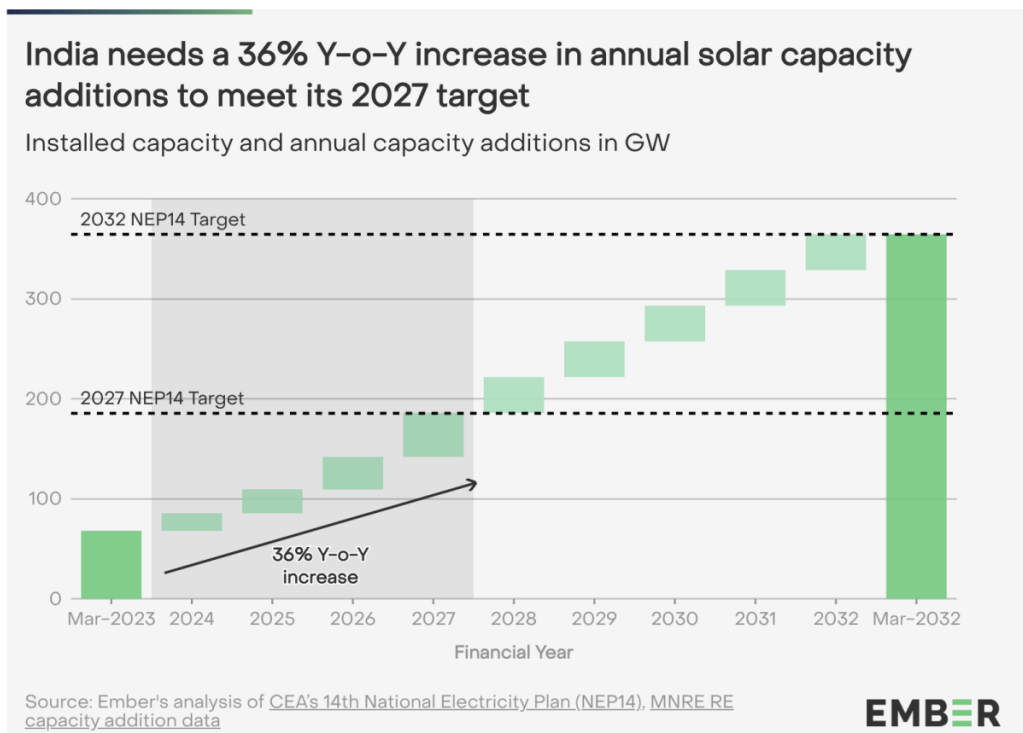


Silver Imports*, Tonnes



Source: Indian Customs, Metals Focus; *Excluding Jewellery Imports

While those figures include investment demand, they also include industrial consumption, which has been driven by India's growing use of silver in its solar programs. And based on the green energy targets their government continues to publish, it's an amount that's likely to increase in the years ahead.



Industrial Silver Demand Hits New Record

The record industrial silver demand was driven by green applications, and in particular, solar/photovoltaic demand.

The [World Silver Survey](#) noted:

that higher demand is expected from the automotive sector due to “the rising electrification of powertrains and ongoing investments in infrastructure, such as charging stations.”

Silver is also expected to be “a critical component in transportation, nanotechnology, biotechnology, healthcare, consumer wearables, and computing and data center energy storage.” Additionally, the Samsung solid-state battery that we will touch on shortly offers the potential for another new significant source of silver demand.

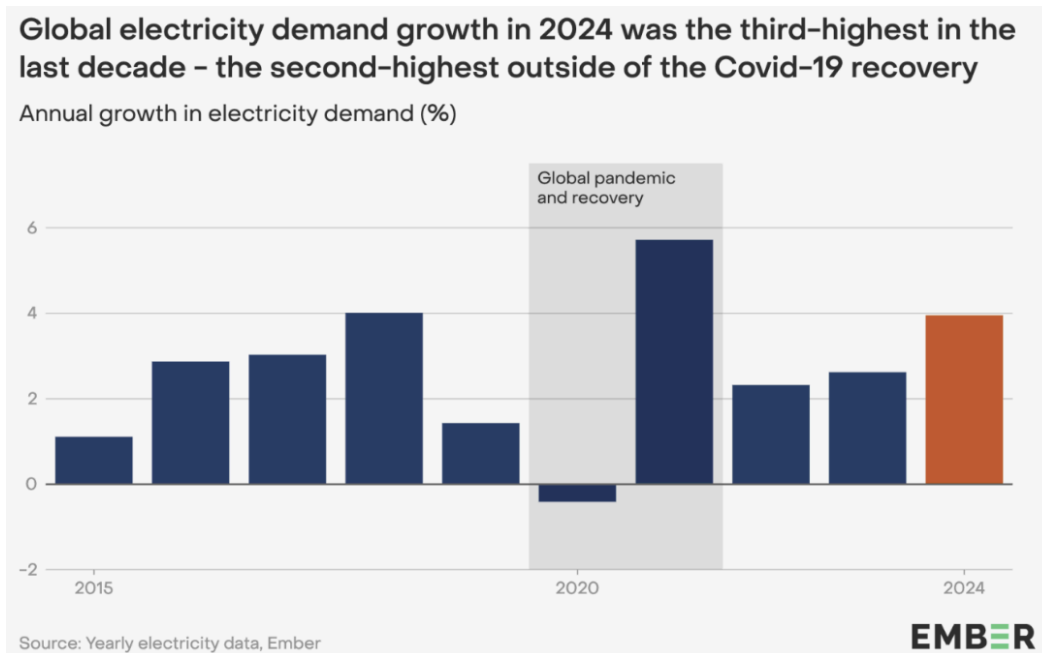
The rapid adoption of AI technology is also on track to be another growing demand driver, especially as the expansion of AI has led to [a power crisis in the U.S.](#), with the Department of Energy expecting domestic energy usage from data centers [to double or triple by 2028](#),

Microsoft has already made substantial investments in solar power generation, and [Google, Meta, Apple, and other leading technology companies are expected to follow](#).

In terms of what western governments are planning throughout the rest of the decade, [the International Energy Agency \(IEA\) had the following note](#):

The European Union and the United States are both forecast to double the pace of renewable capacity growth between 2024 and 2030, while India sees the fastest rate of growth among large economies.

In India, the rapid expansion of auctions, the introduction of a new support scheme for rooftop PV, and stronger financial indicators for many utility companies make the country the fastest-growing renewable energy market among large economies through 2030.

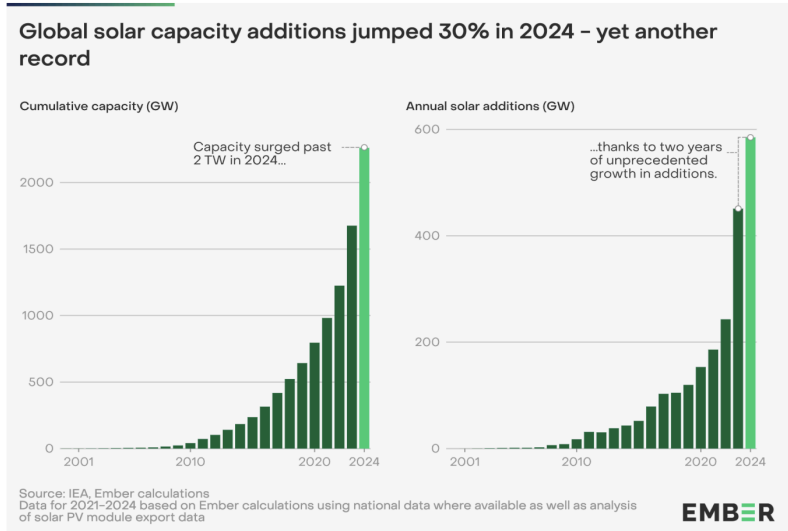


Solar Demand Continues To Drive Industrial Silver Usage

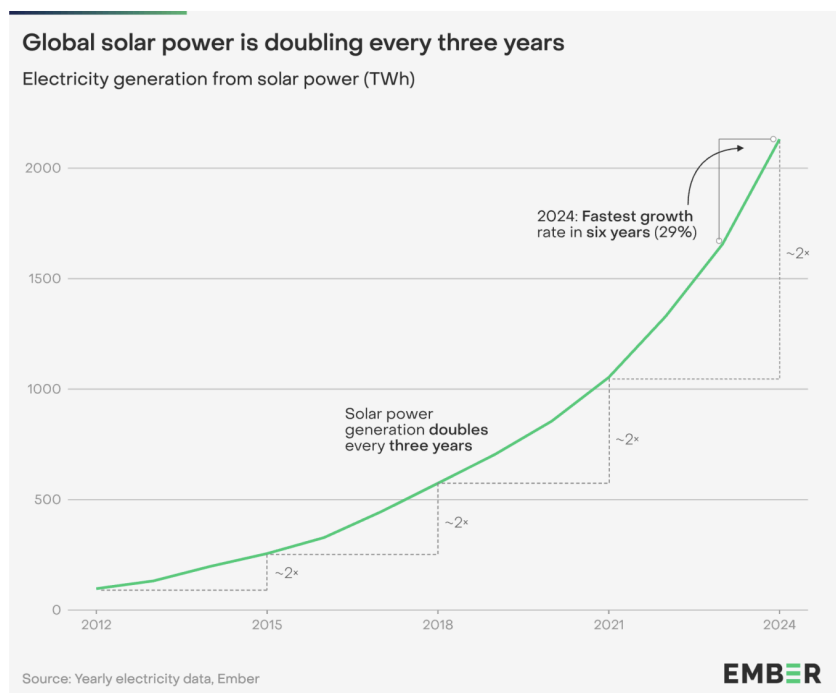
Solar continues to be one of the primary demand factors for the silver market and it has played a significant role in creating the deficits the market has experienced in recent years.

Million ounces	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025F	2024	2025F
Demand												
Industrial (total)	491.0	528.0	525.8	525.4	511.9	564.1	592.3	657.1	680.5	677.4	4%	-0.5%
Electrical & Electronics	309.0	339.1	330.4	326.6	321.4	350.7	370.7	444.4	460.5	465.6	4%	1%
...of which photovoltaics	81.6	99.3	87.0	74.9	82.8	88.9	118.1	192.7	197.6	195.7	3%	-1%
Brazing Alloys & Solders	49.1	50.9	52.0	52.4	47.5	50.5	49.2	50.2	51.6	52.9	3%	3%
Other Industrial	132.9	138.0	143.5	146.4	142.9	162.9	172.4	162.6	168.4	158.9	4%	-6%
Photography	34.7	32.4	31.4	30.7	26.9	27.7	27.7	27.3	25.5	24.2	-7%	-5%
Jewelry	189.1	196.2	203.2	201.6	150.9	182.0	234.5	203.1	208.7	196.2	3%	-6%
Silverware	53.5	59.4	67.1	61.3	31.2	40.7	73.5	55.1	54.2	46.0	-2%	-15%
Coin & Net Bar Demand	212.9	155.8	165.9	187.4	208.1	284.3	338.3	244.3	190.9	204.4	-22%	7%
Net Hedging Demand	12.0	1.1	7.4	0.0	0.0	3.5	17.9	11.5	4.3	0.0	-62%	na
Total Demand	993.3	972.9	1,000.8	1,006.4	929.0	1,102.4	1,284.2	1,198.5	1,164.1	1,148.3	-3%	-1%

Ember, a global energy think tank, reported that "in 2023, [new capacity installations jumped by 86% compared with 2022.](#)" And that in 2024, "[solar power surged by a record 474 TWh](#), the largest annual growth ever recorded in absolute terms, and the fastest increase in six years (+29%)."



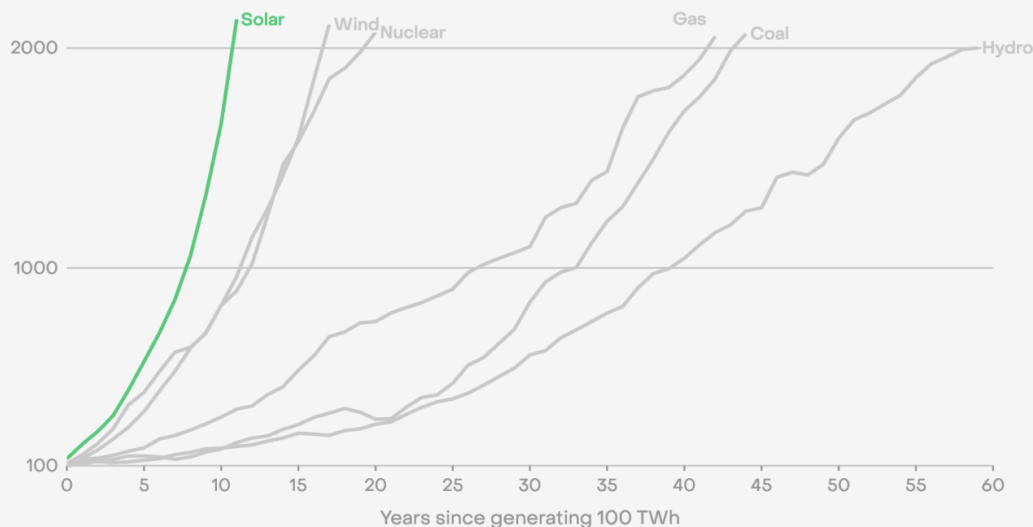
Ember also notes how global solar power is doubling every three years.



In the next chart, Ember highlights how solar has ["grown from 100 TWh to 1,000 TWh in eight years,"](#) and how it then took just three years to pass 2,000 TWh.

It took 8 years for solar to go from 100 TWh to 1,000 TWh of power – and then just 3 years to pass 2,000 TWh

Global electricity generation per source, by years since passing 100 TWh*



Source: Wind and solar generation data from Ember's yearly electricity data. Nuclear, gas, coal and hydro data from Pinto et al. (2023)
 This graphic is based on a chart by Nat Bullard <https://www.nathanielbullard.com/presentations>
 *Data only shown until the point where each source generated just over 2,000 TWh

EMBER

In 2023, the IEA reported that [420 GW of solar capacity was added](#), as new renewable power capacity installed worldwide [set "a new annual record for the 22nd consecutive year."](#) Ember reported a total of [444 GW added](#) in 2023.

According to the IEA, [550 GW were added in 2024](#), while Ember reported a total of [585 GW of new capacity installations](#) last year.

IRENA (the International Renewable Energy Agency) generally has lower figures for total solar capacity added than the IEA and Ember. Although they reported [345 GW added in 2023](#) and [452 added in 2024](#), which was still in line with the EMBER and IEA increases on a percentage basis

IRENA also noted that "China alone added 278 GW to the total expansion, followed by India at 24.5 GW added."

The [U.S. Energy Information Administration](#) noted:

We expect that U.S. renewable capacity additions—especially solar—will continue to drive the growth of U.S. power generation over the next two years.

Last year, the electric power sector added a record 37 GW of solar power capacity, almost double the 2023 solar capacity additions.

The IEA mentions that despite “the exceptional growth in PV deployment in recent years,” we will still need to continue and scale up to follow

[the Net Zero Emissions by 2050 Scenario](#),

requiring continued policy ambition.” That’s of course tied to the goals set at the UN’s COP28 climate summit in late 2023, where 118 governments pledged to triple the world’s renewable energy capacity by 2030.

BloombergNEF is forecasting that while solar growth will continue in 2025, the pace will slow, as [they project 11% growth this year](#), following the 35% growth rate they reported in 2024. Yet regardless of which set of numbers you use, the growth that’s already taken place is evident, and if the governments are going to even come close to reaching their 2030 and 2050 mandates (and it’s a fair question as to whether that’s even possible), this trend is still just getting started.

The Newer Solar Panels Require More Silver, But Thrifting Is Taking Place

Of note is that the newer solar panels being used do require more silver, although thrifting continues to take place—a trend that’s been ongoing for a few years.

Tunnel oxide passivated contact (TOPCon) technology took off in 2023, increasing silver loadings in solar panels by at least 25%. In 2024, more than 50% of solar panels are expected to be based on TOPCon.

Another development in the solar industry, heterojunction technology (HJT), is projected to require double the silver load in solar panels in 2025 and beyond. [Private Investor and Analyst Chen E Lin](#)

Here’s what the [In Gold We Trust Report](#) said in 2023:

HJT cells utilize double the amount of silver than TOPCON and almost triple the amount of silver than PERC cells, thus serving as a significant driver of long-term silver industrial demand.

Two years later, this has occurred, yet thrifting (finding ways to get more energy while using less silver) has also taken place.

