CPM Group

Silver Truths

2022 Sponsor

ENDEAVOUR SILVER

Endeavour Silver

NYSE: EXK
TSE: EDR
FRA: EJD

Endeavour Silver is a mid-tier precious metals mining company that operates two high-grade underground silver-gold mines in Mexico: Guanaceví Mine in Durango and the Bolañitos Mine in Guanajuato. Endeavour is working on the development of its third mine, Terronera, moving the project towards a construction decision, pending receipt of financing and final permits. It is also advancing its attractive pipeline of growth projects in Mexico, Chile and the United States to facilitate its goal to become a premier senior silver producer. In January 2022, Endeavour announced it had signed a definitive agreement to purchase Pitarrilla, one of the world's largest undeveloped silver deposits. The acquisition is expected to close in Q2 2022.

Earlier this year, Endeavour introduced its new sustainability strategy, which sets out priorities, actions, and targets over the next three years focused on three pillars: people, planet and business. This refreshed strategy is part of the Company's multi-year transformation and growth plan and demonstrates the crucial role that leading mining companies like Endeavour Silver can provide in supporting economic, social and environmental sustainability.

Investor Highlights

- Mid-tier silver producer – Two high grade, underground silver gold mines in Mexico
- Strong financial position – Strong balance sheet with minimal debt
- Significant organic growth – One of the best organic growth profiles in silver mining sector
- Discovering new orebodies – Track record of making discoveries and expanding reserves and resources
- Leading silver leverage – Pure precious metals producer with significant beta to silver
- Strategically acquiring key assets – Opportunistically acquire new mines that are accretive to NAV and cash flow with organic growth potential

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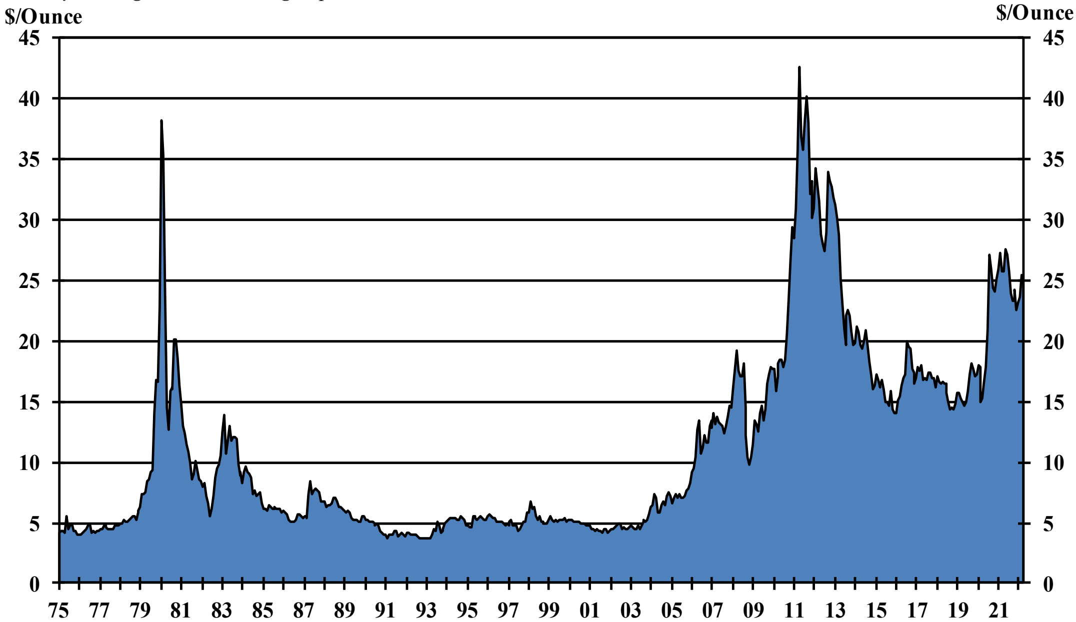
Visit https://edrsilver.com/ for more information
gmeleger@edrsilver.com
Tel:604-685-9775

The Price of Silver

Monthly Average Comex, Through April 2022



Silver prices averaged $25.28 in 2021. That was up 24.2% from $20,67 in 2020, and up an even greater percentage from the $16.23 average in 2019.

To date in 2022, through May, silver prices have averaged $23.66 per ounce.

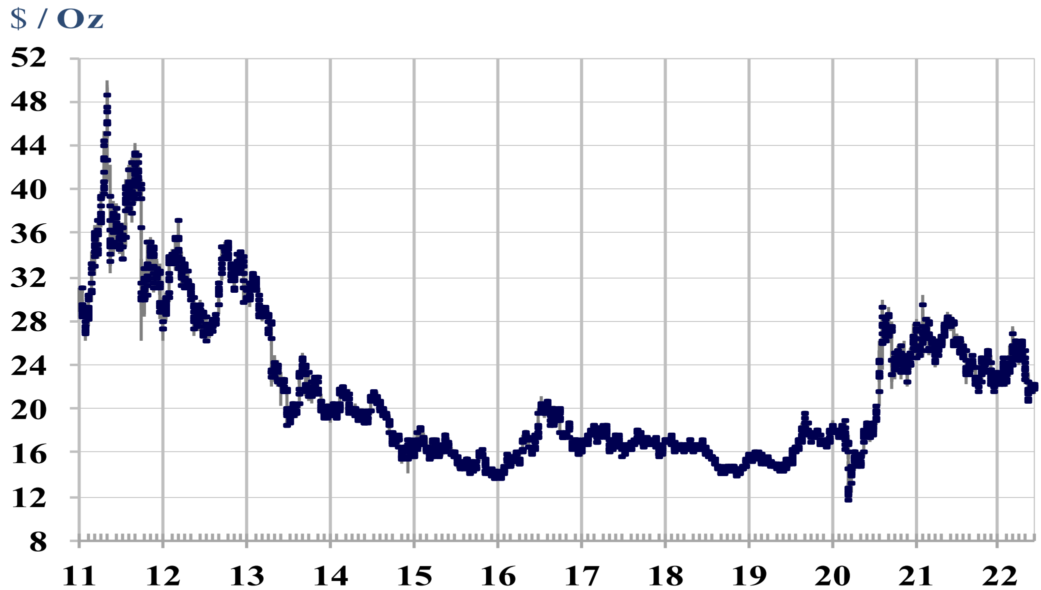
Annual average silver prices are not as high as the record of $35.29 in 2011, but last year's $25.28 was the third highest annual average price, topped only by 2011's record price and 2012's $31.17. Even so, some of the less reputable silver retail investment marketing operations continue to decry 'low' silver prices. They have unrealistic expectations.

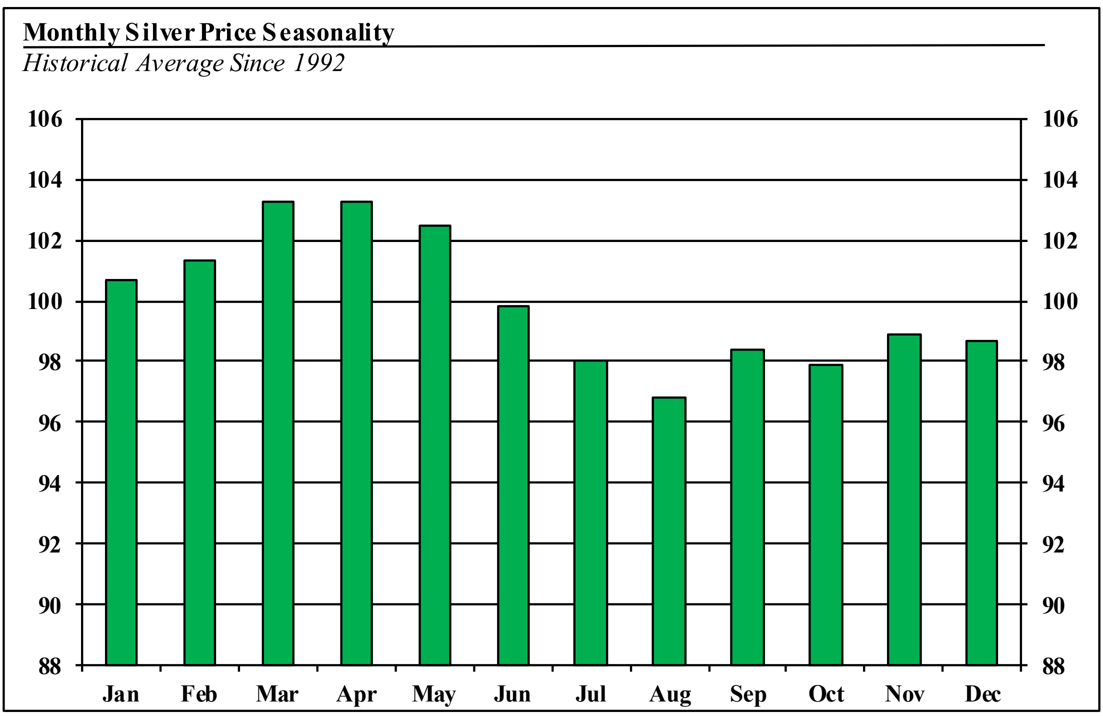
CPM's price expectations are based on a sober, honest, accurate analysis of the silver market's supply and demand fundamentals coupled with a realistic, data-driven analysis of the underlying economic, financial, and political environment. That analysis is laid out in the following pages.

The next page has two charts related to prices. The first is a shorter term price chart showing daily prices since 2011.

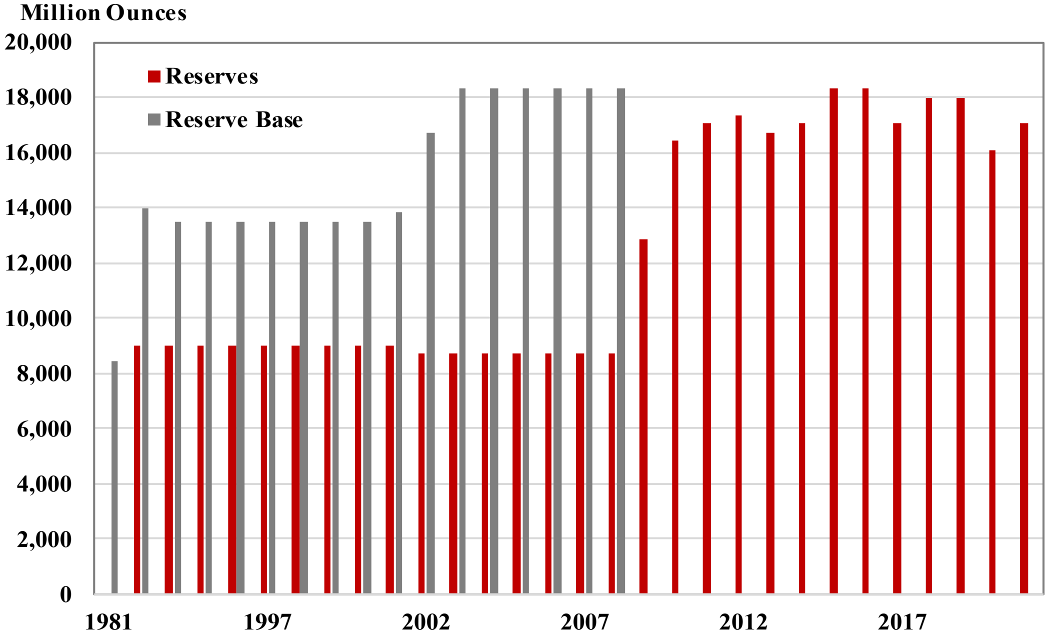
The second is a chart showing the monthly seasonality of silver prices. Silver prices typically are strongest in the period March through May, softening as fabricators reduce their operations during the period of June into September. Events and developments can override this seasonal price pattern, but it is important to understand the cyclicality of monthly silver price changes and the fundamentals behind those changes.

