WORLD SILVER SURVEY 2015

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Industrias Peñoles, S.A.B. de C.V.

Pan American Silver Corp.

Silver Standard Resources Inc.

Silver Wheaton Corp.

Cover Image: A selection of Thistle & Bee Burlap stacking bangles.

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Produced for The Silver Institute
by the GFMS team at Thomson Reuters

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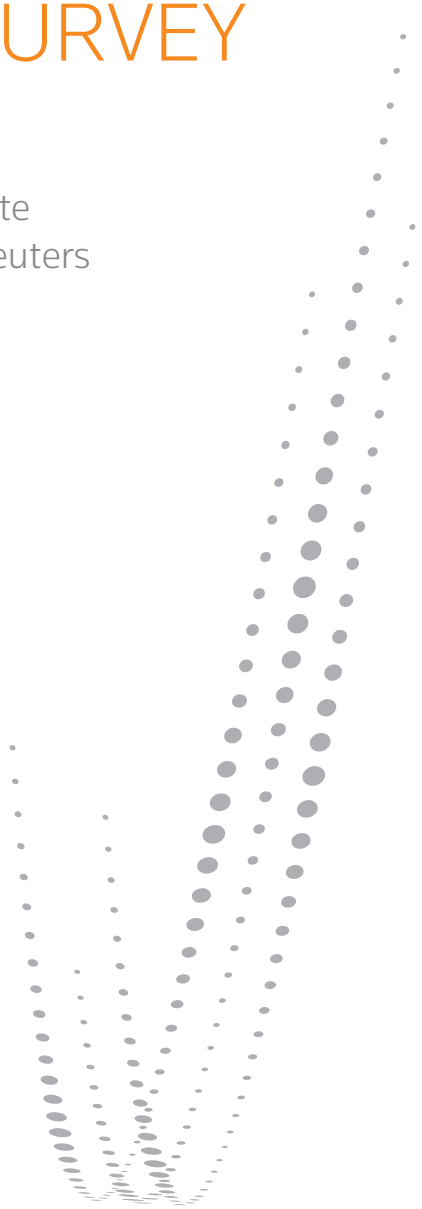

ABOUT THE MAJOR SPONSORS OF WORLD SILVER SURVEY 2015

A-Mark Precious Metals, Inc.

A-Mark Precious Metals, Inc. is a full-service precious metals trading company and an official distributor for many government mints throughout the world. The company offers gold, silver, platinum and palladium in the form of bars, plates, powder, wafers, grain, ingots and coins. Its Industrial unit services manufacturers and fabricators of products utilizing or incorporating precious metals, while its Coin & Bar unit deals in over 200 coin and bar products in a variety of weights, shapes and sizes for distribution to dealers and other qualified purchasers. The company operates trading centers in Santa Monica, California, and Vienna, Austria, for buying and selling precious metals. Customers of A-Mark include mints, manufacturers and fabricators, refiners, coin and metal dealers, banks and other financial institutions, jewelers, investors and collectors. For more information about A-Mark Precious Metals, visit **www.amark.com.**

Coeur Mining, Inc.

Coeur Mining, Inc. is the largest U.S.-based primary silver producer and a significant gold producer with five precious metals mines in the Americas employing approximately 2,100 people. Coeur produces from its wholly owned operations: the Palmarejo silver-gold mine in Mexico, the San Bartolomé silver mine in Bolivia, the Rochester silver-gold mine in Nevada, the Kensington gold mine in Alaska, and the Wharf gold mine in South Dakota. The Company also has a non-operating interest in the Endeavor mine in Australia in addition to royalties on the Cerro Bayo mine in Chile, the El Gallo complex in Mexico, the Zaruma mine in Ecuador, and the Correnso mine in New Zealand. In addition, the Company has two silver-gold feasibility stage projects - the La Preciosa project in Mexico and the Joaquin project in Argentina. The Company also conducts ongoing exploration activities in Alaska, Argentina, Bolivia, Mexico, and Nevada. The Company owns strategic investment positions in several silver and gold development companies with projects in North and South America.

Fresnillo Plc

Fresnillo plc is the world's largest primary silver producer and Mexico's second largest gold producer, listed on the London and Mexican Stock Exchanges under the symbol FRES. Fresnillo plc has six operating mines, all of them in Mexico - Fresnillo, Saucito, Ciénega (including the San Ramón satellite mine), Herradura, Soledad-Dipolos[1] and Noche Buena; one development project, San Julián and four advanced exploration prospects - Centauro Deep, Juanicipio, Orisyvo and Las Casas Rosario as well as a number of other long term exploration prospects. In total, Fresnillo plc has mining concessions covering approximately 2.1 million hectares in Mexico. Fresnillo plc has a strong and long tradition of mining, a proven track record of mine development, reserve replacement, and production costs in the lowest quartile of the cost curve. Fresnillo plc's goal is to maintain the Group's position as the world's largest primary silver company, producing 65 million ounces of silver and 750,000 ounces of gold by 2018..

[1] Operations at Soledad and Dipolos are currently suspended.

Industrias Peñoles, S.A.B. de C.V.

Peñoles is a mining group with integrated operations in smelting and refining non-ferrous metals, and producing chemicals. Peñoles is the world's top producer of refined silver, metallic bismuth and sodium sulfate, and the leading Latin American producer of refined gold and lead. The Company was founded in 1887 and it is part of "Grupo BAL", a privately held diversified group of independent Mexican companies. Peñoles' shares have traded on the Mexican Stock Exchange since 1968 under the ticker PE&OLES.

Peñoles highlights:

- ***Began operations in 1887 as a mining company.***
- ***Has integrated operations in the areas of exploration, mining, metallurgy and chemicals.***
- ***Listed on the Mexican Stock Exchange since 1968; the stock is included in the IPC index.***
- ***One of the largest net exporters in Mexico's private sector.***

Pan American Silver Corp.

Pan American Silver Corp. is the second-largest primary silver producer in the world. Based in Vancouver, BC, the Company was founded in 1994 and today has seven mines in Mexico, Peru, Bolivia and Argentina, as well as a portfolio of exploration and development projects in the Americas. In 2014, Pan American produced a record 26.11 million silver ounces and 161,500 gold ounces at cash costs of $11.46 per ounce of silver, net of by-product credits, and All-in Sustaining Costs per Silver Ounce Sold ("AISCSOS") of $18.62. In 2015, Pan American expects to produce 25.50 to 26.50 million silver ounces and 165,000 to 175,000 gold ounces at cash costs of $10.80 to $11.80 per silver ounce, net of by-product credits and AISCSOS of between $15.50 and $16.50. The Company plans to spend $71.0 to $84.0 million in sustaining capital as well as $98.0 to $109.0 million on long term development and expansion projects, the majority of which will be invested in the La Colorada expansion project and a new power line to the Dolores mine.

Silver Wheaton Corp.

Silver Wheaton is the world's largest pure precious metals streaming company. The company offers investors cost certainty, leverage to increasing silver and gold prices, and a high-quality asset base. Its business model is based on paying low, predictable costs for precious metals streams from a diverse portfolio of mines, with any increases in precious metal prices flowing directly to the bottom line.

Silver Wheaton offers these benefits while at the same time seeks to reduce many of the downside risks faced by traditional mining companies. In particular, it offers its investors both capital and operating cost certainty. Other than the initial upfront payment, the company typically has no ongoing capital or exploration costs. Furthermore, operating costs have been historically fixed at around $4 per ounce of silver produced and $400 per ounce of gold produced, subject to inflationary adjustments.

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This is the twenty-fifth annual edition of the World Silver Survey produced for The Silver Institute. The World Silver Survey is produced by the GFMS team at Thomson Reuters, London-based analysts of the global metals markets. The information contained herein is based in part on the analysis of publically available data such as hallmarking series, trade statistics, company reports and other public-domain information. More importantly, it is also based on a series of interviews with the industry's main players, carried out every year by our team of analysts, which provide the essential data to allow the compilation of reliable estimates for world supply and demand.

Thomson Reuters is grateful to the many miners, refiners, bullion dealers, bankers and fabricators throughout the world who have contributed their time and information to ensuring that the picture of the industry described in the World Silver Survey is as complete and accurate as possible.

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UNITS USED:

supply and demand data are given in units of million troy ounces (Moz) rounded to one decimal place.
1 Moz = 31.103 t (metric tons)
1 ton = 32,151 troy ounces
1 ton = 1,000,000 grams (g)

TERMINOLOGY:

"-"	Not available or not applicable.
"0.0"	Zero or less than 0.05.
"dollar", "$"	US dollar unless otherwise stated.
"Identifiable Investment"	The sum of physical bar investment and all coin fabrication, plus the net change in Exchange Traded Fund (ETF) holdings.
"Physical Surplus/ Deficit"	The difference between the supply of new and secondary silver to the market in a calendar year and measurable demand for physical silver. This excludes opaque Over the Counter (OTC) investment in silver and commercial bank transactions.
"Net Balance"	The physical surplus or deficit of silver with the addition of highly visible ETF and exchange stock inventory changes.

PRICES:

Unless otherwise stated, US dollar prices are for the London Silver Market fixing prior to August 15 2015. Post this date prices refer to the LBMA Silver Price as successor to the silver fix.

TABLE ROUNDING:

Throughout the tables and charts, totals may not add due to independent rounding.

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FOCUS BOXES

1. SUMMARY AND OUTLOOK

Silver price changes over the course of 2014 sparked a number of market reactions on both the supply and demand side of the market with a number of records broken. Overall this saw the market broadly balanced over the course of the year with a physical deficit of 4.9 Moz (152 t) recorded.

Prices themselves were driven by a combination of factors including a slowdown in Chinese growth, a continued move away from commodities as an asset class by institutional investors and a stronger U.S. dollar in the second half of the year. Importantly, despite this negative backdrop, coin and bar purchases remained at historically high levels. Likewise, ETF holdings also remained sturdy at 635.5 Moz (19,728 t) the highest recorded year-end level.

Silver extended its popularity in the jewelry and silverware markets as fashions continued to target bigger and heavier pieces. The trend away from plated material towards sterling silver also continued. The major exception to this was in China where the entire jewelry market suffered a slowdown last year; indeed excluding China, jewelry consumption increased by 12.9% or 19.3 Moz (599 t), providing a potential boon to silver demand should Chinese purchasing rebound. Industrial demand held broadly flat over the year with notable increases from the photovoltaic sector (the first in three years) and the brazing alloys sector. This was offset by modest declines in the electronics and photographic sectors and overall industrial fabrication was 594.9 Moz (18,504 t).

Supply to the market reached its highest level since 2010 at 1,061.8 Moz (33,027 t), driven higher by increased output from primary silver mines. Mine production reached a record high at 877.5 Moz (27,293 t), an increase of 5.0% year-on-year. Scrap supply meanwhile witnessed the perfect storm as low prices, the impact of previous thrifting and depleted near-to-market stockpiles combined to push processed scrap to its lowest level in over a decade at 168.5 Moz (5,242 t). Supply to the market was rounded off by a modest return to net producer hedging at 15.8 Moz (492 t).

TABLE 1 - WORLD SILVER SUPPLY AND DEMAND

(million ounces)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Supply										
Mine Production	639.9	643.3	666.6	682.7	716.3	751.2	755.3	789.3	835.3	877.5
Net Government Sales	65.9	78.5	42.5	30.5	15.6	44.2	12.0	7.4	7.9	- -
Scrap	203.4	207.1	204.2	202.0	201.2	227.5	261.5	255.5	192.7	168.5
Net Hedging Supply	45.9	-11.6	-24.1	-8.7	-17.4	50.4	12.2	-47.1	-35.4	15.8
Total Supply	**955.1**	**917.2**	**889.2**	**906.6**	**915.6**	**1,073.3**	**1,041.1**	**1,005.2**	**1,000.5**	**1,061.8**
Demand										
Jewelry	187.6	175.2	182.9	178.2	177.5	190.7	188.8	186.3	212.1	215.2
Coins & Bars	51.6	48.7	51.2	187.3	87.5	143.3	210.6	138.0	243.6	196.0
Silverware	68.3	62.1	60.2	58.4	53.2	51.6	47.2	43.7	58.8	60.7
Industrial Fabrication	639.1	646.7	659.2	654.1	542.2	645.1	628.3	595.2	597.9	594.9
....of which Electrical & Electronics	229.7	242.3	262.5	271.7	227.4	301.2	290.8	267.0	266.2	263.9
...of which Brazing Alloys & Solders	52.6	54.7	58.3	61.6	53.6	60.9	62.7	60.6	63.1	66.1
...of which Photography	160.3	142.2	117.0	98.2	76.4	66.8	59.1	52.1	48.0	45.6
...of which Photovoltaic	7.3	8.9	12.5	25.0	30.1	50.7	69.1	60.5	55.8	59.9
...of which Other Industrial	189.2	198.6	209.0	197.7	154.7	165.5	146.6	155.0	164.7	159.4
Physical Demand	946.5	932.8	953.6	1,078.0	860.4	1,030.7	1,074.8	963.2	1,112.4	1,066.7
Physical Surplus/Deficit	**8.5**	**-15.5**	**-64.4**	**-171.5**	**55.3**	**42.6**	**-33.8**	**41.9**	**-111.9**	**-4.9**
ETF Inventory Build	-	126.8	54.8	101.3	156.9	129.5	-24.0	55.1	1.6	1.4
Exchange Inventory Build	15.9	-9.0	21.5	-7.1	-15.3	-7.4	12.2	62.2	8.8	-8.9
Net Balance	**-7.4**	**-133.4**	**-140.6**	**-265.7**	**-86.4**	**-79.4**	**-21.9**	**-75.4**	**-122.3**	**2.6**
Silver Price, $ per oz.	7.31	11.55	13.38	14.99	14.67	20.19	35.12	31.15	23.79	19.08

WORLD SILVER SURVEY: SUPPLY AND DEMAND METHODOLOGY

Physical surpluses and deficits in the silver market help to determine lead times, margins and premia and can also impact upon price direction. It is not always the key price determinant, however, as unlike the purely industrial metals there is also significant demand for silver as an investment product. We estimate that in 2014, 18% of demand for new silver came from the physical coin and bar sector as investors increased holdings.

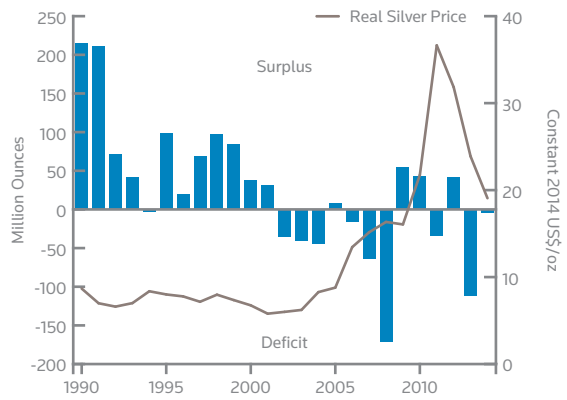
In addition to this silver has an active Over-the-Counter (OTC) market owing, primarily, to its role as an institutional investment product. OTC trade can have a large impact upon the silver market and in 2014 the volumes of silver transferred, as reported by London Bullion Market Association clearing members, totaled approximately 36,450 Moz (1.13 M t), with a value of $693 billion. Even this figure does not represent the total value of global silver transactions. As a rule of thumb, the net-transfers are roughly one half of the total loco London market volume, which in turn is approximately 90% of the total going through the market. In 2014, therefore, total volume was of the order of 81,000 Moz (2.52 M t) with a value of $1.5 trillion; this is equivalent to over 90 times 2014 silver mine production.

So while not as liquid as the gold market, there is a significant flow of transfers and trade that will also impact upon silver price movements. A good indication of investor interest is provided in the Exchange Traded Fund (ETF) data that are released to the market and this highly visible data is also included in our supply-demand balance along with published levels of physical inventory at silver futures exchanges. Our full assessment of the impact of investment flows on silver in 2014 can be found in Chapter 3.

The final element that differentiates silver from purely industrial metals is that the metal is commonly recycled or held as an above-ground asset by private and institutional investors as well as by industry. Indeed, old jewelry scrap, coins and bars make up a significant part of the scrap pool (and they are arguably the only really price-sensitive elements in this market) as opposed to scrap collected from recycled electronics, for example.

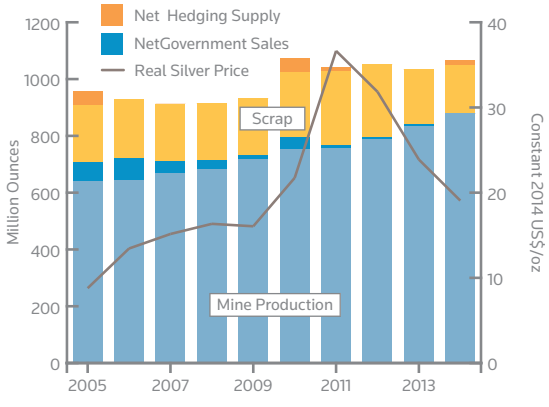
Thomson Reuters' supply and demand data are collected and collated by our team of research analysts based in Australia, China, Europe, India and the USA within an extensive field research program that involves interviewing stakeholders across the supply chain. In order to build up a picture of supply and demand in the silver market Thomson Reuters maintains individual demand databases for over 85 countries globally and for almost 600 mines and projects on the supply-side. As part of the primary research exercise, the Thomson Reuters analysts collect information on jewelry fabrication; coin fabrication; silverware; bar investment; industrial uses and the amount of old silver scrap entering the supply chain. In addition to this, on a global basis, Thomson Reuters also collects net government sales and purchases information and collates producer hedging and de-hedging levels.

SILVER PHYSICAL SURPLUS / DEFICIT



Source: GFMS, Thomson Reuters

WORLD SILVER SUPPLY



Source: GFMS, Thomson Reuters

SUPPLY IN 2014

- ***Global mine production increased for a twelfth consecutive year to reach a record level of 877.5 Moz (27,293 t).***

- ***Gains in mine supply were partially offset by weak scrap supply, falling by 12.5% year-on-year and representing a 24.1 Moz (750 t) decline.***

Silver **mine production** increased by 42.2 Moz (1,311 t) last year, as new projects came on-line and with a more important contribution originating from assets that were ramping up, having entered production in 2013 or earlier. The latter category saw meaningful contributions from Escobal in Guatemala, which shipped first concentrate in October 2013 and produced over 20 Moz (632 t) of silver last year. Saucito in Mexico continued to deliver growth, along with Concheño. In the United States, Lucky Friday ramped back up, following downtime for shaft maintenance, and in the Dominican Republic, Pueblo Viejo delivered appreciable silver as a by-product of gold mining. Projects that provided meaningful first contributions in 2014 included Ministro Hales (Chile), Cerro Negro (Argentina) and Toromocho (Peru).

As hinted at by the locations of the above-mentioned projects, growth last year was focused in South America, with the primary silver sector showing especially strongly. Producers' costs, expressed in U.S. dollar terms, were reined in substantially, the global average for primary mines registering a drop of 16% to $7.74/oz on the basis of total cash costs, in large part thanks to producers' currencies depreciating against the dollar.

Lower prices also saw lower levels of **scrap** entering the market with processors sometimes holding back material in the hope of higher prices. In addition, the impact of previous thrifting (the trend to use less silver per item) in the electronics sector impacted upon recovery rates. Scrap supply fell to its lowest since 1996 at 168.5 Moz (5,242 t).

Representing a switch from the past two years of activity, producers added hedge contracts to more than double the volume of the silver **hedge book**, contributing 15.8 Moz (492 t) of accelerated supply last year. The majority of producer hedging entered into was undertaken by base metals producers, with primary silver producers continuing to prefer not to hedge silver output.

DEMAND IN 2014

- ***Total physical demand fell by 4% last year, as a decline in retail investment offset gains from jewelry, silverware and the photovoltaic sector.***

- ***Jewelry fabrication rose to a new record level of 215.2 Moz (6,693 t) in 2014, helped by lower silver prices and a strong rebound in Indian demand.***

- ***Industrial fabrication was marginally lower, with notable gains being made in demand from the photovoltaic and brazing alloys and solders sectors.***

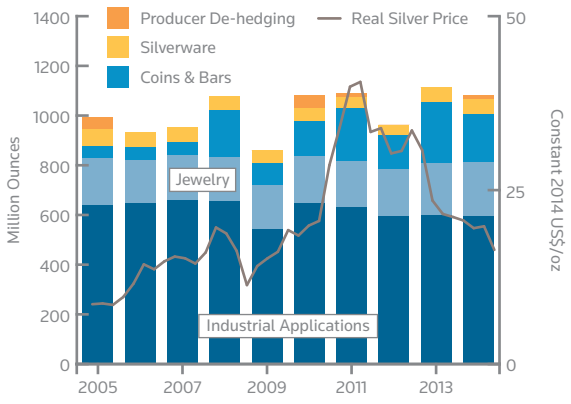
- ***Silverware consumption rose to its highest level since 2006 as producers moved away from using plated material.***

- ***Despite the 20% drop in coin and bar investment, last year's figure was still the second highest on record.***

Total **physical demand** saw a 4% decline in 2014, falling to a two-year low of 1,066.7 Moz (33,179 t). Some of this was due to the structural factors hitting photographic and other industrial demand, but more important was the fall from 2013's record levels of coin and bar demand. Significantly, however, demand for silver for physical investment remained inflated by historical standards.

