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Six Consecutive Years of Deficit: Why Silver Production Barely Changes

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A MARKET IN DEFICIT FOR THE SIXTH YEAR IN A ROW

On November 12, The Silver Institute reported that the global silver market would record its sixth consecutive annual deficit in 2026. According to estimates prepared by Metals Focus for the Silver Institute, demand would exceed supply by 35 million ounces, and the cumulative deficit for 2021-2026 would reach some 746 million ounces, close to 90% of what the world's mines produce in a year. The price hit a record of US$121.65 per ounce on January 26 and then retreated, although it remains well above the levels of previous years in nominal terms.

With a persistent deficit, one would expect mines to produce more silver. However, Metals Focus projects that mine production in 2026 would remain virtually flat compared with recent years, at 834 million ounces. This brief seeks to explain why silver mine production changes so little even when the market is in deficit, based on how production has evolved and where it comes from.

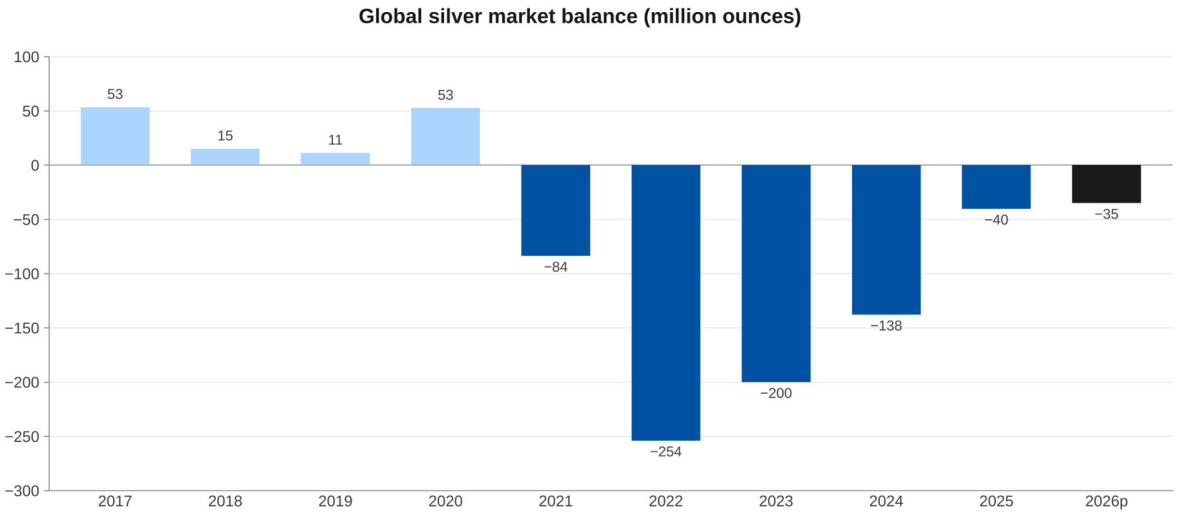
Data and method

The analysis uses data published by The Silver Institute in its annual World Silver Survey, prepared by Metals Focus since the 2020 edition and by the GFMS team (Thomson Reuters, later Refinitiv) up to the 2019 edition. Specifically, it uses (1) the "Silver Supply and Demand" table of the World Silver Survey 2026 for market balance, demand, mine production and recycling in 2017-2025, (2) the same table in the 2016 and 2021 editions for mine production in 2006-2016, (3) the "Silver Mine Production by Source Metal" table of each edition from 2011 to 2026, and (4) the 2026 estimates in the Silver Institute press release of November 12, 2026, prepared by Metals Focus. Annual prices are from the World Bank and are expressed in 2025 dollars using the US Consumer Price Index (CPI). Copper, zinc, lead and gold mine production is from the US Geological Survey (USGS), and Chilean data are from the Chilean Copper Commission (Cochilco). Annual changes are calculated as log differences. Because each edition revises figures for previous years, and the data provider changed in 2019, correlations only compare years reported in the same edition, without mixing figures from different editions. As the series are short, the results describe indicative associations and should be read with caution.

Deficits since 2021

Between 2017 and 2020 the market had small surpluses. Since 2021, demand has exceeded supply every year, peaking at 254 million ounces in 2022 (**Figure 1**). The deficits are mainly explained by rising industrial demand, particularly from solar panels, and by investment purchases.