Daniel Ghali of TD Securities mentions in his January 2025 report titled, “Sleepwalking Towards a Silver Squeeze”:

Significant adoption of thrifting efforts: Chinese manufacturers' compressed margins have catalyzed technological breakthroughs over the last months that have enabled manufacturers to thrift silver from next-generation solar panels.

Next-generation TOPCon technologies now require less silver than the previously-dominant technology at the start of 2024 (PERC), eroding a significant offset to slowing capacity additions from what was otherwise expected to be a significant increase in loadings.

Overall silver loadings in silver panels have declined by an estimated 20% this year. However, given how the swift adoption of TOPCon has already benefited from these thrifting techniques, further thrifting of silver will be more limited.

While this may result in slowing growth, the set-up is far from an outright decline in demand. The debate is about the scale of deficits, but surpluses will remain out of sight over the coming years.

There are a wide range of assumptions one can come up with in regards to future solar demand, but there seems to be somewhat of a consensus at this point that the growth will continue, albeit at a slower pace. Additionally, the continued governmental green energy movement would suggest that there also remains a scenario in which we could be shocked at staggering amounts of silver getting consumed by solar if the governments really do push to meet those 2030 and 2050 targets.

Remember, the silver market is already in a deficit even with current demand structure, so should solar demand continue to increase in the years ahead, that would just further add to the existing deficit.

Samsung Unveils Solid-State Battery That Offers Dramatic Improvement, But Uses A LOT More Silver

Then of course there's the new Samsung solid-state battery that's currently being developed. At the SNE Battery Day Expo in 2024 in Seoul, South Korea, Samsung caused a stir in the battery industry when they announced that their pilot solid-state battery has successfully replaced the expensive platinum catalysts with silver, enabling hydrogen fuel cells to be produced much less expensively.

Samsung also mentioned that the production line for these new and more efficient batteries that require substantially more silver is now fully operational, and that they 'built a pilot line last year [to mass-produce all-solid-state batteries by 2027](#).'

The initial batch of batteries has already been delivered to electric vehicle (EV) manufacturers for testing, and Samsung says they are '[receiving positive feedback](#)' on the new battery that uses 1,000 grams of silver (2.2 lbs, or 32 troy ounces), as opposed to the 5 grams currently used in the conventional batteries.

EV research house Rho Motion reports that [17.1 million electric vehicles were sold in 2024](#). Which means that if even half of those vehicles were produced with the new Samsung battery it would be an increase in silver consumption from 2.7 million ounces to 271.9 million ounces.

Samsung is currently talking about these batteries being available by 2027, so it'll be more clear in a few years just how widely they end up getting adopted. Some of the analyst reports I've read mentioned that they expect that 'due to their high production costs, [these batteries' initial application will be limited to the "super premium" EV segment](#).'

That may or may not turn out to be accurate. Although even if it does, it doesn't rule out what might happen as competition develops, and the price comes down in the longer term. And while I won't attempt to forecast how many cars end up using Samsung's batteries five or ten years from now, what can be said at this point is that this battery does have the potential to be another new significant source of silver demand. Because we're not talking about something where the upper end of the range is adding 10 or 15 million ounces of demand per year.

Again, there's no guarantee that adoption goes as expected. But based on the commentary I've seen so far (Interesting Engineering's headline was '[Silver catalysts spark a revolution in affordable fuel cells](#)'), it does seem at least possible that there could be somewhat significant adoption. And if the battery does become available, and is able to do what's being advertised, will manufacturers continue to use a battery that has a 250-mile range, takes hours to charge, and lasts 8 years, or will they opt for the one that lasts for 600 miles, charges in 9 minutes, and has a 20-year lifespan?

These are the questions that we'll get the answers to in the years ahead. But if there is any degree of significant adoption and implementation, it would represent another large source of silver demand, in what could be an even larger deficit by the time we get to that point.

Silver Demand In The Decade Ahead

In November of 2023, Oxford Economics put out another study for the Silver Institute forecasting the [industrial demand for silver over the next decade](#), in which they concluded that:

Between 2023 and 2033, we forecast the global output of end users of industrial silver will increase by 46% in real terms.

This reflects predictions of particularly rapid growth in the output of the electrical and electronics applications industry, which is forecast to grow by 55% over the decade.

Now admittedly, it's hard to imagine a time in the world where there's been less certainty around what's going to happen over the next 10 years than right now. However, if those projections end up being even anywhere remotely close to what actually happens, it's going to be a problem for the silver supply and demand balance.

Some of their takeaways included:

- Industrial demand to grow 46% over the next decade
- Electrical and electronics demand is forecast to grow by 55% over the decade Jewelry demand to grow by 34%
- Silverware demand to grow by 30%
- The silver demand by industrial, jewelry, and silverware is forecast to grow by 42% over the next decade (double the growth rate of the past 10 years)

Even without any further increase, the silver market's already eating into the above-ground inventories. But if Oxford's projections end up being anywhere near accurate, that inventory depletion might not only continue, but potentially even accelerate. Additionally, given the time lag to get new projects into production (more on this in the Supply section of this report), as well as the lack of capital into the silver mining sector over the past few years, this would remain an ongoing problem without any easy resolution in the foreseeable future.

What Happens To Silver Demand If There's A Recession

In the gold and silver community, as well as in a growing portion of the wider investment world, many investors feel the economy is already in, or headed towards, a recession (particularly if measured in real terms and with a more appropriate inflation rate).

In early May of 2025, JP Morgan CEO Jamie Dimon said that at this point, a recession is the 'best-case scenario.' And that was even before he gave his speech in early June, where he said rather emphatically, **"You are going to see a crack in the bond market. OK? It is going to happen."**

Add in that Goldman Sachs was concerned enough by what they saw over the past few months that they even put out a research report talking about how gold could go as high as \$4,500 in 'an extreme tail scenario.'


Of course, even hearing Goldman Sachs talk about the possibility of \$4,500 gold is significant in and of itself. Although based on how the tariff situation has played out so far, along with growing indications of new supply chain and inflationary pressures on the way, and the escalation of multiple geopolitical conflicts, I often wonder if we might not already be in the midst of the type of tail-risk scenario that Goldman was talking about.

Obviously how these situations get resolved will have a lot to do with how the macroeconomics play out. However, while it's outside the scope of this paper to thoroughly examine whether we are currently in, or will have a real (or nominal recession), it is still worth considering what impact a recession would have on the silver market if one does occur (and for what it's worth, when you factor in the ever-compounding debt spiral the Treasury market is facing, that has Dimon so concerned about the bond market cracking, I do personally think a 2008-like event has now become just a matter of time on a long enough timescale).

So in the case that we do have an **overtly** recognized recession, one of the first things to consider is how the governments and central banks would respond. To note, the reason I emphasized the term 'overtly,' is to distinguish between conditions that could justifiably be cited as recessionary—but where the Fed comes out and says everything's fine—and a situation where even the governments and central banks are talking about how we've entered a recession and they feel a need to take fiscal and monetary action in response (like during COVID).

When this happens, will Western governments sit by and watch the markets deflate, or will they respond with fiscal stimulus? And if it's the latter, how likely is it that green energy subsidies will be part of that stimulus? Given past history, as well as the current financial environment, it seems difficult to imagine Western fiscal or monetary policy makers just standing aside with their hands in their pockets.

Even without a recession, the governments were going to have a hard time finding enough silver to facilitate their global green agenda. But if we do have a recession, and at least if the Inflation Reduction Act stands as any sort of template, it might be wise to at least price in some non-zero probability of future stimulus packages including more silver-consuming green subsidies.



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The Inflation Reduction Act modifies and extends the clean energy Investment Tax Credit to provide up to a 30% credit for qualifying investments in wind, solar, energy storage, and other renewable energy projects that meet prevailing wage standards and employ a sufficient proportion of qualified apprentices from registered apprenticeship programs (discussed in greater detail in the next section). In addition to

(from [home.treasury.gov](https://www.home.treasury.gov))

The election of Trump did somewhat change that equation in the U.S., as he is a noted critic of green energy, and his Big Beautiful Bill called to “[roll back the 30% tax credits for residential and commercial solar installment](#)” that were introduced as part of the Biden-era Inflation Reduction Act.”

However, keep in mind that the [U.S. accounted for only 8% of the global installed solar capacity added last year](#). So even if there's a dropoff in the U.S., if the rest of the world still moves

forward with their 2030 and 2050 climate goals, there still could be more government money supporting the green energy markets.

Steve Schoffstall of Sprott writes that, [“by 2050, it’s projected that the global electric grid will need to double in capacity to meet the 86% increase in electricity demand,”](#) and I would suggest that his comment is well within the consensus range of many of the current projections being published.

Additionally, while a recession would impact industrial demand, remember that approximately 72% of silver is mined as a by-product of other metals like copper, zinc, lead, and gold. So if a recession leads to lower demand for those metals, and copper, lead, and zinc miners produce less ore because of that lower demand, the silver supply would also decrease.

So ultimately, while I would expect the silver price to decline (at least initially, similar to what took place in 2008 and 2020) if there was a COVID-like shock, there are these factors built into the silver supply and demand structure that would still at least partially offset a drop in demand.

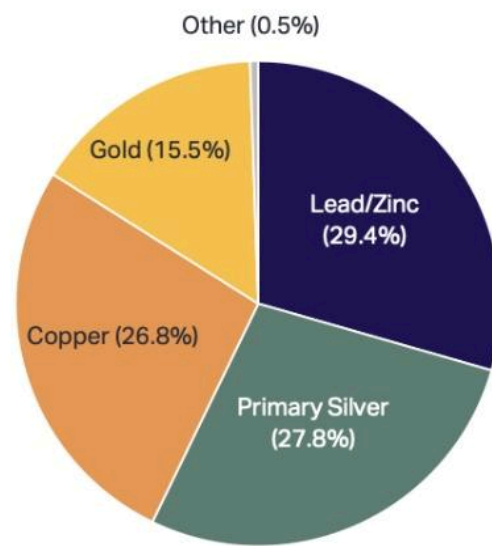
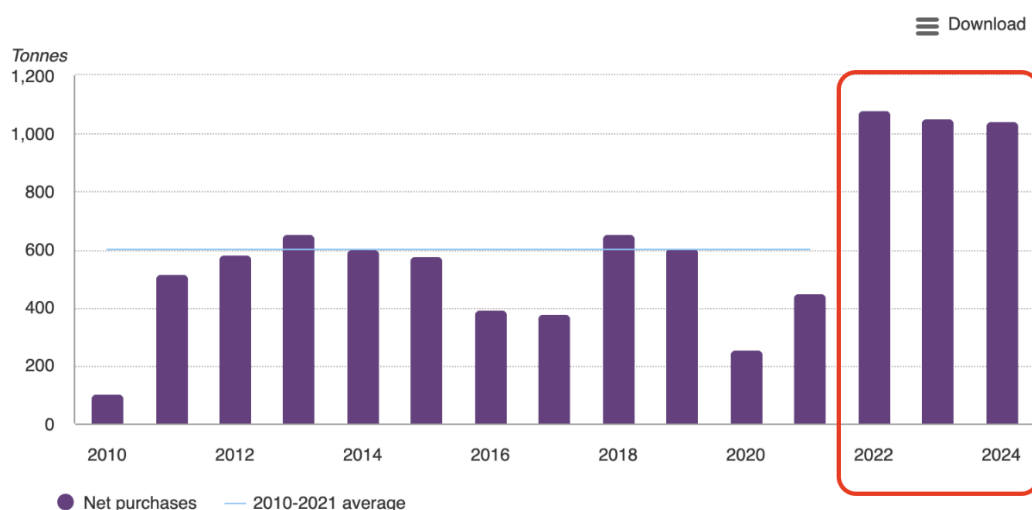


Chart Courtesy Of The World Silver Survey

Will Central Banks and Governments Buy Silver

One of the biggest stories of the past three years in the precious metals world has been the large accumulation of gold by central banks. This began shortly after sanctions were placed on Russia following their entry into Ukraine in 2022, and the central banks then set a record for the most gold purchased that year at 1,080 tonnes. They then followed that up with another 1,050 tonnes in 2023, and then a third consecutive 1,000 plus tonne year with 1,089 tonnes in 2024.

Annual central bank net purchases, tonnes*



Sources: Metals Focus, Refinitiv GFMS, World Gold Council; [Disclaimer](#)

However, for the most part, even given the events of the past few years, there has still been scant evidence of accumulation, or even discussion of accumulation, of silver by central banks.

Obviously silver shares a lot of similarities with gold. But there are also differences, especially in how most of the silver that's produced gets consumed industrially. Yet given how silver does have its extensive history as money, particularly in the U.S. and China (although they're hardly alone), I have wondered if there could come a point where a government or central bank starts to look at silver.

Then last fall, there was evidence of the first government or central bank in recent times to announce they were buying silver when Russia declared in [their draft federal budget for 2025-2027](#) that silver was one of the items it planned to add to its state reserves. Russia didn't provide an amount in that press release, although Gainesville Coins is reporting that 'Russia allocated 51.5 billion rubles (\$535-538 million) for precious metals purchases, explicitly [including silver for the first time](#) alongside gold, platinum, and palladium.'

Additionally, right as this report was about to be published, the Saudi Arabian Monetary Authority showed up on the SLV investor list.

Whether more activity like that occurs remains to be seen. Although the Hindustan Times published an article in April of 2025 that asserted that part of the discussions between the U.S. and India on a trade deal included the possibility of the U.S. settling its trade imbalance by sending "[gold, silver, platinum and precious stones](#)" back to India. To be clear, I have yet to see any secondary confirmation of that report, or any follow-up, so I can't say for sure whether that

report is actually accurate. Although in the case that it is, and that proposed arrangement did become reality, that would certainly be a significant development.

Also worth considering, is that if we do end up with a \$5,000 or higher gold price in the next few years, is there some point at which, regardless of whether governments or central banks consider silver as money, an investment, or a strategic resource, that some just think that it's a good asset to own?

Obviously it's an important metal, both strategically and militarily. And with the current power demands, military escalations, and also the global governmental desire to go green, could a foreign adversary look at the supply and demand profile and see a point of vulnerability?

When I first started this section of the report, I had written that currently this was still just speculative. Although shortly before the report was published, the U.S. Department of the Interior announced that [silver was one of the metals that was added to its draft list for inclusion as a strategic metal](#).

As of the time of publication, that proposal has not yet been ratified. Although in terms of pricing in "Black Swan" or "tail-risk scenarios," I would offer that these are at least some possibilities to consider weighting with a non-zero probability.

Now Even The States In The U.S. Are Turning Back To Gold And Silver

While there's been a fair amount of attention on the growing list of countries that are actively reducing their dependence on the U.S. dollar, there's actually an even more shocking segment of the market that's concerned about the dollar and turning back to gold and silver.

Perhaps it was inevitable that foreign nations would eventually grow tired of U.S. borrowing and printing. But now a growing number of the states are even passing legislation that favors gold and silver ownership, while regularly citing many of the same underlying concerns that our foreign creditors and trading partners have expressed—they're concerned about the debt and the debasement of the dollar.

Consider what Nebraska Senator Ben Hansen said upon the news of his state becoming the 12th to end capital gains taxes on sales of gold and silver:

Gold and silver are the only forms of currency mentioned in our Constitution, and with that comes the people's ability to use it as such without penalty from the government.

Saving, and using, gold and silver is our right and one of the only checks and balances to our **federal government's unending devaluation of our paper currency.**

44 states have already exempted gold and silver from state sales taxes, and there are now 13 states that no longer impose capital gains taxes on gold and silver.

Some states have also passed legislation to have precious metals accepted as legal tender, which means they could be used to pay for private debts, taxes, and fees levied by the state. In 2015 Texas Governor Greg Abbot signed a bill that created a state depository, and eight years later, a Texas Senate committee began considering a proposal that would give Texans the ability to purchase everyday goods with a gold-backed digital currency. The bill would actually allow state residents to create an account at the Texas Bullion Depository, which they could use to conduct transactions by debiting the appropriate amount of gold and silver.

Arizona, Florida, and Oklahoma have also been moving forward legislation that would establish a species-backed transactional currency and a state bullion depository. The proposed law in Arizona even goes as far as to state that the state treasurer “may deposit a portion of state monies in the depository in the form of bullion, ***and that bullion deposit is considered part of this state’s financial reserves.***”

Utah, Texas, and Tennessee have passed legislation to allow for state reserves to be stored in gold and silver, Wyoming passed a bill establishing a \$10 million physical gold reserve for the state, and the \$15.65 billion Ohio Police & Fire Pension Fund approved a 5% allocation to gold for diversification purposes and as an inflation hedge (if you’d like to know more about your own state’s current policies, [the Sound Money Defense League is a great resource for keeping track of the current legislation](#)).