Global **industrial** offtake in 2014 remained broadly unchanged, falling by less than 1% to 594.9 Moz (18,504 t), the lowest level since 2009, as gains in brazing alloys & solders, photovoltaic and the ethylene oxide industry were slightly offset by lower demand in photography, electrical

WORLD SILVER DEMAND



Source: GFMS, Thomson Reuters

& electronics and other industrial applications. While the global economic backdrop continued to improve, thrifting remained the key factor limiting industrial demand growth last year, although the rate of thrifting declined in light of markedly lower silver prices. On a regional basis, a modest increase in industrial offtake in developing countries, led by the 4% growth in China, was offset by weaker demand in the advanced economies.

Silver used in **photographic** applications continued to decline, falling by 5% in 2014, to 45.6 Moz (1,419 t), the lowest level in our series, which began in 1990. To put this into perspective, last year's level was down by 78% from the record high at the start of the millennium. That said, it is worth emphasizing that the pace of decline slowed considerably, to its slowest rate since 2004, which was aided by the sustained weakness in the silver price.

Silver consumed in **ethylene oxide (EO)** production was up 6% year-on-year. Much of this was due to gains in China, the largest source of silver demand in the EO industry, adding 4.4 Moz (138 t) to its production capacity thanks to newly commissioned plants.

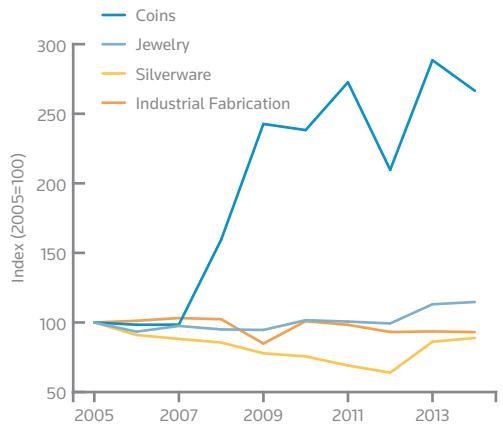
Silver **jewelry** fabrication rose for the second consecutive year, hitting a fresh record of 215.2 Moz (6,693 t) in 2014. This was largely thanks to a strong performance in India, which surged by 47% last year to the highest level on record, surpassing demand in China. Lower silver prices, which led to high levels of restocking, was the most important factor contributing to last year's impressive growth. If we exclude this country from the global total, jewelry offtake in the rest of the world dropped by 10%.

This was primarily due to a steep decline in demand in China, where jewelry fabrication registered a 26% year-on-year drop, the first annual decline in our series. Slowing economic activity and a lack of confidence in the silver price outlook helped to explain last year's weakness. Meanwhile, improving economic sentiment and weaker silver prices led to healthy gains in the industrialized world, helping somewhat to mitigate the losses elsewhere.

Identifiable Investment, which includes physical bar investment, coins & medals and ETF inventory build, contracted by 20% last year, to a two-year low of 197.3 Moz (6,138 t). A close analysis of individual components of our identifiable investment figure reveals that last year's fall was primarily due to a steep decline in coin and bar investment, which recorded a 20% year-on-year decline to 196 Moz (6,095 t). While this was considerably lower than the record high of 2013, last year's figure was still the second highest on record. Meanwhile, ETF investment held up relatively well, rising by 1.4 Moz (43 t) over the course of the year and finishing the year at 635.5 Moz (19,766 t), the highest year-end level on record.

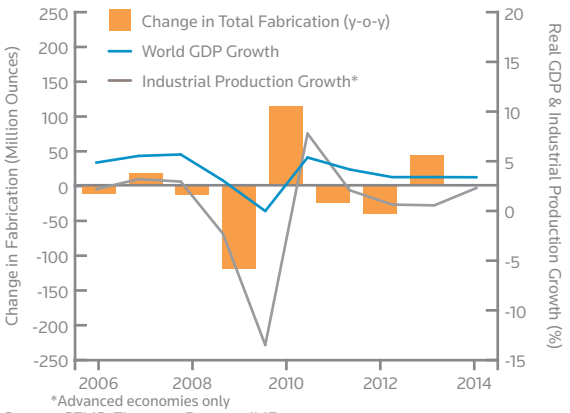
Demand for **coins & medals** eased by 8% to hit 107.6 Moz (3,346 t), the lowest level since 2012. It is worth emphasizing though that silver coin fabrication remained relatively robust compared to gold coin offtake, which dropped by a more pronounced 37% last year. This was largely a reflection of fresh investor interest for silver bullion coins, particularly in Europe and North America, later in the year in response to a sharp drop in the price.

WORLD SILVER FABRICATION INDICES



Source: GFMS, Thomson Reuters

FABRICATION DEMAND & WORLD ECONOMIC INDICATORS



*Advanced economies only

Source: GFMS, Thomson Reuters; IMF

2. SILVER PRICES

- ***Silver prices averaged $19.07/oz in 2014, a 19.8% decline year-on-year and its lowest annual average level since 2009. Prices traded in a $15.28/oz-$22.05/oz range after beginning the year at $19.50/oz and ending it at $15.97/oz.***

- ***The pricing mechanism known as the Silver Fix also came to an end in 2014 after 117 years. On August 15th 2014 this was replaced by an electronic auction known as the LBMA Silver Price.***

At the beginning of each year markets search for a number of themes, often prompted by changes in asset allocations over the December and January period. In 2014 this saw emerging market currency weakness come to fore as the tapering of U.S. quantitative easing, announced in December 2013, led to concerns over some economies' reliance on cheap money stemming from previous U.S. economic policy. There was also growing concern about China's ability to drive growth via domestic consumption in the face of weak export markets and a closing gap between production costs in China and the rest of the world. These two themes are central to understanding the silver prices movements in 2014.

Both of these factors were also broadly negative over the course of the year. While the impact of a slowdown in China on silver demand and price is straightforward, the influence of U.S. policy is more nuanced. Firstly, a stronger U.S. economy in relation to Europe and Japan, and monetary loosening in both of these major economies, helped lead to a strengthening dollar in the second part of the year. Secondly, the more U.S. economic data improved the stronger the stock market and the greater the expectation of higher interest rates. The S&P 500 gained 12% over the course of the year while silver fell 19.9% on an intra-year basis.

Higher interest rates meanwhile would disadvantage silver in relation to bond markets as it is a non-yielding asset class. Thus, in the absence of any major physical shortages in the market, silver looked less attractive as an asset class in relation to its major peers and the price was under pressure for most of the year.

Interrupting this broad downward trend were two sustained rallies that saw silver enter into overbought territory before prices retreated. The first of these, in February 2014, was

US$ SILVER PRICE

	1984	1994	2004	2014
Annual Average	8.14	5.29	6.66	19.08
Maximum	10.11	5.75	8.29	22.05
Minimum	6.22	4.64	5.50	15.28
Range:Average	47.8%	21.0%	42.0%	35.5%

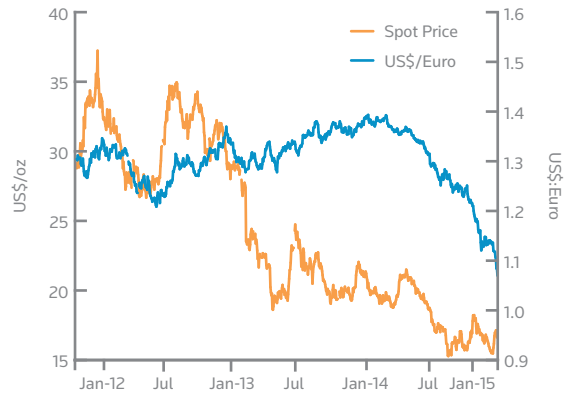
Source: GFMS, Thomson Reuters

THE SILVER PRICE IN OTHER CURRENCIES IN 2014

	Euro/kg	Rupee/kg	Yen/10g	Yuan/kg
Annual Average	460.89	42,374	646.4	3,778
Maximum	516.18	48,890	726.4	4,323
Minimum	394.15	35,150	564.6	3,002
Range:Average	26%	32%	25%	35%

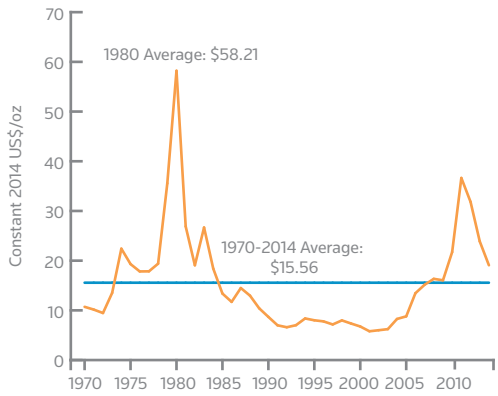
Source: GFMS, Thomson Reuters

THE SILVER PRICE AND THE US DOLLAR



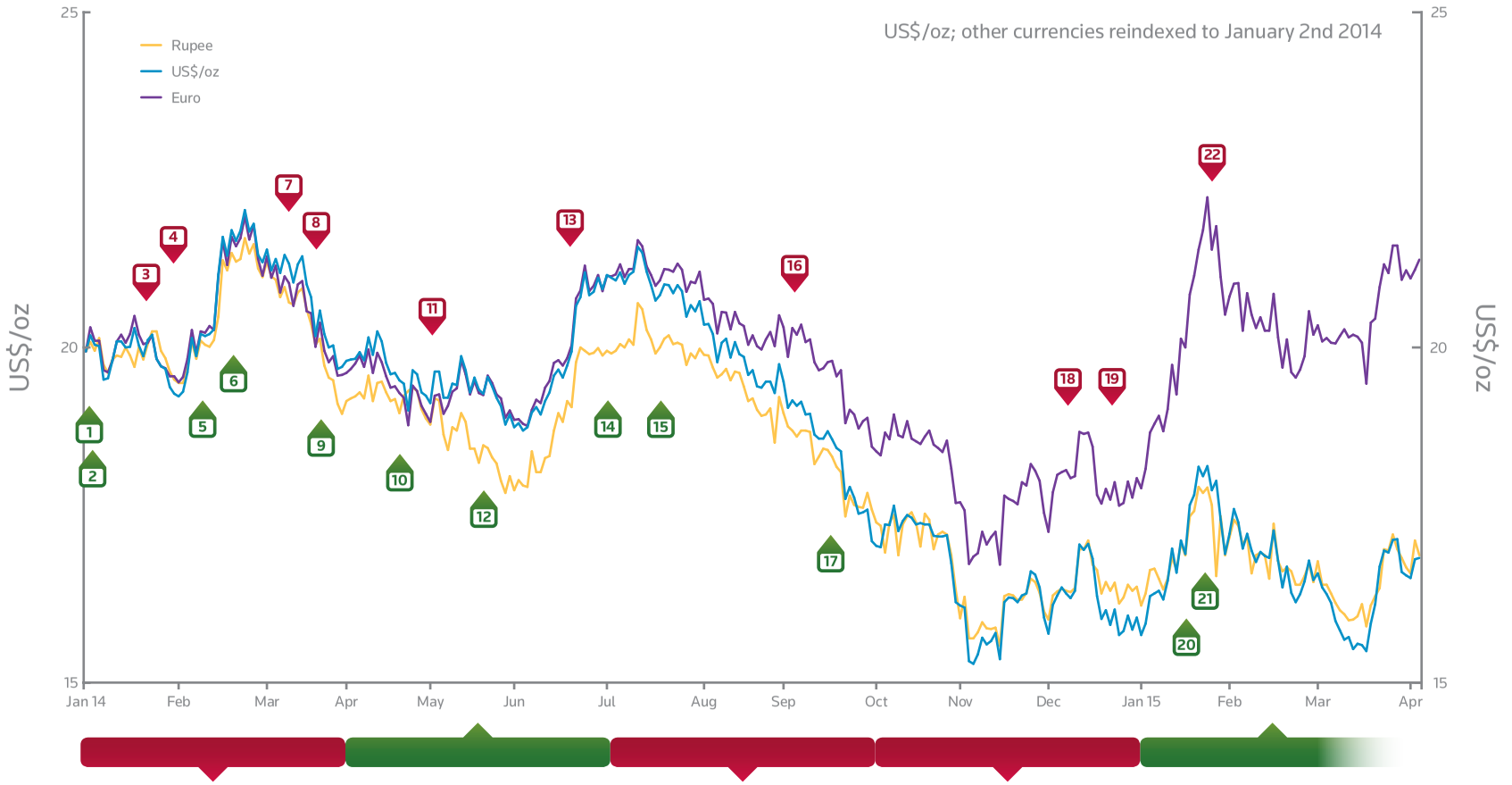
Source: GFMS, Thomson Reuters

REAL SILVER PRICES ($2014)



Source: GFMS, Thomson Reuters

LONDON SILVER MARKET: SPOT PRICE



1. (01/01/14): Tax on silver coins in Germany increases from 7% to 19%
2. (03/01/14): ISIS occupies Fallujah city near Baghdad. Tension escalates in the region. Ukraine crisis adds to geopolitical risk premium
3. (23-29/01/14): HSBC flash China PMI records its first contraction
4. (29/01/14): A further $10bn taper is announced
5. (11/02/14): US debt ceiling raised through to March 2015, technical default averted
6. (22/02/14): President Yanukovych leaves Ukraine
7. (07-12/03/14): Chaori Solar as first domestic bond defaults generate worries
8. (19/03/14): Additional taper takes stimulus down to $55bn per month
9. (19/03/14): China's Premier Li says to keep economy growing at a reasonable rate
10. (20/04/14): China unveils mini-stimulus measures to rev up economic engine
11. (01/05/14): U.S. April NFP rose 304,000
12. (22/05/14): HSBC flash PMI for China at five-month-high
13. (18/06/14): Fed reduces further bond purchases to $15bn of MBS and $20bn per month of long dated Treasuries
14. (01/07/14): China June official PMI at 51 a six-month-high
15. (17/07/14): Malaysian commercial airliner crashes in Ukraine. Geopolitical tensions increase
16. (04/09/14): ECB cuts refinancing rates to 0.05% and overnight deposit to -0.20%
17. (16/09/14): China's PBOC starts 500 million yuan SLF, a targeted QE
18. (05/12/14): November US NFP registered at 321,000
19. (23/12/14): US Q3 GDP grows at 5%
20. (15/01/2015): SNB abandons cap on the franc
21. (24/01/2015): ECB unveils landmark trillion-euro stimulus program
22. (26/01/2015): Leftist leader Alexis Tsipras wins Greek parliamentary election

Source: GFMS, Thomson Reuters

prompted by a covering of short positions built up in late 2013 and a short-lived rally across the precious metals complex as more money moved into physical assets on the back of weak emerging markets. Silver was also buoyed by riding on gold's political risk coattails in this period as Russia moved to annex Crimea and tensions with the West grew. On February 24 the spot silver price reached $22.16/oz on an intra-day basis, the highest level it would reach all year.

The second rally occurred started in June and here a series of more positive data releases from China helped to support the industrial metals complex, coupled with a substantial increase in speculative long positions in COMEX silver. Indeed the Managed Money long position (futures and options) reached an all time high in mid-July and this also prompted a dramatic reduction in speculative downside bets in the silver market.

The rally was to be short-lived however as macro-economic news soon overtook the market with the ECB cutting interest rates and increased speculation that the Eurozone would introduce more quantitative easing. This started the dollar off on its second half rally and helped to undermine the dollar silver price. From July 1st the U.S. dollar became an increasingly decisive factor into both how silver traded on a daily basis and also its general direction, indeed in the third quarter the negative correlation between the two increased to 0.97.

This substantial strengthening the U.S. dollar saw the Dollar Index increase from 80.05 at the beginning of July to end the year at 89.99. The value of the U.S. dollar would continue to rise into the first quarter of 2015, with the dollar index reaching 100 in March, its highest level since 2003. This was not just down to the relative health of the U.S. economy but also the loosening of monetary policies and expansion of quantitative easing programs in the Eurozone and Japan, which account for 57.6% and 13.6% of the dollar index respectively.

The later part of 2014 also saw another large COMEX short position being built up in the market which pushed the price back below $16.00/oz briefly in December. The unwinding of this position would see a small short-covering rally over the course of January 2015 before the metal set into more range-bound trading. There have been few definitive moves in price direction in the silver market over 2014 and the first quarter of 2015.

Silver's price movements throughout the year were also heavily influenced by technical trading patterns. That is, the size of a price movement, or reaction to a piece of news, was often in line with analysis of short-term technical support and resistance levels. It remains likely that a major change in direction will not appear until there is more certainly on U.S. interest policy, in our view.

VOLATILITY (US$ PRICE)

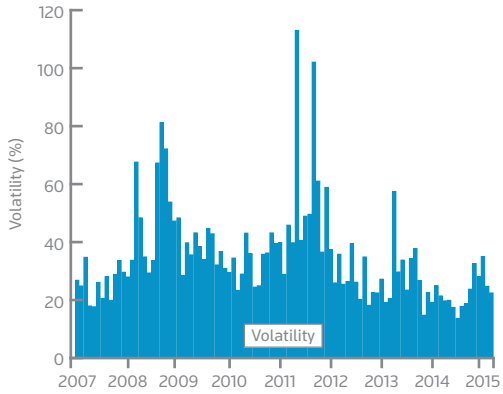
	2011	2012	2013	2014
Annual	61%	29%	32%	22%
	14.Q1	**14.Q2**	**14.Q3**	**14.Q4**
Quarterly	22%	19%	17%	28%

Source: GFMS, Thomson Reuters

COMEX LONG AND SHORT MANAGED MONEY POSITIONS

Source: GFMS, Thomson Reuters

DAILY SILVER PRICE VOLATILITY



Source: GFMS, Thomson Reuters

END OF AN ERA, THE SILVER FIX COMES TO A CLOSE AFTER 117 YEARS

August saw the end of an era for the silver market as the Silver Fix reference price was replaced after 117 years. The move was prompted by an increasing level of scrutiny of non-regulated benchmarks in the wake of the LIBOR scandal and investigations into potential wrongdoing in foreign exchange markets. A series of high profile, and costly, settlements with regulators in recent years has seen the banking industry become signifincatly more risk averse when it comes to involvment in the setting of benchmark prcies and rates.

Against this background, Deutsche Bank, one of three silver fixing banks, resigned its gold and silver fixing seats as of May 13th 2014. The move prompted a major review of precious metals pricing by the London Bullion Market Association (LBMA) and the London Platinum & Palladium Market (LPPM) into how the precious metals fixes would be replaced. Silver was first up as in need of replacement and after a brief consultation period several bids were submitted to the LBMA. On July 11th the winner was announced as a joint entry from CME Group, as operator of an electronic auction, and Thomson Reuters as administrator and distributor.

The first auction of the newly constituted LBMA Silver Price was held on August 15th 2015 and this price has replaced the now defunct Silver Fix as a reference in both physical markets and for derivatives contracts. As of April 2015 there were six banks accredited as participants in the LBMA Silver Price auction, these were: HSBC Bank USA NA; JPMorgan Chase Bank; Mitsui & Co Precious Metals Inc; The Bank of Nova Scotia – ScotiaMocatta; The Toronto Dominion Bank and UBS.

SILVER IN OTHER CURRENCIES

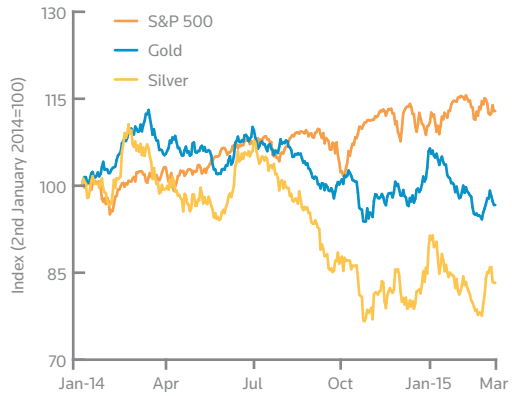
As shown on the chart on page 14 the variation in silver's price performance in other currencies has been pronounced. While silver fell by 19.8% in annual average dollar terms the decline was even greater in euros (20.0%), sterling (24.1%), the Swiss franc (21.1%), the South Korean won (22.9%) and the Australian dollar (25.7%).