Silver Prices: 1 January 2011 to 6 June 2022





Silver Reserve and Reserve Base



Silver Reserves and Reserve Base

Million Ounces

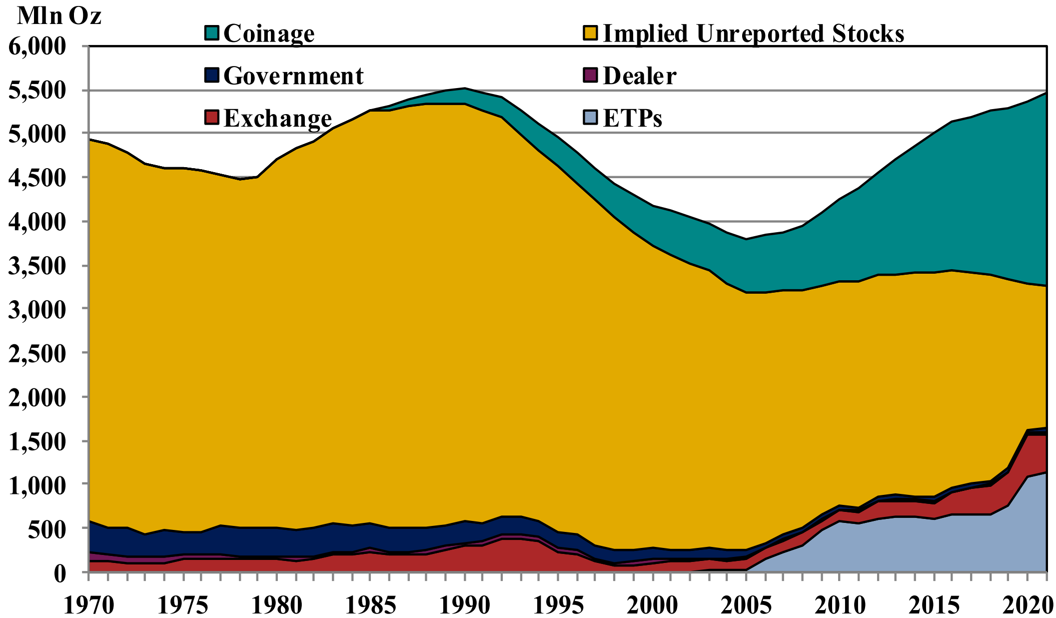
	Silver	
Year	**Reserves**	**Reserve Base**
1981	**N/A**	**8,100**
1988	**7,830**	**10,800**
2005	**8,681**	**18,326**
2008	**8,681**	**18,326**
2020	**16,057**	**N/A**

This chart and table illustrate the reality that there is plenty of silver known to exist in economically profitable deposits. The world is not running out of mineable silver. And, resources, which are not included here, are even larger.

Since the late 1980s nearly 20 billion ounces of silver have been mined. That is almost three times as much as existed in measured reserves in 1988. Yet known reserves have more than doubled to 16 billion ounces since that time.

Silver Bullion Inventories

Year-end Data, Through 2021



Another misconception used by less than reputable bullion sales people and their representatives is that the world is running out of refined above-ground inventories of silver. This also is not accurate.

While much of the silver that is held in bullion bars and coin form is held in private, unreported stocks, it is possible to estimate those unreported holdings through long-term supply and demand statistics and analysis.

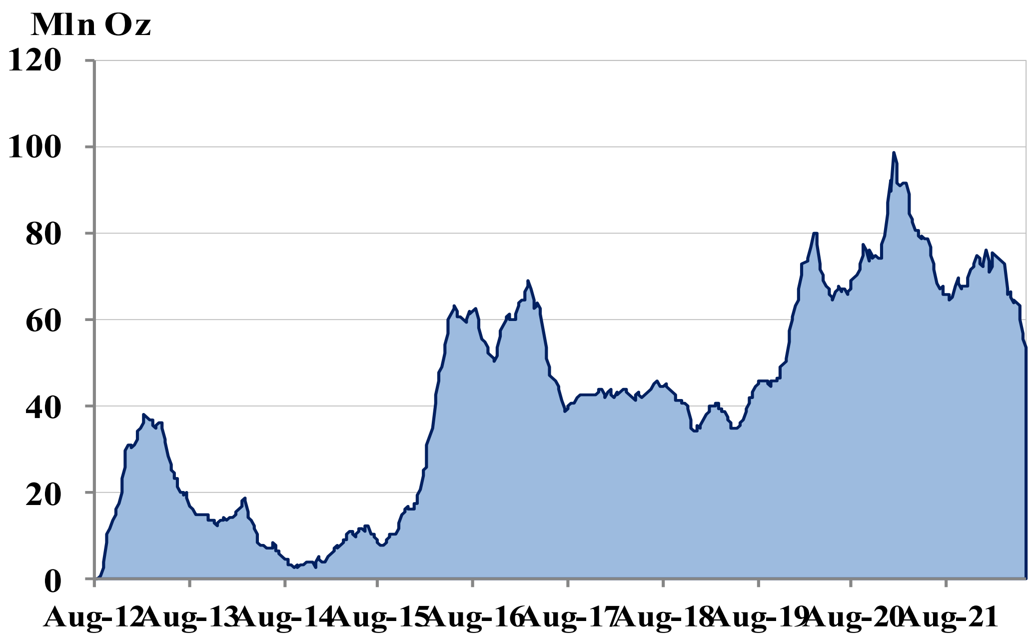
Additionally, the rise of bullion coins since the middle of the 1980s has provided firm statistics on the stock of silver held in coin form. The creation of physical silver backed exchange traded funds in the middle of the 2000s also proved popular with many investors. As a result, investors have shifted holdings from unreported inventories to reported ETF inventories and more accurately estimated coin reserves.

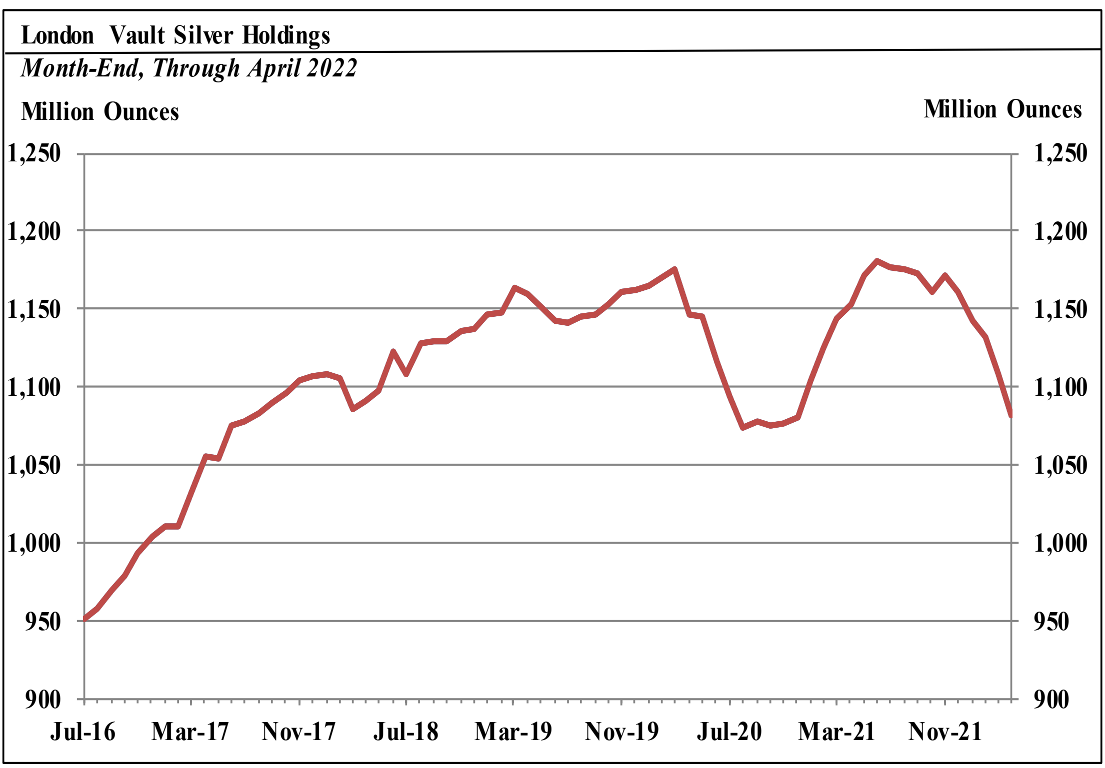
The chart above shows CPM's estimates of total silver above ground inventories of silver held in bar and coin forms.

