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Date: June 9, 2022
Topic: **Commodities**



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SIL – Global X Silver Miners ETF

GLOBAL X ETFs RESEARCH

Silver, Explained

Silver often flies under the radar of its metal counterpart, gold, but silver has unique properties that make it attractive as both a precious and an industrial metal. The following analysis seeks to shed additional light on silver by answering five key questions:

- How and where is silver extracted?
- How is silver used?
- How does silver compare to gold?
- What are silver’s supply and demand dynamics?
- What are the differences between investing in physical silver, futures, and silver mining stocks?

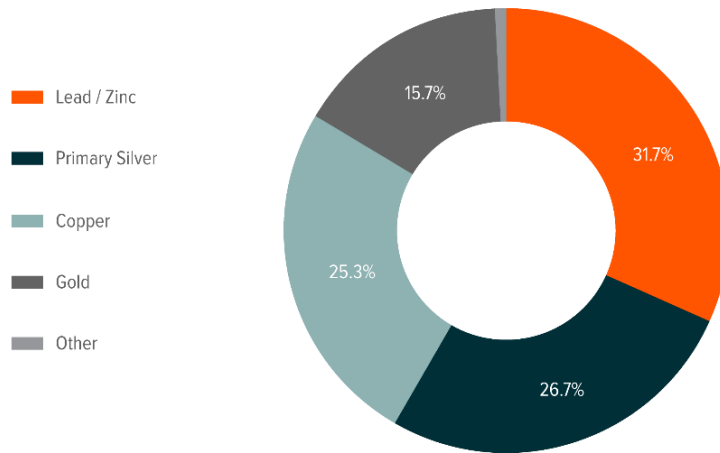
How and Where Is Silver Extracted?

Silver ore is mined through both open-pit and underground methods. The open pit method involves using heavy machinery to mine deposits relatively near the Earth’s surface. In underground mining, tunnelling deep shafts into the ground allows for the extraction of the ore. With extraction completed, the ores are crushed, ground, and then separated through a process called “flotation” to achieve mineral concentrations 30-40 times higher than natural occurrences. Refiners then further concentrate this extraction through the process of electrolysis or amalgamation.¹

Only 27% of silver derives from mining activities where silver comprises the primary source of revenue. The remaining 73% comes from projects where silver is a by-product of mining other metals, such as copper, lead, and zinc.² As expected, the revenues of firms focused on primary silver production tend to be much more impacted by silver prices than firms that produce it as a by-product.

2020 SILVER OUTPUT BY SOURCE METAL (%)

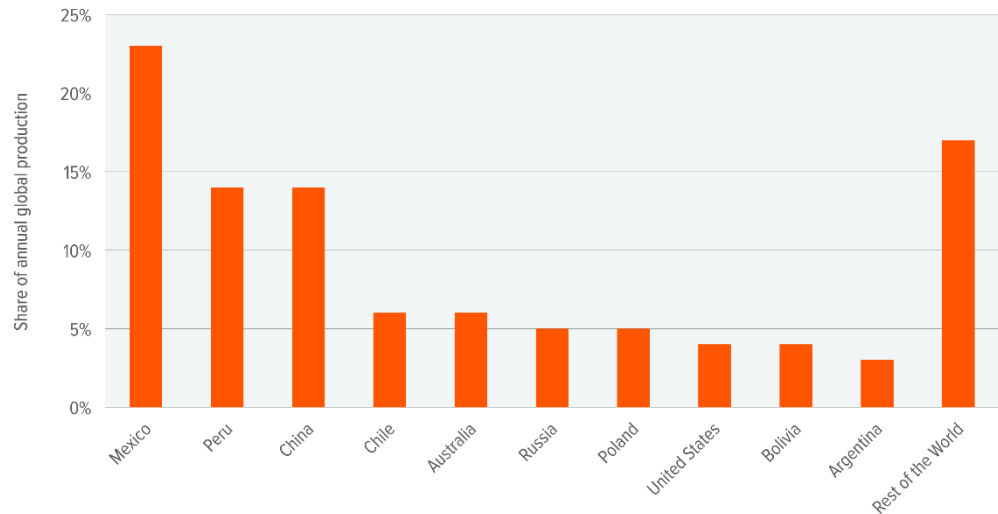
Sources: Global X ETFs based on information derived from: Metals Focus. (2021, April). *World silver survey 2021*. The Silver Institute.