Emerging market currencies generally suffered in 2014 and this mitigated losses in many economies, most notably in Russian rouble terms where sharply lower energy prices and U.S. and European sanctions saw a dramatic weakening of the currency. Here silver declined only 3.6% on an average basis in 2014 and on an intra-year basis actually increased by 40%. Russia was not alone however in seeing smaller declines, in Turkey average annual prices fell by 7.4%, in Japan by 13.0%, Thailand by 15.0% and India 14.1%.

GOLD:SILVER RATIO

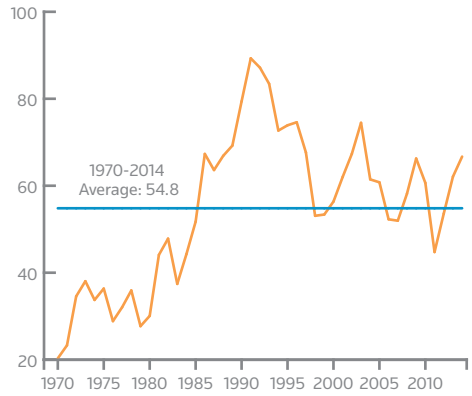
The gold:silver ratio began 2014 at 61.2, close to the ten year average level. Shortly thereafter this fell to 60.5 as silver prices peaked for the year on February 24th. From then on the ratio would deteriorate from silver's perspective, averaging 66.7 for the full year but ending near its high point at 75.1. Since then the ratio has drifted lower, ending Q1 2015 at 7 1.0.

SILVER, GOLD AND THE S&P 500



Source: GFMS, Thomson Reuters

THE GOLD / SILVER PRICE RATIO



Source: GFMS, Thomson Reuters

SILVER AND OTHER COMMODITY PRICES

The GFMS team at Thomson Reuters believes that the examination of correlation coefficients is highly useful, not only as an indication of underlying themes that may influence the market, but also to support economic theory with empirical evidence. It must be noted, however, that the existence of either a positive or inverse correlation between two assets is not sufficient in itself to establish direct causality.

Silver's strongest sustained relationship remained with gold over the course of 2014 and the first quarter of 2015. This fits with the narrative that the driving force behind silver's price movements recently has been in relation to its attractiveness as an asset class, rather than the supply and demand fundamentals of the metal. Outside gold, correlations, be they positive or negative, remained weak in the first half of 2014. In the third quarter this changed, however, and silver enjoyed a strong correlation to both copper and oil as all three commodities saw their prices drifting lower on the back of a stronger dollar. Both the copper and oil relationships quickly disintegrated in the fourth quarter however as oversupply in both copper and energy markets became the driving factor, leading to sharp declines that wrere not replicated in silver.

The decoupling of silver, oil and copper also helps to explain the relatively weak correlations with the GSCI and CRB Spot Metals Index over Q4 2014 and Q1 2015. Perhaps more surprising has been the lack of a negative correlation with the S&P 500 in spite of the divergent trends seen in the markets. While this did reach a negative correlation of 0.77 in Q4 2014 this is more coincidence than causality in our view.

CORRELATIONS OF CHANGES IN DAILY PRICES

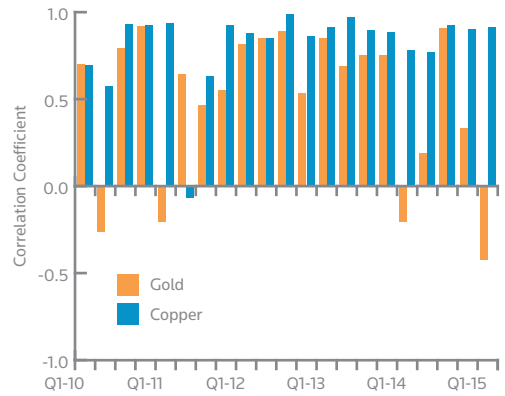
	Q1 14	Q2 14	Q3 14	Q4 14	Q1 15
Gold	0.78	0.77	0.93	0.90	0.91
US$ Index	-0.65	-0.18	-0.97	-0.72	-0.42
Oil (WTI)	0.64	0.42	0.88	0.48	-0.01
CRB Spot Metals	0.06	-0.31	0.75	0.58	0.48
GSCI	0.71	0.51	0.94	0.44	-0.36
Copper	-0.20	0.19	0.91	0.33	-0.42
S&P 500	0.47	0.15	-0.37	-0.77	-0.34

Source: GFMS, Thomson Reuters

Silver also saw a series of volatile movements in net investor positioning in 2014, as reported in the COMEX Managed Money series, and this may help explain some of the price movements in the market being unique silver. The supply and demand fundamentals of the market were broadly balanced for 2014 as a whole and the closest the market came to anything resembling physical tightness was in the third quarter as India pulled in record quantities of material. This appeared to have little impact upon the price however, although it would have been mildly supportive and it did see increases in physical premia.

As the markets continue to anticipate a change in U.S. interest rate policy we are likely to see a continued correlation with gold and negative correlations to equity markets and the dollar. Elsewhere individual supply side dynamics of other commodities are increasingly driving prices, rather than demand side shocks that impact upon a range of commodities, and this is likely to see silver maintain weak relationships with the major commodity indices.

QUARTERLY CORRELATION OF THE SILVER PRICE



Source: GFMS, Thomson Reuters

GOLD, SILVER AND COPPER PRICES

Source: GFMS, Thomson Reuters

3. INVESTMENT

- ***Identifiable Investment, which includes physical bar investment, coins & medals and ETF inventory build, fell by a fifth to a two-year low of 197.4 Moz (6,138 t) in 2014.***
- ***Coin and bar investment declined by 20% to 196.0 Moz (6,095 t). Meanwhile, combined ETF holdings held firm, rising by 1.4 Moz (43 t) for the full year.***
- ***In indicative value terms, Identifiable Investment fell by 35% to an estimated $3.8 billion, the lowest level since 2009.***

OVERVIEW

After a 27% rise in 2013, Identifiable Investment, which consists of physical bar investment, coins & medals and ETF inventory build saw a 20% contraction over 2014, dropping to a two-year low of 197.4 Moz (6,138 t). Identifiable Investment has fallen below the 200 Moz level three times in the past five years: 2011, 2012 and 2014 - all years in which there was disinvestment from bullion. Compared to 2011 and 2012 however, Identifiable Investment was relatively higher in volume terms thanks to robust coin and bar demand, and an absence of large scale ETF liquidation (in contrast to the second quarter of 2011, for example).

Coin and bar investment declined by 20% to 196.0 Moz (6,095 t). After seeing demand more than double in 2013, demand for physical bullion bars fell by 31% in 2014 to 88.4 Moz (2,749 t), partially reversing the previous year's gains. In contrast, purchases of coin & medals saw a fairly small decline of 8% to 107.6 Moz (3,346 t), as waning demand for bullion coins elsewhere were largely offset by a robust uptake in North America and India. Meanwhile, combined ETF holdings held firm, rising by 1.4 Moz (43 t) for the full year. Finally, net speculative investor positions, as measured by CFTC managed money positions, ended the year at 85 Moz (2,652 t), a sharp increase of 206% from 28 Moz (867 t) measured at the end of 2013.

In terms of intra-year activity, the silver price somewhat decoupled from that of gold in the beginning of 2014, failing to benefit from the flight to safety to gold amid fears of sharply depreciating currencies in emerging markets, a repercussion from the Fed's continued QE tapering. Heightened geopolitical risk was not reflected in the silver price either. In fact, the silver price took a tumble to break through the important psychological support of $20/oz,

SILVER PRICE AND INVESTMENT INDICATORS

	2013 Average	2014 Average	Change y-o-y
Silver Price $/oz	23.79	19.08	-20%
Contango (3-mth annualized)	0.64%	n/a	n/a
US$ Libor (3-mth annualized)	0.27%	0.23%	n/a
S&P 500 Index	1,657	1,931	17%
CRB Index	472	477	1%
XAU Index	109	67	-39%
World GDP Growth*	2.5%	2.6%	n/a
Chinese CPI	2.6%	2.0%	n/a
US CPI	1.5%	1.6%	n/a
Eurozone CPI	1.3%	0.4%	n/a

*Annual rates; Source: GFMS, Thomson Reuters; Oxford Economics

WORLD IDENTIFIABLE INVESTMENT

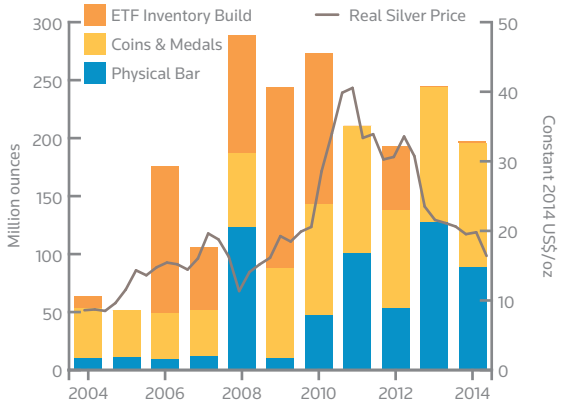
(million ounces)	2012	2013	2014
Physical Bar Investment	53.4	127.2	88.4
Coins & Medals	84.6	116.4	107.6
ETF Inventory Build	55.1	1.6	1.4
Total Identifiable Investment*z	**193.1**	**245.2**	**197.4**
Indicative Value US$(bn)**	**6.0**	**5.8**	**3.8**

* Identifiable Investment is the sum of investment in physical bars, coins & medals as well as the build in ETF holdings and hence is all the quantifiable forms of investment.

** Indicative Value calculated on an annual basis using annual average silver prices.

Source: GFMS, Thomson Reuters

WORLD IDENTIFIABLE INVESTMENT

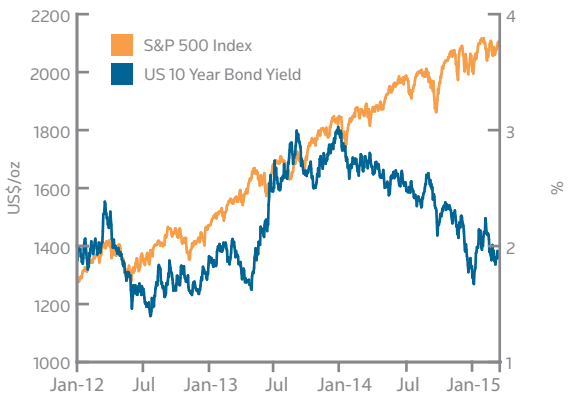


Source: GFMS, Thomson Reuters

reaching $19/oz in early April. Thereafter, silver traded relatively weakly for the rest of the first half of the year. Perceived weakness in the silver price encouraged a steady build up of ETF holdings from 634.0 Moz to 650.0 Moz during the first half of the year. Physical investors were less sanguine however, as the weak silver price saw second quarter silver bullion coin sales contracting by 22% on a quarter-on-quarter basis, compounded by tax hikes in Japan and Germany that had a negative impact on investment behavior in both countries. In the paper investment market, net speculative investor positions, as measured by the CFTC managed money position, was generally trending down over the first half of the year, although it was punctuated by bouts of short covering in between. Net speculative positions hit a record low of -53 Moz (-1,649 t) in early June, driven by a doubling of short positions over the quarter. Price increases in early June, however, triggered short covering and the weighty short positions built earlier lent momentum to the price recovery. The subsequent trimming of short positions and extension of longs saw net speculative long positions reached 233 Moz (7,277 t), just shy of a four-year-high.

In the second half of the year, the silver price was declining, with the rate of fall accelerating in November. Much of the decline was attributed to a strengthening dollar against other major currencies, compounded by a shift of market attention away from Fed tapering to interest rate hikes. Moreover, a worsening outlook for the global economy towards the end of the quarter affected industrial uptake for silver, applying further downward pressure on prices. This culminated in the silver price fall to $15.39/oz towards the end of the year, a four-year low. Weaker growth in China, monetary easing by the ECB and the Bank of Japan only served to strengthen the U.S. dollar against most currencies thereafter dragging the silver price downwards in the process. ETF investors originally capitalized on silver's downward trending price by steadily building up their holdings to a record high of 661.3 Moz (20,570 t) but the sharp fall in silver price towards the end of the year saw investors scurrying to liquidate their ETF holdings, presumably in search of higher yielding investments elsewhere. Consequently, silver ETF holdings ended the year at 635.5 Moz (19,766 t), almost unchanged from the beginning of the year.

S&P 500 VS U.S. BOND YIELD



Source: GFMS, Thomson Reuters

In contrast, the physical market saw a considerable rise in demand for silver bullion coins in response to the sharp fall in price in the fourth quarter. The effect was especially prominent in Europe and North America. Indeed, some bullion dealers reported a "run" on silver coins as some mints put distributors under allocation, resulting in a perceived shortage of bullion coins. Investor activity in the paper investment market was highly volatile over the second half of the year, with net speculative investor positions swinging from a near four-year-high position of 234 Moz (7,277 t) to a net short of 52 Moz (1,605 t) in less than four months, as short positions built steadily over the period to reach an all-time-high. While subsequent short covering helped return the market to a net long position by year end, it was evident that paper investors were inclined to building ever larger short positions in silver over the year. Meanwhile, it is also worth mentioning that silver turnover on the Shanghai Gold Exchange (SGE) reached a record-high of 5.88m kgin December, volumes in the SGE has been growing exponentially since 2007.

In early 2015, the silver price saw a small rally in January, partly attributable to a return in investor interest in gold on the back of rising concerns about heightened currency volatility and geopolitical tensions. However, the increasingly bearish sentiment towards the global economy dented investor confidence in demand for industrial metals, including silver. Bullion coin investors remained on the sidelines and we estimate a 15% year-on-year fall in bullion coin sales in the first quarter of 2015.

OTC MARKET

Due to the lack of meaningful publicly available data on activity in Over the Counter (OTC) products in silver,

LONDON BULLION MARKET ASSOCIATION AND COMEX TURNOVER

(daily averages)	LBMA No. of Transfers	Turnover Moz	COMEX Turnover Moz	LBMA/ COMEX Ratio
2008	519	125.8	176	0.7:1
2009	340	97.3	159	0.6:1
2010	381	87.3	254	0.3:1
2011	798	173.7	389	0.4:1
2012	811	134.5	264	0.5:1
2013	872	136.5	287	0.5:1
2014	778	144.4	272	0.5:1

Source: LBMA; COMEX

stemming from the absence of actual statistics on volumes and open interest, we cannot give a precise estimate of the impact of OTC activity on the underlying physical market. Although the clearing statistics from the London Bullion Market Association (LBMA) provide a gauge, these data are an imperfect reflection of investor activity. First, they do not capture the trends in other OTC markets and secondly, they fail to differentiate between pure investment flows and other forms of activity. We therefore also use information collected through field research, which, in 2014, suggested that the OTC market experienced broad neutrality from investors on a net basis.

This result may come as something of a surprise to some given the significant price drop last year, but this proved to be somewhat of a double edged sword for investor activity. On the one hand it discouraged some investors who were hoping for a rebound after earlier price declines but at the same time it sparked others into bargain hunting as silver hit multi-year lows. In particular, these lower prices encouraged those who did invest to buy a greater quantity of silver as the same dollar expenditure would lead to higher volumes being bought. This change was highlighted by the LBMA data, which according to our calculations showed that the average size of transfers increased by 18%, to the highest annual average since the investor frenzy of 2011. Indeed this trend appears to be continuing into 2015, in four of the last five months (up to and including data for February) the average size has exceeded 200,000 ounces, a level which had only been exceeded twice in the previous 33 months.

This increase in the average size of investor activity though overstates the overall level of OTC activity last year which was up but much more modestly. LBMA clearing statistics were up by 6% year-on-year, and given the price decline the value dropped by almost 16%. One key factor underpinning interest was Asian buying and the continued trend eastwards in the investor community, with strong Indian interest leading to significant drawdown's at times in London. Meanwhile, western investment in the OTC market dropped, although the impending prospect of QE by the ECB did undoubtedly spark some interest in Europe at the tail end of the year.

EXCHANGE TRADED FUNDS

Total combined holdings of silver exchange traded funds (ETFs) remained almost unchanged from year-end 2013 figures, posting an increase of just 0.2%, or 1.5 Moz (46 t) over 2014, closing the year at 635.5 Moz (19,766 t). However, in value terms, total holdings declined to $10.1 billion, a fall of 18% year-on-year. The fall in value of ETFs was directly in line with the decline in the silver price which dropped by $3.5/oz to just below $16/oz from almost $20/oz a year earlier.

Interestingly, despite the fall in the silver price exceeding that of gold, silver ETF levels posted an increase, in contrast to the 9% or 160 ton fall reported for gold ETFs. For silver ETFs, the biggest inflow over the year took place in the established entities, iShares Silver Trust, the largest silver fund, recording an increase of 9.4 Moz (292 t), while ETF Securities registered inflows of 2.1 Moz (66 t). However, some reported losses were also recorded with ZKB posting outflows of 7.6 Moz (236 t), in addition to Julius Baer recording a fall of 1.3 Moz (42 t) over the year.

The start of 2014 saw demand for physically backed silver remain healthy, with the first quarter posting inflows of 15.6 Moz (484 t) to reach 649.6 Moz (20,204 t), a 2.5% increase after three consecutive months of inflows. The growth witnessed was mainly due to inflows in February, responsible for almost a 70% rise for the quarter, as the silver price rose by 10% to $21.27/oz by the end of the month. Similarly, gold ETFs were also seen to record an inflow in February, (the first monthly inflow since December 2012) as geopolitical tension in Crimea,and weaker than expected U.S. economic data and financial turmoil in emerging markets saw investors scramble for safe haven assets, resulting in a rise of 6% for gold prices . However, with the silver (intra-year) price somewhat decoupled from that of gold in the early part of the year, it tumbled down to break through the important psychological support of

INVESTMENT IN COMMODITIES

Last year was a challenging year where commodities price performance was concerned. With the exception of rhodium and palladium, many commodities, whether from the precious metals complex, base metals complex, energy or agriculture ended the year with lower price levels. Of particular significance were the double digit percentage declines in iron ore and crude oil, both of which saw their asset prices halved over the course of the year.

The key drivers that shaped the commodities markets in 2014 can be largely summarized into three factors (1) U.S. dollar strength (2) market surpluses and (3) geopolitical risk. The dollar index gained 12% over 2014 on the back of a strengthening U.S. economy and the end of the tapering program by the Fed. This shifted the markets' attention towards an expected interest rate hike in 2015. The dollar strength was made even more pronounced by weaker economies elsewhere, notably the Eurozone, Japan and emerging markets, resulting in further appreciation of the dollar against these currencies.

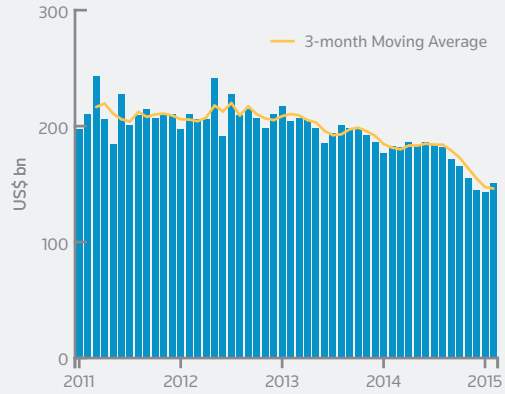
Meanwhile, the market also saw further expansion of supply in some commodities, notably in iron ore output and increased oil and gas production. Without concomitant growth in demand, this contributed to a supply glut in these markets and subsequent price declines. The impact of the rise in the dollar, however, was mitigated somewhat in precious metals markets by a series of events last year that led to heightened geopolitical risks, namely the Ukrainian crisis and the Northern Iraq offensive, which helped catalyze demand for safe haven assets.

In terms of price performance, the precious metals complex was right in the middle of the pack relative to other commodities and asset classes, registering a gain of 3% in 2014. The dollar index was the best performing asset (12%), followed by equities (8%). Energy was the worst performing subsector, registering a loss of 45% over the year. Within the precious metals complex, rhodium and palladium were the only commodities that registered gains in 2014, at 37% and 12% respectively. The remaining precious metals all posted losses, with silver posting the biggest loss at 21%. The gains in rhodium and palladium were largely due to a recovery in the global automobile sector, with the former gaining extra momentum from labor strikes in South Africa, further broadening the deficit in the rhodium market balance. Conversely, the losses in gold and silver prices were primarily driven by expectations of monetary policy normalization in the U.S., which resulted in the strengthening of US dollar and decreased demand for safe haven assets.

Using CFTC monthly Index Investment Data as a gauge of investment activity in the commodities sector, notional values in the U.S. commodities futures market have been trending downwards since 2012, with the decline gathering pace in 2014. From a record high of $242.6 bn in 2011, the notional value in commodities futures had declined by 41% to $143.2 bn by the end of January 2015, the lowest level since 2009. This decline, however, is mainly explained by falling commodity prices as open interest has largely held up against that in 2011.