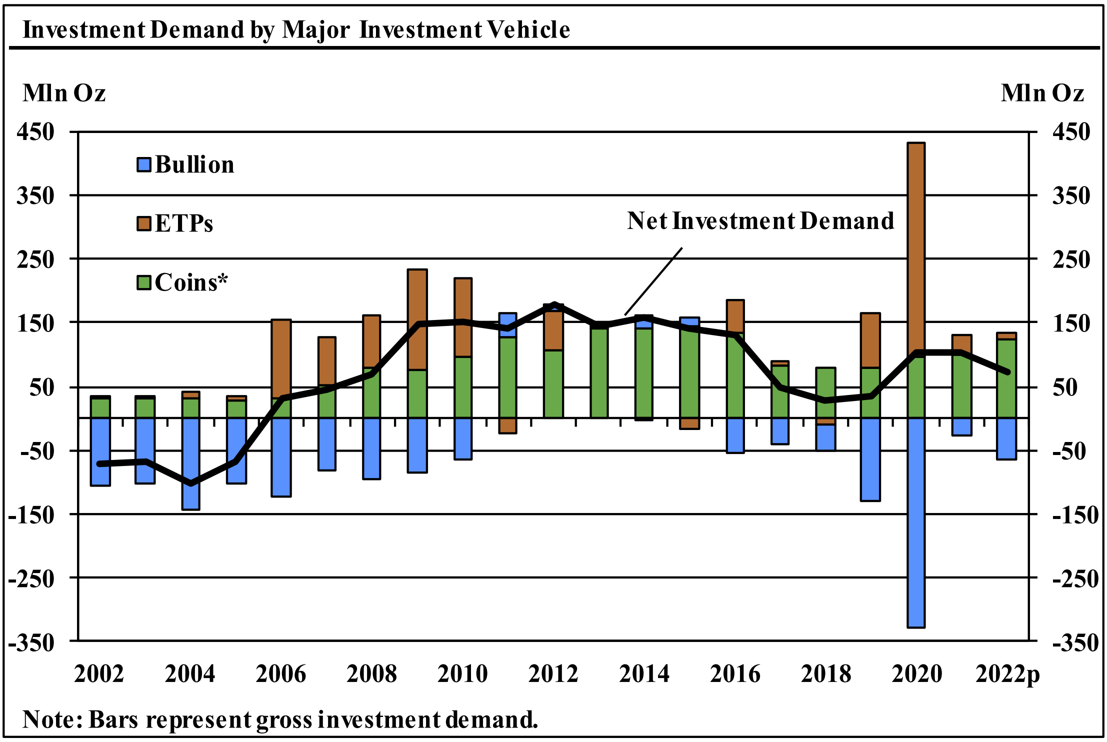
The following pages show inventories in major markets: New York, Shanghai, and London, along with other aspects of silver inventories.

SHFE Silver Stocks

Weekly, Through 2 June 2022







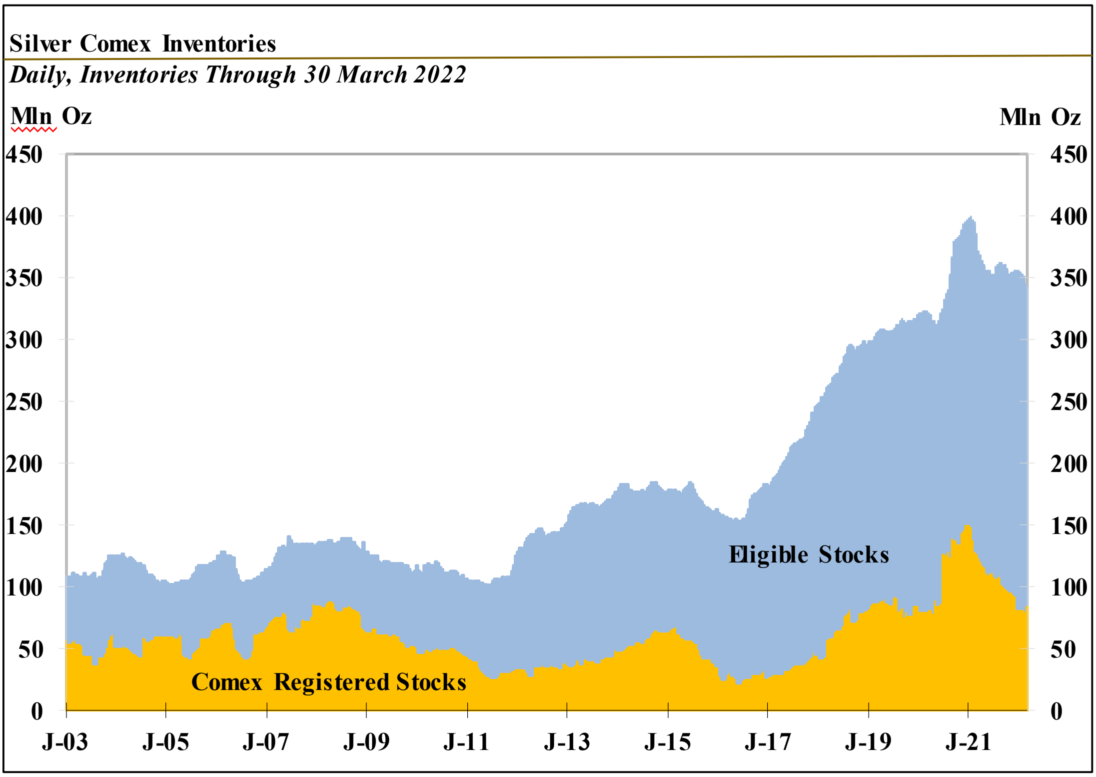
The earlier discussion about silver bullion and coin inventories mentioned the shift over the past several decades in investor preference to holding silver in coin or exchange traded product forms, over bullion bars.

This chart shows that progression.

One of the notable trends was the shift from 1,000 ounce bars to ETPs when these exchanged traded products were introductions in 2006.

There has been a more prominent shift to coins, for a variety of reasons. One factor has been the rise in silver prices from around \$5 per ounce prior to 2006. A 1,000 ounce bar cost \$5,000 or so, plus a small premium, at that level. By the time silver rose to \$15 and higher these bars became much more expensive to hold.

Other factors also favored coins and ETPs in the minds of investors.



Inventories of 1,000 ounce good delivery silver bars held in Comex-registered depositories rose sharply from 2017 to January 2021, far surpassing the amounts previous held in these valuts for the past several decades. The increase in New York market inventories really began around 2011 and reflected shifts in silver market trading patterns.

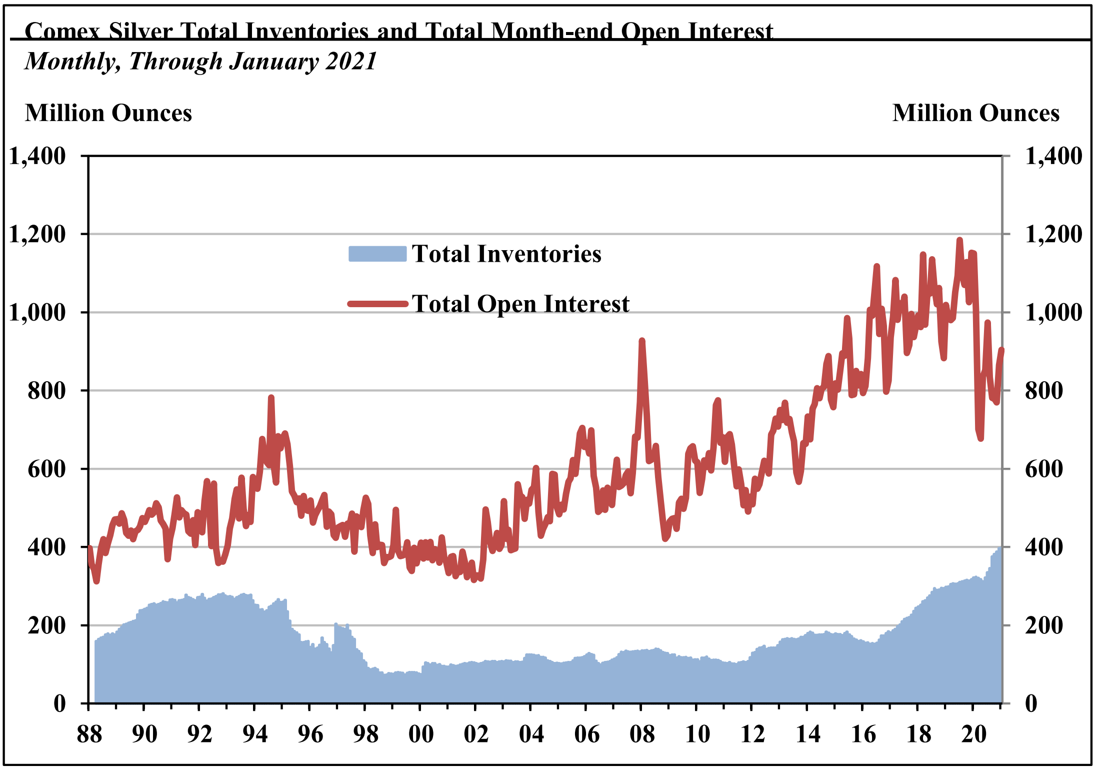
These inventories peaked 397 million ounces in January 2021, as investors and others disgorged several hundred million ounces of silver in the early months of the Covid pandemic and economic lockdown, and metal investments and market inventories shifted into the New York market from other parts of the world.

Since that time they have subsided by around 12%. These inventories had risen sharply during the lockdown and recession. They declined in the first quarter of 2021 as world economies began re-opening and demand surged.

Comex stocks are reports as registered (depository receipts having been transferred to the clearinghouse) and eligible (meeting Comex specifications but not delivered to the clearinghouse). There is a constant flow of metal into and out of each category, and metals enters and leaves these depositories on a daily basis.

It is important to note that while there has been a larger percentage and volume decline in registered silver inventories than in total inventories, after the initial drop that came as world economies re-opened and began recovering in the first quarter of 2021, after that initial decline most of the metal that has been de-registered with the clearinghouse has remained in the depositories as eligible metal.

Silver holdings also had risen over the past four years in to 2020 and then declined slightly. Even those Shanghai and London inventories have declined, as shown on the next page, they remain near historical highs.



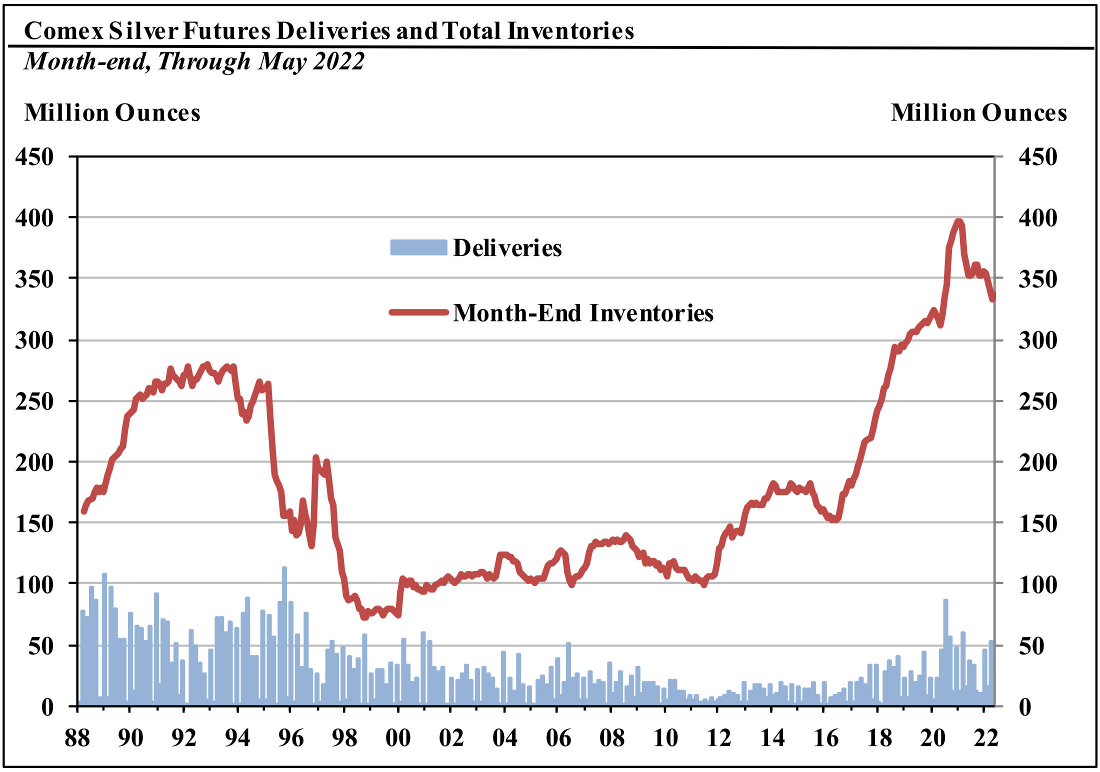
There are several key economic purposes of futures and options markets, as described in this report last year. Given some of the incredibly inaccurate portrayals of the silver market circulated by less than honorable sources, this discussion bears repeating.