Silver can be found across many geographies, but approximately 56% of the world’s silver production is found in the Americas, with Mexico, Peru, and Chile supplying 43%.³ Outside of the Americas, China, Australia, and Russia combine to make up nearly 25% of the world’s production.

TOP 10 SILVER PRODUCING COUNTRIES

Sources: Global X ETFs based on information derived from: Metals Focus. (2021, April). *World silver survey 2021*. The Silver Institute.



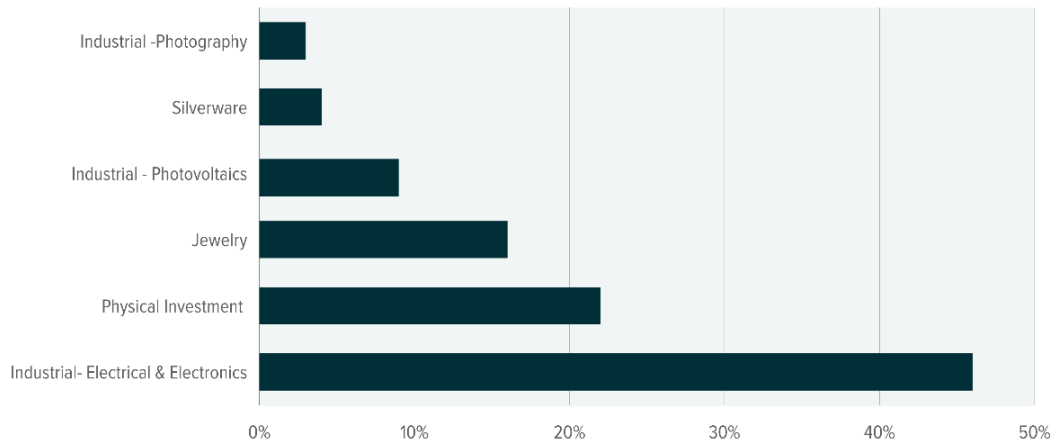
How Is Silver Used?

For centuries, silver has been used in a variety of luxury goods, such as jewelry, tableware, and fine art. Many buyers look favorably upon the durable nature of silver and its collectability aspect. Today, over 40% of silver’s consumption stems from this pocket of the market, including jewelry and silverware.⁴ Silver is a significant material for industrial uses as well, due to its thermo-electro conductivity, ductility, malleability, and high sensitivity to light. The metal is used extensively in a variety of faster-growing electronics segments, such as solar panels, LED lighting, flexible displays, touch screens, RFID tags, cellular technology, and water purification. Silver’s unique properties, as well as the relatively small quantities of the metal required in many applications, often make it an irreplaceable input, even if the price of silver rises.⁵



2021 GLOBAL SILVER DEMAND BY CATEGORY

Sources: Global X ETFs based on information derived from: Metals Focus. (2021, April). *World silver survey 2021*. The Silver Institute.



How Does Silver Compare to Gold?

Silver and gold are often compared to each other, given their common classification as precious metals. Note two important differences between them: Silver’s additional industrial usage and their relative market sizes.