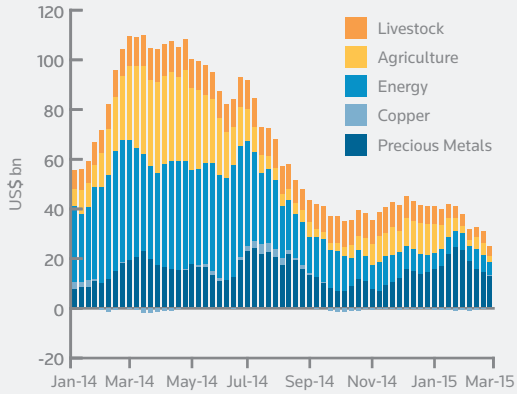
That said, many hedge funds that were set up to ride the commodities super-cycle have also closed their doors as supply has caught up with the China-led demand shock that had characterized many markets since the mid-2000s. A closer look at CFTC Managed Money positions for each sector within commodities showed that the decline in net positions in energy and the agriculture sector were the main drivers behind the

CFTC INDEX INVESTMENT DATA (US$BN)



Source: CTFC

NET POSITIONS IN KEY COMMODITY FUTURES



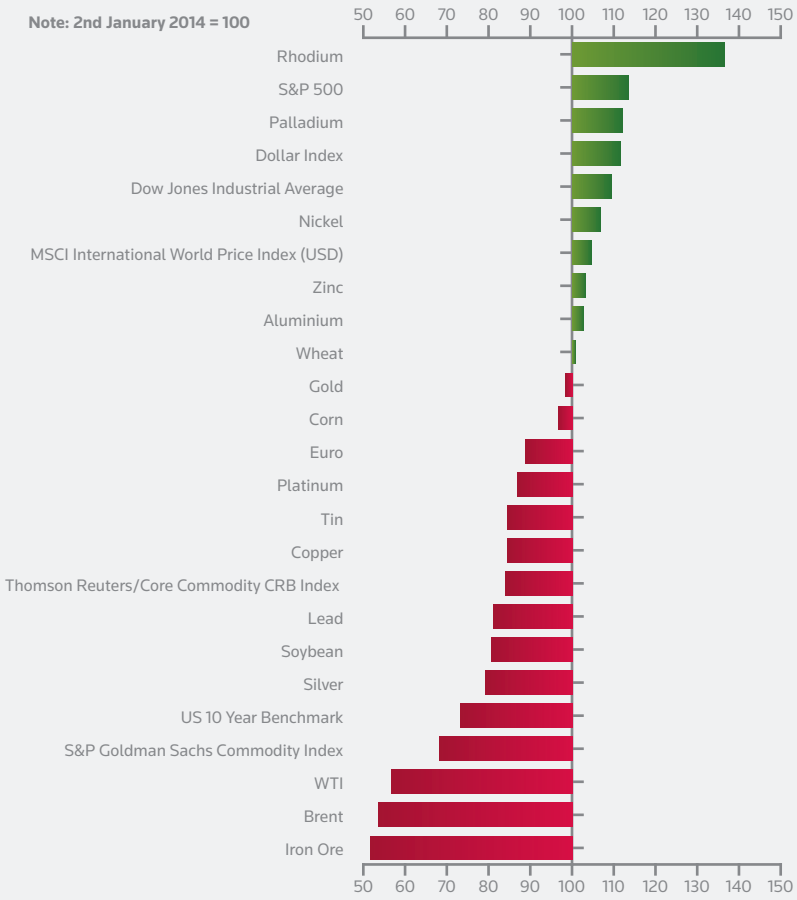
Source: CTFC

overall reduction in net positions last year. The positioning of energy futures, which saw a sharp decline in the net position much earlier than the oil price descent later in the year, suggests that the oil price decline may have been partially driven by speculative shorting of the market in addition to its already unfavorable fundamentals.

Looking ahead, our macroeconomic view supports a stronger dollar on the back of the strengthening U.S. economy. This may be detrimental to the price performance of commodities as an asset class, especially precious metals which are typically sought as a safe haven during times of crisis. A weaker oil price may provide some support to producers' margins by reducing production costs but demand – the other side of the equation – plays an equally important role in shaping the fundamentals.

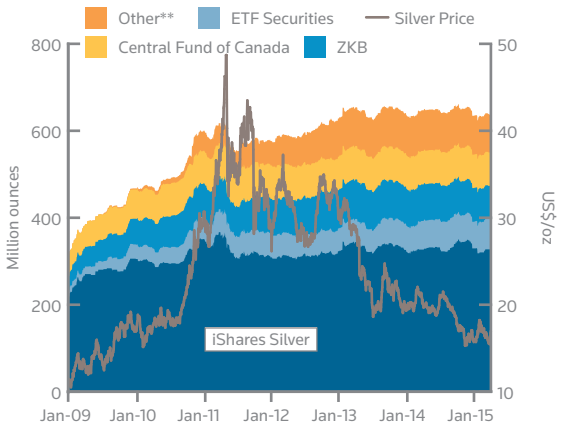
With China's proclaimed 'new normal' of slower economic growth, demand for commodities may wane, albeit a sharp correction in precious metals prices may spur some physical demand uptake. With the exception of India, other emerging markets are mired in recession or slow growth, as evident in Russia and Brazil. Henceforth, it remains to be seen whether the U.S. can continue to build on the economic recovery to offset slowing growth elsewhere.

INDEXED PERFORMANCE ACROSS ASSETS IN 2014



Source: GFMS, Thomson Reuters

SILVER ETF HOLDINGS



Source: Respective Issuers
*ETF Securities: includes LSE, Australia, NYSE, GLTR and WITE
**Other: includes Sprott Physical Silver Trust, Julius Bär, DB Physical Silver, BlackRock Silver Bullion Trust, Silver Bullion Trust, Mitsubishi UFJ Tokyo, iShares Physical Silver ETC, Source Physical Silver, Royal Canadian Mint;

SILVER ETFS HOLDINGS

	(Moz) end-2013	end-2014
iShares Silver Trust	320.2	329.6
ZKB Silver ETF	84.7	77.1
Central Fund of Canada	77.0	77.0
ETF Securities*	59.9	62.5
Others**	92.3	89.4
Total	**634.0**	**635.5**

* Includes LSE, Australia, NYSE, GLTR, WITE and Hong Kong

** Includes Sprott Physical Silver Trust, Julius Bär, DB Physical Silver, BlackRock Silver Bullion Trust, Silver Bullion Trust, Mitsubishi UFJ Tokyo, iShares Physical Silver ETC, Source Physical Silver, Royal Canadian Mint.

Source: Respective issuers

$20/oz, reaching $19/oz in early April. ETFs were steady over the period, reaching 649.6 Moz (20,205 t) by end-May. However, by end-June, with the monthly average gold:silver ratio having fallen from 66.5 to 64.7, (the first fall in the gold:silver ratio recorded for the year), ETFs once again returned to outflows to reach 641.0 Moz (19,939 t) by month end.

Turning to the third quarter of the year, continued perceived weakness in the silver price (attributed to a strengthening dollar against other major currencies in addition to a shift of market attention away from Fed tapering to interest rate hikes) further encouraged investors to capitalize, with silver ETF holdings rising by 1.5% since end-June, or 9 Moz (294 t) by end-October to reach 650.5 Moz (20,233 t). On 30th September a record high for the year of 661.3 Moz (20,570 t) was reached, however the sharp fall in silver prices towards the end of the year reversed this trend with investors opting for higher yielding investments. Consequently, silver ETF holdings ended the year at 635.5 Moz (19,766 t), almost unchanged from the beginning of the year.

PHYSICAL BAR INVESTMENT

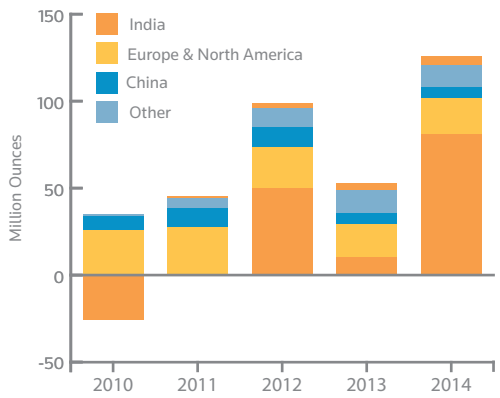
After seeing demand more than double in 2013, offtake of physical bullion bars fell by 31% in 2014 to 88.4 Moz (2,749 t), partially reversing last year's gains. In value terms, this corresponds to $1.7bn. While India - a primary driver of physical bar investment in 2013 – continues to grow, this was more than offset by liquidations elsewhere in the world as silver bullion fell out of favor with investors amid its lackluster price performance.

Indian bar investment gained by 4% last year to 62.8 Moz (1,953 t), making it a second consecutive year of decline. That said, we have revised down the 2013 investment number to 60.2 Moz (1,871 t). Despite the year-on-year rise in volume terms, in value terms it has declined by more than 10% (basis annual average price in rupee). This was largely due to a fall in prices and poor returns on investment during 2012 and 2013, which kept investors skeptical on the future price outlook. However, when prices moved below Rs. 40,000/kilogramme, fresh investments also picked up. Investments were largely in the form one or five kilo bars that are sliced from the larger 30 kilo bars. Silver also benefitted from a range of government import restrictions targeting the gold market over the course of 2013 and 2014. This made silver an attractive alternative for those wanting to trade the spot and future spreads.

Physical bar investment in **Europe** is estimated to have fallen sharply last year, to its lowest level since the global financial crisis of 2008/09. Bar demand continued to suffer from heavy taxation as, unlike gold bullion, which is exempt from VAT, investors are required to pay VAT of around 20% (depending on the country) on silver bullion bars. Among other factors contributing to last year's decline were improving investor confidence and buoyant stock markets, which undermined investor interest in safe-haven assets and put pressure on silver investment demand. This was particularly evident in the first six months of the year, when disappointing price performance (the average silver price in euro terms was down 28% compared to the same period a year before) and generally weak investor sentiment towards the precious metals complex, pushed investors to liquidate some of their silver holdings to allocate cash into yield-bearing financial assets. It is worth emphasizing, though, that first-half losses were somewhat mitigated by some renewed interest in the latter half of the year in the anticipation of quantitative easing from the ECB and in light of a sharp decline in silver prices, which spurred some bargain hunting in the final months.

Demand in the **United States** for silver bars dropped by 29% in 2014. In the first half of the year, bar demand slumped around 17%. In the second half, there was a marked increase in liquidations in the silver bar market, as some U.S. investors sought to realize losses in order to capture tax breaks. This brought net demand significantly lower relative to year ago levels in the period. Field

PHYSICAL BAR INVESTMENT



Source: GFMS, Thomson Reuters

research suggests that these positions may have been reopened at lower entry-level prices later in the year and in the first quarter of 2015. Price rallies throughout the year did generate relatively stronger buying interest; however the ratio of buyers to sellers was lower when compared to previous years and these bouts of buying were much shorter lived. In the first quarter of 2015 bar demand continued to decline, but at a slower clip compared to the drop seen in the corresponding period in 2014.

After growing by less than 1% in 2013, **Chinese** bar investment took a big hit in 2014, recording a 52% year-on-year decline, to 6.2 Moz (193 t), the lowest level since 2010. The sharp decline was attributed to the continual implementation of the anticorruption policy, which served a severe blow to the gifting sector including bars. A lack of strength in the silver price had also undermined investor confidence on the silver price outlook. Some investors thus preferred to trade on silver's short term price trend by trading contracts through the local metal exchanges instead of investing in physical bullion.

COMMODITY EXCHANGES ACTIVITY

The year 2014 saw total turnover on the **Shanghai Futures Exchange** (SHFE) continue to build on its stellar growth in 2013 albeit at a slower pace, showing a 12% year-on-year increase to a nominal 93,296 Moz (2,901,824 t). The exchange, which launched in 2012, saw high turnover in the first quarter, sustaining the massive growth seen in the second half of 2013. Aside from brief spikes of activity, trading across the second and third quarters was at a lower level, with an average daily trading volume of 219 Moz (6,802 t) compared to a figure of 607 Moz (18,868t) in the first quarter. Activity picked up in the final quarter of 2014, especially after November when prices dropped off, with an average daily turnover was 501 Moz (15,582t).

Turnover on **COMEX** posted a 5% year-on-year decline last year to a nominal 68,485 Moz (2,130,116 t). While there was a sustained rally in the month of November, the general trend was down. The first half had an average daily turnover of 287 Moz (8,928 t) compared to 257 Moz (7,992 t) in the second. Turnover on the **MCX** more than halved as the effects of the commodities transaction tax, introduced in July 2013 took effect.

CFTC reports on managed money can be used as a proxy

SILVER TURNOVER ON MAJOR COMMODITY EXCHANGES

(total volume in nominal million ounce equivalents)

	2012	2013	2014	Change y-o-y
SHFE	10,256	82,971	93,296	12%
COMEX	66,578	72,375	68,485	-5%
MCX	24,155	15,676	7,750	-51%
SGE	3,310	6,881	8,024	17%
ICE FUTURES US	704	500	188	-62%
TOCOM	39	31	24	-24%

*N.B. : Includes the 5,000-ounce and 1,000-ounce contracts

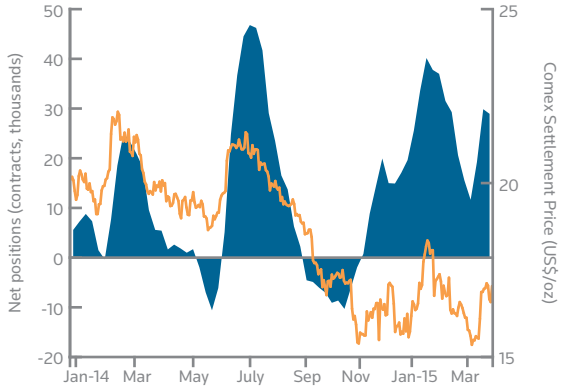
Source: GFMS, Thomson Reuters; TOCOM, MCX, SGE and SHFE

for investor activity on the exchange. The first half of 2014 was characterized by a steady rise in long positions and a volatile short position, mirroring the silver price. Until mid June, the long position gained 20.2 Moz to 161.7 Moz, while the short position reached a peak of 214.7 Moz, leaving a net deficit of 53.0 Moz. The subsequent recovery in the silver price at the end of June and in July mobilized investors and look the long position to a year high of 269.8 Moz at the start of July while negative speculation dropped like a stone to a mere 31.7 Moz in late July. The acute fall in the silver price from around $21 at the start of July to around $15 at the beginning of November was partially driven by fresh short positions, which rose to a peak of 234.1 Moz in late October. Interestingly, although long positions did trail off from their July highs, there was no mass liquidation of positions, with the average long position of 205.3 Moz in the second half of the year compared to 163.8 Moz in the first. The rest of the year, as well as the start of 2015, saw shorts drop away as the price stabilized, while longs continued to build. What is clear over the course of 2014 and into 2015 is that long investors have held their nerve, held and built on their positions against falling prices, whereas short investors react sharply to price movements, exiting the market as quickly as they enter it (a reflection of silver's high price volatility).

COINS AND MEDALS

After a whopping 38% growth in 2013, silver coin fabrication declined by 8% in 2014, bringing total coins and medals fabrication to 107.6 Moz (3,346 t), the lowest level since 2012. That said, silver coin fabrication levels were relatively robust in 2014 compared to gold coin fabrication, which slumped by 37% year-on-year. The robustness is highlighted by the fact that 2013 was a year characterized by bargain hunting on the back of the silver price collapse

NET "INVESTOR" POSITIONS ON COMEX



Source: CFTC

MANAGED MONEY NET POSITIONS IN COMEX FUTURES

		Contracts	Moz	Price
2011		21,643	108.2	35.25
2012		19,658	98.3	31.15
2013		9,114	45.6	23.75
2014	Q1	11,809	59.0	20.44
	Q2	4,243	21.2	19.62
	Q3	19,617	98.1	19.65
	Q4	3,664	18.3	16.48

(Managed Money net positions, Moz equivalent and average Comex settlement price in $/oz)
Source: CFTC

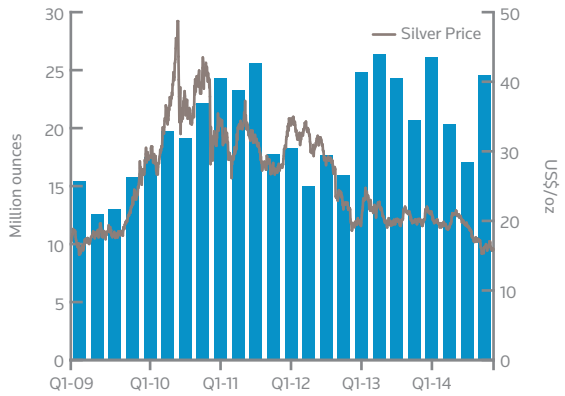
in Q2 2013, driving silver coin investors into the market in droves to take advantage of the lower price, whereas previously high level had priced many potential investors out of the market, or at least capped the volume of their purchases. In value terms however, total investment in coins and medals declined by a sharper 26% year-on-year to $2.05 billion. The decline of the silver coin market in value terms was due to a 20% fall in silver prices over the period, which compounded the effect of the down trend.

Analyzing GFMS' proprietary quarterly bullion coin survey, silver coin sales started 2014 strongly, carrying momentum from the previous year forward. Entering the second and third quarters, silver coin sales had largely been trending downwards as it was losing its luster as a risk and inflation hedge. In the final quarter of 2014 the silver price fell sharply, hitting $15.39/oz at one point; this once again lured some bargain hunters into the market especially from Europe and North America. Some mints put distribution under allocation over the period, creating a perceived shortage in the market, which further triggered some interest. Indeed, some bullion dealers reported a "run" on silver coins. Total silver bullion coin sales for 2014, of those mints surveyed, saw a 9% year-on-year decrease to 87.9 Moz (2,735 t). Volumes sold remained elevated compared to pre-2009 levels.

Looking at trends on a regional basis and starting with North America, annual silver coin fabrication in the **U.S.** and **Canada** held firm, growing by 3% respectively despite the global downtrend. Combining bullion and numismatic coins, we estimate that the U.S. and Canada produced a total of 45.5 Moz and 30.7 Moz of silver coins respectively in 2013. In both countries, this was the highest level of silver coin fabrication in our records. **Mexico**, however, saw silver coin sales decrease by 9% to 1.0 Moz.

Silver coin fabrication in Europe was the main laggard, and accounted for much of the global decline in coin fabrication last year. Total silver coin fabrication declined sharply by 53% to 9.3 Moz. Much of this was attributed to weak coin sales from **Austria**, Europe's pre-eminent bullion coin manufacturer. We estimate that silver coin sales from the country dropped by 67% y-o-y to 4.8 Moz, the lowest level since 2007. The primary reason behind the fall in bullion coin sales from Austria is due to the VAT hike on silver coins in Germany from 7% to 19% effective January 2014. Germany is one of the largest markets for bullion coins in Europe. The **UK**, the region's second largest fabricator of silver coins, saw fabrication decline by 3% to 2.1 Moz. That said, silver coin fabrication remains high thanks to the Royal Mint's aggressive campaign to rejuvenate demand for precious metals products two years ago. Annual silver coin production prior to 2013 was always below 1 Moz.

SILVER BULLION COIN SALES



Source: GFMS, Thomson Reuters

INVESTMENT

TABLE 2 - SILVER FABRICATION: COINS AND MEDALS (INCLUDING THE USE OF SCRAP)

(million ounces)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
United States	16.6	17.6	16.0	25.4	34.3	41.7	41.0	34.8	44.2	45.5
Canada	1.6	2.9	4.3	9.0	10.8	18.6	23.5	18.0	29.7	30.7
Australia	1.0	1.4	3.5	5.9	6.5	8.8	11.3	6.5	9.1	7.9
India	0.0	0.0	0.0	0.0	0.0	0.0	1.9	1.9	5.4	6.3
China	1.8	1.6	2.6	2.8	3.0	1.5	4.1	4.5	6.2	5.9
Austria	0.6	0.5	0.5	8.3	9.5	11.6	18.4	9.2	14.7	4.8
United Kingdom	0.5	0.4	0.5	0.5	0.5	0.5	1.0	0.7	2.2	2.1
Mexico	2.6	1.9	1.6	1.4	1.7	2.1	1.7	0.7	1.1	1.0
Germany	9.7	8.7	6.3	7.2	7.4	6.4	3.3	1.1	0.6	0.6
Spain	1.7	1.5	1.2	0.6	0.6	0.6	0.5	0.4	0.4	0.5
Other Countries	4.2	3.2	3.2	3.2	3.4	4.5	3.6	6.7	2.8	2.3
World Total	**40.4**	**39.7**	**39.7**	**64.3**	**77.8**	**96.2**	**110.0**	**84.6**	**116.4**	**107.6**

Germany, once Europe's second largest silver coin fabricator, continues to see its silver uptake for coin fabrication steady at 0.6 Moz, mainly for the production of commemorative coins. Ten years ago, silver uptake for coin fabrication was 9.7 Moz; this had declined to 0.6 Moz in 2013. The chief reason behind the shrinkage is attributed to the German government's pricing model, which stipulates that the cost of silver content should match the face value of the commemorative coin. To meet this target, the purity of silver has been reduced from 92.5% to 62.5% since 2011, a development that removed a substantial amount of silver used in coin fabrication despite the same mintage levels. Following this policy, the decrease of silver price in the past three years since could see silver content increasing again in the coming years.