Futures and forward markets were created to provide liquid financial markets for commodities merchants, producers, processors, users, and their financial intermediaries to hedge their price exposure in their physical, commercial business. Another function is to provide investors and short-term investors (which others sometimes call speculators) a means of buying exposure to rising and falling commodities prices. These investors seek financial exposure to prices with no intention of taking delivery and paying 100% of the value of their futures contracts.

Most producers and manufacturers hedge their exposure with financial intermediaries in principal-to-principal over the counter trades. Most of the hedging done on futures and options markets is done by these banks and dealers.

Another misperception is that the ratio of open interest or outstanding contracts to inventories indicates insufficient inventories to meet demand. This is far less relevant than it seems because virtually all of the contracts traded are held by hedgers and investors who have no interest or intention in putting up 100% of the value and making or taking delivery. Thus, it is the relationship between less than 1% of the open interest on the one hand and inventories that is important. *See the next page.*

Also, deliveries are of depository receipts. People who speak about truck loads of corn being delivered to their neighbors are trafficking an urban legend that is not true.



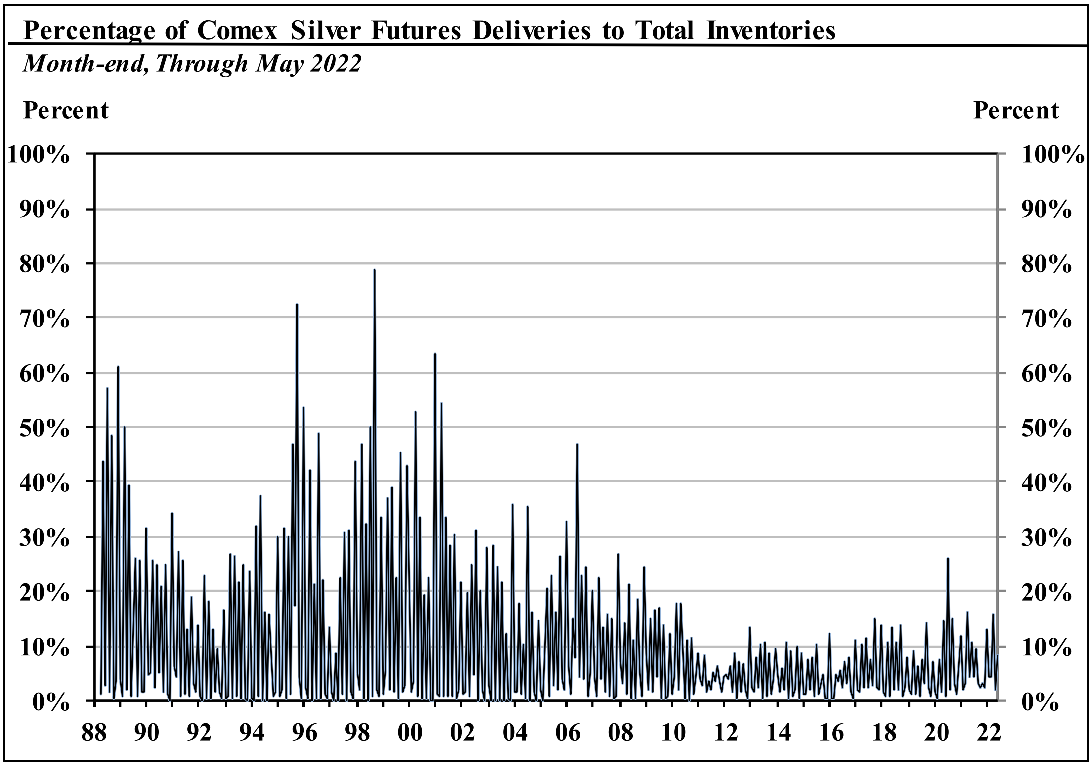
Following on from the previous page's discussion, the much more relevant metric of a market's tightness is the relationship between market inventories and deliveries. Again, remember that future market deliveries are of depository receipts for precious metals, warehouse receipts for base metals, grain elevator receipts for grains, and tank farm receipts for petroleum, gasoline, and natural gas.

The chart on this page shows the rise to record levels of Comex reported silver inventories in the New York market, compared to deliveries each month. There are ample inventories to cover deliveries, presently more than seven times as much metal.

As previously explained, the vast majority of commercial and investor buyers and sellers of commodities futures and options do not want to buy or sell their physical commodities through exchange traded futures and options. They want leveraged, margined, cleared access to price changes in the underlying commodity. They have no intention of making or taking delivery. **A common misbelief is that if these investors could not buy futures or options they would buy physical silver or gold. Most of them would not, in fact. They simply would not be involved in precious metals, or other commodities.**

Thus the key relationship is between deliveries and inventories. Since more than 99% of the trades are closed out without deliveries, it is the volumes of deliveries in relationship to the inventories that matter. But even that needs qualification, since commercial participants regularly take delivery of depository receipts and re-deliver them the next day. So not even deliveries indicate accurately how much physical metal might be taken out of depositories.

These are complex mechanics of the market. This report is not designed to educate the readers of all of the nuances involved in physical as well as futures and options silver trading. The lack of knowledge of many of the topics briefly touched on here often is the kernel around which misstatements about silver, and gold, are formed.

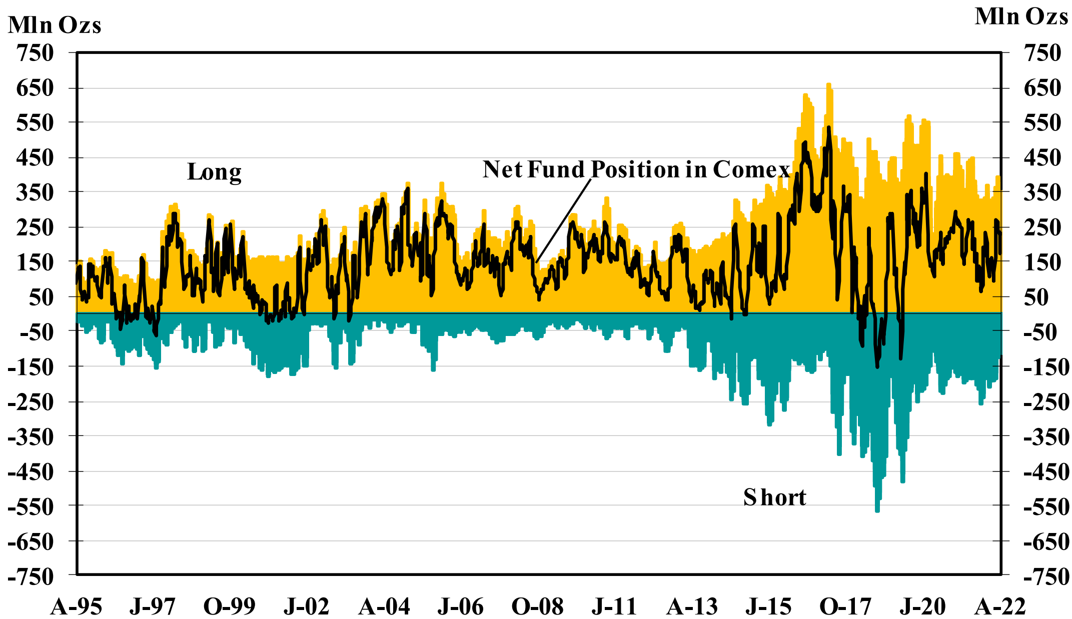


This chart is another way of illustrating the extent to which the Comex silver futures contract has ample ‘backing’ of reported inventories in the New York market.

Of interest is the extent to which deliveries represented a larger percentage of inventories in the 1980s and 1990s, declining during the 2000s. This primarily represents increased inventories, although a movement away from using New York market depositories as way stations of physical metal coming from mines and refineries on its way to fabricators based in the eastern United States and Canada after the 1990s also is reflected in this percentage.

Non-Commercial Gross Long and Short Silver Positions

Comex Futures & Options. Weekly Data, Through 29 April 2022



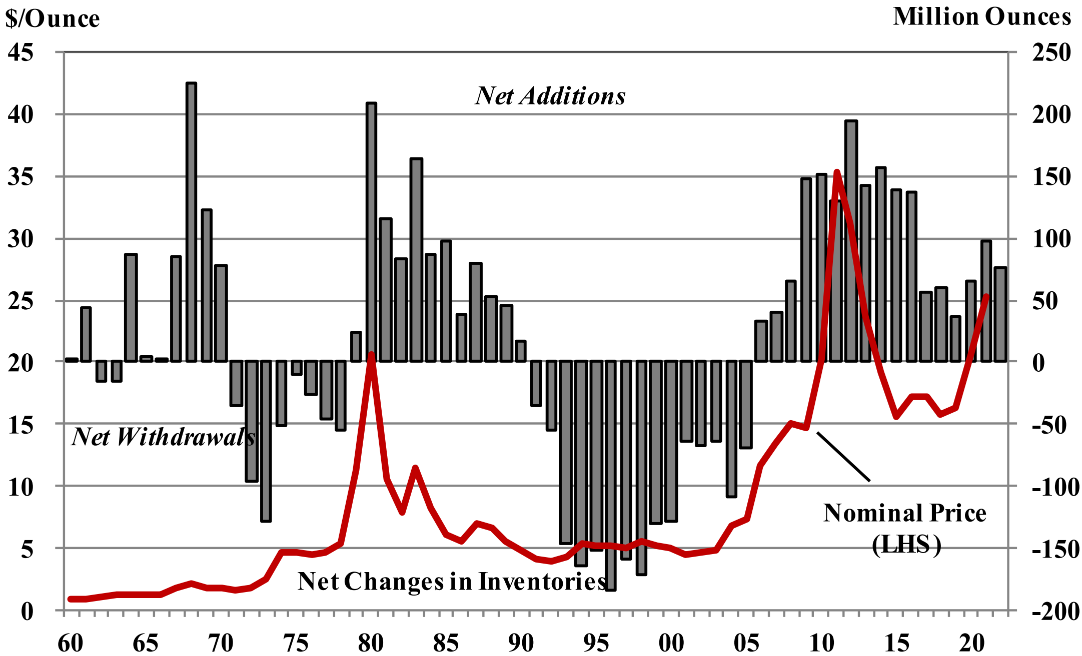
Institutional invsetors remain interested in silver, if not as much as they were prior to 2016.