Ultimately, if the states are now moving back towards gold and silver, at the same time the BRICS continue to de-dollarize, and central banks continue to buy gold in record amounts, it really makes you wonder how this will all look in 10 or 20 years.

Silver Supply

In 2024 the total silver supply rose by 2% to 1.015 billion ounces, driven by a recovery in mine output, which rose by 1%.

Part of the increase in the mine supply in 2024 vs. 2023 can be attributed to the 2023 total being lower than normal because of a strike that year that shut down Newmont’s large Penasquito mine for several months. Yet aside from 2023 when Newmont had the strike, and 2020 when mines were shut down due to COVID, the 2024 mine production of 819.7 million ounces was the lowest total going back to 2016 when mine production peaked at 900.1 million ounces after two decades of consistent growth.

Since that 2016 peak, even despite a significant increase in the silver price, mining output has declined due to “[reserve depletion, mine closures and decreasing ore grades.](#)”

Million ounces	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025F
Supply										
Mine Production	900.1	863.9	850.8	837.4	783.8	830.8	839.4	812.7	819.7	835.0
Recycling	156.3	160.2	162.3	163.8	180.5	190.7	193.5	183.5	193.9	193.2
Net Hedging Supply	0.0	0.0	0.0	13.9	8.5	0.0	0.0	0.0	0.0	0.9
Net Official Sector Sales	1.1	1.0	1.2	1.0	1.2	1.5	1.7	1.6	1.5	1.5
Total Supply	1,057.4	1,025.1	1,014.3	1,016.2	974.0	1,023.1	1,034.6	997.8	1,015.1	1,030.6

The Metals Focus report in the link above also mentioned the following in regards to the silver supply in mid-2024:

Global silver mine production [rose] to a peak of 900 million ounces in 2016. The industry then endured a prolonged decline, falling at an average of 1.4% a year to 814 million ounces in 2023, a decrease of 86 million ounces. This was driven by reserve depletion, mine closures and an overall drop in head grades, which fell from 170 grams per tonne in 2013 to 136 g/t in 2023.

We expect silver output to rise by 2% y/y to 826 million ounces in 2024, driven by planned expansions at existing operations. Beyond this, supply will experience staggered growth, rising to a peak of 856 million ounces in 2027 and plateau thereafter.

In contrast, production from currently operating mines is expected to fall by 2029, and output will become increasingly reliant on the successful commissioning of developing projects. Given the challenges associated with advancing projects through to production, the outlook for silver mine supply is therefore uncertain.

Looking beyond 2025, there are several primary silver projects in the pipeline, but all require further de-risking in order to advance to a final positive investment decision.

Taking into account construction timelines and possible delays, it is unlikely many of these projects will reach production before the end of the decade.

Therefore, future supply will remain reliant on expansions at existing operations and byproduct production at gold and base metal mines. Mine supply growth is likely to remain modest, with only minimal increases globally. Metals Focus also pointed out the issues in counting on substantial new sources of silver production from the byproduct miners.

The copper mining industry is both large and mature, having begun thousands of years ago. However, high-quality copper projects are increasingly rare, and major new discoveries are dwindling. The process from discovery to production is lengthy, averaging 16.5 years.

With 72.2% of the silver mine supply coming from byproduct miners, an increase in the silver price would have a limited impact on additional production. Which means that even if the silver price goes above \$50, that's not going to impact the decision-making of the copper, lead, and zinc mining executives. That's just not how their business model works.

There's also the timing issue that Metals Focus touched on, as new projects that need to be permitted can take anywhere from 5-20 years to come online. So outside of an unexpected drop in demand, the deficits are on track to continue eating into the above-ground inventories for the foreseeable future.

Mining Costs Rise

While the higher silver price has certainly helped the primary silver producers, those producers have also faced considerable cost inflation in the past few years just like every other industry, and perhaps even more so given how capital intensive the mining industry is.

This inflation has led to muted improvement in the operating cash flow for the miners, and at a time when the market could ideally use all hands on deck, the conditions over the past few years have basically been the exact opposite of what could actually facilitate an increase in production.

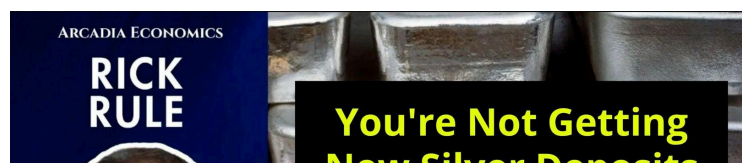
To put that in perspective, consider that in November of 2024, SilverCrest Metals reported an all-in sustaining cost of \$14.50 per silver equivalent ounce in their 3rd quarter earnings release. Yet their CEO Chris Ritchie stated in an interview that when they accounted for all of the true costs, including those not accounted for by the all-in sustaining cost (AISC), [their "true pre-tax cost" was already over \\$25 per ounce](#), more than \$10 higher than their AISC. And keep in mind that SilverCrest's Las Chispas project was known as one of the lower cost projects out there.

The 2025 Silver Survey reported the average AISC for the North American silver producers in 2024 at \$14.67.

Primary Silver Production Costs

US\$/oz (by-product*)	2023	2024	Y/Y
North America			
Total Cash	9.47	7.51	-21%
All-In Sustaining	18.17	14.67	-19%
Central & South America			
Total Cash	9.27	8.84	-5%
All-In Sustaining	16.15	16.14	-0.1%

So if SilverCrest's true all-in cost is anywhere near representative of the industry (and again they were known as one of the lower-cost producers before they were purchased by Coeur Mining), it means that if a group with capital wants to go launch a new silver project, it's probably not happening at a [true all-in cost below \\$25](#).



Just like in almost every other industry, mining costs rose significantly in the years after COVID, which means the floor under the silver price has been rising as well. And while there have indeed been times when the price has dipped below the cost of production, if that were to happen for an extended period of time, additional supply gets knocked offline.

Also be aware that of the top 20 silver producing companies, the companies at the bottom of the list are producing less than 10 million ounces per year.

We've already discussed how copper, lead, and zinc miners aren't going to increase production just because the silver price goes up, which means we're counting on the primary miners to fill in the gap. But primary mine production has already been decreasing over the past decade.

Also, if the market is running 150-200 million ounce deficits per year, and outside of the top 20 producers we're looking at companies that are mining less than 10 million ounces of silver per year, how many new companies are going to be required to bring new projects online to meet that gap

Top 20 Silver Mining Companies

Million ounces	2023	2024	Y/Y
Fresnillo ¹	53.5	54.3	2%
KGHM Polska Miedz ²	45.9	43.1	-6%
Newmont	18.0	33.0	83%
Hindustan Zinc ^{3,4,5}	23.8	22.5	-5%
Pan American Silver	20.4	21.1	3%
Southern Copper	18.4	21.0	14%
CODELCO ⁵	19.2	19.9	4%
Polymetal JSC ^{5,6}	17.7	19.4	9%
Glencore	20.0	19.3	-4%
San Cristobal Mining	12.6	16.8	33%
Industrias Peñoles ⁷	18.9	16.3	-14%
Hecla Mining	14.3	16.2	13%
Buenaventura	8.0	14.7	83%
Volcan Cia Minera	15.2	13.9	-9%
BHP ⁸	11.8	13.2	12%
South32 ⁸	13.0	12.2	-6%
Nexa Resources	10.3	11.7	14%
Coeur Mining	10.3	11.4	11%
Boliden	10.4	11.2	8%
SSR Mining	9.7	10.5	8%

This isn't a situation where 3 or 4 of the senior producers can just invest some capital and boost production by 40-50 million ounces per year each. So if the silver market is counting on 20-30 new projects to come online that are going to start producing 5-10 million ounces each on an annual basis, there might actually be a better chance of the U.S. repaying its \$37 trillion of debt before seeing that happen. Especially when the junior segment of the market that would be critical to facilitating that type of expansion is just now finally coming out of one of the more severe mining bear markets in recent history.

Chinese Smelters Cut Deals With South & Latin American Silver Producers To Arbitrage Elevated Shanghai Premiums

One of our more intriguing conversations in 2024 was with an executive for a large North American silver producer that's focused in Mexico.

This conversation took place back when the Shanghai silver premiums had risen to more than \$3 over the COMEX, and when I asked this executive if he thought someone would start to arb that spread, he told me that Chinese smelters were already doing deals directly with the South and Latin American concentrate off-takers and taking the concentrate back to ports in China.

Even more intriguing was the way he described the aggressiveness of the Chinese smelters. He explained that normally the treatment charge for concentrate is around \$200 per tonne (the miner pays that amount to the smelter). But because the smelters were able to refine and sell the silver at such a high premium in China, they started reducing the treatment charges, until at one point they were even offering a credit (paying the off-taker to do the treatment), just so they could keep getting the metal and selling it in China.

This executive also expressed that the regulators don't want the North American-headquartered mining producers selling directly to China, and based on the current political climate, there's a good chance we will see more policy in that direction in the years ahead. [China has already been buying mines around the world](#) over the past two decades, and their actions going forward, as well as their success or failure in dealing with their own economic slowdown and the impact of the tariffs, will continue to play a large role in the metals pricing, and also the mining sector in the years ahead.

Silver Inventories Are Being Used To Fund The Deficits

When calculating data for commodities like silver, it's admittedly part science and part art. Because while there is some data that is concrete like the COMEX or LBMA inventories, we don't know exactly how many ounces every single artisanal miner in the world pulled out of the ground and where it went.

With that said, in looking for confirming signs to suggest that the continued reported deficits displayed in the World Silver Survey are at least representative of what's actually taking place, one of the primary data points is what's happened to the known inventory stockpiles in recent years.

Following the January 6th event at the Capitol building in 2021, and then Joe Biden's inauguration a few weeks later, there occurred what came to be known as the 'Silver Squeeze' in late January of 2021. This came right after the GameStop saga, as that sparked additional interest in the large COMEX silver short position held by the banks. Retail buyers cleared out the hedged inventory the bullion dealers were holding over the weekend, forcing most dealers to suspend sales until the futures re-opened that Sunday night, while the ETFs reported adding over 100 million ounces during a 3-day period.

Although the rally was not sustained, there was enough buying that [the LBMA would later state that:](#)

*'Given that most of this metal was allocated in London, **fears emerged as to whether there was enough silver should demand continue at this pace.***

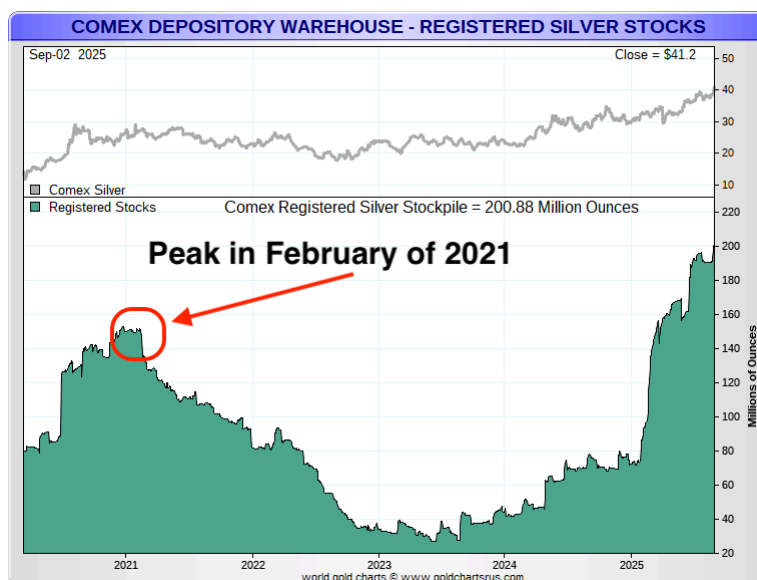
They also mentioned:

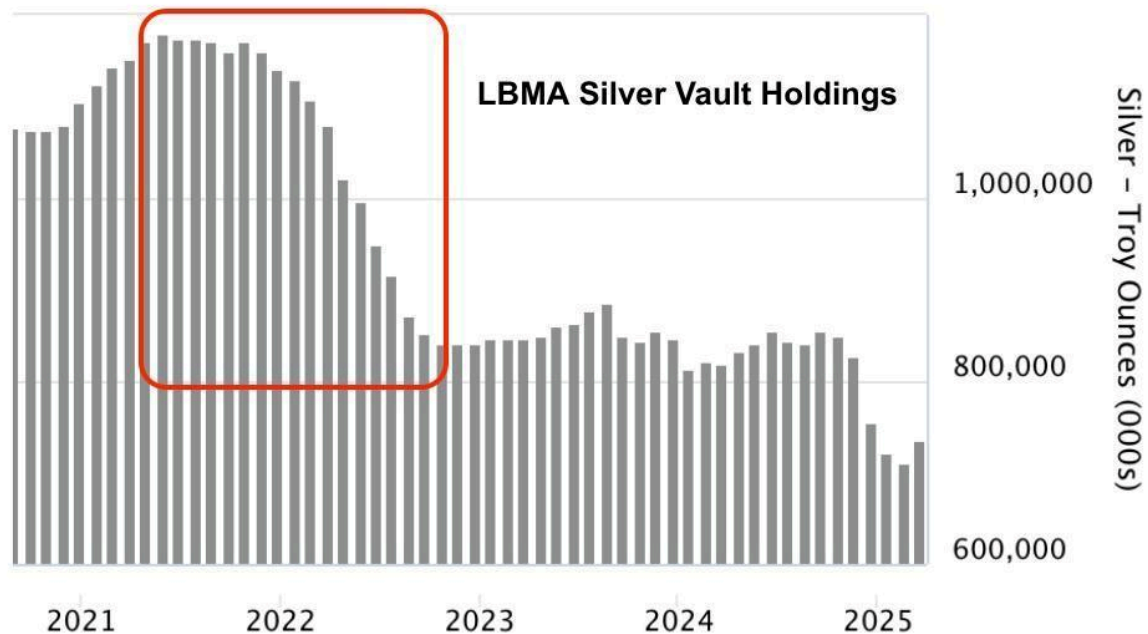
*'Had demand in iShares continued at the frenetic rate of late-January/early February **it would only have been a matter of weeks before London's existing stock was used up.***

Obviously, the existing stock has not yet been used up. But we've been running deficits ever since, and there's been a sharp drop in the total warehouse stockpiles during that same period.

Here's the COMEX "registered" inventory (the silver for which a warrant has been issued and it's available for delivery):

The amount of silver held in the registered category surged higher following the EFP crisis of 2020, until February of 2021, when it then started declining until 2023. There was a similar pattern with the LBMA silver holdings.