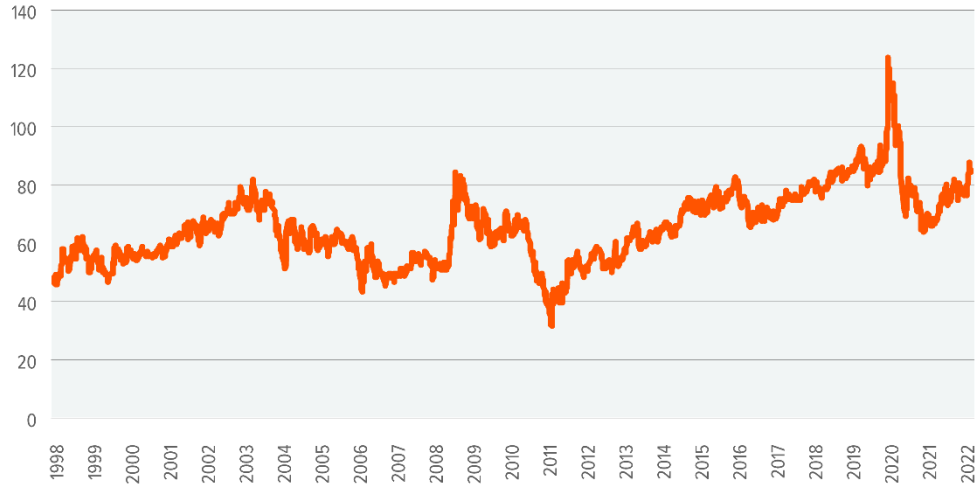
Industrial Usage: As discussed in the section above, industrial usage of silver accounts for about 58% of its annual demand. Gold, by comparison, has only about 8% of its demand driven by industrial use, with the rest attributed to jewelry and gold bars.^{6,7} This difference means that gold is more purely a precious metal, whereas silver and its price is impacted by both demand for precious metals, as well as industrial demand.

Market Size: The market for gold is enormous, with its total value exceeding that of the European sovereign debt market. The market for silver, however, is much smaller and tends to be more volatile. The silver market is one-tenth the size of gold’s in London’s wholesale dealing and one-fifth the size of gold’s COMEX futures.^{8,9}

The Gold-Silver Ratio: The gold-to-silver ratio is a commonly cited figure that represents the amount of silver required to purchase one ounce of gold. This ratio tracks the prices of these metals relative to each other and can indicate when one is potentially cheaper or more expensive than usual. Over the last 30 years, this ratio has been at an average of 65. Currently the ratio is near 78, which possibly indicates that silver is undervalued relative to gold.

GOLD/SILVER RATIO

Source: Bloomberg L.P. (n.d.) [The gold/silver ratio is computed taking the gold spot divided by the silver spot data from March 1, 1992 to June 1, 2022] [Data set]. Retrieved in June 1, 2022 from Global X Bloomberg terminal.



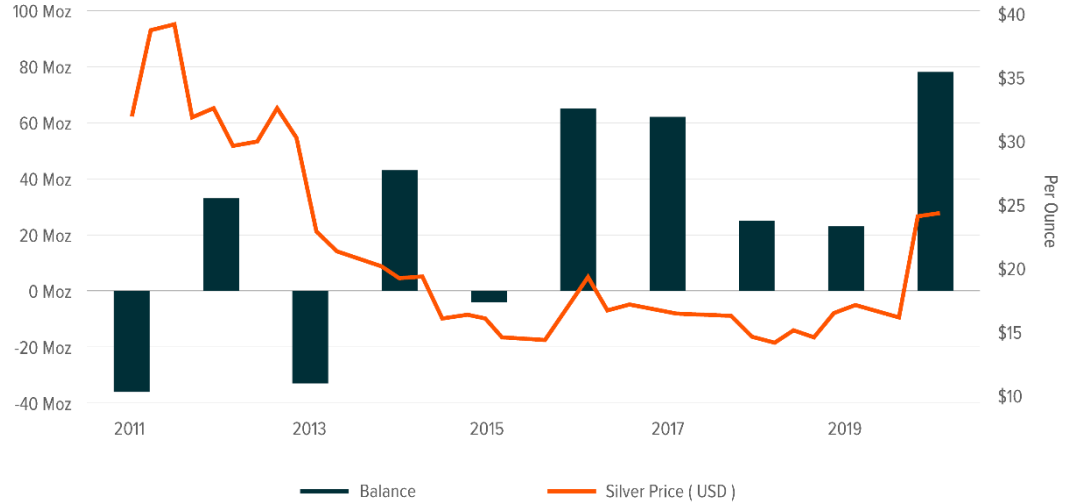
What Are Silver’s Supply and Demand Dynamics?