Figure 1. Global silver market balance, 2017-2026 (million ounces)



Source: GEM Mining Consulting, based on data from The Silver Institute and Metals Focus, World Silver Survey 2026, table "Silver Supply and Demand", row "Market Balance" (2017-2025), and Silver Institute press release of November 12, 2026 (2026p, forecast). Balance = total supply minus total demand.

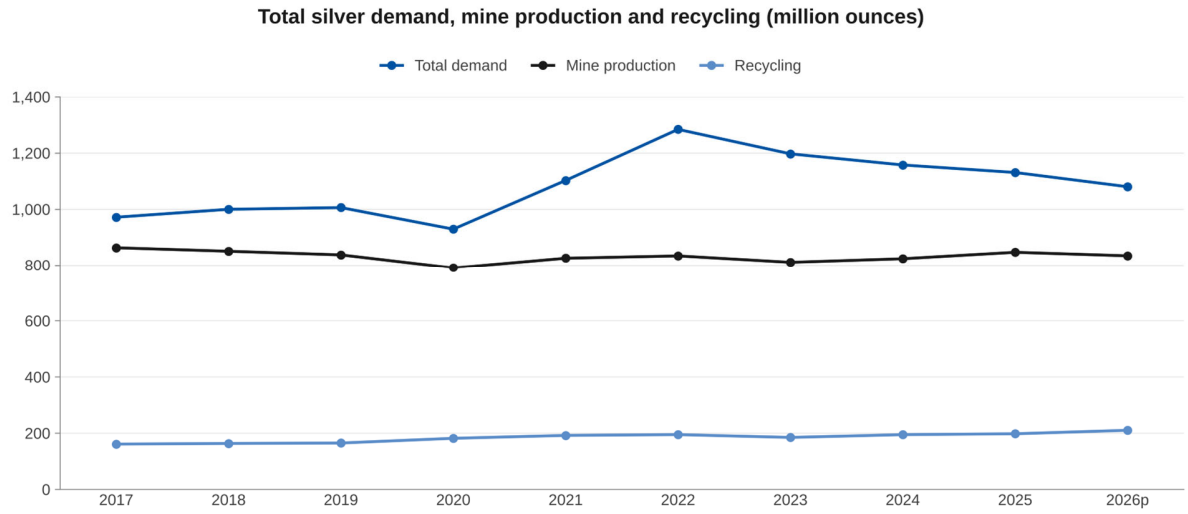
1. Five years of deficit, and mine production did not grow

Between 2021 and 2025, the deficit years, total demand averaged 1,174 million ounces per year, 20% more than in 2017-2020, when the market was in surplus. Mine production, by contrast, averaged 828 million ounces over the same deficit period, 0.9% less than in the previous period (**Figure 2**). The higher demand was partly met by more recycling, which increased by 15% between the two periods.

Why did production not increase despite the deficit? A first reason is that, until recently, the deficit did not translate into high prices. Between 2021 and 2024, the real price averaged US$27 per ounce in 2025 dollars, well below the US$42 of 2011-2013, possibly because inventories accumulated in previous years covered the gap. The sharp price rise began only in mid-2025. A second reason is that production responds late and little to price. The correlation between the annual change in silver mine production and the change in the real silver price is −0.18 with the same year's price and rises only to 0.30 and 0.36 with the prices of two and three years earlier. After the 2006-2011 rally, when the real price rose 172%, production increased gradually and by a much smaller magnitude (around 18% over the same period). An analysis by mine type points in the same direction. Considering how the real silver price changed over the previous two years, production barely reacts. In primary and copper mines the response is nil, and in lead/zinc and gold mines,

where it is largest, a 10% price increase would be associated with an increase of only 1% to 1.3% in production two years later. Given the small number of observations, these results are indicative.