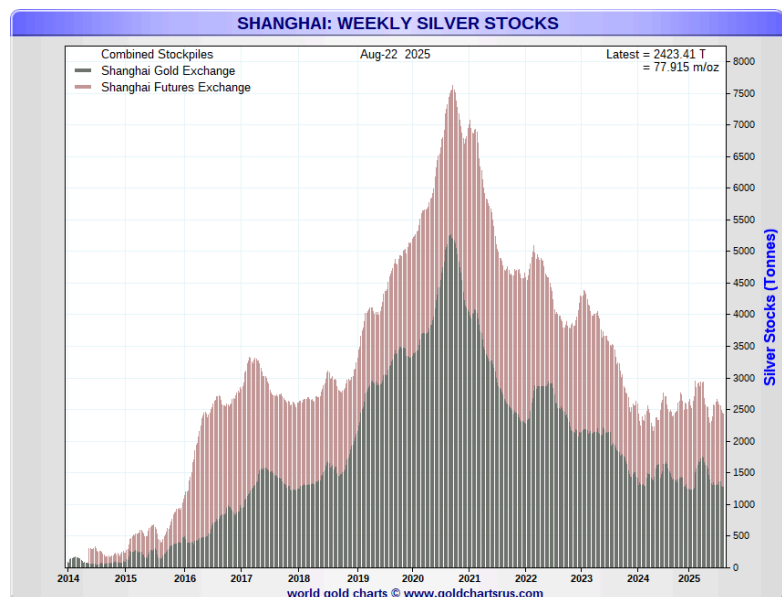


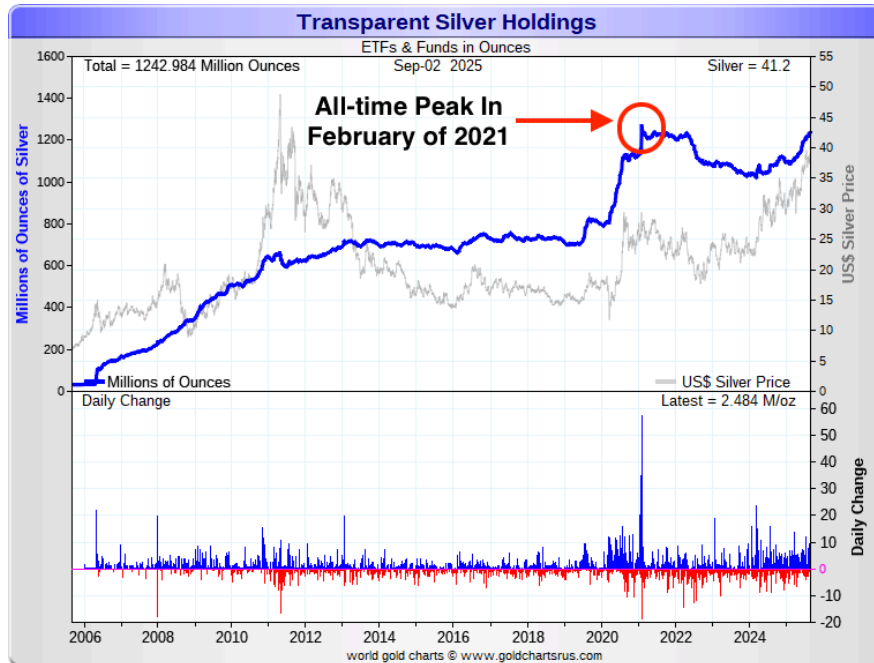
(chart courtesy of the LBMA)

You can also see a similar drawdown in the Chinese inventories, as the next chart shows how the Shanghai Gold Exchange and the Shanghai Futures Exchange inventories started declining from their peak in late 2020.

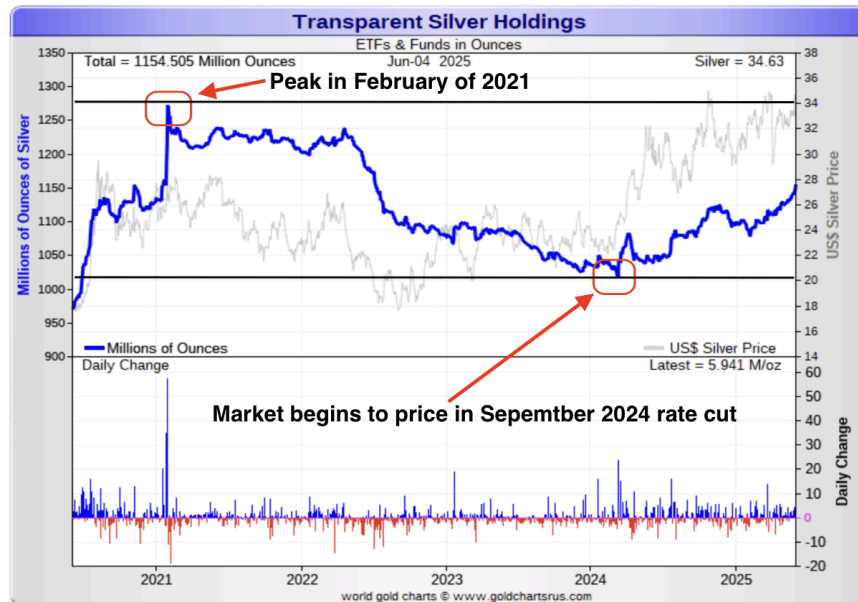
At that peak, the combined Shanghai inventories held over 245 million ounces of silver (just over 7,500 tonnes). But by late May of 2025, that total was down to 73.4 million ounces (under 2,500 tonnes).

The next chart shows how the amount of silver held in the ETFs hit an all-time high in February of 2021 during the silver squeeze, when over 100 million ounces were reported to have been added into the SLV trust alone over a 3-day period.



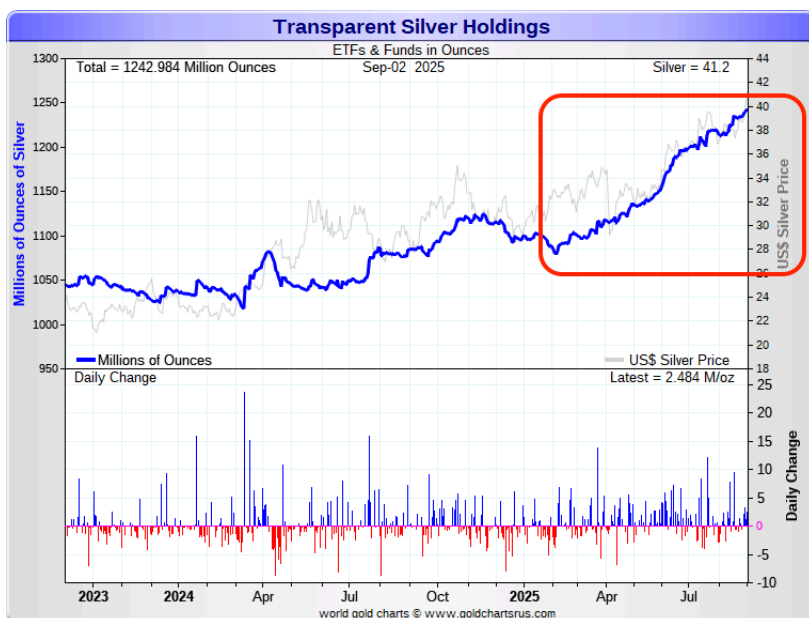


However, in the following two years, over 250 million ounces came out of the ETFs, until that trend reversed last summer as the market began anticipating rate cuts from the Fed.

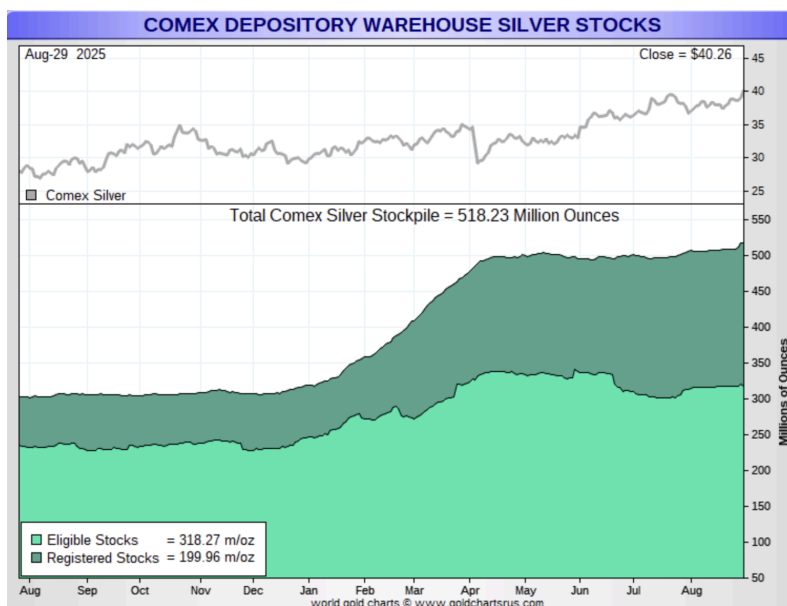


So if the LBMA was concerned enough back in 2021 that they put out a report warning that we were “weeks away” from a supply crisis, and the market has run deficits since then (which are evidenced in the inventory drawdowns), how stable could the foundation of the market actually be at this point?

Metal did start coming back into the ETFs following that drawdown, especially in 2025 in response to the tariff uncertainty (although there is an increasingly compelling argument being discussed that the inflows may not have been as much in response to the tariffs as the markets are assuming).



Then in this next chart, which was displayed earlier in this report, you can see how the total COMEX warehouse inventories (registered and eligible) went from just over 300 million ounces in January to over 500 million ounces by late August.



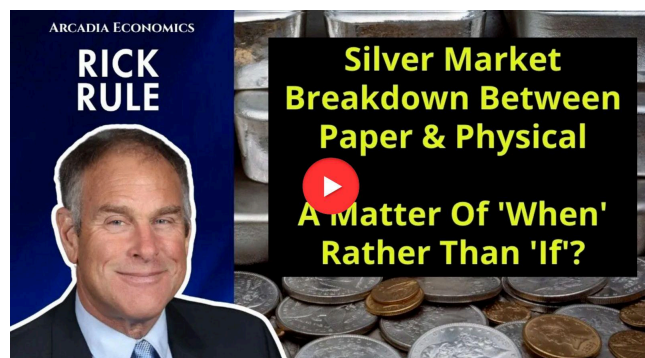
Rick Rule, who was involved with Sprott's PSLV trust during the Silver Squeeze in 2021 had a unique vantage point of the true liquidity of the silver market at that time. And he would later describe how in the process of filling the orders for the inflows the PSLV trust was receiving of up to \$50 million in a day (still a rather small sum in today's investment world), the trust cleared or [cleaned out the physical inventory](#) in Toronto, Montreal, Chicago, and New York, before

London and Zurich were ultimately able to locate the rest of the silver needed to fill PSLV's orders.

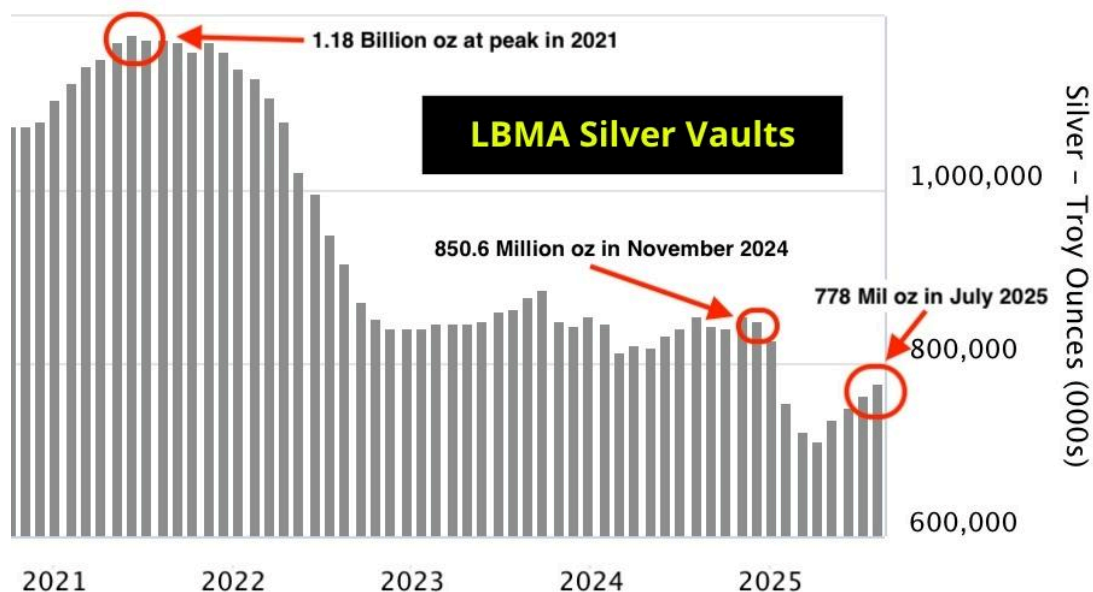
Rick also mentioned that had the retail demand for silver continued at that same pace, he felt it *would have* caused a dislocation between the paper and physical markets. And he reiterated even years later, that he continues to see this dislocation as [a matter of "when" rather than "if."](#)



He then went on to mention how at this point, even aside from whatever the retail investors ultimately do, [the market is on track for a disruption](#). So if retail does come back into the market at some point, that could even accelerate the eventuality that he suggests.



The exodus of silver out of the LBMA vaults accelerated this year after the large flows of silver from London to the COMEX. And while some of that silver did return to London in recent months, the current total of 778 million ounces is still significantly lower than the 850.6 million ounces the vaults held in November of 2024 when Trump was elected. And it's also over 400 million ounces lower than the 1.18 billion ounces that were held at the peak in 2021.



Ultimately, if the LBMA thought it was weeks away from running out of silver in 2021, and all of this has happened since then, would the London spot market still be able to fill the gap if another situation like what Rick described back then was to happen again now?

TD Securities Warns Market Is 'Sleepwalking Towards a Silver Squeeze'

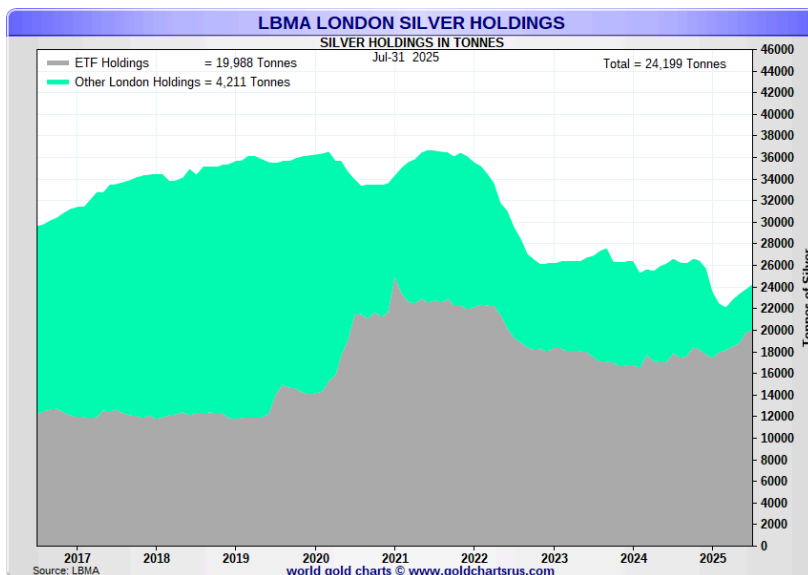
In January of 2025 when Daniel Ghali wrote his update on the declining silver inventories, he mentioned how the 'LBMA vaults could reach the critical values necessary to disrupt trading behaviors sooner than expected.'

With only 305 million ounces remaining in the LBMA's free float as of December, **the world's largest stockpile is nearing critical thresholds that could disrupt silver's market structure.**

After all, **250 million ounces of silver have been required on average for trading on any given day over the last five years, leaving a critically low buffer before everyday physical transactions are impacted.** This leaves only about 50 million ounces in the 'free float' before it winds down to levels below average daily trading volumes.

This critically low buffer could plausibly be tested by the ongoing drain. Signs of scarcity have started to emerge, with forwards continuing to tighten and lease rates spiking over the course of December. Since he wrote that, the 305 million ounces in the LBMA "free float" is now down to 148.5 million ounces (4,211 tonnes x 35,274 ounces per tonne) and was actually even lower before silver returned to the London vaults in the past few months (the green 'other London holdings' represent the "free-float").

At the time of the publication of this report, the banks' short position on the COMEX was equal to 218.9 million ounces. However, in defending against the idea that the banks have a naked short position on the COMEX, [they often say that this is the hedge for their physical holdings in London.](#) But if that's really accurate, that would mean that either the true unencumbered supply into negative territory.



This would also be the case at the same time that industrial silver demand just hit a new record, while the man who was the public representative of one of the largest buyers in the market has gone on record saying that he thinks it's simply a matter of time before there's a dislocation between the paper and physical markets.

How this ultimately plays out will be fascinating to watch in the years ahead. Yet it still doesn't strike me as the most stable long-term arrangement, and while an issue of this nature may never come to pass, it does still hold the possibility of an asymmetric outcome if it does.

Public Silver Holdings Have Also Likely Fallen

Unfortunately, there's no simple metric that provides a good estimate of how much silver has actually been sold back from retail investors. However, it's safe to say that there has been *some reduction* of the publicly held silver holdings in the past two years.

Estimates of the total amount of above-ground silver (warehouse stockpiles plus public retail holdings) generally range from about [4 billion](#) to [6 billion ounces](#), with around [2-4 billion ounces](#) believed to be held by retail investors, and approximately 1-2 billion in the registered stockpiles.

Identifiable Silver Bullion Inventories*				
Million ounces	2022	2023	2024	Y/Y
London vaults	840.9	856.2	827.5	-3%
CME	299.0	277.9	318.6	15%
SHFE	69.2	38.2	43.9	15%
SGE	69.0	46.5	40.5	-13%
Other	7.4	4.1	8.6	109%
Total	1,285.5	1,222.9	1,239.2	1%
*Year-end; Source: Metals Focus, LBMA, CME, SGE, SHFE, MCX & OSE.				