Moving on to Asia, silver coin fabrication held firm, growing by 4% year-on-year. We have trimmed our estimates of silver coin fabrication in **China** in view of indications that bullion coin sales had a much lower uptake than planned mintages suggests. China is estimated to have produced 5.9 Moz of silver coins last year, a 4% year-on-year decline. However, silver coin fabrication has increased by more than three-fold in China in the past decade, growing from a mere 1.8 Moz in 2005. This was driven by a huge increase in interest for bullion coins as a means to store wealth, underpinned by fears of backlash from China's post financial crisis credit bubble and a relative lack of alternative investment vehicles.

Meanwhile, **India** has surpassed China in 2014 to become the region's largest silver coin fabricator in Asia, producing a total of 6.3 Moz. Investment has been one of the drivers that have helped lift demand but considerable volumes have also been generated from the gifting segment, for both corporate and personal gifting. In many middle income households, silver coins serve as gifts during wedding invitations or as a return gift at wedding ceremonies. Corporate activity has been equally strong, primarily gifting to employees, vendors and customers during occasions such as Diwali and Laxmi pooja. The grammage weight has also increased and is typically in the range of 50 to 200 grams. The share of imported coins is minimal as much of it is fabricated by domestic fabricators. Silver coin fabrication volumes in **Australia** declined by 13% year-on-year to 7.9 Moz, the lowest level since 2012. Australia is one of the key silver bullion coin producers in the world and we think the VAT hike in Europe may have explained falling demand for silver investment coins from Australia's bullion mint.

Entering 2015, general risk-on trades, which had largely characterized the weakening of the gold and silver price in the final quarter of 2014, took a 180° turn as risk-off trades returned to market in the New Year. The silver price moved from $15.71/oz in the beginning of the year to $18.23/oz in January. The strong price trend has negatively affected demand amongst silver coin investors, particularly bargain hunters who had largely supported the market in the previous quarter. We think that the bullion coin market may have found its 'new normal' in 2014. Unless there are considerable price dips during the year that may lure in bargain hunters, or a risk event that may prompt investors to flock to safe haven assets, silver bullion coin sales going forward should largely approximate to levels seen in 2014. Talk of interest rate rises and better yields elsewhere would likely reduce the case for precious metals as an investment.

4. MINE SUPPLY

- **Global silver mine production rose again last year, to a new record high of 877.5 Moz (27,293 t).**
- **The increase was primarily driven by stronger output from the primary silver and copper sectors, which rose by 20.9 Moz (651 t) and 11.3 Moz (351 t), respectively.**
- **The largest gain came from Central & South America, led mainly by production in Guatemala and Chile, partly counteracted by lower production from Canada and Russia.**
- **Primary silver Total Cash Costs fell by almost 16% in dollar terms, to $7.74/oz.**
- **The producer silver hedge book grew last year, by 15.8 Moz (492 t) to stand at 29.5 Moz (919 t) at end-2014 on a delta-adjusted basis.**

MINE PRODUCTION

- ***Global mine production continued to increase last year, recording a 12th successive annual gain.***

Silver mine production rose by 5%, or 42.2 Moz (1,311 t) to reach 877.5 Moz (27,293 t) in 2014, a new record high. This represented a compound annual growth rate of 3.3% since 2002. The fall in the silver price continued last year, placing the industry under further cost pressure, with operators striving to contain cost escalation by seeking further operational efficiencies. Despite continued cost pressures, as per the previous year, we witnessed few mine closures. The bulk of the gains, in output last year can be attributed to Central & South America which recorded a 17% or 40.3 Moz (1,252 t) jump in output to 280.6 Moz (8,727 t). Guatemala itself recorded a 205% increase in output to 27.6 Moz (858 t) following the successful commissioning of the high-grade Escobal

TOP 20 SILVER PRODUCING COUNTRIES

Rank			Output (Moz)	
2014	2013	Country	2013	2014
1	1	Mexico	187.2	192.9
2	2	Peru	119.5	121.5
3	3	China	115.6	114.7
4	4	Australia	59.2	59.4
5	7	Chile	39.2	50.6
6	6	Bolivia	41.2	43.2
7	5	Russia	45.9	42.9
8	8	Poland	37.6	40.6
9	9	United States	33.4	37.6
10	10	Argentina	24.9	29.1
11	15	Guatemala	9.0	27.6
12	12	Kazakhstan	19.6	17.5
13	11	Canada	20.8	15.5
14	13	Sweden	10.8	12.7
15	17	Morocco	8.2	8.9
16	14	India	10.7	8.4
17	16	Indonesia	8.2	7.7
18	18	Turkey	6.0	6.6
19	23	Dominican Republic	2.8	4.5
20	19	Armenia	3.4	3.7
		Rest of World	**32.1**	**31.7**
		World Total	**835.3**	**877.5**

Source: GFMS, Thomson Reuters

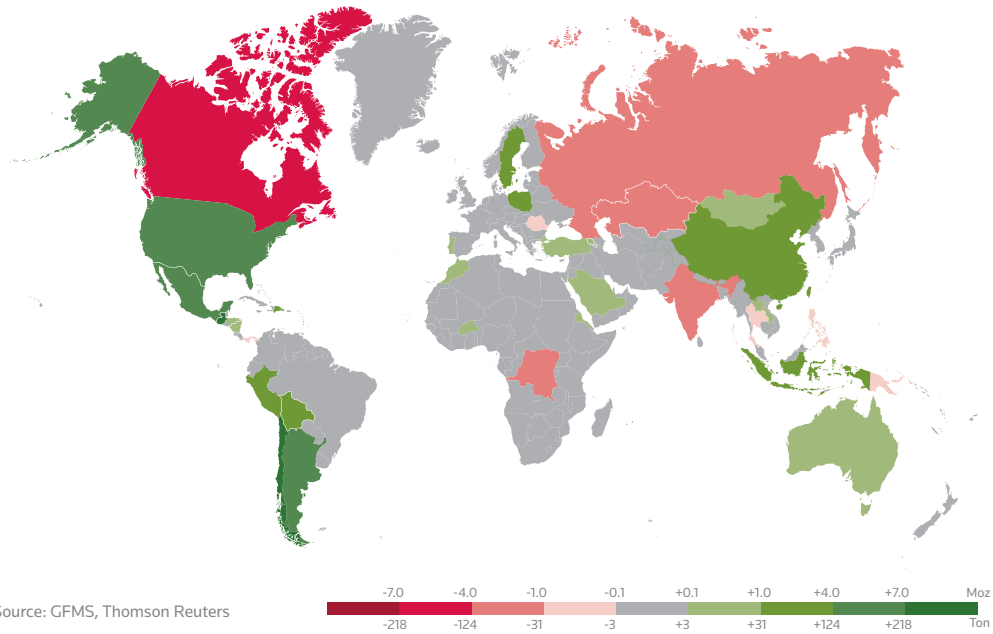
TOP 20 SILVER PRODUCING COMPANIES

Ranking			Output (Moz)	
2013	2014		2013	2014
4	1	KGHM Polska Miedź S.A. [1]	37.3	40.4
2	2	Fresnillo plc. [2 3]	39.0	40.4
5	3	Goldcorp Inc.	30.3	36.8
1	4	Glencore plc. [4]	39.0	34.9
3	5	BHP Billiton plc. [5]	38.2	34.0
6	6	Polymetal International plc.	27.2	28.7
7	7	Pan American Silver Corp. [3]	26.0	26.1
8	8	Volcan Cia. Minera S.A.A. [4]	20.7	22.5
n/a	9	Tahoe Resources Inc. [3 6]	2.0	20.3
18	10	Corp. Nacional del Cobre de Chile [6]	9.5	19.9
9	11	Cia. De Minas Buenaventura S.A.A. [4]	18.9	19.7
10	12	Coeur Mining, Inc. [3]	17.0	17.2
11	13	Hochschild Mining plc. [7]	16.6	16.2
12	14	Sumitomo Corp. [6]	13.8	15.3
14	15	Industrias Peñoles S.A.B. De C.V. [8]	13.2	14.1
13	16	Southern Copper Corp. [9]	13.5	13.0
16	17	Teck Resources Ltd. [6]	11.4	12.7
17	18	First Majestic Silver Corp. [3]	10.6	11.7
20	19	Hecla Mining Company	8.9	11.1
21	20	Boliden A.B. [5]	8.4	10.4

1 Reported metallic silver production; 2 Including 100% of Penmont mines, excluding silverstream; 3 Primary silver producer; 4 Includes minority partners; 5 Metal in concentrate; 6 Estimate; 7 Includes 100% from Pallancata, includes Moris; 8 Excludes 100% of Fresnillo plc.; 9 Mined silver;

Source: GFMS, Thomson Reuters

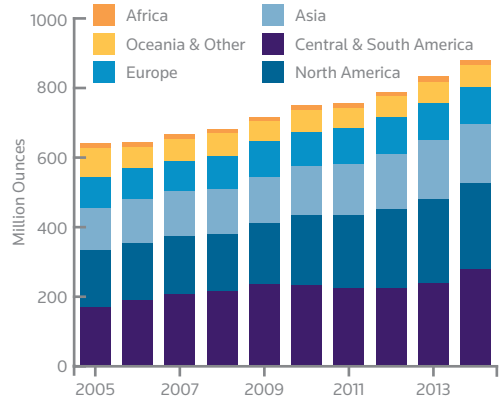
SILVER MINE PRODUCTION WINNERS AND LOSERS, 2014 VERSUS 2013



Source: GFMS, Thomson Reuters

primary silver deposit; the largest addition globally. Other significant gains in output were posted in Chile, Argentina and Mexico. Leading the global declines was Canada, which recorded a 25% fall to 15.5 Moz (483 t) following lower output across a number of operations. In Asia, production declined by a modest 3% or 5.4 Moz (169 t) due to lower output from base metal mines in Kazakhstan and India. Silver output from the primary silver sector continued its strong growth trend of previous years, posting an 8% gain to total 269.5 Moz (8,381 t). Again, the majority of these gains can be attributed to countries bordering the eastern Pacific. The largest mined source of silver, the lead/zinc sector, posted a modest 2% increase to 310.6 Moz (9,661 t).

WORLD SILVER MINE PRODUCTION



Source: GFMS, Thomson Reuters

NORTH AMERICA

North American mine production rose for a sixth successive year, rising by 2% to total 246.1 Moz (7,653 t). The outcome was led by output from the primary silver and lead/zinc sectors in Mexico and United States, partially offset by an overall decline in Canada.

Output in **Mexico** grew by 5.8 Moz (179 t) to total 192.9 Moz (6,000 t). The primary silver sector accounted for half of the growth in the country, primarily led by a jump in production at Saucito and San Jose. At the former, output rose by 3.8 Moz (119 t) supported by higher throughput (+30%) and ore grades (+3%) from additional feed from Saucito II; one of Fresnillo's development projects commissioned late last year. At San Jose, following a mine and processing plant expansion during April 2014, throughput surged by 48% which, when combined with a 16% rise in silver grade, led to a 1.9 Moz (58 t) increase. Further gains were recorded at Del Toro, where despite operational issues with the mill during the ramp-up stage, output rose by 1.2 Moz (38 t). The significant increase in throughput came from the commissioning of the flotation circuit and the provision of power from a new 115 kV power lines since September 2014. Providing a partial offset, output from Fresnillo's namesake operation fell by 2.7 Moz (83 t), mainly due to a 9% drop in silver grade. Development work delays and higher strip ratios

TABLE 3 - WORLD SILVER MINE PRODUCTION

(million ounces)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Europe										
Russia	32.5	31.3	29.3	36.4	42.2	36.8	38.5	44.5	45.9	42.9
Poland	40.5	40.5	39.6	39.0	39.2	37.6	40.8	41.3	37.6	40.6
Sweden	9.1	8.6	9.4	8.4	8.7	9.2	9.1	9.8	10.8	12.7
Turkey	5.2	6.0	7.5	10.1	12.5	12.3	9.3	7.3	6.0	6.6
Portugal	0.8	0.6	0.9	1.3	0.7	0.7	1.0	1.1	1.4	1.7
Spain	0.2	0.1	0.1	0.1	0.1	0.7	1.1	1.2	1.3	1.3
Greece	0.0	0.8	1.1	1.1	0.9	0.9	0.8	1.0	0.9	0.9
Bulgaria	0.7	0.6	0.4	0.4	0.5	0.4	0.5	0.6	0.6	0.6
Macedonia	0.2	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Romania	0.9	0.5	0.1	0.0	0.1	0.2	0.4	0.3	0.3	0.1
Ireland	0.2	0.2	0.2	0.2	0.1	0.0	0.0	0.1	0.0	0.1
Italy	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Countries	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Total Europe	**90.4**	**89.6**	**89.0**	**97.3**	**105.4**	**99.3**	**101.9**	**107.5**	**105.5**	**108.0**
North America										
Mexico	93.1	95.5	100.8	104.1	114.3	141.8	153.6	172.3	187.2	192.9
United States	39.2	36.7	40.5	36.0	40.2	41.2	36.0	34.1	33.4	37.6
Canada	34.2	31.2	26.7	21.5	19.6	18.4	18.7	21.3	20.8	15.5
Total North America	**166.5**	**163.3**	**168.0**	**161.6**	**174.0**	**201.4**	**208.3**	**227.7**	**241.4**	**246.1**
Central & South America										
Peru	102.7	111.6	112.6	118.5	126.1	117.0	109.9	111.9	119.5	121.5
Chile	44.3	51.5	62.3	45.1	41.8	41.0	40.9	37.0	39.2	50.6
Bolivia	12.8	15.2	16.9	35.8	42.6	41.0	39.0	39.7	41.2	43.2
Argentina	6.1	6.9	8.2	10.8	18.0	23.3	22.8	24.5	24.9	29.1
Guatemala	0.3	1.6	2.8	3.2	4.2	6.3	8.8	6.6	9.0	27.6
Dominican Republic	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.9	2.8	4.5
Honduras	1.7	1.8	1.7	1.9	1.9	1.9	1.6	1.6	1.6	1.8
Ecuador	0.3	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.6
Nicaragua	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.4	0.5
Brazil	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5
Colombia	0.2	0.3	0.3	0.3	0.3	0.5	0.8	0.6	0.4	0.4
Panama	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0
Other Countries	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1
Total C. & S. America	**169.1**	**189.8**	**205.9**	**216.8**	**236.6**	**232.9**	**225.7**	**224.3**	**240.3**	**280.6**
Asia										
China	67.6	75.9	79.3	84.0	86.7	94.6	102.6	111.7	115.6	114.7
Kazakhstan	26.1	25.6	22.8	20.2	19.7	17.6	17.6	17.5	19.6	17.5
India	3.3	5.9	5.7	6.8	6.2	8.2	7.5	9.0	10.7	8.4
Indonesia	9.9	7.9	8.6	8.0	7.7	6.7	6.1	5.3	8.2	7.7
Armenia	1.2	1.3	1.7	1.4	1.3	1.6	2.4	2.9	3.4	3.7
Islamic Rep. Of Iran	2.9	3.2	2.9	3.2	3.4	3.6	3.6	3.5	3.1	3.2
Mongolia	1.2	1.2	1.2	1.1	1.1	1.1	1.1	1.1	1.6	2.1
Uzbekistan	2.1	2.1	2.5	1.7	1.7	1.9	1.9	1.9	1.9	1.9
Dem. Rep. of Laos	0.2	0.2	0.1	0.2	0.5	0.6	0.6	0.6	1.0	1.3
Thailand	0.6	0.5	0.4	0.4	0.7	0.7	0.8	1.2	1.2	1.1
North Korea	0.8	0.9	0.9	0.9	0.8	0.8	0.9	0.9	0.9	0.9
Philippines	0.6	0.8	0.9	0.5	1.1	1.4	1.4	1.5	1.5	0.9
Saudi Arabia	0.4	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.6	0.7

TABLE 3 - WORLD SILVER MINE PRODUCTION

(million ounces)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Japan	1.0	1.1	0.4	0.4	0.4	0.3	0.5	0.6	0.5	0.5
Kyrgyzstan	0.0	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.3	0.3
Tajikistan	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1
Pakistan	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Other Countries	0.1	0.1	0.1	0.1	0.1	0.3	0.2	0.2	0.1	0.1
Total Asia	**118.2**	**127.2**	**128.1**	**129.7**	**132.2**	**140.2**	**147.9**	**158.5**	**170.5**	**165.0**
Africa										
Morocco	7.9	7.6	6.9	7.8	8.9	9.9	8.0	7.5	8.2	8.9
South Africa	2.8	3.0	2.8	2.7	2.9	3.0	3.0	2.9	2.8	2.8
Eritrea	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.7	0.8	1.5
Burkina Faso	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Zambia	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4
Tanzania	0.4	0.4	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4
Botswana	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3
Dem. Rep. of the Congo	1.7	2.2	2.3	1.1	0.0	0.2	0.4	0.4	2.0	0.3
Zimbabwe	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Ethiopia	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
Ghana	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Other Countries	1.1	1.2	0.4	0.3	0.1	0.1	0.1	0.2	0.2	0.1
Total Africa	**14.6**	**15.0**	**13.2**	**12.8**	**13.0**	**14.3**	**12.9**	**13.1**	**15.4**	**15.4**
Oceania & Other										
Australia	77.4	55.6	60.4	61.9	52.4	60.4	55.5	55.5	59.2	59.4
Papua New Guinea	2.2	1.6	1.4	1.6	2.2	2.1	3.0	2.6	2.9	2.8
New Zealand	1.5	1.1	0.6	1.0	0.5	0.4	0.3	0.2	0.2	0.2
Other Countries	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Oceania & Other	**81.1**	**58.4**	**62.4**	**64.6**	**55.0**	**63.0**	**58.7**	**58.3**	**62.3**	**62.4**
World Total	**639.9**	**643.3**	**666.6**	**682.7**	**716.3**	**751.2**	**755.3**	**789.3**	**835.3**	**877.5**

at the San Carlos and San Mateo areas also contributed to the loss in output. In addition, output at Palmarejo dropped by 1.0 Moz (33 t) due to lower grades from surface operations and lower mill throughput caused by a decrease in underground tons mined.

Within the lead/zinc sector, we estimate a 2.3 Moz (73 t) jump as production from Goldcorp's Peñasquito tracked higher. Output at Peñasquito rose by 3.4 Moz (104 t) due to a 12% increase in processed silver grades. Further gains were witnessed at Francisco del Oro, where output rose by 0.4 Moz (13 t) from the prior year. These gains were sufficient to offset losses elsewhere in the sector, which we estimate focused around small to medium scale operations across the country.

Mine supply from the **United States** rose by 13% year-on-year, reaching 37.6 Moz (1,170 t). We estimate that production at Teck's Red Dog increased by approximately 2.0 Moz (64 t). The primary silver sector also posted significant results, with output at Lucky Friday and Rochester rising by a combined 3.2 Moz (99 t) on the back of higher throughput and grades.

Following two years of consecutive declines, output from **Canada** contracted by 25% or 5.2 Moz (163 t) year-on-year, with the losses stemming primarily from the lead/zinc and silver sectors. Glencore's Brunswick ceased operations in mid-2013. Further losses were registered at LaRonde due to lower grades from normal mine sequencing and lower throughput caused by the scheduled maintenance of the Penna shaft. On an aggregate basis, these two operations led to a combined drop of 2.1 Moz (67 t). Additionally, in late 2013, BelleKeno ceased mining activities and this correspondingly contributed to a 1.4 Moz (44 t) drop in output in 2014 from the primary silver sector. We estimate that widespread small losses caused production from the gold sector in Canada to contract by 0.9 Moz (28 t).

CENTRAL & SOUTH AMERICA

Central & South American mine supply rose by 40.3 Moz (1,252 t) to 280.6 Moz (8,727 t), responsible for the majority of global growth. Across the region, output growth was led by operations from the primary silver and copper sectors, which on aggregate contributed to a 32.4 Moz (1,009 t) increase in production. In the gold mining sector, losses from aging operations and mine closures were offset by gains from recently commissioned projects. Silver recovered from this sector accounted for a 4.0 Moz (124 t) increase in 2014. Further gains were also witnessed from the lead/zinc sector, which also rose by 3.3 Moz (125 t) year-on-year.