Institutions continue to hold around 350 million ounces of gross long positions in Comex futures and options. Their gross short positions have contracted over the past few years, and hover around 150 to 200 million ounces, less than half of the peak gross short positions during the bear market in silver prices.

Net long positions have ranged largely between 150 and 250 million ounces since 2020, down from the peaks around 2015 and 2016 but still firmly net long.

Silver Market Balance

Annual, Projected Through 2022. Prices through 2021.



This chart shows the relationship between changes in net surpluses and deficits of newly refined silver relative to fabrication demand, on the one hand, and silver prices on the other.

Much of these surpluses actually reflect the active purchases, increased demand, from investors. The deficits represent times when investors (and other inventory holders, but primarily investors) were net sellers.

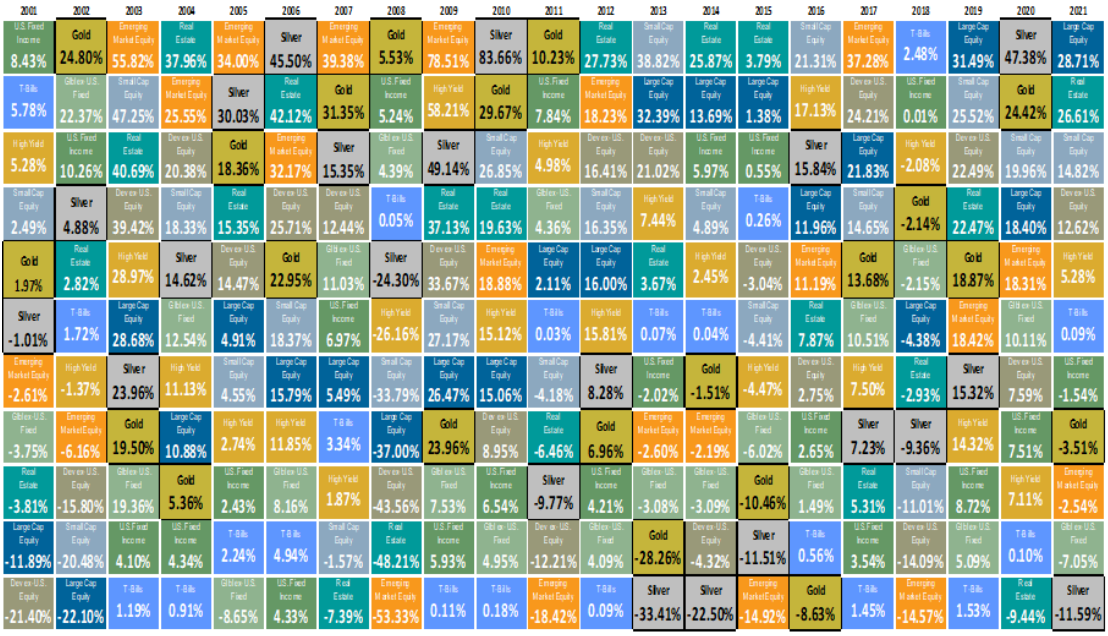
As a result, silver prices rise during periods of market surpluses, reflecting strong investor demand, and fall or move sideways during deficit periods, such as the period from 1990 through 2005.

The strong period of historical levels of investor demand from 2009 through 2016 can be seen in the rise in prices. The lower prices after 2013 led investors to pull back on their purchases for four years, which were reflected in sustained lower prices. In 2020 investor demand almost doubled, leading to the sharp rise in silver prices that year. Investor demand rose around 50% again in 2021, moving silver prices even higher. Demand is projected to be a bit lower in 2022, but still high enough to support high silver prices.

Starting in the 1990s some promotional organizations began adding investment demand in which fabrication demand, to try to make investors believe the silver (and gold) market was in a tighter supply-fabrication demand balance. CPM does not distort its data and analysis in this way.

The CPM Quilt Chart Of Investment Returns Including Gold and Silver

Annual Returns for Key Indices Ranked in Order of Performance (2001–2021), Percent Change Year-End to Year-End



This chart is largely unreadable without a magnifying glass. A close up of the past two years, with the first quarter of 2022 appears on the next page.

This is an ‘investment quilt chart,’ ranking 9 classes of assets from stocks and bonds to currencies, cash, and real estate in terms of annual performance of price gains.

CPM added gold and silver to this data. Silver and gold each were the top performing asset class in 15% of the years from 2000 to 2021. In total, precious metals topped all these other investments 30% of the time. Another 5% - 15% of the years gold or silver were the second or third best price performing investment.

Gold and silver effectively compete with stocks, bonds, real estate.

Investment Returns Including Gold and Silver

Annual And Quarterly Returns

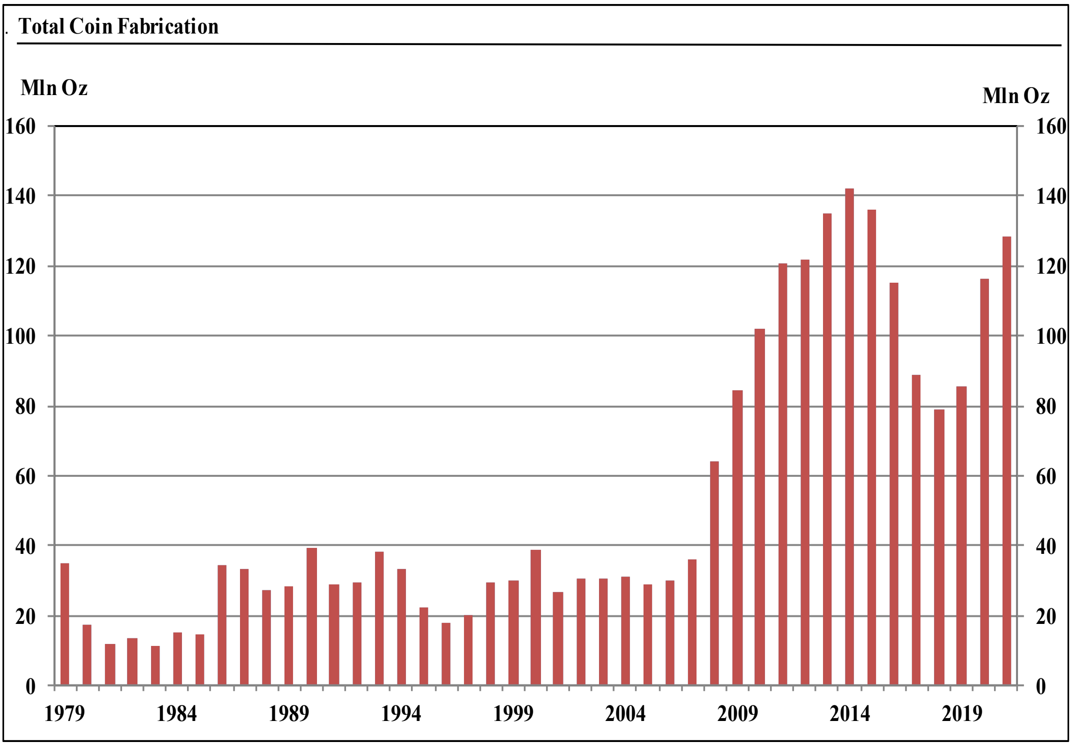
2020	2021	2022-Q1
Silver 47.38%	Large Cap Equity 28.71%	Silver 7.63%
Gold 24.42%	Real Estate 26.61%	Gold 6.60%
Small Cap Equity 19.96%	Small Cap Equity 14.82%	Cash Equivalent 0.61%
Large Cap Equity 18.40%	Dev ex- U.S. Equity 12.62%	Real Estate -2.32%
Emerging Market Equity 18.31%	High Yield 5.28%	Large Cap Equity -4.60%
Gblex- U.S. Fixed 10.11%	Cash Equivalent 0.09%	Dev ex- U.S. Equity -4.81%
Dev ex- U.S. Equity 7.59%	U.S. Fixed Income -1.54%	High Yield -4.84%
U.S. Fixed Income 7.51%	Gold - 3.51%	U.S. Fixed Income -5.93%
High Yield 7.11%	Emerging Market Equity -2.54%	Gblex- U.S. Fixed -6.15%
Cash Equivalent 0.10%	Glblex- U.S. Fixed -7.05%	Emerging Market Equity -6.98%
Real Estate -9.44%	Silver -11.59%	Small Cap Equity -7.53%

Here are the results from the investment quilt chart for the past two years and for the first quarter of this year.

In the first quarter of this year silver topped returns, at 7.6%. Gold was second, at 6.6%. The next best performer was cash at 0.6% — one tenth of the gold return. All of the other asset clases lost price value over the course of the first quarter.

The second quarter, not yet complete, will show gold and silver not doing so well. Often when an investment has a strong price increase in one period it will consolidate or give up some of that performance in the next period. That is typical across investments.

Silver and gold were the top two performers in 2020. Silver fell to the bottom of the chart and gold to the fourth worst position in 2021, as other assets had their days.