Figure 2. Total silver demand, mine production and recycling, 2017-2026 (million ounces)



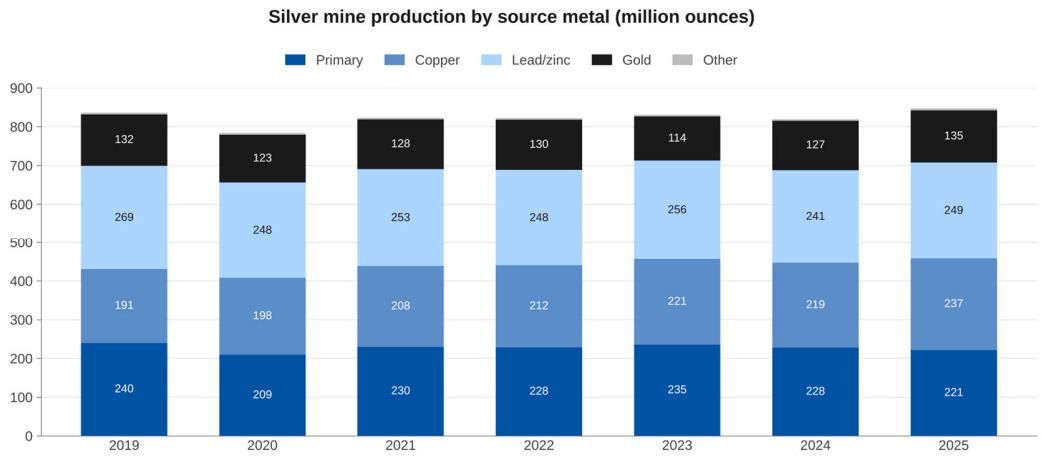
Source: GEM Mining Consulting, based on data from The Silver Institute and Metals Focus, World Silver Survey 2026, table "Silver Supply and Demand", rows "Total Demand", "Mine Production" and "Recycling" (2017-2025), and Silver Institute press release of November 12, 2026 (2026p, forecast).

2. Three out of four ounces come from mines of other metals

Ultimately, the main reason production barely changes despite the deficit lies in where silver comes from. In 2025, only 26.1% of mine production came from mines whose main product is silver, referred to in this brief as primary mines. The rest was obtained as a by-product of lead and zinc mines (29.4%), copper mines (28.0%) and gold mines (15.9%) (**Figure 3**). Notably, the share of primary mines fell from 28.7% in 2019 to its lowest level in the Metals Focus series.

For a mine where silver is a by-product, silver comes along with the main ore being extracted. How much silver is produced therefore depends on how much copper, zinc, lead or gold the mine decides to extract, and not necessarily on the silver price.

Figure 3. Silver mine production by source metal, 2019-2025 (million ounces)



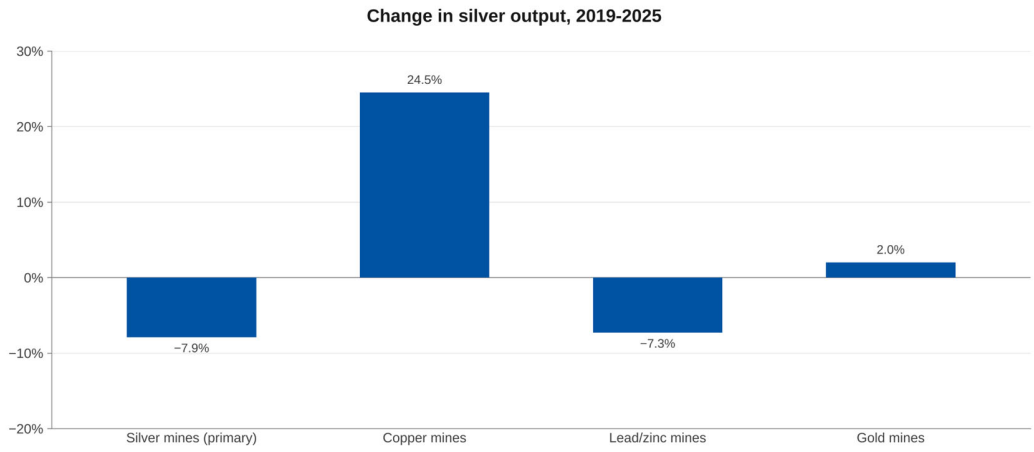
Source: GEM Mining Consulting, based on data from The Silver Institute and Metals Focus, World Silver Survey 2020 to 2026, table "Silver Mine Production by Source Metal", row "Total" of each edition. Totals may differ slightly from the revised mine production series.