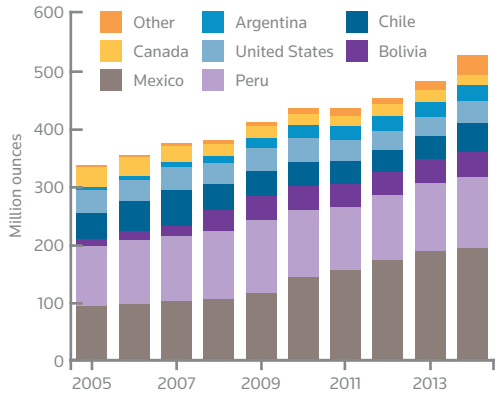
The largest increase globally was seen in **Guatemala**, where production surged by 18.6 Moz (577 t) to total 27.6 Moz (858 t). The bulk of the rise came from the primary silver Escobal property, which was commissioned in September 2013 and achieved commercial production in January 2014. A full year of operations accounted for an estimated increase of 18.3 Moz (569 t) last year. At Guatemala's other large scale mine, Marlin, higher grades were behind a 4% increase.

The second largest gain came from **Chile**, where production rose by 29% or 11.5 Moz (357 t). Consequently, Chile has overtaken Bolivia to become the second biggest producer of silver in Central & South America. The increase was primarily due to the onset of production at Codelco's Ministro Hales, an open-pit copper mine. While production began on schedule, issues involving high arsenic levels in concentrates led to delays in the roaster reaching full capacity. As a result, some shipments to smelters were deferred and others necessitated concentrate to be blended to dilute the deleterious elements. It was the onset of Ministro Hales that drove Codelco's output for the year up by 10.5 Moz (326 t). Growth also came following a 7% increase in throughput at Escondida, where silver production rose by 0.9 Moz (26 t), and at El Peñón, where higher grades led to a 2.0 Moz (62 t) increase in production. The most significant loss came from the cessation of La Coipa, which was placed on care & maintanence in October 2013, and accounted for an estimated loss of 2.9 Moz (89 t).

A third year of growth was seen in **Argentina**, where production rose by 17% or 4.2 Moz (132 t) year-on-year, stemming primarily from the gold sector. One recently commissioned operation, Cerro Negro, accounted for half of the growth in the country and, prior to declaring commercial production in January 2015, the mine produced 2.2 Moz (67 t) of silver during 2014. At Casposo, output rose by 1.3 Moz (40 t) as a result of mining from significantly higher grade areas in the INCA 1 ore body. Although a series of rock falls caused production disruptions over the second quarter, improvements to the leach circuit led to higher silver recoveries and throughput throughout the rest of the year. Growth was also observed due to higher grades at Manantial Espejo and Pirquitas, which between them added a further 1.1 Moz (34 t). Providing a partial offset, we estimate output at Veladero fell due to lower grades.

Mine supply from **Peru**, the region's largest producer, rose by 2% year-on-year, reaching 121.5 Moz (3,778 t). Gains from the primary silver and lead/zinc sectors were partially offset by losses in the gold sector as a consequence of aging operations and mine closures. Following four years of consecutive losses, production from Arcata grew by 0.8 Moz (26 t) to 5.8 Moz (181 t) as a result of a 32% jump in silver grade. Despite a 9% drop in silver grades, production at the largest primary silver operation in Peru, Uchucchacua, added 0.6 Moz (19 t) due to improvements in both throughput and recovery rates, respectively. Higher grade and throughput at Yauli were behind growth in the lead/zinc sector. Output from that operation rose by 2% or 0.7 Moz (22 t) to total 11.5 Moz (358 t). These gains were sufficient to offset losses in the gold sector, which saw Pierina and Ares placed on care & maintenance, resulting in a combined drop in production.

MINE PRODUCTION IN THE AMERICAS



Source: GFMS, Thomson Reuters

ASIA

Breaking 12 years of consecutive increases, Asian mine supply fell last year, by 5.4 Moz (169 t). This was the only region to see production contract by any meaningful amount. Behind the decline, output from the lead/zinc sector in **India** fell by 2.3 Moz (72 t), due to lower output at Rampura Agucha. Hindustan Zinc outlined a waste stripping program which, combined with a build-up of in-process inventory, lay behind the losses.

Although official statistics show that refined production in **Kazakhstan** was steady year-on year, we estimate that domestic production declined, with the balance of refined production sourced from imported material. Overall, we estimate that domestic output dropped by 2.2 Moz (68 t), to a total of 17.5 Moz (543 t). KAZ Minerals recorded a drop in silver in concentrate output of 3.6 Moz (111 t) to 10.7 Moz (334 t), after a decline in silver grades at Artemyevesky and a reduction in output from the company's 'disposal' assets. Glencore recorded a 19% or 1.0 Moz (31 t) drop in output from Kazzinc to a total of 4.3 Moz (134 t). This was consistent with lower zinc and lead metal production and the prioritisation of processing third party sulphides, in preference to own source oxide material.

After eleven consecutive years of supply growth, we estimate that output from the world's third largest silver producing country, **China**, contracted marginally in 2014, with a loss amounting to 0.8 Moz (26 t). We ascribe much of the decline to the Chinese lead/zinc sector, where some of the largest smelting companies reported lower volumes of silver output, such as Henan Yuguang Gold & Lead, which saw a drop of 6.5% year-on-year. However, we estimate that the fall in silver from domestic mines was lower than that implied by these losses, given the reduction in the level of imports of silver rich zinc concentrates, the processing of which has been replaced with domestic ores. Dampening these losses, we estimate that output rose in the still-growing gold and primary silver sectors. Among the moves of note, Zijin Mining reported an increase of 11% to its mined silver production, while primary miner Silvercorp Metals' GC operation added 0.5 Moz (15 t) in 2014, as output ramped up.

Output in **Indonesia** rose last year, by 1.8 Moz (55 t), attributable to gains in the country's by-product gold sector. The increase was driven by the continued ramp up of the KBK and Martabe properties, both of which began operations in 2012. Between them these two operations accounted for an increase of 1.1 Moz (33 t). Dampening the gains, a 0.5 Moz (15 t) drop was seen at Mt Muro, due to the cessation of operations in 2013. Elsewhere, output from the **Philippines** almost halved, by 0.7 Moz (21 t), as several silver-bearing mines went offline.

Some offset was provided by output in **Mongolia**, which rose by 0.5 Moz (15 t) on the back of a ramp up in production from the Oyu Tolgoi copper mine.

OCEANIA

Production in Oceania was flat year-on-year at 62.4 Moz (1,940 t). In **Australia**, the region's largest producer, output remained steady at 59.4 Moz (1,847 t). The country's primary silver sector did not fare so well, however, with the heaviest fall seen at Cannington, the country's largest silver producer and the world's largest primary silver mine, where output fell by 4.4 Moz (136 t) due to a 16% fall in silver grades, in line with planned mine sequencing. The region's other primary silver operation, Wonawinta, was placed on care and maintenance during the first quarter of 2014 leading to a decline in output of 1.0 Moz (31 t). After a change of ownership and renaming to Manuka, the mine is being redeveloped and recorded its first silver pour in March 2015.

An offset was provided by Australia's base metal mining industry. MMG's Century, Australia's largest open pit lead/zinc mine, recorded a 0.5 Moz (15 t) increase in silver production to 1.6 Moz (51 t), primarily due to a 21% increase in silver head grade. The polymetallic Jaguar operation recorded a 0.6 Moz (19 t) increase in output as mill throughput and silver head grades both improved.

EUROPE

European silver production increased in 2014 by 2.5 Moz (79 t), or 2%, to a total of 108 Moz (3,359 t). The principal driver was an increase in output from the silver-bearing copper mines of KGHM Polska Miedź in **Poland**, which recorded an increase of 3.0 Moz (95 t) to a total of 40.4 Moz (1,256 t). These gains can be largely attributed to productivity gains in the company's mining operations and metallurgical processes. This helped to push Poland's

AN OVERVIEW OF CORPORATE TRANSACTIONS

Last year, silver miners, in common with miners in other sectors, focused their attention on optimization of existing operations rather than engaging in aggressive acquisition activity. Consequently, M&A activity remained subdued during 2014.

One of the larger silver-related deals last year was the acquisition by Fresnillo of the remaining 44% of the Penmont JV, from Newmont, in a $450 million cash transaction. This brought La Herradura, Soledad & Dipolos and Noche Buena under full control of Fresnillo. Collectively, these gold mines produced approximately 0.7 Moz (21 t) of by-product silver last year. Early in the year, Newmont sold its Midas operation to Klondex Mines Ltd., for a total consideration of US$83 million. The Midas mine, formerly part of Newmont's Nevada Complex, produced 1.3 Moz (40 t) of silver in 2014. Buenaventura acquired the remaining 51% of the exploration-stage Chucapaca project from Minera Gold Fields Peru S.A, for a cash consideration of US$81 million, plus a 1.5% NSR. Among the smaller silver miners, Scorpio Mining Corp. merged with U.S. Silver & Gold, owner and operator of the Galena mine complex in Idaho, in an all-share deal that valued the combined company at C$65 million. Following the liquidation of Cobar Consolidated Resources, the Wonawinta silver project was acquired by Southern Cross Goldfields (since renamed Black Oak Minerals), for A$0.4 million in cash. It was reported in January 2015 that mining had commenced at the asset, now named the Manuka project.

Transaction activity appears to have picked up more recently in the silver sector. On 1st April this year it was announced that Tahoe Resources and Rio Alto Mining had completed an all-share merger, through which Rio Alto became a wholly-owned subsidiary of Tahoe. Coeur Mining has expanded its exploration portfolio through the recently-completed acquisition of Paramount Gold and Silver, in an all-stock transaction valued at $146 million. Turning to pending transactions, Hecla Mining and Revett Mining have announced a proposed merger. This $20 million all-share deal would enable Hecla to continue advancing the Rock Creek silver-copper project in Montana.

total up to 40.6 Moz (1,264 t), reversing the decline of the previous year. Notably, the company achieved first production at a level below 1,200m in the Deep Głogów copper operation, significantly extending the mine life. During the year the company completed exploratory and assessment work leading to the documentation of around 4.1 million tonnes of copper and 7,500 tonnes of silver in the Gaworzyce-Radwanice region, pointing to estimated life of mines in Poland of around 30-40 years from present.

Output in **Sweden** increased by 1.9 Moz (59 t) to a total of 12.7 Moz (396 t). This was largely driven by an expansion of operations at Boliden's Garpenberg mine which recorded an increase in output of 1.8 Moz (56 t) to a total of 7 Moz (218 t). The commissioning of the new Garpenberg concentrator and processing ore with a higher silver content accounted for the sharp increase in silver in concentrate production year-on-year.

Growth in the region was dampened somewhat by the contribution from the region's largest producer, Russia where output declined by 3.0 Moz (93 t) to 42.9 Moz (1,335 t). This was despite increases at Russia's two largest primary silver operations, Dukat and Lunnoye, which together added a combined 1.8 Moz (56 t). More than offsetting this gain was a drop in silver production from the country's gold and base metal mining operations. Despite an increase in gold output at Kupol, we estimate silver production to have fallen by 1.0 Moz (31 t) to a total of 4.3 Moz (134 t) due to a 31% reduction in the silver head grade. Likewise, at Khahanjinskoye, silver output was down by 0.7 Moz (22 t) as the Khakanja mine nears depletion and mill feed is supplemented by material from lower-grade stockpiles. Silver volumes from Russia's lead/zinc and copper mining industries are estimated to have declined by around 3.4 Moz (106 t) in trend with lower output generally from these sectors

AFRICA

Mine output in Africa was steady year-on-year at 15.4 Moz (480 t). Output at Africa's largest silver producing mine, Imiter in Morocco, fell by 4% to 6 Moz (186 t). Although this operation, Africa's only meaningful primary silver mine, witnessed a 6% increase in processed tonnage, this was not enough to offset a 10% drop in processed head grade. The largest decline on the continent was recorded at the Dikulushi copper mine, in the Democratic Republic of the Congo, where silver output fell by 1.7 Moz (54 t) after the exhaustion of open pit material and a subsequent transition to underground operations. In January 2015, Mawson West announced that it had placed Dikulushi on care and maintenance due to underground production rates being below expectations. Elsewhere, as throughput increased, the polymetallic Bisha mine in Eritrea recorded a rise in silver output.

AVERAGE PRICES OF SOURCE METALS

($/ton)	2010	2011	2012	2013	2014	Change y-o-y
Lead 3-Mth	2,172	2,390	2,073	2,157	2,113	-2%
Zinc 3-Mth	2,185	2,210	1,964	1,940	2,167	12%
Copper 3-Mth	7,555	8,825	7,946	7,346	6,828	-7%
Gold ($/oz)	1,225	1,572	1,669	1,411	1,266	-10%

Source: GFMS, Thomson Reuters; LME; ILZSG

WORLD MINE PRODUCTION OF SOURCE METALS

(Thousand tons)	2010	2011	2012	2013	2014	Change y-o-y
Lead	4,168	4,644	5,035	5,435	5,312	-2%
Zinc	12,346	12,590	13,111	13,190	13,433	2%
Copper	15,968	16,047	16,624	18,002	18,270	1%
Gold (tons)	2,742	2,846	2,875	3,061	3,133	2%

Source: GFMS, Thomson Reuters; ILZSG

OUTLOOK

- ***Silver mine supply is expected to decrease in 2015, as new supply from projects is not forecast to be sufficient to replace production lost from ageing operations.***

Silver mine supply has seen three successive years of strong growth, with the strongest contributions having come from the lead/zinc sector during 2012 and 2013, and from primary silver mines in 2014. A significant proportion of this growth can be attributed to a few individual assets, notably Peñasquito (lead/zinc), Ministro Hales (copper) and Escobal (primary silver).

However, we expect what now amounts to a 12 year trend of consecutive growth in global supply to be broken in 2015, with a forecast decrease of up to 4% in silver output. This is largely a consequence of a thinning project pipeline, as the number of major new mines in development has fallen due to the sustained falls in both precious and base metals prices over the last three years. New supply is expected to come from Cerro Negro, where commercial production was declared on 1st January 2015, and uplift in output is also expected from Coñcheno, which reached commercial production in late-2014. However, these are among the relatively few new assets expected to deliver increases to output this year; many of the recent development projects have now ramped-up to design capacity, and are not expected to provide significant additional supply in 2015.

Turning to the outlook for the more mature silver-producing mines, we expect that production will trend flat-to-down for many assets. Output this year is not expected to exceed that of 2014 for major operations such as those owned by Fresnillo, or at Cannington, where grade is expected to continue decreasing. Production from KGHM is expected to be lower in 2015, due to planned processing of lower silver grades. More generally, with metals prices at their current levels, there is little incentive for producers to invest in expanding capacity at existing operations.

BY-PRODUCT ANALYSIS

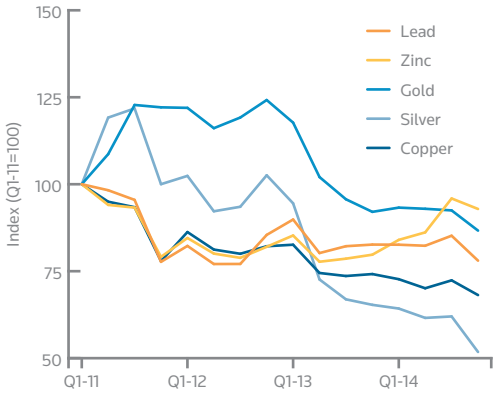
- ***Production from the primary silver sector continued to grow in 2014, rising by 8%.***

- ***Silver produced as a by-product of other metals also rose last year, albeit at an overall slower rate than the primary mining industry.***

Primary silver production grew strongly in 2014, and was the primary driver behind global growth, rising by the most of any sector (+20.9 Moz, 651 t). Gains were concentrated in Central & South America, where the largest addition globally came from the ramp up of operations at Escobal (+18.3 Moz, 569 t). Further gains from primary mines ramping up production came from, at Saucito (+3.8 Moz, 119 t), Fortuna Silver's San Jose (+1.9 Moz, 58 t), Lucky Friday (+1.8 Moz, 55 t) and Del Toro (+1.2 Moz, 38 t). A partial offset to this growth came from two of the largest primary silver mines; Cannington (-4.4 Moz, 136 t) and Fresnillo (-2.7 Moz, 83 t).

The gold industry exhibited a similar trend to that of primary silver mining whereby, in line with increasing global gold production, output rose by 2% last year to 100.7 Moz (3,133 t), led by the ramp up of key new projects

INDEXED SILVER & BY-PRODUCT METAL PRICES



Source: LME, Thomson Reuters

SILVER OUTPUT BY SOURCE METAL

(million ounces)	2013 Output	% of Total	2014 Output	% of Total	Change y-o-y
Primary	248.5	30%	269.5	31%	8%
Gold	107.1	13%	110.1	13%	3%
Lead/Zinc	304.1	36%	310.6	35%	2%
Copper	168.5	20%	179.8	20%	7%
Other	7.1	1%	7.5	1%	5%

Source: GFMS, Thomson Reuters

globally. Correspondingly, our assessment of the volume of silver recovered from primary gold mines also grew, by 3.0 Moz (93 t). Increases came from the ramp up of Cerro Negro (+2.2 Moz, 67 t), Concheño (+1.8 Moz, 57 t), Pueblo Viejo (+1.8 Moz, 55 t) and Martabe (+0.7 Moz, 22 t). Again similar to silver, the two main losses came from more two established operations, namely the cessation of operations at La Coipa (-2.9 Moz, 90 t) and a drop at Kupol (-0.7 Moz, 23 t).

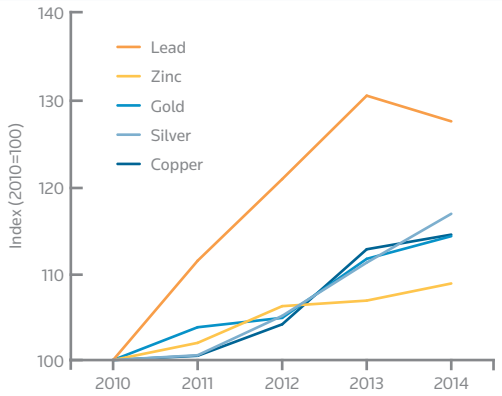
Although the precious metal mining industry has come under pressure from falling prices squeezing margins, with gold and silver having fallen by 24% and 39% since 2012 respectively, production has continued to grow. This is a legacy of investments made in earlier years when prices were higher, while producers at established precious metal operations have embarked on programmes to control costs and sustain profitability, thereby avoiding large closures.

Looking to other metals, although it was by no means one-way traffic for LME-traded base metals last year, increasing concern over China's transition to a consumer-led economy tended to cast a cloud over base metal prices generally. This was particularly evident in the final months of 2014, ensuring that copper emerged as the weakest performer in the industrial metals complex (-7%). Meanwhile, lead and tin, which had been identified as strong candidates for gains last year, both lost ground (-2%) as predicted supply deficits proved elusive. However, as many of the world's largest zinc mines prepare to close, the zinc price has performed better (+12%) as the market preoccupied itself with upcoming supply shortages.

Figures from the GFMS team at Thomson Reuters show that, after much promise, global copper output stuttered last year, rising by just over 1%, or 268,000 tons, to reach 18.3 million tons. However, output of silver from this sector grew by 11.3 Moz (351 t), which represented a stronger 7% gain. Behind this rise were two key starts; Ministro Hales in Chile (+10.5 Moz, 328 t) and Toromocho in Peru (+2.4 Moz, 74 t). If not for some operational difficulties encountered in the ramp up of these two properties, silver output in 2014 would have been even higher. Correspondingly, the bulk of the global growth can be attributed to new generation of copper mines coming on stream. Other increases in output were seen from the operations of KGHM (+3.1 Moz, 95 t), Escondida (+1.0 Moz, 31 t) and Oyu Tolgoi (+0.4 Moz, 13 t). Yet there were some declines observed which dampened growth, such as at Antamina (-3.0 Moz, 93 t), the operations of Kaz Minerals (-3.6 Moz, 111 t) and the suspension of operations at Dikulushi (-1.7 Moz, 54 t).

Silver from lead/zinc operations grew by 2% last year, with declines in major producing nations such as Australia, Canada and India more than offset by a 6% increase in Chinese production to 5.0 million tons, or close to 37% of the total. The elasticity of Chinese zinc mine supply and an ability to fill any gap created by large mine closures remains a key consideration in the zinc market. In contrast, global lead mine output fell by around 2% last year, due largely, but not exclusively to lower production in China. This divergence was in part a function of ore grades, but was also down to rising output from zinc-only mines such as those in west Hunan province. For silver this has meant that growth of output from the lead/zinc sector has faltered when compared to the increases of 11% and 5% seen in 2012-2013 respectively, with losses for example due to operational difficulties at the mines of Hindustan Zinc (-2.3 Moz, 72 t) and the closure of Brunswick (-1.3 Moz, 41 t).