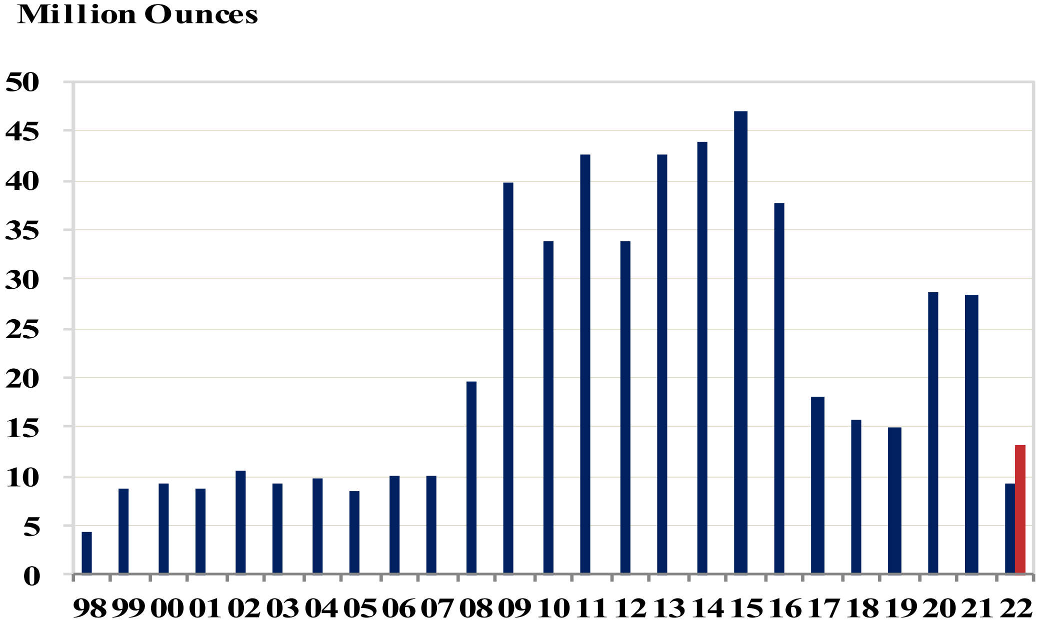
Silver coin demand has mirrored overall investment demand for silver, rising when investors want silver and pulling back when they are less enthusiastic.

The recover in silver coin demand over the past two years is clear here. Even so, the sales of silver in coin form has been limited by quality control and output issues in the manufacture of coin blanks.

As mentioned earlier, they has been a shift in investor preferences away from bullion bars toward bullion coins since the middle of the 1980s.

Annual U.S. Mint Silver Coin Sales to Dealers

May 2022



Dealer Premia on U.S. Mint Silver Coins

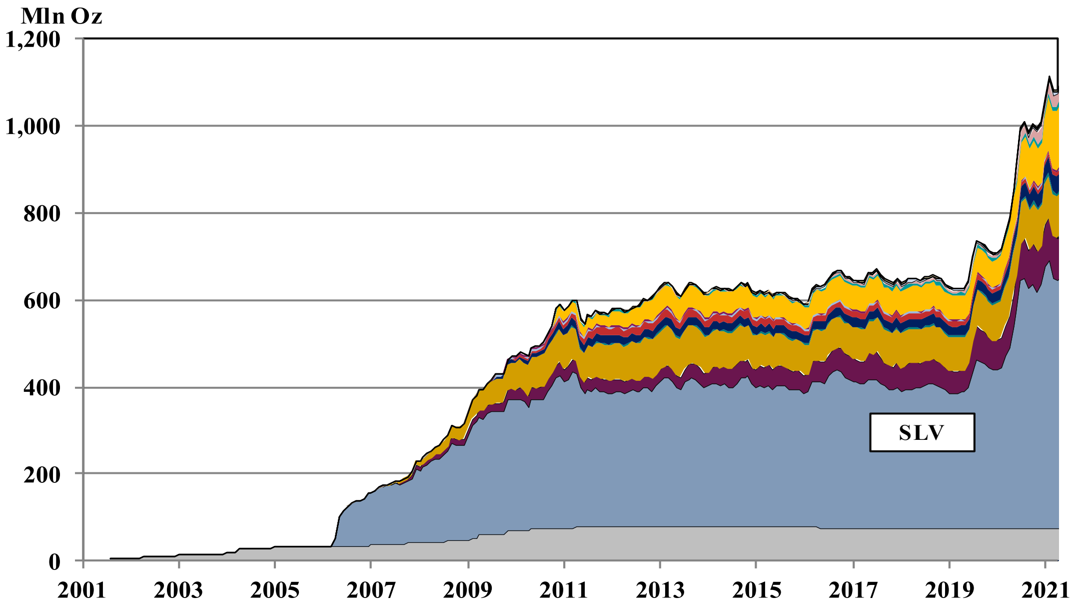
Daily Data through 31 May. 2022

The blue bar for 2022 represents sales of Silver Eagle coins during the first five months of this year. The red bar is the same period in 2021. It can be seen that 2022 sales are lagging somewhat behind last year's levels.

This lower sales figure represents a combination of lower investment demand, continued production and supply constraints, and the high premium on Silver Eagles, which is leading some investors to buy other forms of physical silver.

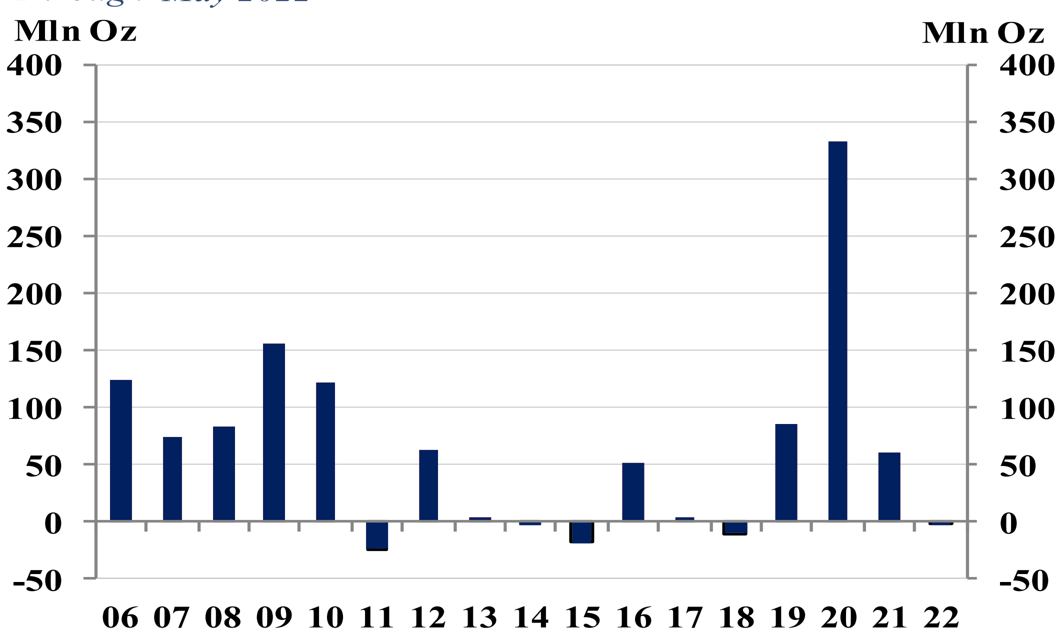
Silver Exchange Traded Product Holdings

Through May 2022



Annual Changes to Silver ETP Holdings

Through May 2022

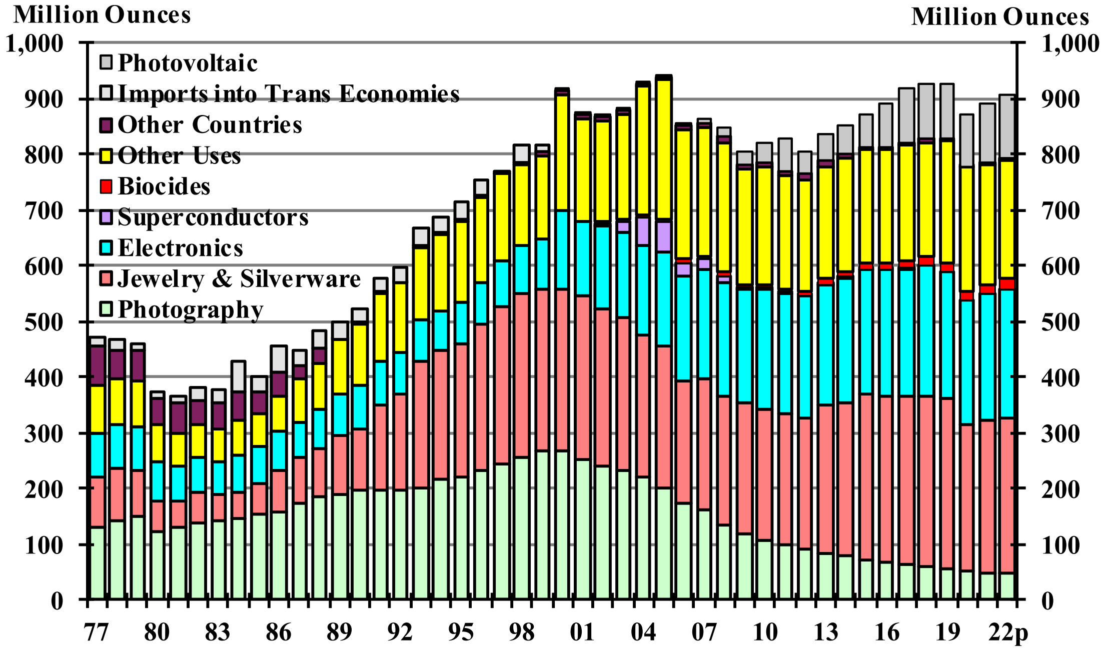


Net investor demand for silver via exchange traded produces reflects the reduced demand for silver this year.

The spike in 2020 was not completely investment demand, but reflected some bullion banks reducing large inventories built up during the first months of the pandemic and lockdown, as well as metal they had taken on during the years of lower investment demand for silver, from 2016 through 2019.

Silver Fabrication Demand

Projected Through 2022



Silver use in the manufacture of fabricate products fell sharply during the recession of 2020. Demand sprung back in 2021, and continues to expand in 2022, but at relatively slow rates. By the end of 2022 silver use in fabricated products still is expected to be running below pre-pandemic levels.

The next page breaks out silver use in electronics and electrical applications, one of the more dynamic major uses of silver. The second chart on the next page looks at silver use in automotive electronics, which is around one-sixth of total silver use in electronics.

