SILVER

(Data in metric tons[1] of silver content unless otherwise noted)

Domestic Production and Use: In 2020, U.S. mines produced approximately 1,000 tons of silver with an estimated value of $670 million. Silver was produced at 4 silver mines and as a byproduct or coproduct from 33 domestic base- and precious-metal operations. Alaska continued as the country's leading silver-producing State, followed by Nevada. There were 24 U.S. refiners that reported production of commercial-grade silver with an estimated total output of 2,000 tons from domestic and foreign ores and concentrates and from new and old scrap. The physical properties of silver include high ductility, electrical conductivity, malleability, and reflectivity. In 2020, the estimated domestic uses for silver were electrical and electronics, 28%; jewelry and silverware, 26%; coins and medals, 19%; photography, 3%; and other, 24%. Other applications for silver include use in antimicrobial bandages, clothing, pharmaceuticals, and plastics; batteries; bearings; brazing and soldering; catalytic converters in automobiles; electroplating; inks; mirrors; photovoltaic solar cells; water purification; and wood treatment. Mercury and silver, the main components of dental amalgam, are biocides, and their use in amalgam inhibits recurrent decay.

Salient Statistics—United States:	**2016**	**2017**	**2018**	**2019**	**2020[e]**
Production:					
Mine	1,150	1,030	934	977	1,000
Refinery:					
Primary	1,530	1,420	1,420	1,420	1,400
Secondary (new and old scrap)	866	490	632	643	640
Imports for consumption[2]	6,160	5,040	4,830	4,760	6,500
Exports[2]	289	157	603	220	130
Consumption, apparent[3]	7,890	6,420	5,790	6,160	8,000
Price, bullion, average, dollars per troy ounce[4]	17.20	17.07	15.75	17.17	20.00
Stocks, yearend:					
Industry	63	45	51	52	50
Treasury[5]	498	498	498	498	498
New York Commodities Exchange—COMEX	5,710	7,570	9,150	9,860	12,000
Employment, mine and mill, number[6]	1,050	805	823	869	1,100
Net import reliance[7] as a percentage of apparent consumption	74	76	73	74	80

Recycling: In 2020, approximately 640 tons of silver was recovered from new and old scrap, about 8% of apparent consumption.

Import Sources (2016–19):[2] Mexico, 50%; Canada, 27%; Peru, 4%; Poland, 4%; and other, 15%.

Tariff: Item	**Number**	**Normal Trade Relations 12–31–20**
Silver ores and concentrates, silver content	2616.10.0040	0.8 ¢/kg on lead content.
Bullion, silver content	7106.91.1010	Free.
Dore, silver content	7106.91.1020	Free.

Depletion Allowance: 15% (domestic), 14% (foreign).

Government Stockpile: The U.S. Department of the Treasury maintains stocks of silver (see salient statistics above).

Events, Trends, and Issues: The estimated average silver price in 2020 was $20.00 per troy ounce, 16% higher than the average price in 2019. The price began the year at $17.98 per troy ounce, then decreased to a low of $12.13 per troy ounce on March 18. The price of silver increased to a high of $28.99 per troy ounce, in August, because the COVID-19 pandemic caused an increase in investor demand as well as in industrial demand. The price was the highest since March 2013; however, it trended downward through November.

In 2020, global consumption of silver was estimated to have decreased slightly from that of 2019. Coin and bar consumption increased for the fourth year in a row. Consumption for industrial uses was estimated to have decreased in the first half of 2020 owing to lockdown restrictions in response to the COVID-19 pandemic, supply chain disruptions, lowered inventory replenishment, and reduced labor forces within factories. Jewelry and silverware consumption of silver was estimated to have decreased by 23% and 34%, respectively. In 2020, there was increased physical investment in silver, reaching an estimated 7,370 tons (236.8 million troy ounces) compared with 5,820 tons (187 million troy ounces) in 2019. Global holdings reached a reported 28,800 tons (925 million troy ounces) compared with 30,890 tons (993 million troy ounces) in 2019.[8]

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SILVER

World silver mine production decreased by 6% in 2020 to an estimated 25,000 tons, principally as a result of decreased production from mines in China, Mexico, and Peru, primarily owing to shutdowns in the first half of the year in response to the COVID-19 pandemic. Domestic silver mine production increased slightly in 2020 compared with that in 2019 principally from increased production at mining operations in Alaska. The COVID-19 pandemic did affect silver production in the United States; however, the ending of the strike at the Lucky Friday Mine in January offset the production losses.

World Mine Production and Reserves: Reserves for Australia, Peru, Poland, and the United States were revised based on information from Government and industry sources.

	Mine production		Reserves[9]
	2019	2020[e]	
United States	977	1,000	26,000
Argentina	1,080	1,000	NA
Australia	1,330	1,300	[10]88,000
Bolivia	1,160	1,100	22,000
Chile	1,350	1,300	26,000
China	3,440	3,200	41,000
Mexico	5,920	5,600	37,000
Peru	3,860	3,400	91,000
Poland	1,470	1,300	70,000
Russia	2,000	1,800	45,000
Other countries	3,920	3,500	57,000
World total (rounded)	26,500	25,000	500,000

World Resources:[9] Although silver was a principal product at several mines, silver was primarily obtained as a byproduct from lead-zinc mines, copper mines, and gold mines, in descending order of production. The polymetallic ore deposits from which silver was recovered account for more than two-thirds of U.S. and world resources of silver. Most recent silver discoveries have been associated with gold occurrences; however, copper and lead-zinc occurrences that contain byproduct silver will continue to account for a significant share of reserves and resources in the future.

Substitutes: Digital imaging, film with reduced silver content, silverless black-and-white film, and xerography substitute for traditional photographic applications for silver. Surgical pins and plates may be made with stainless steel, tantalum, and titanium in place of silver. Stainless steel may be substituted for silver flatware. Nonsilver batteries may replace silver batteries in some applications. Aluminum and rhodium may be used to replace silver that was traditionally used in mirrors and other reflecting surfaces. Silver may be used to replace more costly metals in catalytic converters for off-road vehicles.

[e]Estimated. NA Not available.

[1]One metric ton (1,000 kilograms) = 32,150.7 troy ounces.

[2]Silver content of base metal ores and concentrates, refined bullion, and dore; excludes coinage, and waste and scrap material.

[3]Defined as mine production + secondary production + imports – exports + adjustments for Government and industry stock changes.

[4]Engelhard's industrial bullion quotations. Source: Platts Metals Week.

[5]Source: U.S. Mint. Balance in U.S. Mint only; includes deep storage and working stocks.

[6]Source: U.S. Department of Labor, Mine Safety and Health Administration (MSHA). Only includes mines where silver is the primary product. In 2020, MSHA changed the Mine Employment values in their publicly available database.

[7]Defined as imports – exports + adjustments for Government and industry stock changes.

[8]DiRienzo, Michael, and Newman, Philip, 2020, Key components of silver market affected by pandemic in 2020—Global demand and mine supply impacted, while physical silver investment expected to surge to a 5-year high: Silver Institute and Metal Focus, November 19, 2 p.

[9]See Appendix C for resource and reserve definitions and information concerning data sources.

[10]For Australia, Joint Ore Reserves Committee-compliant reserves were 25,000 tons.