INDEXED GLOBAL METAL MINE PRODUCTION



Source: GFMS, Thomson Reuters; ILZSG

PRODUCTION COSTS

- **Silver mine cash costs for 2014 averaged $7.74/oz, a 16% drop relative to 2013.**

Silver Total Cash Costs fell for the second consecutive year in 2014, by 16%, to $7.74/oz, down from $9.18/oz in 2013. Over the same period, the average annual silver price fell by 20%, to $19.08/oz; a drop which left the average simple cash margin of primary producers at $11.34/oz. At first impression this might appear to be an attractive margin, but it represents a 22% contraction year-on-year that excludes capital expenditure, corporate overheads and exploration costs.

In 2014, primary silver producers accounted for 31% of global output and our cost data capture of 207.5 Moz (6,455 t) represented 77% of primary supply. Although this sector typically benefits from the sale of by-product metals such as gold, lead and zinc, the contribution from the production of these metals fell significantly from 2013. The sharp price decline in silver was accompanied by other metals, such as gold (-10%), copper (-7%) and lead (-2%). Some positive changes came from zinc prices, which rose by 12% on a back of a rapidly shrinking supply and higher Chinese imports of refined zinc.

Cost control measures continue to be implemented in the mining sector. To improve operational efficiencies and deliver more stable output, producers' push for lower unit costs by way of focusing on higher ore grade and throughput have yielded positive results, and more than offset cost pressures in areas such as wage inflation and lower by-product credits from gold and copper production.

SILVER MINE PRODUCTION COSTS

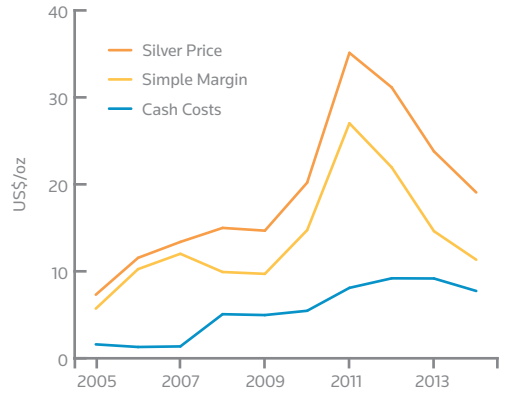
(US$/oz unless stated)	2011	2012	2013	2014
Total Cash Costs	8.10	9.19	9.18	7.74
Average Silver Fix Price	35.12	31.15	23.79	19.08
Sample Size (Moz)	164.2	167.5	178.2	207.5

Source: GFMS, Thomson Reuters

Total Cash Costs in Argentina fell by 34%, as cost savings were witnessed at Manantial Espejo and Pirquitas. At the former, higher throughput led to a 18% increase in production; while at Pirquitas, record zinc production led to lower unit costs from higher by-product credits. Similarly, mine cash costs at primary silver operations in Mexico fell by nearly 5%, as certain operations (eg. Saucito) processed more ore with higher grade content (eg. San Jose). Higher by-product credits were also a common theme across a select few mines (eg. Dukat). In Russia, cash costs decreased by 25% led by operational efficiencies at Dukat and Lunnoye, where higher throughput resulted in a combined 8% increase in production, and lowered costs already supported by higher gold by-product credit and lower energy inputs.

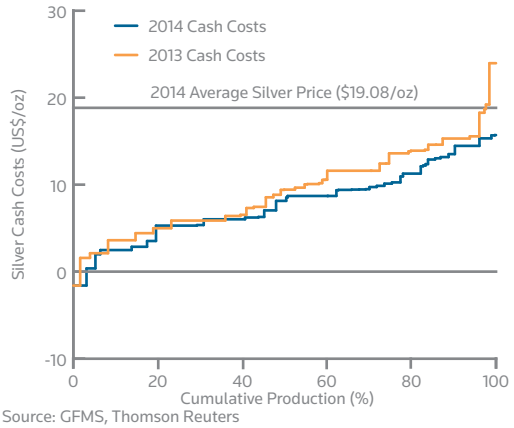
Of the key producing countries in the emerging market region, the strong depreciation of their currencies against the US Dollar allowed for locally priced input costs, such as labor, to remain under control. In major producing countries like Mexico and Peru, exchange rates fell by 4% and 5%, respectively. In Chile, the peso weakened by 15%, while in Russia, the rouble weakened by 21% to a record year low. A more significant drop was witnessed in Argentina, where the Argentinean peso dropped by 48% led by capital flow restrictions and inflationary pressures in the country.

HISTORICAL SILVER CASH COSTS



Source: GFMS, Thomson Reuters

SILVER MINE CASH COSTS



Source: GFMS, Thomson Reuters

PRODUCER HEDGING

- ***In 2014, the delta-adjusted hedge book grew by 15.8 Moz (492 t).***

After two years of strong de-hedging, during which the hedge book contracted by 86%, to just 13.7 Moz (427 t) by end-2013, the delta-adjusted book more than doubled last year, adding 15.8 Moz (492 t). However, this still left the outstanding book at less than one third of its recent peak volume of 96.2 Moz (2,993 t) seen in 2011.

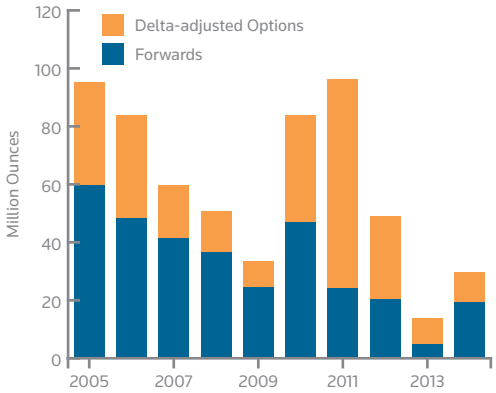
For many years options were the dominant component of the hedge book, particularly so during 2010-2011, when large collar option positions were built up by miners at a time when prices were considerably higher. With the majority of those positions maturing over the intervening years, the proportion of the hedge book composed of forwards, when measured by the nominal (number of) contracts rather than by option delta, rose from 8% at end-2011 to 40% at end-2014.

The activity of 2014 did much to continue this trend. The majority of the fresh hedging came through forward sales, the most notable of which was by Nyrstar. The company settled its silver streaming agreement with Silver Wheaton for 75% of the silver production of the Campo Morado Mine, for a consideration of $25 million and the grant of a right of first refusal for future silver streaming transactions. Additionally, Nyrstar entered into pre-paid silver agreements, through which it agreed to deliver 9.4 Moz (292 t) of silver during the six months to end-June 2015, in return for an up front consideration of $124.6 million. Nyrstar also entered into forward sales covering a portion of future production from the Port Pirie smelter, between 2016-2019. While the company does not disclose the volume, we have made an estimate for this in our aggregate total.

Among other companies, during the second quarter of 2014 Troy Resources also entered into forward sales positions, as a condition of a debt facility, covering 2.0 Moz (63 t) of silver at an average price of $19.41/oz. At end-year, the company had 1.7 Moz (53 t) at a weighted average price of $18.20/oz, and early in 2015 had entered into further positions. After its silver positions matured during 2013, Minera Frisco re-entered into a collar option structure covering 3.5 Moz (109 t) of output at an average floor price of $20.13/oz, and a cap of $22.99/oz. Elsewhere, Industrias Peñoles continued to replace its option positions as they matured, although the amount of delta-hedging against its position fell by 2.8 Moz (86 t), as the amount of production covered by its contracts fell year-on-year.

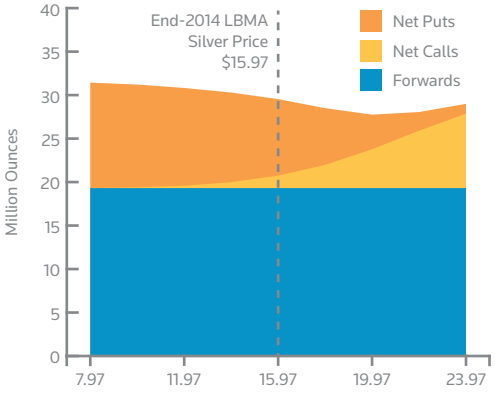
The chart below plots the sensitivity of the hedge book with respect to changes in the silver price, assuming all other market factors remain equal. A $4 drop in price would have resulted in the volume of silver delta-hedged against the options book rising by 1.3 Moz (40 t), while a $4 increase in the silver price would have resulted in a 1.8 Moz (56 t) drop in the volume delta-hedged. Therefore, the options book was acting as more of a price floor than cap, as the bought puts of the book were closer to being in-the-money than the sold calls. Nevertheless, despite the increase in the aggregate hedge book, the proportion of production from 2015-2019 covered by some form of price protection stands at a historically modest 31.5 Moz (981 t), representing less than 1% of forecast output over that period.

PRODUCER HEDGING: OUTSTANDING POSITIONS



Source: GFMS, Thomson Reuters

SENSITIVITY OF THE GLOBAL HEDGE BOOK



Source: GFMS, Thomson Reuters

5.SUPPLY FROM ABOVE-GROUND STOCKS

- ***Identifiable above-ground stocks were broadly flat year-on-year, totaling 1,808 Moz (56,249 t), at the end of 2014. These stocks could cover 22 months of physical demand, up from a recent trough of 13 months in 2005.***

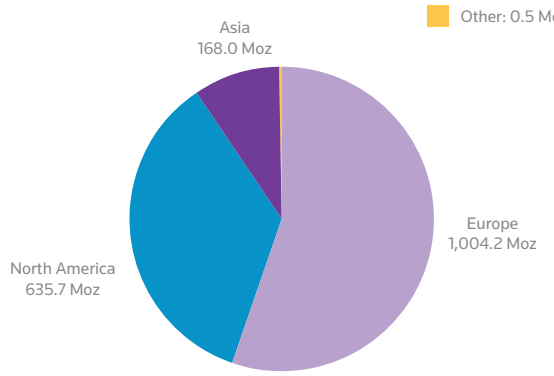
- ***Scrap recycling added 168.5 Moz (5,242 t) to annual supply in 2014, down 13% from the previous year. This drop was the third successive decline.***

OVERVIEW

While some silver gets lost, the majority of silver ever produced remains above ground today and is theoretically available to the market in various forms. Some of this above-ground stock serves a dedicated use until it is recycled back into a homogenous form while the balance is stored in vaults as bullion. This chapter covers shifts in above-ground bullion stocks as well as additions to annual supply from scrap recycling.

A large portion of the above-ground silver bullion stock is tracked by GFMS in order to glean insight about price movements and demand trends. GFMS tracks bullion stocks held by governments, stockpiled by industry, stored at futures exchange warehouses, and held in custodian vaults (allocated or unallocated to ETFs). Silver held in custodian vaults is estimated based on data collection of ETF silver holdings and other reported volumes, a confidential survey, and field research. Our vault data is global, an expansion from last year's report, which only covered vault holdings in Europe. The silver stocks previously labeled "European Dealer" stocks is now included in our "Custodian Vaults" series.

BULLION STOCKS - REGIONAL BREAKDOWN IN 2014



Source: GFMS, Thomson Reuters

Silver bullion stocks are mostly composed of stocks allocated to ETF investors, institutional and hedge fund investors and other kinds of longer-term investors. Silver is relatively expensive to store because its volume to price ratio is higher than that of gold.

Additionally, GFMS tracks the recycling of above-ground silver from fabricated sources, namely coins, jewelry, silverware, e-waste, photographic papers and other "open loop" sources of scrap. This scrap material gets recycled and refined back into bullion form. While this newly recycled silver does not increase above-ground stocks, since it already qualifies as such, it mobilizes above-ground stocks such that they can be re-used or stockpiled in bullion form. Annual changes in silver scrap flow are primarily influenced by silver prices and economic conditions.

IDENTIFIABLE ABOVE-GROUND SILVER BULLION STOCKS

(Moz)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Custodian Vaults*	533.1	729.0	765.8	651.1	904.1	919.3	969.5	911.1	911.9	922.8
ETFs	31.0	158.3	213.1	314.7	472.0	601.6	577.5	632.8	635.3	635.5
Exchange*	122.8	106.4	125.9	114.7	93.6	83.4	98.0	159.3	168.1	158.1
Government	316.8	238.3	195.8	165.3	149.7	105.5	93.4	86.1	78.2	78.2
Industry	11.1	21.8	11.8	17.3	14.4	18.5	17.7	18.3	15.5	13.8
Total	**1,014.7**	**1,253.8**	**1,312.4**	**1,263.1**	**1,633.7**	**1,728.3**	**1,756.1**	**1,807.6**	**1,809.0**	**1,808.4**
Months of Demand	13	16	17	14	23	20	20	23	20	22

Source: GFMS, Thomson Reuters; Respective ETF issuers, exchange websites, Japan Ministry of Economy, Trade and Industry, USGS

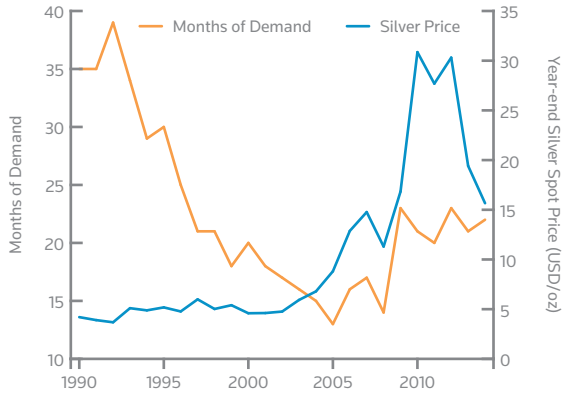
*Custodian vault and exchange warehouse stocks exclude stocks allocated to ETFs.

IDENTIFIABLE BULLION STOCKS

Identifiable bullion stocks can be divided into two categories; stocks that are reported and unreported GFMS stock estimates, which are based on confidential surveys and field research. Reported stocks include our industry, exchange, and ETF categories as well as the government category for some countries. Unreported stocks include our custodian vault category and the lion's share of our government category. Reported stocks accounted for 45% of the total identifiable bullion stock series in 2014. These same stocks accounted for only 17% of the total in 2005, a testament to the increase in transparency of the market, mostly a result of the proliferation of ETFs. It should be noted that above-ground stock levels are subject to change as new information and data are gathered over time and the market becomes more transparent. Additionally, the unreported portion of our bullion stock data is subject to the greatest margin of error within this series.

Total identifiable above-ground bullion stocks were 1,808.4 Moz (56,249 t) at the end of 2014, flat from year ago levels. Interestingly, total stocks have been flat since 2012, which suggests silver stocks have been sticky in the recent declining price environment. Indeed, field research has confirmed that investors are reluctant to sell silver accumulated in previous years. Industry and exchange stocks (excluding ETF allocations) fell 11% and 6%, respectively. These declines were offset by a 1% increase in custodian vault stocks (excluding ETF allocations). ETF and government stocks were broadly flat. Custodian vault stocks, excluding ETFs, accounted for 51% of total identifiable stocks last year, below the peak of 58% in 2007.

IDENTIFIABLE STOCKS EXPRESSED AS MONTHS OF DEMAND



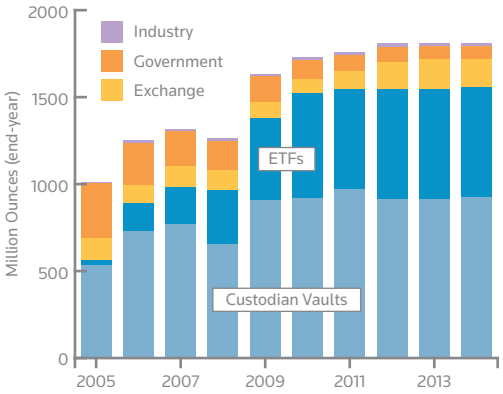
Source: GFMS, Thomson Reuters

At the end of 2014, total identifiable bullion stocks represented 22 months of total physical demand, up from 20 months in 2013 and up from a trough of 13 months in 2005. In the early 1990s, identifiable stocks represented upwards of 39 months of demand, mostly due to significantly higher government inventories. Government inventories have declined due to silver's reduced role in monetary systems and circulated coin production. As illustrated in the chart above, nearly flat silver prices in the 1990s were accompanied by a rapid decline in stocks expressed as months of demand. Only when stock cover reached its lowest point of 13 months of demand in 2005 did prices begin to materially increase.

CUSTODIAN VAULT STOCKS

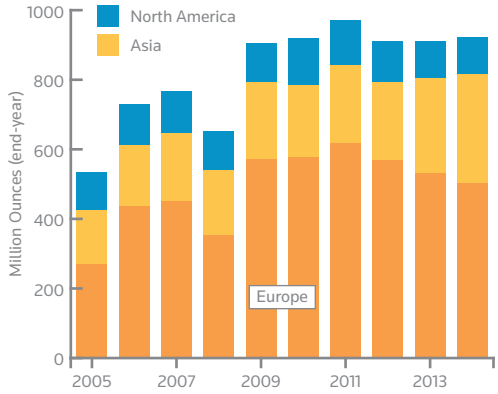
Custodian vault stock data excludes ETF holdings, but it is important to note that most custodians of ETF silver stocks

IDENTIFIABLE ABOVE-GROUND SILVER INVENTORIES



Source: GFMS, Thomson Reuters; exchanges, ETF issuers, Meti, USGS

CUSTODIAN VAULT STOCKS*



Source: GFMS, Thomson Reuters *Stocks exclude silver stocks allocated to ETFs

also store silver in vaults that are not allocated to ETFs. The same is true of futures exchange warehouses.

Custodian vault stocks increased by 10.9 Moz (338 t) to total 922.8 Moz (28,703 t) by end-2014. This increase came from growth in Asian vault stocks, while European and North American stocks declined. Custodian vault stocks, excluding ETFs, increased at a 4.5% compound annual rate from 2000 to 2014. Meanwhile, stocks including ETF allocations increased at an 8% rate, demonstrating the growing importance of ETFs in the silver market.

Stocks in Asia rose by 41.5 Moz (1,290 t) last year. Chinese banks have continued to expand their precious metals leasing businesses, which have required increasing holdings of precious metals. India saw an increase in vaulted silver stocks last year and indeed silver imports touched a record high, which is mostly attributed to higher investment demand. Singapore's vaulted stocks almost doubled in 2014 and research suggests there is still demand for new capacity in the city state. Asia accounted for 34% of custodian vault stocks last year, up from 29% in 2005.

European vault stocks, which accounted for 55% of total custodian vault stocks in 2014, declined 5% to 503.2 Moz (15,650 t). This decline can be attributed to reduced institutional investor interest in the region. Indeed European ETF holdings fell by 6% in 2014.

North American stocks decreased 2% to 106.5 Moz (3,314 t) by the end of 2014. There was some investor liquidation in the second half of the year that resulted in a reduction to bullion stocks. The decline in these stocks also may have been due to the reallocation of silver investment positions to silver ETFs. North American investors increased their ETF holdings by 2% last year.

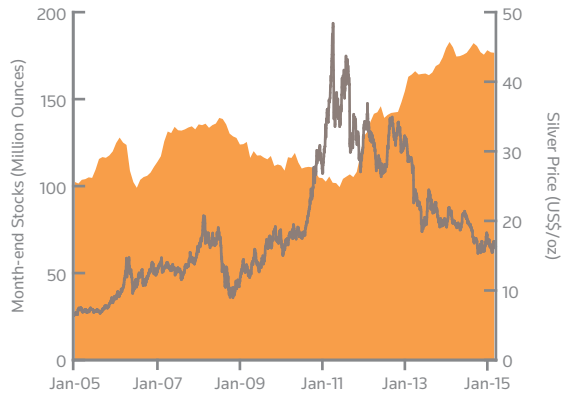
FUTURES EXCHANGES

Any futures exchange that offers physical settlement will likely store metal in a vault. Only about 2% of futures contracts are settled in physical, so it is not necessary to hold an amount of metal the equals the total level of open interest. At the end of 2014, COMEX warehouses held 175.5 Moz (5,460 t) of silver, which only amounted to around 23% of open interest in silver futures. Further, registered stocks only accounted for 9% of open interest.

Only three exchanges report silver stocks: COMEX in the U.S., the Tokyo Commodity Exchange (TOCOM), and the Shanghai Futures Exchange (SHFE). These stocks totaled 179.7 Moz (5,588 t) at the end of 2014, down 5% from the previous year. Stocks on the SHFE fell by 10.4 Moz (325 t) last year. This drastic decrease may have been due to tightness in silver supply in China, which increased the amount of futures contracts settled in physical on the SHFE. According to field research, producers were holding off from selling silver into the market, awaiting higher prices. Therefore, the tightness in the Chinese market is owed to lower velocity rather than lower supply. Indeed the Shanghai Gold Exchange (SGE) silver spot price exceeded the international price by upwards of 15% last year. Given that access to silver is still somewhat limited in China, the SGE price as it relates to international spot prices provides insight about domestic market conditions since the SGE is a significant source of metal to the market. SHFE stocks have already doubled as of the end of the first quarter of 2015 since the end of 2014, suggesting that the tightness in supply last year is behind us. TOCOM increased 30% last year to total 0.2 Moz (5.5 t).