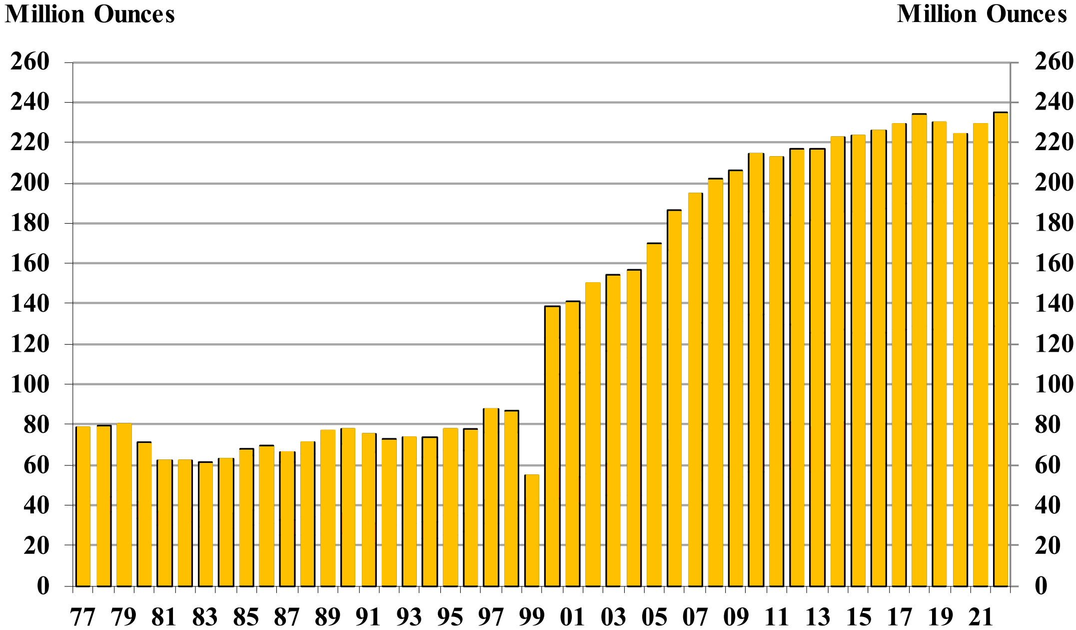
The growth in silver use in automotive electronics has reflected the massive loading into cars and trucks of electronic controls and a wide range of electronic accessories.

There has been a great deal of discussion about how the advent of electric vehicles already is behind the strong growth in silver use in automobiles and will be more important in the years and decades to come. The reality is that the rapid increase in silver use in autos predates the rise in EVs production and sales. Furthermore, the increase in EV production and sales is likely to experience various constraints in how fast this industry will grow. While EVs certainly will boost the use of silver in autos, the growth rate and timing is likely to be far lower than some silver marketeers say it will be.

About one ounce of silver is used per vehicle manufactured today. EVs are expected to use 1.5 to 2.0 ounces per vehicle. If a conservative, realistic projection is that there could be 20 or 30 million EVs being made and sold by 2030, eight years from now, that would add perhaps 10—15 million ounces of silver use to the automotive industry's present demand levels.

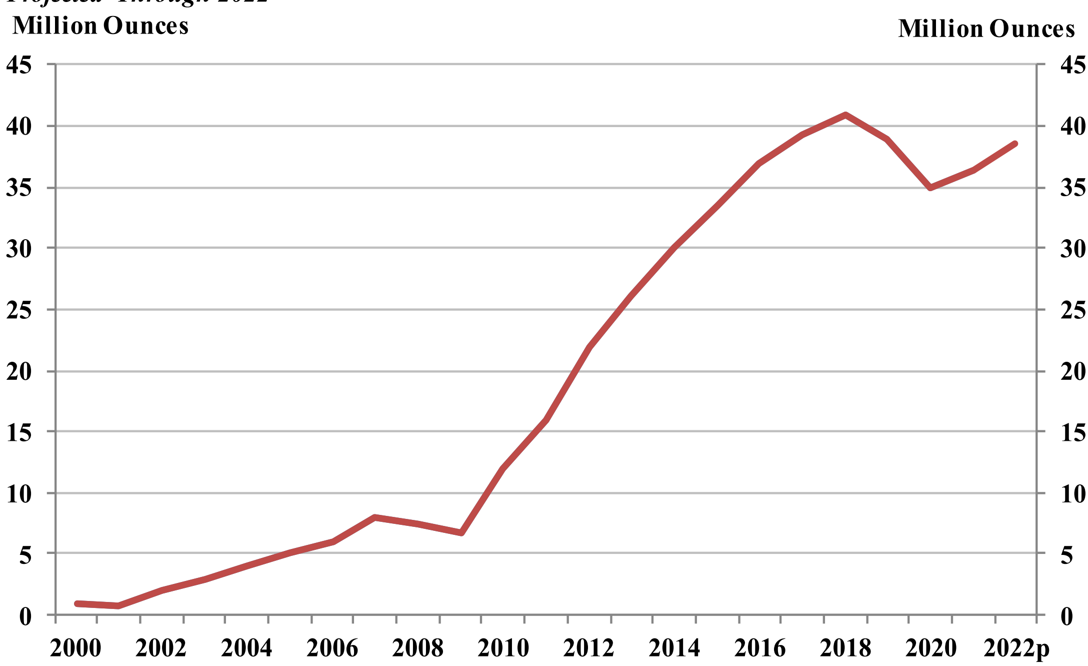
Silver Fabrication Demand for Electronics and Batteries

Annual, Projected Through 2022



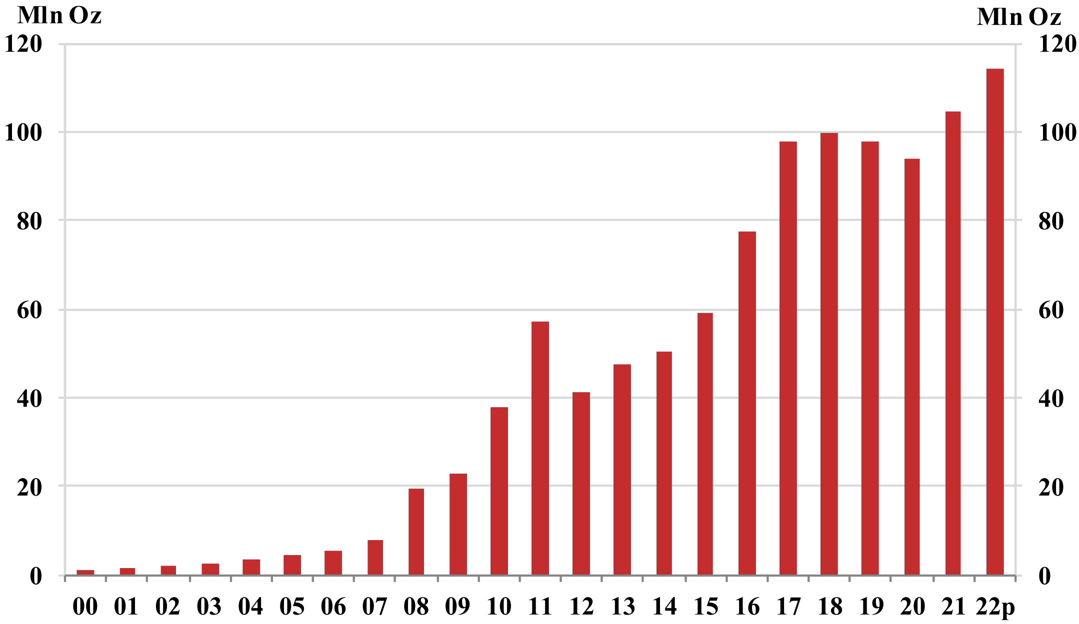
Silver Use In The Auto Sector

Projected Through 2022



Annual Silver Demand for Photovoltaic Solar Panels

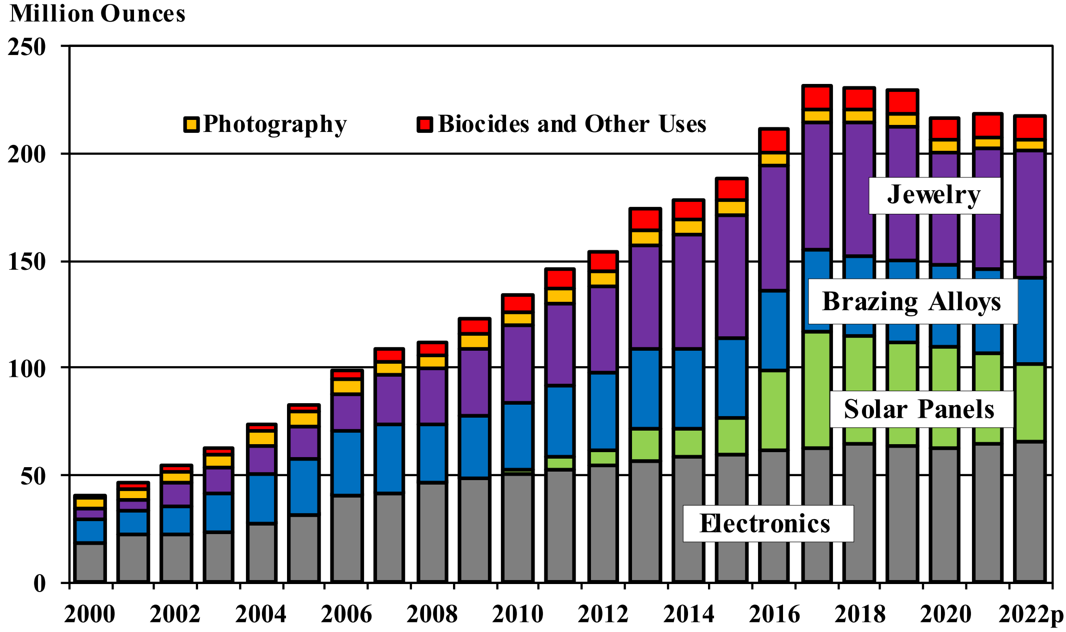
Projected Through 2022



Solar photovoltaic (PV) panels have become a major source of demand and use of silver over the past 15 years. This application used more than 100 million ounces of silver in 2021, and is expected to continue increasing its silver use for decades to come.

Silver Fabrication Demand in China

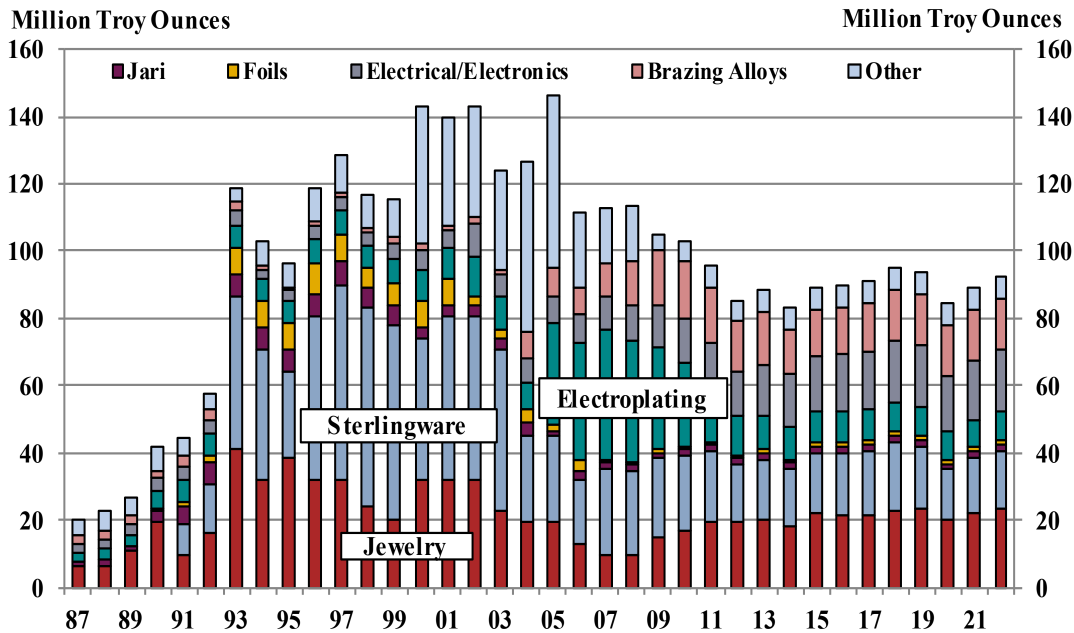
Annual, Projected Through 2022



China is the largest silver-consuming nation, along with one of the largest producers and refiners of silver.