So while the deficit has been drawing down the silver inventories, and is on track to continue doing so, there is still a significant amount of silver out there. In other words, we're not yet at the point where we're running a deficit, and there's only 10 ounces left in the bank. There are still about 4-6 billion ounces out there, while the deficits have been running around 100–200 million ounces per year. And at a higher silver price, more silver will come back into the market.

Although in terms of what's freely available for the daily trading needs, as Daniel Ghali pointed out, the free float is getting stunningly low (and gets even lower if some of the silver in the free float is actually offset by the banks' COMEX short position). So while it remains difficult to gauge

a breakpoint regarding how much metal becomes available at any given price, if the retail selling does continue, ultimately that means there's less metal that's available to the market in the future.

What Happens If The Silver Price Drops

Like with any other commodity, all else being equal, when the price drops, you would expect a lower amount of production. And in the context of the current conditions, that creates an intriguing set of dynamics for the silver market. Because if the price was to fall back into the low \$20 range, it's staggering to imagine the impact that would have on the mining sector, and in particular, the junior segment of the market. So if there is a large drop in the silver price, especially if it is not accompanied by a correspondingly significant decline in demand, the deficits will be driven higher.

Additionally, a large price decline could conceivably reawaken the retail buyers. And while it would be interesting to see how the retail market would actually react in that scenario, based on personal experience, as well as conversations with hundreds of silver investors, I do think there would be a new segment of buyers coming into the market at a \$20-\$25 price point.

Can A Rising Silver Price Avert A Shortage?

Well...yes and no.

First, it's important to understand that while the conditions that would be required for a shortage to eventually occur are largely in place, there is still time on the clock.

However, things can change, and while it may not currently be all that easy to see what could occur that would resolve the imbalance (especially if the industrial demand continue to grow), there's a difference between saying "we're currently on track," versus "we're at that point and it's happening now."

For context, in 1990, there were over 2 billion ounces of silver in the warehouse stockpiles, which then declined to about 500 million ounces by 2005. And I would imagine that those who were following the silver market back then might have thought we were getting close to a breakpoint. But that trend then reversed over the next 15 years, largely due to advancements in mining technology that increased production, and the inventories went back up to about 2 billion ounces by 2020.

Now with that said, if forced to make an even money bet right now, it's a lot easier to see the current imbalance getting exacerbated before it gets resolved. However, what I think remains more likely than reaching an overt shortage (at least in the short-to-medium term), is that the price rises and draws more silver out from private investors, and there's an increase in recycling.

Although if something doesn't change about the current demand growth and production levels, it's also not entirely impossible that eventually the silver that would come back online, even at a \$50 plus silver price, could be consumed as well. And if that were to occur, it would be truly fascinating to observe.

That potential situation is likely still a ways off, but it is a valid longer-term question. Therefore, in weighting your risk probabilities, I do think the situation merits having a non-zero tail-risk priced in for longer-term investors.

Why Silver's Been Lagging Gold During The Current Rally

As gold has been regularly setting new all-time record highs over the past year and a half, silver has remained well below its \$49-50 highs from 1980 and 2011.

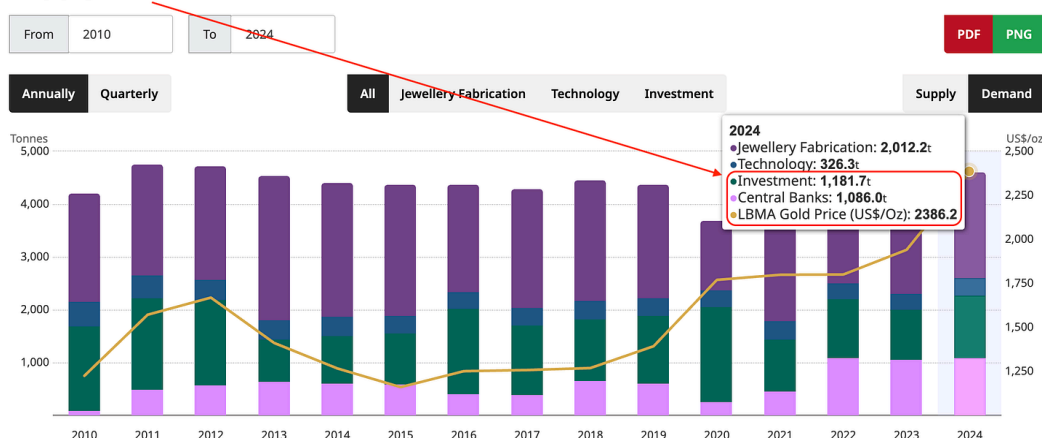
So what is it that's driving gold, but has not yet pushed silver up as forcefully? Why is the gold to silver ratio currently at 87 to 1?

The primary answer, as is often the case, can be found by looking at the money flows.

We've already discussed how central banks have been setting records for the amount of gold purchased over the past 3 years. But aside from Russia and Saudi Arabia, and the possibility that [India may start receiving gold and silver from the U.S.](#) to settle the trade deficit, there haven't been large sovereign purchases of silver like we've seen with gold. Which means that the investment flows between gold and silver are quite different, and in looking at the numbers, that difference becomes clear.

The chart below shows the 2024 investment demand numbers from the [World Gold Council](#). Combining what the World Gold Council labels investment along with the Central Bank purchases amounts to a total of 2,267.7 tonnes. That's 79.97 million ounces, and when multiplied by 2024's average gold price of \$2,386, that's a total investment of \$190.8 billion.

Supply and demand statistics



Applying the same exercise to silver, where last year's investment total was 190.1 million ounces, multiplying that amount by an average silver price of \$28.27 results in a total of \$5.397 billion.

Million ounces	2016	2017	2018	2019	2020	2021	2022	2023	2024
Supply									
Mine Production	900.1	863.9	850.8	837.4	783.8	830.8	839.4	812.7	819.7
Recycling	156.3	160.2	162.3	163.8	180.5	190.7	193.5	183.5	193.9
Net Hedging Supply	0.0	0.0	0.0	13.9	8.5	0.0	0.0	0.0	0.0
Net Official Sector Sales	1.1	1.0	1.2	1.0	1.2	1.5	1.7	1.6	1.5
Total Supply	1,057.4	1,025.1	1,014.3	1,016.2	974.0	1,023.1	1,034.6	997.8	1,015.1
Demand									
Industrial (total)	491.0	528.0	525.8	525.4	511.9	564.1	592.3	657.1	680.5
Electrical & Electronics	309.0	339.1	330.4	326.6	321.4	350.7	370.7	444.4	460.5
...of which photovoltaics	81.6	99.3	87.0	74.9	82.8	88.9	118.1	192.7	197.6
Brazing Alloys & Solders	49.1	50.9	52.0	52.4	47.5	50.5	49.2	50.2	51.6
Other Industrial	132.9	138.0	143.5	146.4	142.9	162.9	172.4	162.6	168.4
Photography	34.7	32.4	31.4	30.7	26.9	27.7	27.7	27.3	25.5
Jewelry	189.1	196.2	203.2	201.6	150.9	182.0	234.5	203.1	208.7
Silverware	53.5	59.4	67.1	61.3	31.2	40.7	73.5	55.1	54.2
Coin & Net Bar Demand	212.9	155.8	165.9	187.4	208.1	284.3	338.3	244.3	190.9
Net Hedging Demand	12.0	1.1	7.4	0.0	0.0	3.5	17.9	11.5	4.3
Total Demand	993.3	972.9	1,000.8	1,006.4	929.0	1,102.4	1,284.2	1,198.5	1,164.1
Market Balance	64.1	52.2	13.5	9.8	45.1	-79.3	-249.6	-200.6	-148.9
Net Investment in ETPs	53.9	7.2	-21.4	83.3	331.1	64.9	-117.4	-37.6	61.6
Market Balance less ETPs	10.2	45.1	34.9	-73.5	-286.1	-144.3	-132.2	-163.0	-210.5
Silver Price (US\$/oz, London price)	17.14	17.05	15.71	16.21	20.55	25.14	21.73	23.35	28.27

This means that the total amount of money that went into the gold market was 35.3 times the investment total that was allocated to silver. Also, keep in mind that the central bank purchases only represent about 20% of total demand (with other 'investment' representing about another 20% of the total, and jewelry and technology usage comprising the majority of the balance).

Looking at this another way, \$190.8 billion went into gold, and if even 10% of that money had been allocated into silver, it would have increased net silver investment by more than 3.5x to 671 million ounces, driving the deficit another 481 million ounces higher. Of course this is hypothetical, and the current available evidence does not suggest that we are necessarily near that type of shift. However it is still worth keeping in mind.

It's also worth noting that the 35.3 to 1 gold to silver investment ratio is a lot lower than the current 87 to 1 gold to silver ratio, while the data from these same reports shows a mining ratio of 6.32 to 1 (819.7 million ounces of silver mined in 2024 vs 129.5 million ounces of gold). Yet at least as of now more money is going into the gold market versus silver, which is ultimately the primary reason the gold price has been moving faster than silver.

Market participants are simply buying a lot more of it on a net dollar investment or percentage basis.

The U.S. Still Dominates The Investment Silver Market

Something else that rarely gets mentioned in the silver community is that the idea of investing in silver is largely an American practice.

It was fascinating to be in Argentina earlier this year, where they've experienced hyperinflation several times in the past few decades, yet the people there don't buy gold and silver like they do in the U.S. And while that's just one anecdotal example, the numbers also bear this out.

In 2023 the U.S. represented about one half of global investment demand. Then in 2024, thanks in large part to the wave of retail selling in the U.S., U.S. investment dropped to about a third of the market total.

Physical Investment*

Million ounces	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Y/Y
United States	124.8	101.1	55.7	47.4	48.2	94.3	138.2	135.6	120.8	64.9	-46%
India	110.4	36.5	40.5	54.0	56.5	8.7	27.6	79.4	49.3	59.8	21%
Germany	23.6	26.1	24.4	27.6	37.8	46.5	50.3	48.9	13.3	9.9	-25%
Australia	4.3	5.1	3.3	3.6	3.5	11.4	16.0	20.7	12.4	9.3	-25%
Canada	7.6	7.2	4.7	4.6	5.0	7.5	10.6	12.0	7.9	6.4	-18%
China	13.9	13.8	9.4	9.0	7.9	8.7	7.8	7.4	6.2	5.5	-10%
Other Europe	7.8	12.8	10.6	12.9	13.4	12.5	15.1	16.4	13.5	11.6	-14%
Other East Asia	8.3	8.7	6.9	7.3	13.6	13.4	12.8	12.0	9.9	10.8	9%
Others	1.8	1.9	1.7	1.6	1.2	3.3	3.5	5.2	5.0	5.0	0%
Global Total	302.6	213.1	157.2	167.9	187.2	206.1	281.8	337.6	238.2	183.3	-23%

Source: Metals Focus. *These figures differ to coin + net bar demand as they exclude commemorative coins and take into account swings in dealer stocks.

This means that the largest market participant in the silver market was selling more than normal, whereas there were large new buyers in the gold market.

Although fear not silver investors, because all is not lost. In fact, one of the things that's so attractive about the silver investment profile is that last year 67% of the supply was consumed industrially (680 million ounces of industrial demand out of a total supply of 1.015 billion ounces).

Million ounces	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025F
Supply										
Mine Production	900.1	863.9	850.8	837.4	783.8	830.8	839.4	812.7	819.7	835.0
Recycling	156.3	160.2	162.3	163.8	180.5	190.7	193.5	183.5	193.9	193.2
Net Hedging Supply	0.0	0.0	0.0	13.9	8.5	0.0	0.0	0.0	0.0	0.9
Net Official Sector Sales	1.1	1.0	1.2	1.0	1.2	1.5	1.7	1.6	1.5	1.5
Total Supply	1,057.4	1,025.1	1,014.3	1,016.2	974.0	1,023.1	1,034.6	997.8	1,015.1	1,030.6
Demand										
Industrial (total)	491.0	528.0	525.8	525.4	511.9	564.1	592.3	657.1	680.5	677.4

We've already discussed why there's a good chance that industrial demand will grow even beyond last year's record, and how if there's not an increase in supply, the percentage of the production that gets consumed by industry would continue to grow as well.

That industrial consumption of silver, and the possibility of a supply gap remain a valid concern in the silver market, whereas that's not the case for gold since it's not used as extensively in industry.

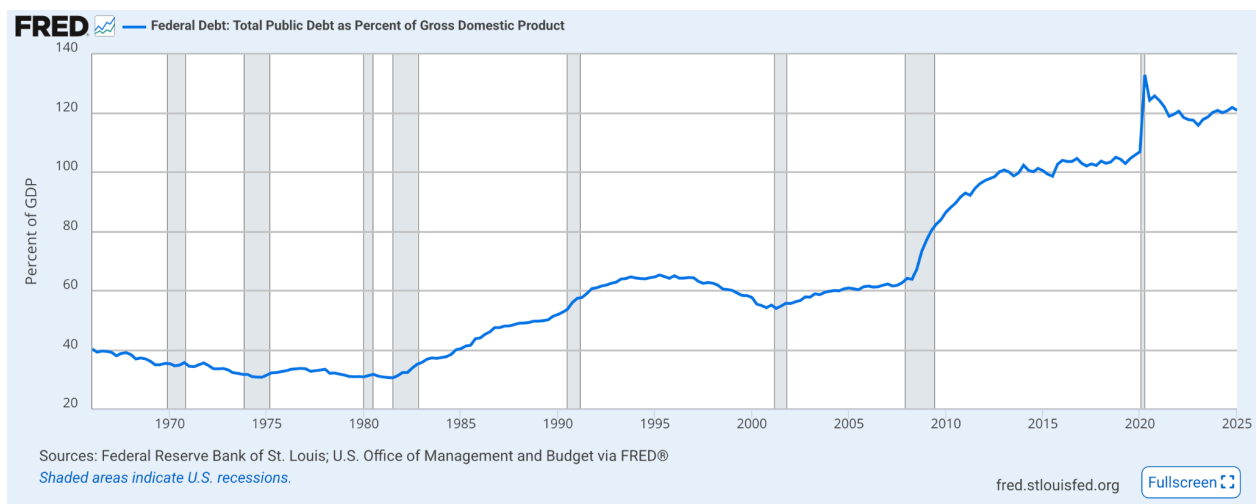
So far it doesn't seem like the silver market is particularly concerned about the possibility of a shortage, or something similar to what happened in the cocoa market. But that doesn't necessarily mean that silver is currently being priced correctly. And for evidence that such a thing could actually be happening, I point back to the pricing in the housing market in 2006 as a prime example of how markets often do not properly price in the bigger dislocations that loom on the horizon.

It's possible that a repricing in silver could well require the deficits eating enough of the inventory stockpiles until there is more overt concern about a shortfall. Although my suspicion remains that we will see a significant move in the silver price before we reach a shortage.

Macro Forecast Call For More Fed Easing In The Years Ahead

In June of 2024, former Treasury Secretary and Federal Reserve Chairwoman Janet Yellen said, “I think if the debt is stabilized relative to the size of the economy, [that we're in a reasonable place](#).”

The only problem with that idea is that the debt hasn't been stabilized relative to the size of the economy for decades. Additionally, based on the current market dynamics, there may actually be a better chance of the silver supply gap being filled than the debt levels being stabilized anytime in our near future.



In the interview where Yellen made that comment she tried to sell the interview host on how the debt as a percentage of GDP is lower than it was when COVID hit. Although that assertion seems a bit of an obfuscation of the greater and more relevant bigger picture, and when the host asked Yellen if there was any plan to actually bring the total debt down, she didn't seem to have any interest in touching that one.

Instead, she started talking about how difficult it really is to make any meaningful spending cuts, a lesson that was reinforced earlier this year when after all of the fanfare around Elon Musk and the DOGE team, Musk walked out a few months later while saying that the Big Beautiful Bill essentially ignored every recommendation the DOGE team had made.

As Yellen was on her way out as Treasury Secretary, just 6 months after making the statement referenced above, she said:

[‘I am sorry that we haven't made more progress](#) (on the debt). I believe that the deficit needs to be brought down, especially now that we're in an environment of higher interest rates.’

It's nice that she's sorry about it after she failed to address it while she had the ability to do something about it. But perhaps that's why so many precious metals investors believe that when push comes to shove, any funding issues will ultimately be addressed with more Federal Reserve monetization. And it remains an excellent probability that that's exactly what ends up happening.