Over the past five years, global demand for silver has remained aligned with global supply. In 2021, supply outpaced demand by only 23 ounces.¹⁰ If investments in silver bars and coins are excluded from the analysis, however, then the supply of silver exceeded demand.¹¹ This implies that demand for silver as a store of value and an investment can dramatically swing prices, particularly given the volatile nature of such demand. Therefore, if owning precious metals becomes more attractive to investors, then silver prices could rally significantly. However, if interest rates rise sharply, it could put negative pressure on the metal’s price. In addition, precious metals are often sought after when volatility is high, as investors seek investments that can potentially preserve their value even in a bear market.



SILVER MARKET OVERVIEW

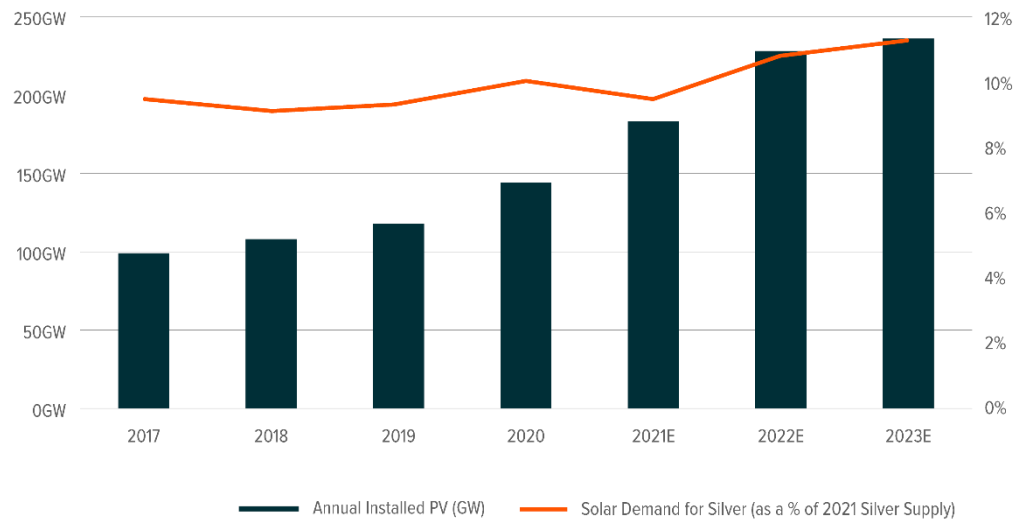
Sources: Global X ETFs based on information derived from: Bloomberg, L.P. (n.d.) [Silver prices and surplus deficit data based on the market balance from January 1, 2011 to December 31, 2020] [Data set]. Retrieved April 1, 2022 from Global X Bloomberg terminal.; Metal Focus. (2022, April 1). *World silver survey 2021*. The Silver Institute.



One trend that has the potential to dramatically change silver’s supply and demand landscape involves increased solar power installations. It is estimated that each gigawatt (GW) of installed solar power requires 30 metric tons of silver.¹² Given its high electrical and thermal conductivity, a silver paste is used in roughly 85% of photovoltaic cells.¹³ In 2020, new solar installations amounted to 138 GW, with solar representing approximately 9% of silver’s total demand.^{14,15} However, analysts estimate that 2023 could witness 236 GW of new solar capacity, representing 11% of total expected silver demand.¹⁶

GLOBAL PV INSTALLATIONS AND SILVER DEMAND

Sources: Global X ETFs based on information derived from: Henbest, S., Kimmel, M., Callens, J., Vasdev, A., Brandily, T., Berryman, I., Danial, J., & Vickers, B. (2021, July). *New energy outlook 2021*. Bloomberg NEF.; Metals Focus. (2021, April). *World silver survey 2021*. The Silver Institute.



What Are the Differences Between Investing in Physical Silver, Futures, and Silver Mining Stocks?

WAYS TO INVEST IN SILVER

| | PHYSICAL OWNERSHIP | FUTURES | SILVER MINERS |
|---------------------------|---|--|---|
| TRACKING OF SILVER PRICES | Directly tracks spot prices in silver | Closely tracks spot prices in silver, but can be susceptible to contango ¹⁷ | Tends to be leveraged play on silver prices given high fixed cost of mining |
| UNIQUE FEATURES | Often requires storage costs such as safes or insurance | May lose value even if spot silver prices rise, given contango | Indirect exposure to silver given that miners can have revenues from other metals |
| TAXATION | Collectible tax rate (28%) | Blended 60% long term & 40% short term capital gains (29.08% max) | Long term (23.8% max) or short term (37.0% max) capital gains depending on holding period |