3. Each type of mine follows its main metal

Between 2019 and 2025, silver obtained from copper mines increased by 24.5%, driven by a 12.7% rise in world copper mine production (USGS) and, in 2025, according to Metals Focus, by project ramp-ups in Chile and higher grades in Peru. In lead and zinc mines, whose combined production barely changed (0.5%), silver fell by 7.3%, while in gold mines, with stable global production, it rose by 2.0% (**Figure 4**).

Primary mines, the only ones whose main product is silver, did not increase their output during the deficit years either. Between 2019 and 2025 their production fell by 7.9%, affected by lower grades and operational problems in some producing countries. The November update by Metals Focus anticipates that primary mine production will rise by 6.5 million ounces in 2026, mainly due to operational improvements in Mexico. Although their all-in sustaining costs (AISC) rose 47% in the first half of the year, high prices increased these mines' margins by 187%. For reference, the 6.5 million ounce increase projected by Metals Focus for primary mines in 2026 would cover less than one fifth of that year's deficit.

Figure 4. Change in silver output by mine type, 2019-2025



Source: GEM Mining Consulting, based on data from The Silver Institute and Metals Focus, World Silver Survey 2020 (2019 data) and 2026 (2025 data), table "Silver Mine Production by Source Metal". Primary silver: mines whose main product is silver.

In short, this would help explain why silver production has not responded to the deficit or to the 2025 price rally. About three out of four ounces are obtained as a by-product, and in those mines the volume of silver depends on the production plan for their main metal. For them, a higher silver price improves revenues, but hardly justifies, on its own, extracting more ore. Only primary mines, which account for about a quarter of mine supply, have the silver price as their main incentive to produce more, and their response would take years. As an illustration, after the price peak in 2011, primary mine production reached its own peak only between 2014 and 2016.

Why it matters

If mine production barely responds to the deficit, the silver market adjusts through other channels. The November update by Metals Focus shows precisely this for 2026. Total demand would fall by 5%, with lower purchases of jewelry and silverware and more efficient use of silver in solar panels, while recycling would rise by 6%, to its highest level since 2012. It is demand, recycling and inventories, not mines, that close the gap, at least based on the behavior of recent years.

The case of Chile. Data from the Chilean Copper Commission (Cochilco) make it possible to verify this pattern in the country. In 2025, Chile produced about 42 million ounces of silver, 79% of which came from copper mining, compared with 54% in 2000. Between 2001

and 2025, excluding 2014, a year with a jump in the series not explained by copper, the annual change in copper-related silver moved together with that of copper produced in concentrates (correlation of 0.51), but not with the real silver price (correlations between −0.17 and 0.10, depending on the lag). A regression with both variables indicates that, for every 1% increase in copper in concentrates, this silver grows by about 0.7%, while the price effect is practically nil. Thus, between 2019 and 2025, with a real price 95% higher, silver from Chilean copper fell by 10%. Ultimately, Chile's silver supply depends on how much copper in concentrate the country produces, not on the silver price.

Data sources and attribution

World silver market data (supply, demand, market balance, mine production and mine production by source metal) are from The Silver Institute's World Silver Survey, editions 2011 to 2026, prepared by the GFMS team (Thomson Reuters, later Refinitiv) up to the 2019 edition and by Metals Focus from the 2020 edition onward, and from the Silver Institute press release "Silver Market Set for Sixth Consecutive Annual Deficit in 2026" of November 12, 2026, with estimates by Metals Focus. Figures 1 to 4 are charts prepared by GEM Mining Consulting from these data, with the specific table and edition indicated under each figure. All calculations, analyses and interpretations, including averages, correlations, regressions and comparisons with other sources, are the sole responsibility of GEM Mining Consulting and do not necessarily represent the views of The Silver Institute or Metals Focus.

Other sources: World Bank, Commodity Price Data (Pink Sheet), annual prices. US Bureau of Labor Statistics, Consumer Price Index (CPIAUCSL series, via FRED). US Geological Survey, Mineral Commodity Summaries 2021 and 2026. Chilean Copper Commission (Cochilco), Yearbook of Copper and Other Mineral Statistics 2000-2025, Tables 2.1 and 3.3, the latter based on data from the National Geology and Mining Service (Sernageomin).