It's also worth pointing out that several Trump administration cabinet members have talked repeatedly about how they feel the dollar is overvalued. Even Trump himself has said that he liked a strong dollar, but "[you make a hell of a lot more money](#)" with a weaker one. And we've heard repeated comments from other cabinet officials making similar statements.

In November of 2024, Stephen Miran even wrote a paper titled '[A User's Guide to Restructuring the Global Trading System](#),' where he talked repeatedly about how the dollar is overvalued, and at one point even said 'the root of the economic imbalances lies in persistent dollar overvaluation that prevents the balancing of international trade.' Then one month later, in December, Trump nominated him for the position of Chairman of the Council of Economic Advisors.

Now 8 months later, the dollar index is down over 12% since January, while there's growing evidence that the Trump administration has been '[influencing it lower](#)' (and if there's one single video interview that I think people would be well served to watch, it would be this one that I just linked). Additionally, if the Trump administration wants to succeed with its on-shoring agenda, it's hard to see a way that can happen without a substantially lower dollar valuation (even from the current level), which would be another big boost for investment silver demand.

Also be aware that in a [Jerome Powell speech in May](#) he noted that the Fed has already been discussing allowing their 'alleged' 2% inflation mandate to run hotter than 2% after periods where the world has experienced what he incredibly referred to as inflation 'shortfalls.'

Reflecting these concerns, we adopted a policy to make up for **persistent shortfalls** from the inflation target, an approach that was common in the extensive literature on the risks associated with the lower bound. Given the downside risks to employment and inflation from proximity to the lower bound and the need to anchor longer-term inflation expectations at 2 percent, we said that **following periods in which inflation has been running persistently below 2 percent, we would likely aim to achieve inflation moderately above 2 percent for some time.**

In our discussions so far, participants have indicated that they thought it would be appropriate to reconsider the language around shortfalls. And at our meeting last week, we had a similar [take on average inflation targeting](#).



Translated from Fed-speak into English, he's basically saying that if inflation goes below 2%, they're already discussing just moving the 2% target higher in response.

However, despite four years of inflation being well above 2%, notably absent from that speech was what the Fed plans to do to address the not so “transitory” inflation surplus of the past 4 years that Americans and citizens around the globe are still paying for.

Also, the reason I referred to the 2% mandate as ‘alleged,’ is that its official origins are a lot less official than most are likely aware, as this was [not actually made official policy until 2012 by Ben Bernanke, right after he was finishing up QE2.](#)

Former Federal Reserve chairman Paul Volcker described it as “skimming,” while saying that his mother “would have seen right through that.” And Alan Greenspan has also inferred that it’s not exactly as if the 2% mandate is some official economic law that was brought down from Mount Sinai on stone tablets in the way that many of today’s market participants have been led to believe.



[Volcker is also quoted as saying:](#)

It is a sobering fact that the prominence of central banks in this century has coincided with a general tendency towards more inflation, not less. If the overriding objective is price stability, we did better with the 19th century gold standard and passive central banks, with currency boards, or even with ‘free banking’.

Additionally, keep in mind that Ben Bernanke, the man who made the 2% mandate official policy, [also once wrote](#):

“The deflation speech saddled me with the nickname ‘Helicopter Ben.’ In a discussion of hypothetical possibilities for combating deflation I mentioned an extreme tactic—a broad-based tax cut combined with money creation by the central bank to finance the cut.

Milton Friedman had dubbed the approach a ‘helicopter drop’ of money. Dave Skidmore, the media relations officer...had advised me to delete the helicopter-drop metaphor...‘It’s just not the sort of thing a central banker says,’ he told me.

*I replied, ‘Everybody knows Milton Friedman said it.’ As it turned out, many Wall Street bond traders had apparently not delved deeply into Milton’s oeuvre.” (Ben Bernanke, *The Courage to Act*, 2015, p. 64)*

One of the reasons why all of the hoopla around the Fed’s mandate can be so distorting is that while you might think, “well, if inflation only goes up at 2 or 3% a year, that won’t be all that much,” remember that 2% is just the target. Not necessarily what ends up happening.

This means the Fed can talk all it wants about 2-3% inflation, but when a couple of not so transitory spikes get mixed in, over the long-term, prices (including the inputs to the costs of mining) end up going up a lot more than 2% per year.

It was also rather alarming to hear Powell say that [“we may be entering a period of more frequent, and potentially more persistent, supply shocks.”](#)

Higher real rates may also reflect the possibility that inflation could be more volatile going forward than in the inter-crisis period of the 2010s.

We may be entering a period of more frequent, and potentially more persistent, supply shocks—a difficult challenge for the economy and for central banks.

Yet despite that, the Fed’s primary conclusion is that the major change they should consider is to just run inflation hotter than normal.

So I ask you this: at the end of the day, if there’s dysfunction in the treasury market (which there already has been at several points in the last few years), will the Fed actually stand aside?

U.S. Treasury Continues To Cut Off Its Best Customers

As the debt continues to rise, the U.S. is also simultaneously cutting off an increasingly large portion of its global investor customer base.

It's hard to imagine that China's in a rush to buy more treasuries right now given what's just transpired over the past 8 months. And It was outright stunning to see the change in language from Japanese Finance Minister Katsunobu Kato in early May of 2025, when a month after saying that Japan would not consider selling U.S. treasuries as a leverage play in their trade deal negotiations, he then said that [he could no longer make that promise](#).

This means that the 2 largest creditors to the U.S. don't seem to be particularly pleased about their investment at the moment, and as it gets more difficult to construct a positive investment case for U.S. debt in real terms over any substantial period of time, it remains an open question of how the Treasury is going to fund itself over the next decade and beyond.

Although once again, the most likely outcome remains that ultimately, the Fed becomes the buyer of last resort.

Even Spending Cuts Won't Fix U.S. Debt Issues At This Point

Despite the attention around Elon Musk and the DOGE board, which led to stunning revelations about just how regularly reckless some of the fraudulent U.S. government spending has been, the decision to create the DOGE board did not result in any substantial cuts.

It was shocking to hear Elon Musk express how disappointed he was with the Trump administration's Big Beautiful Bill, which in Musk's own words "increases the budget deficit. It doesn't decrease it, and it undermines the work the DOGE team is doing."

Even the Wall Street Journal via "Fed Whisperer" Nick Timiraos, was throwing in the towel on any hopes [that the government will ever be able to get its spending under control](#).



Nick Timiraos ✓
@NickTimiraos



"What we are learning is that there will be no material fiscal consolidation. The U.S. will continue to run extremely large deficits as far as the eye can see."

But what's often left unsaid is that the real problem with cutting government spending is that when it already represents 23% of GDP, any substantial cuts would also impact U.S. GDP and tax receipts.

If GDP drops, tax receipts drop, which means that sadly we're likely already at that unfortunate point where somewhat paradoxically, even if the government did substantially cut spending, that would still likely increase the deficit. Which is why the best way to handle that situation is not to find yourself in it in the first place.

Sadly, this is just one of many reasons why it's becoming increasingly more difficult to see a long-term resolution that doesn't involve larger amounts of Fed monetization, or a restructuring of the debt, and/or the current monetary regime.

Sanctions, Geopolitics, and the BRICS

Another key area to keep an eye on is of course the geopolitics, especially with military conflicts ongoing in multiple areas around the globe right now.

At this point, it's hard to understate the impact of the sanctions that were placed on Russia in 2022, as well as their removal from the SWIFT system. As it was right after these events occurred that central banks started buying gold in record amounts. This is also the same time when the long-held correlation between the inversion of the U.S. 10-year yield and the gold price finally broke down (and has diverged ever since).

Exhibit 10: The "Rates-Gold" Correlation Exists Because ETF Flows and Rates Have Been Tightly Correlated



Source: Bloomberg, Goldman Sachs Global Investment Research

Russia responded with [sanctions of their own on several western banks](#), and there is the looming threat from the West to outright confiscate the Russian assets that were frozen. This threat remains another black swan, not only for the gold and silver markets, but also for the financial markets, and the world as a whole.

Throughout 2025, it has also increasingly seemed as if the relationship between Trump and Putin has cooled, and Trump even mentioned the possibility of [additional sanctions on Russia](#). If that were to occur, it would likely accelerate the trend of gold taking on a greater role in the current financial system, a trend that in some ways has been ongoing for decades, although one that has been more publicly evident since it accelerated in 2022.

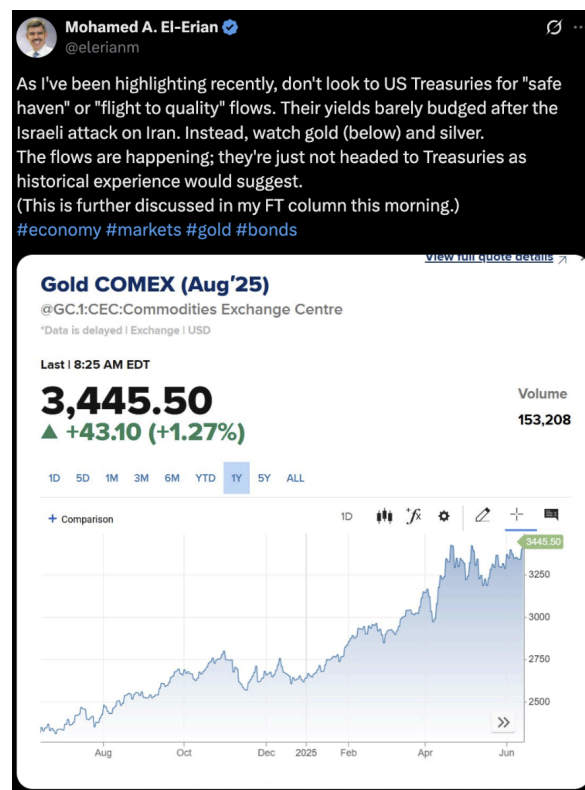
There have also been [reports over the past](#) year of a proposal by the BRICS for a 40% gold-backed payment settlement mechanism under the working title 'The Unit,' which the BRICS did confirm as an 'issue under discussion' on their BRICS Pay website (please note however that while some have speculated that silver could eventually be included in some type of commodity basket, at least in terms of what the BRICS have shared publicly so far, there was not any mention of silver in [The Unit](#) [whitepaper](#)).

Trump has threatened to [shut out any country that de-dollarizes](#) from the Western system. However, we're already at a rather fragile point in the financial markets, and if that sort of showdown were to occur, it's far less than certain that it would play out as the Trump administration might want or expect.

Because we're no longer talking about how gold might 'one day' start cutting into the U.S. treasury's market share of safe-haven demand. That's already begun; it's happening now. In fact, even [mainstream bond investors like Mohamed El-Erian](#) (formerly of Pimco with bond king Bill Gross) are now suggesting as much.

With the current trade war and the ongoing de-dollarization movement, there is also the possibility that the shift out of treasuries and into gold is still just getting started. And I continue to wonder if there's some level that the gold price reaches where silver is finally forced to snap-back in response.

Even though this is only the third time in history that the silver price has been over \$40, there still hasn't been the kind of move silver that I think most precious metals investors would have expected based on what's happened with the gold price. Although I think it's still more likely than not that something like that happens in the next couple of years, and possibly sooner than later. Additional sanctions on Russia, further escalation of wars, and the potential for a more formal gold involvement in the monetary or trade settlement arenas are some key areas to keep an eye on going forward. Especially as China is increasingly signaling that they are moving forward with the internationalization of their Yuan, [while using gold as the collateral](#).



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Lastly, should the East move towards a more extensive use of gold as money or trade collateral, it's interesting to consider whether the West would eventually be forced to match if oil exporters are given the choice of receiving some form of gold-backed payment vs. Petro-dollar based U.S. treasuries. And if the BRICS do go in that direction, does a substantial portion of the globe start to realize we're headed towards a gold-based system and front-run the move?

These are some of the dynamics that we could see unfold in the years ahead.

Why Didn't The Silver Price Rise More During A Decade Of Quantitative Easing And 0% Interest Rates

One of the biggest frustrations, especially for many of the older silver investors, is how despite a decade of quantitative easing and 0% interest rates in the U.S. after the silver price hit \$49 in 2011, the price largely declined throughout most of that decade. And with silver still carrying its reputation as an inflation hedge, many investors were left wondering why the silver price sat in the teens for most of the 2010s.

It's a question that's often pondered, yet rarely addressed or answered. But it's an important one, that deserves to be put in proper context.

To begin, perhaps it's understandable that there's so much confusion around this question due to the complexities of how silver's priced, as it involves an often non-linear balance between physical supply and demand, and the futures trading on the COMEX where the price is set.

While one could make a valid argument that there are flaws with the way this system operates, to better understand what happened, we'll stick to examining the situation as it is. And at the heart of it is that despite how the actions of the Federal Reserve or the government do get priced in by the futures markets, what often gets forgotten is that aside from whether *we should be or not*, we aren't currently on a silver standard. But where things get complex, is that monetary actions by the Fed or the government do still usually get reflected in the price set in the futures market.

As a result, the connection between the physical and futures markets can often break down. However, that doesn't mean there aren't some longer-term boundaries and parameters that do eventually come into play given that there is a physical commodity involved.

To illustrate this point, I'll use an extreme example. I'm not suggesting a silver price target here but just using a large number so that the bigger takeaway is clear.

So imagine that something happens with the Treasury, or some other part of the economy, and the Fed goes back to large amounts of quantitative easing and cuts rates back to 0%.

Then, imagine there's an extreme reaction in the silver market, and the silver price goes to a big number like \$250 per ounce.

We'll then further assume that mining executives and capital backers believed that this was going to be the price going forward (not necessarily the easiest scenario to imagine), and money flowed into the miners and production increased (we'll also leave aside the time lag for now).

But if we're not on a silver standard, with a redeemability mechanism in place to support the price with an additional source of demand for the incremental silver produced, and if people aren't increasing the rate at which they're actually buying, taking possession of, and using silver monetarily, then eventually over a long enough time period, you're left with an oversupply. However, what often gets missed, is that while the silver price as set on the COMEX is generally tracking the gyrations of the Fed and the economy, it also impacts the decisions made by the silver mining executives.

The price went higher in 2011 in response to what was happening following the collapse of the subprime bubble, and silver demand did increase for a while. But the increase wasn't commensurate with what most silver investors felt *should have* occurred, and it was a lot more common to hear about silver investors who were frustrated and throwing in the towel, rather than stories of mainstream investors rushing out to buy physical.

In 2006, the World Silver Survey had mine production at 641.7 million ounces, and this rose to 847.8 million ounces by 2018. An increase of 206.1 million ounces.

Coins and metals plus net implied investment was 93 million ounces in 2006, and then there was a surge in physical silver investment beginning in 2009 that peaked in 2015 at 310.4 million ounces. But by 2018 that was down to 165.7 million ounces.

Silver Supply and Demand

	Year on Year											
Million ounces	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020F	2019	2020
Supply												
Mine Production	760.1	792.7	840.3	877.5	892.9	892.3	863.4	847.8	836.5	797.8	-1%	-5%
Recycling	232.9	216.0	192.7	174.9	166.5	164.4	167.7	167.7	169.9	169.4	1%	-0.3%
Net Hedging Supply	11.9	-	-	10.7	2.2	-	-	-	15.7	10.0	na	-36%
Net Official Sector Sales	4.8	3.6	1.7	1.2	1.1	1.1	1.0	1.2	1.0	1.0	-15%	0%
Total Supply	1,009.7	1,012.4	1,034.7	1,064.2	1,062.6	1,057.8	1,032.2	1,016.8	1,023.1	978.1	1%	-4%
Demand												
Industrial	508.1	450.5	460.8	449.6	456.2	490.3	517.2	511.5	510.9	475.4	-0.1%	-7%
...of which photovoltaics	68.4	55.0	50.5	48.4	54.1	93.7	101.8	92.5	98.7	96.1	7%	-3%
Photography	61.6	52.5	45.8	43.6	41.2	37.8	35.1	34.2	33.7	30.5	-1%	-10%
Jewelry	162.2	159.2	187.1	193.5	202.6	189.2	196.3	203.1	201.3	187.5	-1%	-7%
Silverware	41.5	40.1	45.7	52.4	56.6	52.3	57.7	65.4	59.8	54.3	-9%	-9%
Net Physical Investment	272.0	240.8	300.1	282.6	310.4	213.9	156.2	165.7	186.1	215.8	12%	16%
Net Hedging Demand	-	40.4	29.3	-	-	12.0	2.1	8.4	-	-	na	na
Total Demand	1,045.4	983.5	1,068.9	1,021.6	1,067.0	995.5	964.7	988.3	991.8	963.4	0%	-3%

So in net, between 2006 and 2018, total investment increased by 72.7 million ounces while mine production increased by 206 million ounces. Ultimately, there was more additional supply than demand after the price rose.