Most silver use in China is in electronic components and electrical equipment, and in jewelry and decorative objects. The division of demand in China is very similar to that in other countries.

Silver Fabrication Demand in India
Annual Projected Through 2022

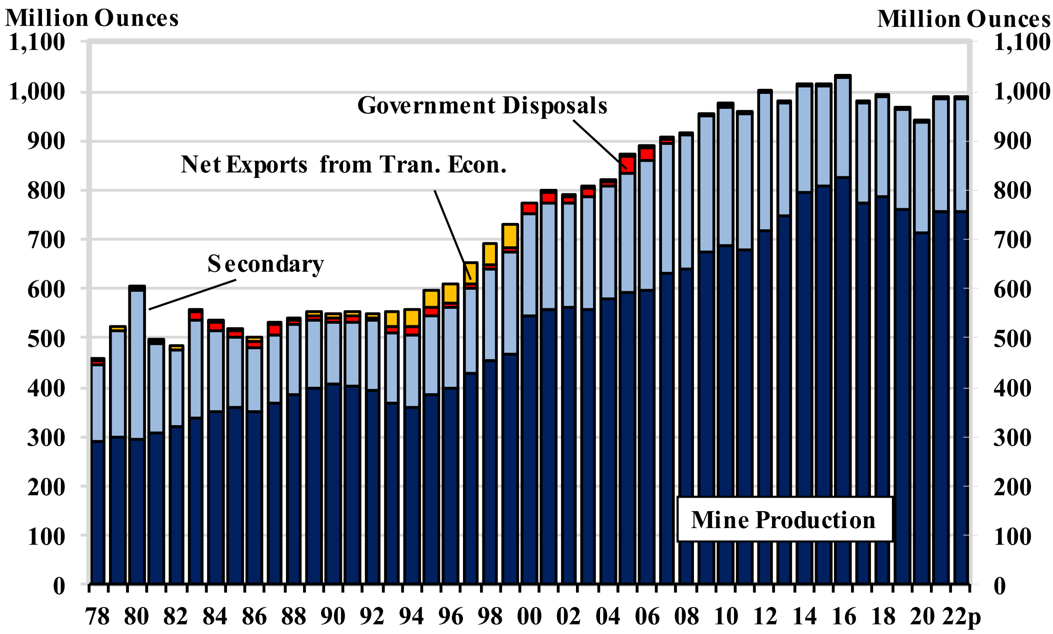


India is another major silver using market, formerly the world's largest consumer of silver. Demand declined slightly in 2020, reflecting the pandemic and economic lock down.

Much of the silver used in India in the past, and almost half of the silver used in recent years, as been in jewelry and decorative objects such as statues and housewares. This demand has a quasi-investment aspect to it.

Total Annual Silver Supply

Projected Through 2022

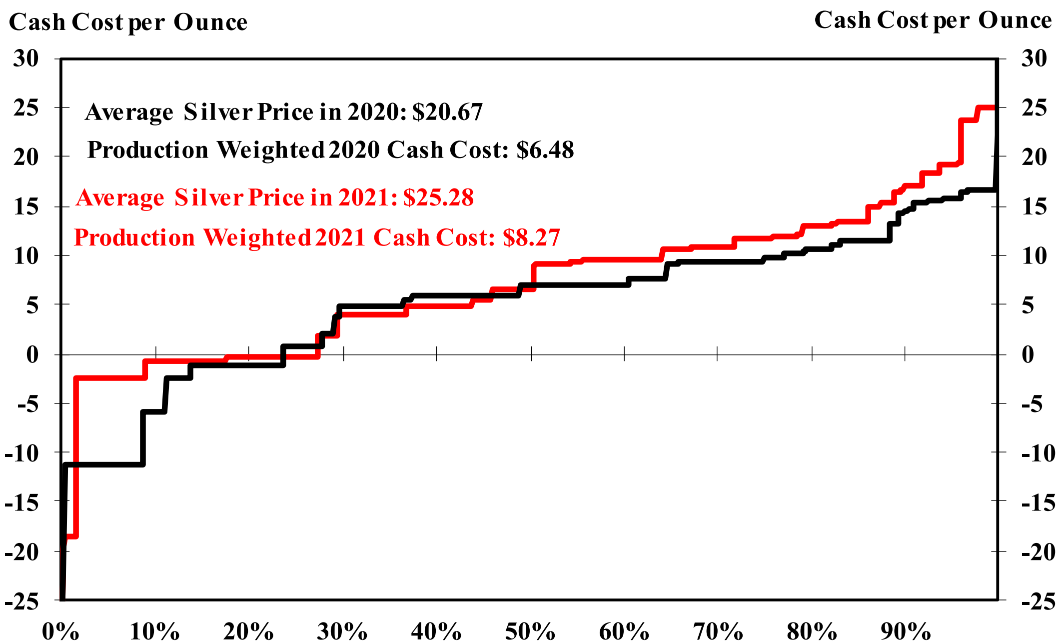


Total supply of newly refined silver rose back to pre-pandemic levels in 2021, recovering more quickly than has fabrication demand.

The growth in mine production has been slowed and will continue to be restrained by a dearth of new capacity under development. This is a consequence of the relatively lower silver prices from 2015 into the middle of 2020. This period of lower prices combined with a period of relatively strong disinterest in investing in silver mining companies to capital constrain the mining industry, leading to less new capacity coming onstream in recent years.

Some of the factors constraining new capital flows into mining, not just silver mining, continue. However, with sharply higher prices for silver and other metals over the past two years, and expectations that the price increases since early 2020 may stick around, there is an increase in capital flows that is likely to be reflected in larger increases in the years ahead.

Primary Silver Producers' Cash Costs in 2021



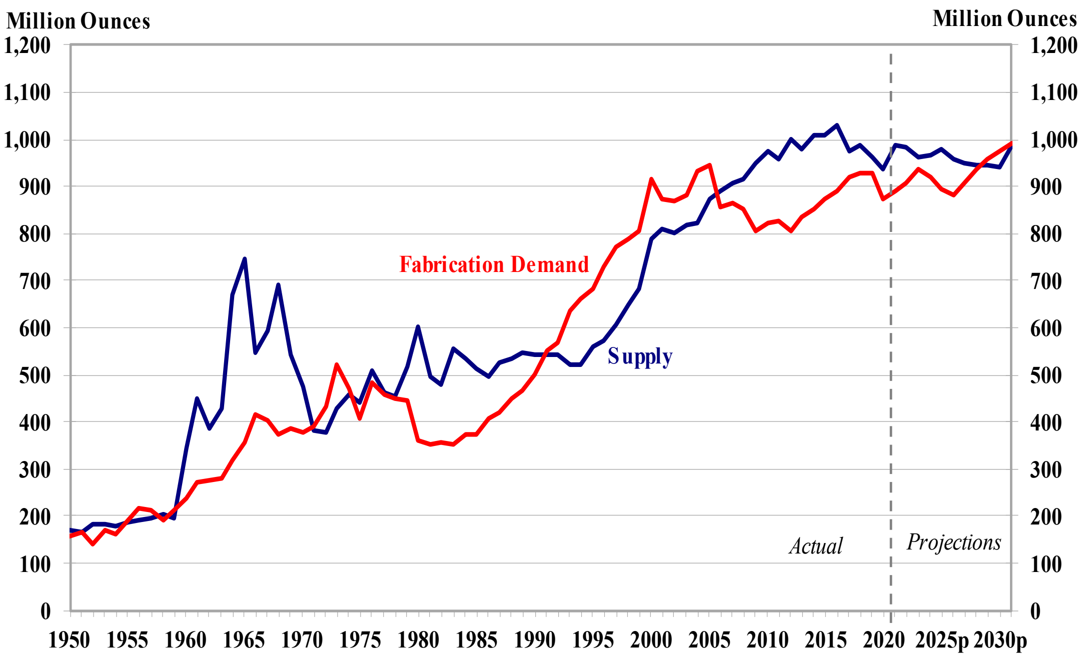
The weighted average cash cost to produce an ounce of silver at a primary silver mine was $8.27 om 2021. This excludes capital and administrative costs, and debt exposure, but it compares favorably to an average market price of $25.28 last year.

The cash costs had risen sharply from $6.48 in 2020. Part of this reflected miners shifting to lower average grades that could be profitably mined at the higher prices they were receiving for their production in 2021. This is standard mining industry practice, to mine the average payable grade in order to maximize the long-term life of mine output and profitability.

Higher unit input costs also factored into the rising costs, although it should be noted that energy costs, a major component of mines' cash operating expenses, were rising more modestly in 2021 than they have during the first half of this year.

Silver Supply and Demand, Base Case

Annual Data, Projected Through 2031



This final chart includes CPM Group's projections for Total Silver Supply and Fabrication Demand of silver to the year 2031, the next 10 years. CPM does not typically provide its long-term projections in widely circulated reports, but we want to end this report with a suggestion of the shape of the silver market to come.

The price of silver is determined by the interplay of total newly refined silver entering the market, fabrication demand, investment demand trends, and shifts in inventories.

Of these market segments, investment demand is the most dynamic, and exerts the greatest influence on the direction and level of silver prices.

If investors want a lot of silver, they bid up the price, encouraging supply and discouraging fabricators from using silver insofar as they can. If investors do not want a lot of silver, they do not buy silver and push the price up. Sometimes, they sell it on a net basis, as was the case from 1990 through 2005, when net investor selling kep silver prices between $3.50 and $5.50 for most of that time.

Looking forward, CPM expects fabrication to rise, especially in the back half of the next 10 years, while total new supply is projected to be relatively flat. That will mean that there will be less silver around for investors. However, the economic, financial, and political environment suggest that investors will want more, not less, silver. The combination of these trends suggest sharply higher prices later in this decade.

Silver Truths was created as an accompanying report to the **Silver Facts and Fantasies II** presentation, and the **2022 PDAC Silver Reception**. We thank our sponsors for helping us make this report available free of charge.

CPM GROUP

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Gold, Silver, and other commodities markets could offer incredible opportunities if you know how to evaluate them.

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