Physical Silver: Silver bullion can be bought directly from precious metal dealers, who sell it at spot market prices. The advantage of physical ownership is that its value closely tracks the price movements of the broader silver market. This also allows owners to potentially physically possess the metal, giving them direct access to their investment. One downside is that dealers can charge premiums to buy and sell silver, which can dramatically reduce returns. In addition, there can be costs of storage, such as buying a safe or renting a safety deposit box. Moreover, when an investor sells physical silver, gains are currently taxed at a maximum of 28%.

Silver Mining Stocks: Silver mining stocks can offer indirect exposure to silver prices. These stocks tend to be leveraged plays on silver prices, owing to the high fixed costs of extracting the metal. Mining stocks are considerably more liquid than physical silver as they can be bought and sold during market trading hours. Silver mining stocks can also be advantageous from a tax perspective, as long-term holders are taxed at long term capital gains rates, which are currently at a maximum of 23.8%. A potential drawback is that investors are exposed to idiosyncratic risks associated with owning the stock of a particular company. To counteract this, investors may look to an ETF, which owns a broad basket of companies involved in silver mining.

Futures: Paper trading of silver is conducted through the futures market. Paper trading provides investors with exposure to silver without needing to physically hold the metal, potentially improving liquidity and reducing the cost of ownership. Unlike the bullion market, futures markets can also allow investors to use leverage. One downside of futures is contango, when future prices of a commodity are higher than their spot price.¹⁸ This can erode gains over time, even if the spot price of silver rises.

Conclusion

Silver is a unique metal because it has properties of both a precious and an industrial metal. We believe this makes silver a useful portfolio holding as it can potentially appreciate in both environments where demand for precious metals is rising, such as during periods of heightened volatility, as well as in eras of strong economic growth where industrial demand is expanding. For long term investors, we believe that a basket of silver mining stocks is a desirable way of gaining exposure to silver, given their leveraged exposure to the underlying metal's price movements.



Footnotes

1. Hoffman, J. E. (2015, January 28). Silver processing. In *Encyclopaedia Britannica*. <https://www.britannica.com/technology/silver-processing>
2. Metals Focus. (2021, April). *World silver survey 2021*. The Silver Institute.
3. Ibid.
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5. Bullion Vault. (n.d.) *What is silver used for in industry?* Retrieved on May 3, 2022 from <https://www.bullionvault.com/silver-guide/silver-industrial-demand>
6. Metals Focus. (2021, April). *World silver survey 2021*. The Silver Institute.
7. Garside, M. (2021, May 4). *Global gold demand share by sector 2020*. Statista.
8. London Bullion Market Association. (n.d.) *LBMA previous metal prices* [Data set]. Retrieved on May 1, 2022 from <https://www.lbma.org.uk/prices-and-data/precious-metal-prices/>
9. Bloomberg, L.P. (n.d.) [Data set]. Retrieved May 1, 2022.
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11. Ibid.
12. Ibid.
13. Understand Solar. (2016, February 14). *Why silver prices will rise: Solar*. <https://understandsolars.com/why-silver-prices-will-rise-solar/>
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15. Metals Focus. (2021, April). *World silver survey 2021*. The Silver Institute.
16. Henbest, S., Kimmel, M., Callens, J., Vasdev, A., Brandily, T., Berryman, I., Danial, J., & Vickers, B. (2021, July). *New energy outlook 2021*. Bloomberg NEF.
17. Contango: when a commodity's future price is higher than its spot price.
18. Hayes, A. (2022, March 15). *Contango: What is contango?* Investopedia. <https://www.investopedia.com/terms/c/contango.asp>

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Investing involves risk, including the possible loss of principal. International investments may involve risk of capital loss from unfavorable fluctuation in currency values, from differences in generally accepted accounting principles, or from economic or political instability in other nations. Emerging markets involve heightened risks related to the same factors as well as increased volatility and lower trading volume. Narrowly focused investments may be subject to higher volatility. There are additional risks associated with investing in silver and the silver mining industry. SIL is non-diversified.

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