This means that despite the debasement of the dollar over that period, the increase in demand didn't keep up with the incremental increase in production. And if the silver price goes up and production is increased, but there isn't a sufficient source of demand to consume that production, over a long enough period of time, you end up with an oversupply and the price eventually has to come down.

But now over the past year, the gold price has been rallying, and precious metals investors have been wondering when silver is going to catch up. But so far, there hasn't been that incremental source of investment demand in silver. Instead there's been elevated levels of selling in the past 2 years by the largest investment silver market participant (U.S. retail).

However, the growing industrial demand has been sufficient to overcome that investor selling and still leave the market in a deficit, and as a result, in the same way that a price spike led to an oversupply in the previous decade, the exact opposite is happening now.

The price action of recent years has created a situation in which it's possible that we could run into a supply issue, even without investment coming back in a big way if the industrial demand continues to grow, or even just stays flat. But, if there is a surge of demand from the investment side, that would only further accelerate the rate at which the existing available supply gets eaten into. It's a bit of a complex arraignment, but hopefully this helps explain why the silver price reacted the way it did from 2013 to 2019, even as rates stayed at 0%.

So remember, even though the physical-futures relationship can go through long periods where the correlation breaks down, that doesn't mean that basic fundamentals don't exist that necessarily must eventually force the market back in line over a long enough time.

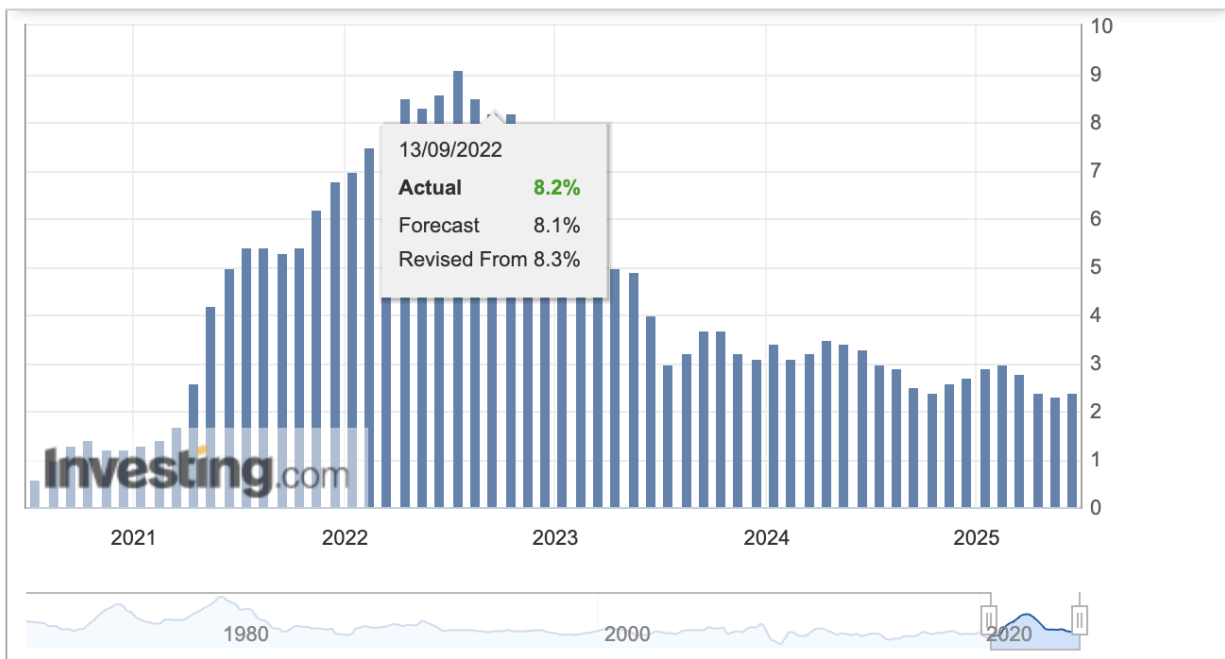
Has Silver Kept Up With Inflation

Another source of confusion in the silver market that can often distort the expectations of silver investors are the nuances around whether silver has actually served its role as an inflation hedge.

Especially within the silver community, there's a common perception that if the Fed cuts interest rates or does more quantitative easing, that the silver price will respond accordingly. And sometimes that is what happens. Although in recent years, that hasn't always been the case.

The most poignant example was in early September 2022 when the silver price fell below \$18, even as the government was still reporting inflation above 8%.

U.S. Consumer Price Index (CPI) YoY



So while there is still a good case to be made for silver being a hedge against inflation, it's a bit more nuanced than "if more money is printed, silver is going to go up by the appropriate requisite amount tomorrow."

I've been studying the gold and silver market since 2009, and as I think back on these past 16 years, a lot of the research I read especially in those early years was more in line with the premise that "if the Fed keeps printing and the debt keeps going up, silver will match that." But I think that could be put in a more productive context, because unfortunately, there is no mathematical or trading relationship that forces the silver price in one direction or another based on the latest Federal Reserve or government profligacy. And this is a key distinction that often gets missed, and is at the root of silver investors being disappointed with what the price is doing.

Certainly I can appreciate the pleas of the sound money advocates, or the adherents to the gold and silver clauses set forth in the U.S. Constitution, although again I'll stick to what is, as opposed to what I or someone else thinks "should be." Because the relationship between the factors affecting inflation and how silver is priced are not like a stock index and an ETF. There isn't a clear arbitrage, where if something gets out of line, there's a mechanism to adjust the silver price directly according to changes in the money supply.

During the period from 2013 to 2019 when a lot of credit was injected into the system, that new money flowed into the stock market, the real estate market, and the government debt markets. And while you or I might buy silver because we're concerned about inflation ahead, and while you or I might think that other people should also be buying silver for those exact same reasons, so far, the rest of the world really hasn't.

That newly created money *didn't* flow evenly into all asset classes. If it did, given the small size of the silver market relative to some of the other asset classes that did receive substantial investment inflows, the silver market would already be a lot higher.

The annual global silver supply is just over a billion ounces, which makes it worth approximately \$40 billion. This means that if large amounts of capital ever did try to move into physical silver, there's not a lot of room for substantial new investment without moving the price (and with a market that's in a deficit, there also isn't necessarily a billion ounces just sitting around that's easily available to buy).

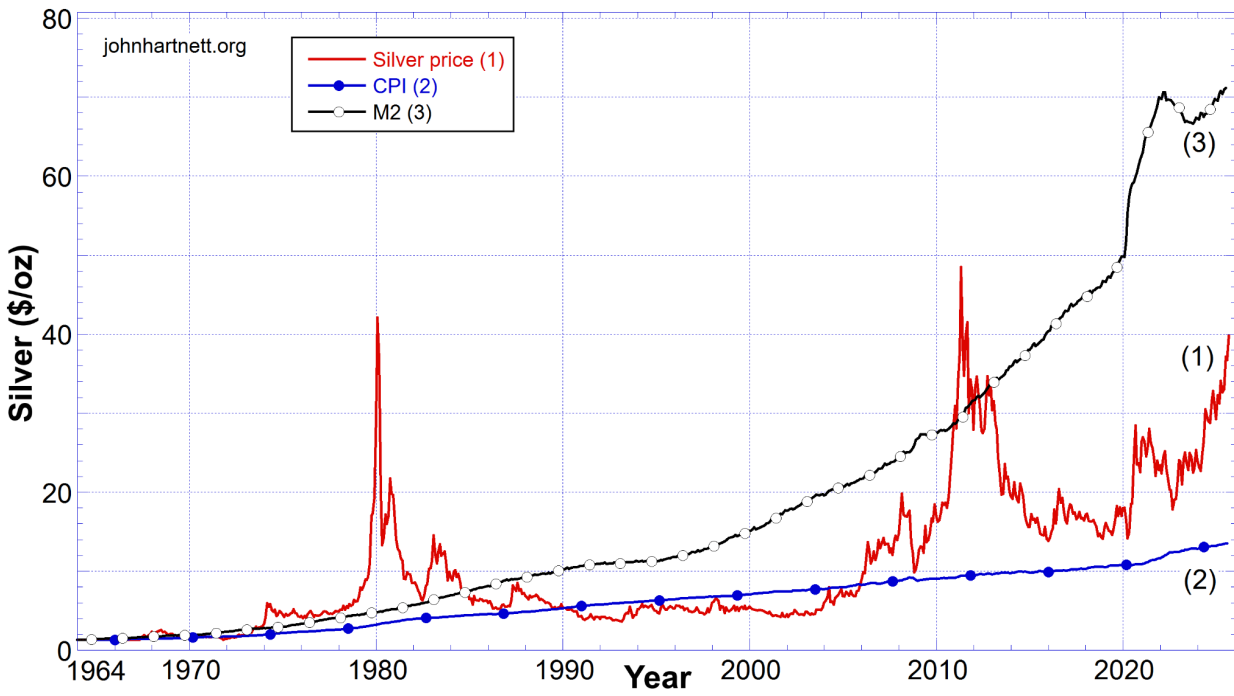
But while silver might not always be the best inflation hedge in the shorter-term, when you take a step back and consider the long-term chart, you start to see a much different story.



Obviously you have the two spikes to the \$49-50 range in 1980 and 2011, which both occurred during times of considerable levels of concern about the greater stability of the financial system. The spike in 1980 was at the end of a decade of stagflation, and while I don't know that the narrative that the Hunt brothers just went out and cornered the market is fully representative of what actually happened, there were investors like them (and others) who were buying silver because they were concerned about inflation and the stability of the monetary and financial systems.

Similarly, in 2011, the world had just been introduced to quantitative easing from the central bank tasked with regulating the world's reserve currency. Also, in both 1980 and 2011, there were trading/liquidity factors involved that helped to exacerbate the price moves. Yet if you relax any previously held assumptions and consider what the silver chart looks like if you smooth out those two peaks, the price has actually done pretty well against inflation over time, and has even beaten the understated CPI.

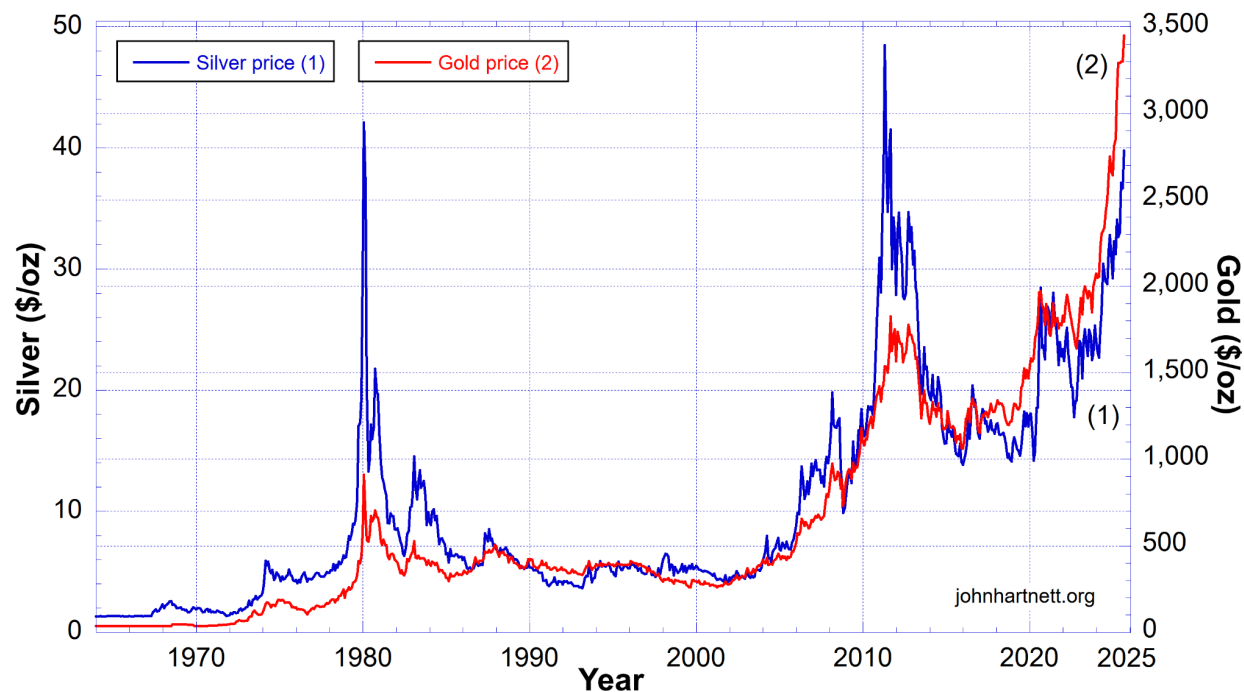
The chart below shows that if you had purchased an ounce of silver at the market price of \$1.29 in 1964 before it was removed from the coinage, it would be worth \$40 today. Whereas if that \$1.29 had been indexed to the CPI, it would currently be worth \$13.28.



Therefore, I would suggest that a better way of thinking about those peaks, is that while silver has trended along with inflation since being removed from the coinage in 1965, during moments of true fear about the stability of the current financial order, the silver price has now on two separate occasions responded by spiking to the \$50 range.

So if you're of the mindset that the ability (or desire) of the world to effectively use the U.S. treasury as an efficient safe-haven store of value is going to be (or already has been) impaired, and you're concerned about what happens if rates rise or treasury investors eventually tire of getting a negative real yield, then there are two data points showing how silver could respond.

The next chart overlays the gold and silver prices from 1964 to the present, and if you smooth out the two spikes (or even if you leave them in), the comparison is about what you would expect. Silver moves slower and often later, but during moments of crisis, silver has a more pronounced peak.



I would imagine that there's a good chance the long-term silver chart will continue in a similar trajectory in the years and decades ahead. It's also helpful to recognize that **where there actually is a bridge between the physical and paper markets over the longer-term, is that because all of the inputs that factor into the cost of mining silver are impacted by the inflation of the money supply, the cost of production has, and will continue to rise over time.**

There have been occasions in recent years where the silver price has briefly gone below the cost of production, such as in 2020 when the price briefly dipped below \$12 per ounce during the onset of COVID. However, the cost of production has generally served a good floor for the price over larger periods of time, and over the longer-term, silver has served as a functional inflation hedge, and is likely to continue to account for the general longer-term increases in pricing levels.

As for the shorter-term, if you think the next CPI report is going to come out hotter than expected, while sometimes the gold and silver futures do indeed respond in the direction that would make sense intuitively, on a narrower timeframe (let's call that 0 to 2 years), on average, you're just going to have a lower correlation than if you're looking over the longer term.

Has Silver Become Just An Industrial Commodity, Or Is It Still Money...

Perhaps it's not surprising that there's so much disagreement about how much silver is actually worth, given that there's a large debate simply as to whether silver is still a monetary metal, or if at this point it's become a purely industrial commodity.

It's a reasonable question, as silver obviously has a long history as money in (and outside of) the U.S. Yet most of the silver is now consumed by the growing levels of industrial demand, and while we've seen an increase in the usage of gold as a monetary reserve in the past three years, the situation in silver is a bit more complicated.

While net investment demand has risen since COVID, it hasn't "surged" like one might expect in a true monetary crisis, as aside from 2022, it's remained lower than the 309 million ounces reported back in 2015. Instead, the yearly deficit has been driven more by growing industrial demand (solar in particular) rather than a big spike in monetary demand.

Does this mean that silver's now just an industrial commodity?

Well...not exactly.

The short answer is that it's still both, and will likely remain so.

One source of the confusion is that the debate around whether silver is money or a commodity often assumes it's a "one or the other" matter. But that hasn't really been the case, and probably won't be going forward either.

The reason is that in an increasingly electronic world that's consuming larger amounts of silver because of its incredible conductivity properties, unless we're heading towards a significant decline in the standard of living (granted, not an impossibility), industry is going to continue to consume silver.

But silver's monetary demand isn't going away either. There are people who have been saving silver as money for decades, and who will likely continue to do so as long as they're alive, regardless of what the price does. You may or may not think they're right to do so, but they *are* investing in it as money.

I also know silver investors who already use silver for transactions, and prefer settling invoices in physical silver.

Is that happening on a widespread level?

No. But it is happening, and it is evidence of silver being used in at least some cases as money.

I've also mentioned how Russia has declared that it will start adding silver to its state reserves, and it's worth highlighting that when the Trump administration finally exempted gold from the tariff policies, they did exempt silver too.

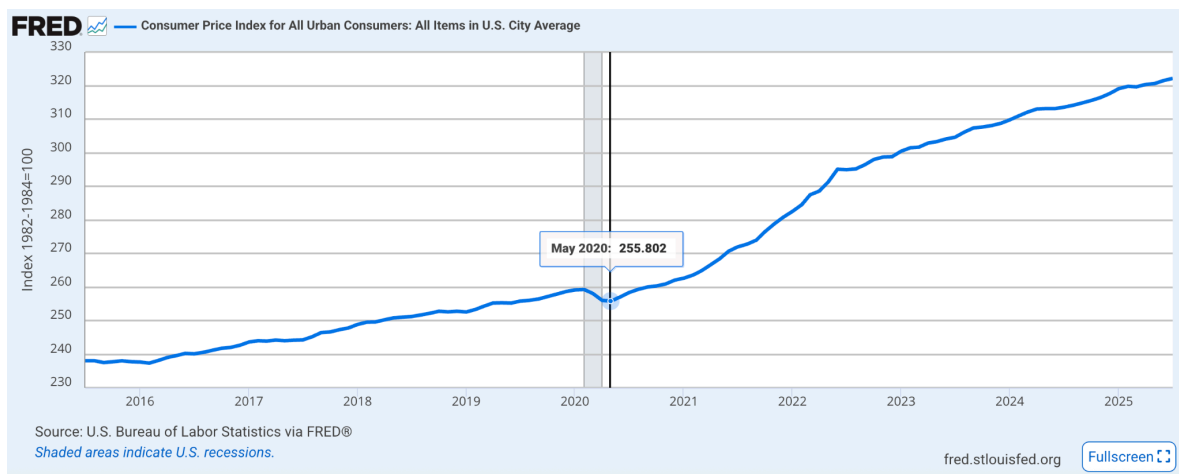
That's not to say that a return to a silver standard is imminent or right over the horizon. But it does point out that the last official comment we've heard from the U.S. government about silver was that they do still on some level consider it as money. And while I think it's ultimately more likely that a return to some form of metallic backing would more likely include gold, rather than gold and silver, I do think there is still somewhat of a legal footprint left in place by the silver tariff exemption.

In terms of why I think it's less likely that silver would be included in any sort of metallic backing, as [brilliant macro analyst Luke Gromen has pointed out](#), one of the key issues with any official monetization of silver is that the silver price would have to go to a level that would basically make industrial usage uneconomic for a silver revaluation to have any substantial impact relative to the current levels of debt. Also, remember that most governments and central banks don't own any silver, which means that even if silver were part of a revaluation, the governments wouldn't directly benefit from it.

What Happens During The Next Wave Of Inflation?

I've also thought about what happens if there's another round of inflation similar to what we've just lived through over the past 4 years. The silver price didn't break out with the effects of inflation in 2022 and 2023, but I continue to wonder if the next time the cost of living really starts rising, if it won't trigger a realization among the broader population that there's something wrong with the money.

Even the somewhat generous CPI Index is up almost 26% since 2020, while the Fed is claiming that it's somehow going to finally bring inflation back down to its 2% mandate by cutting rates even further (and if that seems a little bit hard to believe, trust me, [you're not alone](#)).



During silver's spikes to the \$50 area in 1980 and 2011, each time there was elevated concern about the stability of the monetary and financial systems. And after a decade and a half of TARPs and BTFPs (Federal Reserve monetization programs) patching over the imbalances, it's becoming easier for even the most ardent deniers to see that our current monetary arrangement is living on borrowed time. So if there is a large correction in the stock market, or a funding issue in the treasury market, let alone the type of Lehman-moment that seems inevitable given a long enough timeline, there would be an impact in the demand for physical silver as money.

So while there are some people who will always view silver as money and invest as such, there are others who will continue to see it as an industrial commodity and invest based on that. Which means that perhaps the more relevant question is less a matter of whether silver is a monetary or industrial commodity only, but to what degree it's a bit of each, and at what rate that calculus will change in the years ahead.

If We're Entering A 70s-like Stagflationary Environment & Silver History Repeats, Here's What The Math Looks Like

While the majority of the attention around silver in the 1970s and 1980s is often focused on the surge to \$50, and understandably so, what happened on the way there was just as stunning.

After reaching \$2.50 in 1968, the silver price had fallen to \$1.31 by October of 1971, just two cents higher than the \$1.29 price that existed when the Coinage Act of 1965 was passed (the act that officially removed silver from the U.S. coinage).

By October of 1972, the price had risen to \$1.84, and then by February of 1974 it reached \$5.78, a 4.41 multiple relative to the October 1971 \$1.31 price. And while that's not in any way a guarantee that we're on track for a repeat of past history, if that were to occur, that would leave us with a \$180.81 silver price. Possibly high enough to make even the most frustrated silver bulls smile!

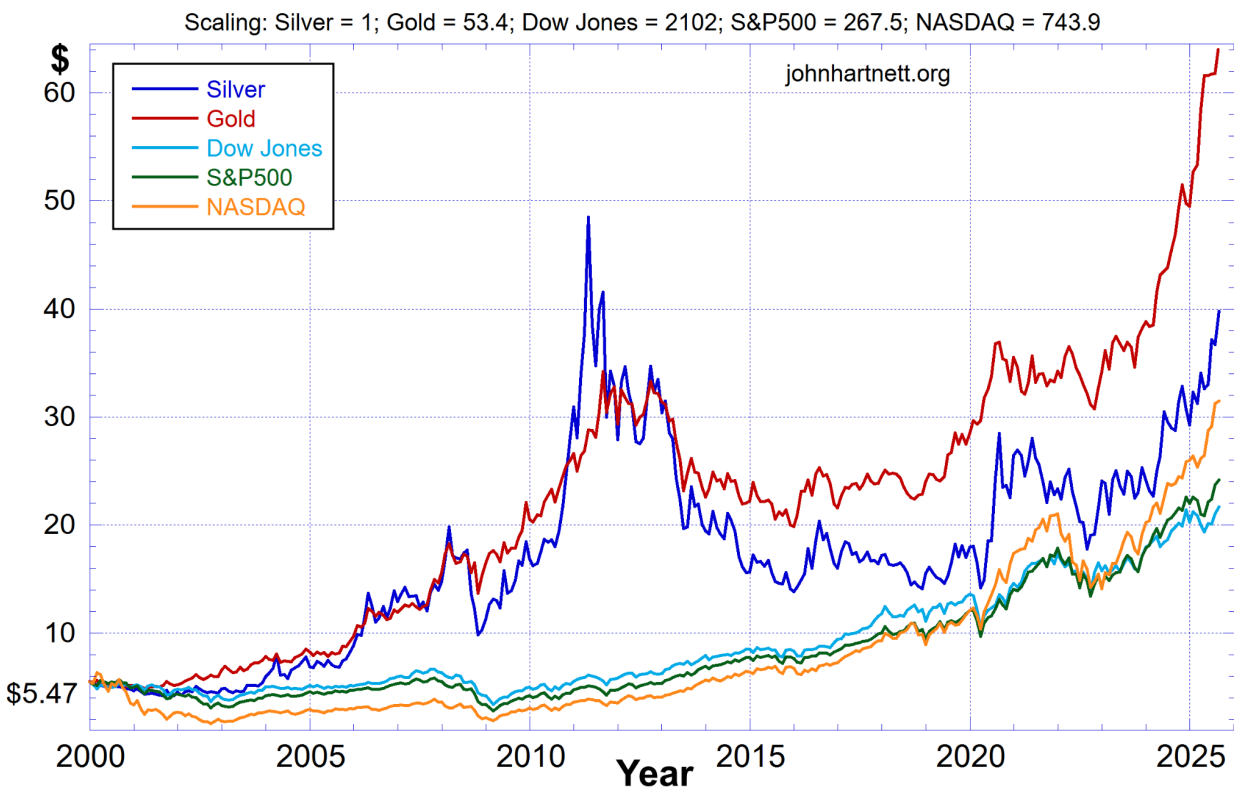


A Look At Silver Versus The Stock Markets

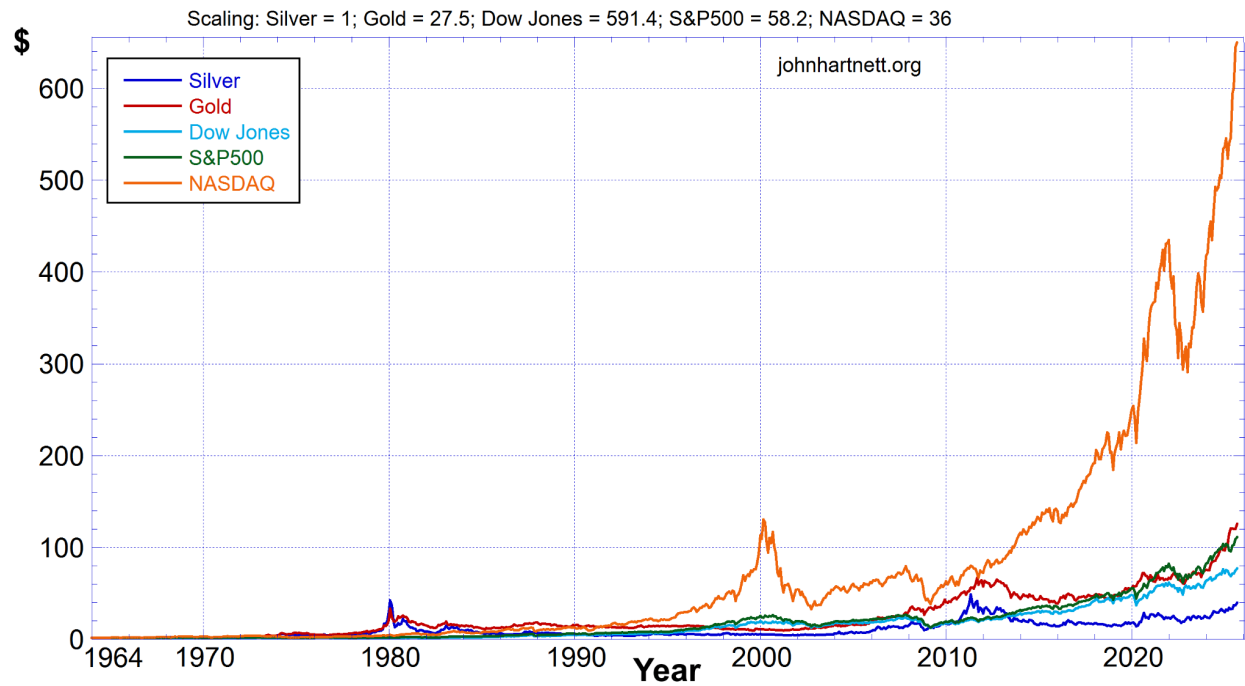
Something that even many long-time silver investors are often surprised to discover is that silver has actually outperformed the stock markets in the U.S. since the year 2000. This even includes the Nasdaq, that's risen more than 17x from its lows in 2009 after the collapse of the housing bubble.

Of course the beginning of 2000 was before the Dotcom bubble burst, and you can pick different date ranges where stocks would be ahead. So I'm not claiming that silver will or should outperform stocks over the long run. But just that over the last 25 years, the silver price has actually beaten the major stock markets in the U.S., and the charts below show how silver has performed versus stocks and gold, both since the turn of the century, and also since 1964 when silver was removed from the coinage.

Silver vs Gold and Stocks Since 2000



Silver vs Gold and Stocks Since 1964



In the graphic below you can see the multiple that each asset has gone up from 1965 until now (the Nasdaq didn't start trading until 1971 so those are measured from that point), as well as the multiple each asset has gone up since 2000.

	Multiple From		Multiple From		Multiple From
	1965-2025		1971-2025		2000-2025
Silver	32.0x	Silver	26.2x	Silver	7.9x
Gold	103.9x	Gold	95.7x	Gold	12.9x
Dow Jones	50.5x	Nasdaq	217.1x	Dow Jones	4.2x
S&P	74.2x			S&P	4.7x
				Nasdaq	5.3x

Closing Remarks

Hopefully this report has provided a helpful overview of what's going on in the silver market, as well as insight into some of the key questions that will determine the silver price in the years ahead.

The silver supply deficits are a legitimate concern, especially as it continues to be difficult to see any easy or immediate resolution, even if the price does rise substantially. And with industrial silver demand forecast to grow, while a return from retail investors could also push the deficit figures to even more extreme levels, the market supply and demand dynamics are not on a sustainable path.

More inflation, and further degradation of the U.S. balance sheet are additional factors that aren't going to be going away anytime soon, and with Trump administration officials continuing to talk about the overvalued dollar, there's an extremely good chance that a lower dollar valuation in the years ahead has an incredibly positive impact on the silver price.

As I stated in the introduction to this report, all of these factors combine to make it an incredibly exciting time to be following the silver market. So hopefully you've enjoyed this report, and will benefit from its contents in the years and decades ahead!

Sincerely,
Chris Marcus
Arcadia Economic
contact me at Chris@arcadiaeconomics.com.

Author Bio

Chris has been a student of the precious metals market since 2009, after having his eyes opened by the collapse of the subprime housing bubble, and how so few seemed to see it coming in advance.

At the time he was working as an equity options trader for Susquehanna International Group after completing an MBA from the Wharton School of Business a few years prior, and he was intrigued by how officials like Ben Bernanke and Hank Paulson seemed blinded to what was happening, yet the investors who had seen it in advance all talked about gold and silver.

He currently runs the [Arcadia Economics YouTube channel](#), writes a daily precious metals column at [Arcadia's Gold & Silver Daily](#), and is a composing musician, whose works include "[The Course of Empire](#)," an Austrian economics-influenced theme album based on Thomas Cole's visionary artwork.

A Special Thank You To The following People And Companies Who Made This Report Possible

Obviously this report would not have been possible without the contributions of a whole host of other people and companies, as well as all of the countless research reports that have been linked to throughout this paper.

However, I would like to give a special thank you to [Vince Lanci of Goldfix.com](#) who not only does incredible research in the gold and silver markets (that many people throughout the world are incredibly grateful for) but is also a genuinely good man who has become a great friend and mentor.

I'm also grateful to [Michael DiRienzo of The Silver Institute](#), who does yeoman's work in terms of not only providing the World Silver Survey each year, but countless other pieces of fantastic research that have been instrumental in this report. Metals Focus is also a big part of that effort, and I am appreciative of the work and effort they put into providing insight into the gold and silver markets.

A special thank you to the great Dr John Gideon Hartnett, a scientist, [precious metals analyst](#), and friend, who kindly assisted with many of the charts that helped illustrate concepts articulated in the report. Also a thank you to Nick Laird of [GoldChartsRUs](#), for his great site that is widely used and appreciated by the precious metals community.

I'd also like to extend my gratitude to Yarra Venne, who has been my partner in Arcadia Economics, and has helped to make all of our research possible.

My sincere thanks to a great silver investor and business mind Joe Grande, who has been a great help in this effort as well as many other Arcadia Economics projects, and once again offered his incredible assistance in the editing of this report.

I would also like to extend my sincere thanks to the Arcadia Economics community. It's been an honor and a privilege to share this journey with you all, and this report, as well as all of our work, would not be possible without you.

Lastly, I want to thank the following companies that have been incredible sponsors, partners, and supporters of the research we have provided, which would not have been possible without their support.

VERY SPECIAL THANKS TO



Fortuna Mining is an excellently run precious metals miner, that just built its Seguela Mine on time and on budget (despite doing it in the midst of the post-COVID inflation wave), where they had their first gold pour in May of 2023, and ramped up to full production by the 3rd quarter of that year.

They're also advancing their Diamba Sud project in Senegal, and the company provides a safe and reliable vehicle for investors looking for exposure to the gold and silver rally.



First Majestic Silver is one of the leading primary silver producers, that just significantly increased their production profile after their acquisition of Gatos Silver, and is one of the stocks that offers the most pure leverage to the silver price.

First Majestic is on track to produce 14.8-15.8 million ounces of silver in 2025 (and 30.6-32.6 million silver equivalent ounces due to their gold exposure).



Dolly Varden Silver is a silver explorer focused in British Columbia's Golden Triangle, that's taken advantage of buying distressed assets during the bear market, has increased its silver exposure as the price has risen, and is de-risking its Kitsault Valley Project.

Dolly Varden is currently in the midst of a 55,000-meter drilling program, and will be releasing results throughout the rest of the year.