COMEX stocks increased 1.6 Moz (50 t) to total 175.5 Moz (5,460 t) at the end of 2014. COMEX stocks consist of

COMEX WAREHOUSE STOCKS



Source: COMEX

SHFE SILVER STOCKS

(Million ounces; end period)

	Q1	Q2	Q3	Q4
2012	na	na	11.4	31.2
2013	35.7	20.0	14.8	14.4
2014	12.3	7.7	2.6	3.9

Source: SHFE

SILVER ETF HOLDINGS BY VAULT LOCATION

While a more detailed discussion about silver ETF holdings is contained in the *Investment* chapter, this chapter's ETF discussion is centered on the difference between ETF holdings by investor domicile and holdings by vault location. ETF holdings are a large and transparent portion of above-ground silver bullion stocks, accounting for 35% of the total as of the end of last year. ETF holdings are a relatively new category in our identifiable above-ground stock series, having only accounted for 3% of the total a decade ago.

U.S. investors own 55.5% of silver ETF holdings, based on an ETF's primary exchange, while the London Stock Exchange silver ETF investors only account for 8% of holdings and silver ETFs traded on the Toronto Stock Exchange account for 21% of holdings. Swiss investors own 14% of holdings based on Swiss exchange-traded silver funds. Investors in Japan, Hong Kong, and Australia make up the balance.

In contrast, 60.5% of global silver ETF holdings are vaulted in the United Kingdom while only 3% of holdings are vaulted in the United States. Switzerland is home to 14% of global ETF holdings, broadly in line with its share of investor ownership. Similarly, Canada is home to 21% of holdings. Japanese ETF-allocated inventories amount to 0.4% of the global total, also in line with Japanese investor ownership.

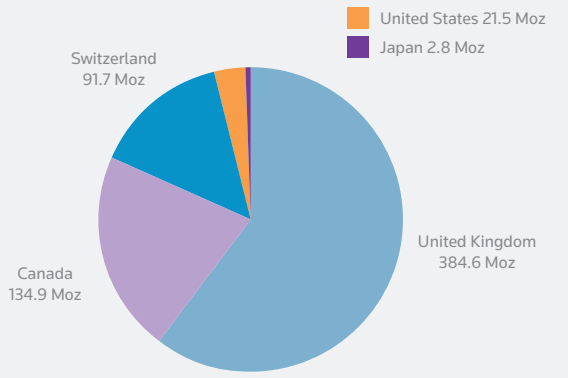
Over time, London's share of ETF holdings by vault location has declined from a peak of 72% at the end of 2006 to 60.5% at the end of 2014. Switzerland gained market share in this period, increasing from 0% to 14%. Canada's share has been relatively stable in the period, ranging from 15% to 23% in any given year.

Canada is also home to the first exchange-traded silver-backed security, the Central Fund of Canada, which has been trading on the Toronto Stock Exchange since the 1960s and began holding gold and silver for investors in 1983. Its silver holdings have increased 45-fold since that year.

A common misconception in the market is that massive ETF selloffs would result in the dumping of metal within the country or massive export of metal from the country where ETF sellers are domiciled. This, however, is not necessarily the case, considering the dominance of vault locations within major precious metals trading hubs. Additionally, any offloading of metal from ETF sales will more likely convert the metal in the vault from being allocated to ETF shareholders to part of their unallocated or other allocated holdings. That said, metal could be shipped out of these major hubs should demand grow significantly elsewhere.

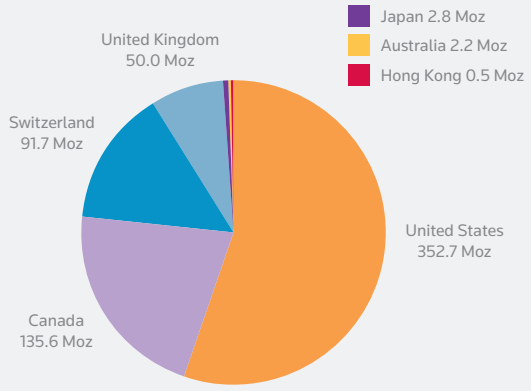
In tracking the actual location of ETF holdings, GFMS is better equipped to adjust our custodian vault data series as well as to provide a breakdown of above-ground bullion stocks by region. A couple of ETFs use multiple vaults in multiple locations; therefore assigning total holdings of each ETF to the exchange location or to a single location may not be accurate. Additionally, a portion of eligible stocks reported by COMEX are allocated to ETFs. Approximately 19% of the 110.9 Moz (3,450 t) of COMEX eligible stocks at the end of 2014 were allocated to ETFs. We have adjusted for this nuance in our total itentifiable bullion stock data as well to avoid double-counting.

SILVER ETF HOLDINGS BY VAULT LOCATION



Source: GFMS, Thomson Reuters; respective ETF issuers & custodians

SILVER ETF HOLDINGS BY INVESTOR DOMICILE



Source: GFMS, Thomson Reuters; respective ETF issuers

eligible and registered stocks. Eligible stocks are stocks in COMEX warehouses that meet the criteria for delivery via the exchange, but cannot be delivered. Registered stocks are stocks that meet the criteria for delivery and can be delivered. Over the course of 2014, eligible stocks trended lower, while registered stocks increased.

ETF silver stocks stored in the U.S. use eligible stocks reported by the COMEX. As such, we adjust the "Exchange" stock data lower by the amount of ETF stocks vaulted in the U.S. This adjustment is reflected in the table located on the first page of this chapter. Excluding ETFs, total exchange warehouse stocks were 158.1 Moz (4,918 t) at the end of 2014, down 6% from the previous year.

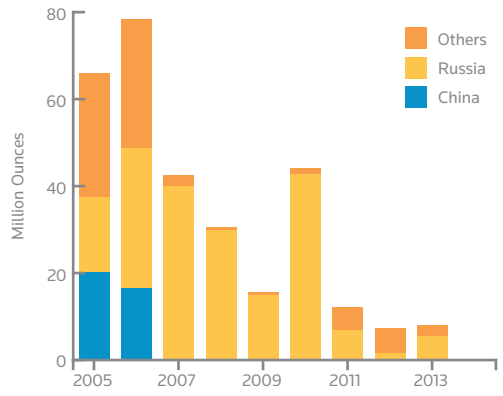
GOVERNMENT STOCKS

Silver bullion stocks held by governments are largely based on private information gathered during the course of our field research, as there is little publicly available data on levels of, and changes in, government silver stocks.

After minimal sales in both 2012 and 2013, no government sales are estimated to have taken place in 2014. While our field research indicates no activity at all, even if a small transaction did take place it would undoubtedly have been at a very low level when compared to the previous decade when disposals averaged 49.4 Moz (1,535 t) per annum over the 2002-11 period. At end-2014, total government silver stocks amounted to just over 78 Moz (2,432 t).

A crucial change is the absence of any Russian disposals in 2014. The country's silver stocks are far smaller than they were a decade ago. For instance, from 2004 to 2010, gross sales from Russia amounted to over 200 Moz (6,300 t).

NET GOVERNMENT STOCK SALES



Source: GFMS, Thomson Reuters

Finally, China and India, each of which had been major sellers between the start of this century and 2007, were both absent from the market once again in 2014. As far as China is concerned, it is our understanding that following several years of heavy sales, silver stocks have already been reduced significantly from "excessive" levels.

INDUSTRY

Industry stocks consist of reported Japanese and United States data. Japanese stocks include stockpiles of silver at producer and merchant facilities. U.S. stocks consist of producer, consumer, and dealer stockpiles. Industry stocks totaled 13.8 Moz (430 t) last year, down from 15.5 Moz (483 t) in 2013. It should be noted that these stocks do not include working pipeline stocks, which are not considered to be part of our identifiable bullion stock series.

SCRAP

- ***Old silver scrap supply dropped by an eighth to 168.5 Moz (5,242 t), the lowest volume level recorded since 1996.***

In 2014 silver scrap supply fell for the third successive year, by 12.5% to 168.5 Moz (5,242 t). This was the second year in a row with double digit declines in scrap supply albeit the decline was half the dramatic collapse of the previous year. Overall, though, it still sent the supply from scrap to an 18-year low. As a proportion of total supply, scrap dropped even more sharply, to just under 16%, after averaging 25% of the total as recently as 2011 and 2012. This decline in supply was a key reason behind the physical market remaining in a deficit last year.

Crucial to the drop in scrap supply was, unsurprisingly, silver prices averaging below $20/oz for the first time since 2009. That said, prices in some local currencies did not experience the same scale of decline and this had some ameliorative impact on flows. Indeed, Russia was one of only three countries (the others were Turkey and Israel) to see an increase in scrap flows in 2014 due to the sharp rise in rouble denominated silver prices in the final third of the year as the currency sharply depreciated. In addition to the price impact there were also a host of other factors which dragged scrap lower, including a tightening regulatory

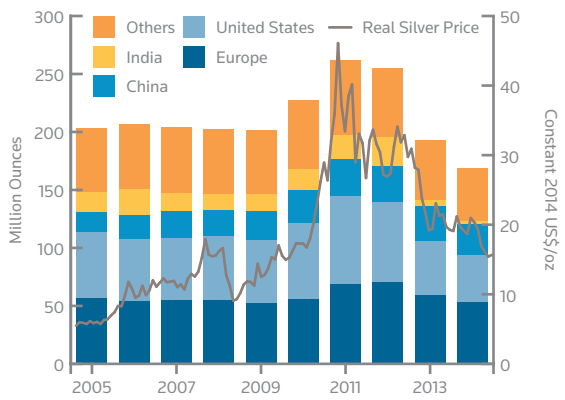
environment and also an exhaustion of "distressed" coin and jewelry recycling supply in industrialized economies as the economic picture improved.

The largest tonnage decline came in the United States and in addition to the previously mentioned factors, silver scrap from low grade sources, namely electronic waste, dropped by between 20% and 25% last year. This was a stark change from prior years when this had continued to be a source of growth in the largest generator of e-waste. The impact of substantial thrifting in many applications some years earlier is now starting to feed through into markedly lower silver content recoveries. Additionally, the earlier drop in silver prices had encouraged collectors to process their higher value e-waste, and hence leaving them with an increased amount of lower grade e-waste. We understand that much of the material that was released in 2014 was this lower grade stock.

Of the major players, India saw the largest drop as scrap almost halved with carat jewelry flows nearly stopping completely as this price sensitive market waited for a recovery in prices that failed to arrive. Even China saw a double digit percentage decline in scrap, as lower prices meant poor profitability and refiners sitting on stockpiles of metal. One of the smallest declines, meanwhile, was in Japan, at 2%. Its smaller drop was partly a function of tighter environmental legislation and a growing pool of above-ground stocks. Indeed, silver recovered from old X-ray films held broadly steady in 2014, thanks to regulations which dictate statutory obligations for hospitals to archive X-ray films.

For the second successive year **European** silver scrap fell in 2014, although the 10% drop to 53.2 Moz (1,656 t) was a better performance than in the year before. Discussions with our contacts have highlighted five reasons, over and above the propensity for a simple price response, that are dragging on scrap supply in the region. First, the increasingly toughening and overlapping nature of regulatory rules has increased costs for refiners and accross the scrap supply chain. A common feature of our research meetings in the UK was talk of a crackdown by the authorities in preventing VAT fraud in silver. Second, there is a decline in available supplies of near-market stocks. This is a function of the price but it is worth noting that in Europe there has also been a decline in stockpiles owing to the surge of material entering the market in previous years.

WORLD SCRAP SUPPLY



Source: GFMS, Thomson Reuters

Third, with the European economy slowly turning around, distressed selling, which had peaked in 2009 but which did persist in the southern members of the Eurozone in particular over the next few years, has largely stopped across the region. Fourth, and in large part as a result of the first three points, not only is supply to the existing players dropping but the number of players in the industry has fallen. This is particularly noteworthy as it had been argued by some that the increase in infrastructure during the prior boom would ensure that scrap levels would remain elevated even when the price cycle turned. However, this has largely proved not to be the case, with a substantial drop in the number of players in many countries, including Germany and France. Fifth, the contribution from photographic scrap continues to fall. The number of photo archives available for liquidation, especially in hospitals, has dropped off due to both the digitizing of photographs and the availability of scans. Having said that, legislation in several countries, including France and Belgium, means that hospital photo archives will continue to exist, thus remaining a source of silver in the coming years.

While this downtrend was felt across the entire continent Russia and Turkey were an exception. The sharp depreciation of the rouble in the closing months of the year caused a surge in scrap supply from September onwards and as a result supply was up 3% for the year as a whole.

Silver scrap in the **United States** totaled 40.3 Moz (1,252 t) in 2014, down 14% from the previous year. This was the third consecutive annual drop in scrap generation within the country. Scrap from high-grade sources like jewelry

TABLE 4 - SUPPLY OF SILVER FROM THE RECYCLING OF OLD SCRAP

(million ounces)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Europe										
Germany	17.6	15.1	15.1	14.6	12.6	14.9	16.7	21.6	17.3	14.3
Russian Federation	8.6	8.4	8.8	8.3	8.4	11.5	11.1	10.9	10.0	10.3
Italy	4.3	5.5	5.6	5.9	5.8	6.5	9.7	9.9	8.7	7.9
United Kingdom	11.6	10.9	11.2	10.9	10.2	6.4	11.3	9.8	7.2	5.6
France	4.1	4.5	4.6	5.1	5.5	6.2	7.0	5.9	5.2	4.9
Turkey	1.3	1.1	1.0	1.1	1.1	1.0	1.2	1.0	1.0	1.5
Czech Republic	0.6	0.7	0.9	0.9	0.9	1.2	1.6	1.6	1.4	1.4
Austria	1.3	1.3	1.2	1.2	1.1	1.1	1.2	1.2	1.2	1.1
Spain	0.4	0.4	0.4	0.5	0.5	0.7	1.3	1.3	1.1	1.0
Poland	0.6	0.7	0.8	0.7	0.7	0.9	1.1	1.2	1.0	0.9
Netherlands	1.4	1.3	1.1	1.1	1.0	1.1	1.2	1.2	0.9	0.8
Sweden	1.0	0.9	0.9	0.9	0.8	0.8	0.9	0.9	0.7	0.6
Belgium	0.7	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.5	0.5
Denmark	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4
Portugal	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3
Hungary	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.3	0.3
Finland	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.3
Slovakia	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3
Norway	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2
Other Countries	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.7
Total Europe	***56.2***	***54.3***	***55.0***	***54.5***	***51.8***	***56.0***	***68.2***	***70.6***	***58.9***	***53.2***
North America										
United States	57.0	53.2	53.6	55.4	54.4	64.8	76.4	68.9	46.9	40.3
Canada	1.5	1.4	1.6	1.7	1.5	1.6	1.8	1.6	1.1	1.0
Mexico	2.1	2.3	2.7	3.1	3.2	4.0	4.5	4.7	1.6	0.6
Total North America	***60.5***	***57.0***	***57.9***	***60.2***	***59.1***	***70.4***	***82.7***	***75.2***	***49.6***	***41.9***
Central & South America										
Brazil	1.0	1.0	1.0	1.0	1.1	1.5	2.5	2.5	2.0	1.9
Uruguay	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.4	0.4
Venezuela	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3
Other Countries	1.6	1.9	1.7	1.6	1.4	1.8	2.2	2.1	1.6	1.0
Total C. & S. America	***3.1***	***3.4***	***3.2***	***3.0***	***2.9***	***3.9***	***5.5***	***5.4***	***4.3***	***3.6***
Asia										
China	17.5	20.4	22.5	22.7	25.3	29.2	31.9	30.9	30.1	26.7
Japan	27.4	26.0	25.7	23.7	21.3	20.9	23.0	21.3	20.0	19.6
S Korea	7.3	7.7	7.8	7.7	8.4	9.4	10.0	9.1	8.4	6.9
Taiwan	2.7	2.8	2.9	3.1	3.6	4.1	4.5	4.3	3.6	3.1
India	17.2	22.7	16.1	13.8	15.0	17.9	20.6	24.8	5.4	3.0
Thailand	2.2	2.6	2.7	2.9	3.1	3.7	3.7	3.2	2.8	2.2
Saudi Arabia	1.6	1.8	1.9	1.9	1.9	2.2	2.3	2.2	2.0	1.9
Israel	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.4	0.4
Singapore	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.4
Indonesia	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.4
Hong Kong	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4
Vietnam	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3
Kazakhstan	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2
Uzbekistan	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2

TABLE 4 - SUPPLY OF SILVER FROM THE RECYCLING OF OLD SCRAP

(million ounces)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Other Countries	1.0	1.1	1.2	1.2	1.3	1.5	1.7	1.6	1.3	0.8
Total Asia	***79.3***	***87.8***	***83.4***	***79.5***	***82.3***	***92.0***	***100.8***	***100.3***	***76.3***	***66.5***
Africa										
Morocco	0.6	0.9	0.9	0.9	1.0	1.0	1.1	1.1	1.0	0.9
Egypt	1.4	1.5	1.5	1.7	1.8	2.0	0.9	0.8	0.7	0.6
Other Countries	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.6	0.6
Total Africa	***2.6***	***3.0***	***3.0***	***3.2***	***3.4***	***3.7***	***2.7***	***2.6***	***2.3***	***2.1***
Oceania										
Australia	1.8	1.7	1.7	1.6	1.6	1.6	1.6	1.4	1.3	1.2
Total Oceania	***1.8***	***1.7***	***1.7***	***1.6***	***1.6***	***1.6***	***1.6***	***1.4***	***1.3***	***1.2***
World Total	**203.4**	**207.1**	**204.2**	**202.0**	**201.2**	**227.5**	**261.5**	**255.5**	**192.7**	**168.5**

and coins was driven lower by the relatively weak silver price. An improved economy and jobs market also reduced scrap sales among households. Silver scrap from low grade sources, namely electronic waste, dropped by between 20% and 25% last year, which was a stronger rate of decline than for high-grade scrap volumes. This decline was driven by lower silver content in e-waste sourced to recyclers. Feedstock volumes in gross weight terms increased last year, however years of aggressive thrifting activity among electronics manufacturers amid rising precious metals prices has begun to surface in recycling feedstocks. Additionally, the decline in silver prices in previous years encouraged collectors to return their higher value e-waste while accumulating stocks of lower grade e-waste. It is widely believed that this lower grade stock was released in 2014. The U.S. is the largest generator of e-waste in the world, but scrap from e-waste recycling only accounts for a single-digit share of total scrap generated in the country.

In **India**, scrap supply declined sharply to 3.0 Moz (92 t) from 5.4 Moz (169 t) in 2013. The decline, to the lowest level in over 15 years, was a result of a steep decline in domestic prices. Most of the scrap recycled came from the industrial segment, mainly from electrical contacts, extraction from catalysts and from the glass industry. Though large volumes remain in a closed-loop process, being immediately reused by industry, some was sourced back to the market. That said volumes were comparatively lower than 2013 levels due to catalyst lifecycles causing less material to be returned to the market in 2014. Conversely, large volumes from industrial scrapping are likely to emerge in 2016 and 2017. Losses were also noted from the compact disc segment due to advancements in storage technology. Carat jewelry scrap meanwhile was largely absent due to lower prices and charges for processing scrap now making up a greater percentage of the price.

While the significantly weaker silver price last year played a key role in the annual decline across Asia, due in part to the supply chain delaying the recycling of material in the hope of a return to higher prices, economic factors were also to blame for the drop in scrap supply. Indeed, with reduced end-user demand, a function of a weaker global economic environment, demand for replacement electronics was lower in several segments, which in turn limited recycling of old appliances. Old scrap from **China** retreated 11% in 2014 to a level not seen since 2009 as weaker prices hampered the profitability in recycling silver while refiners sitting on large stockpiles also reduced the available supply to the market. A sizable drop in industrial recycling was also chiefly to blame for the weaker scrap flows in **Taiwan** and **South Korea** where recoveries slipped by an estimated 14% and 18%. Elsewhere, weaker silver prices were largely to blame for falls in Thailand and Indonesia as the supply chain and consumers alike delayed non essential jewelry and silverware recycling, declining 21% and 13% respectively.

Scrap supply in **Japan** last year retreated 2% to 19.6 Moz (609 t). The modest decline was due to weaker electronics recycling, as notably weaker consumer sentiment, a function of the uncertain economic environment and weaker yen, discouraged the scrapping of old electronics. That said, the tighter environmental legislation and a growing pool of above-ground product limited the fall. Silver recovered from old X-ray films held broadly steady in 2014, thanks to regulations which dictate statutory obligations for hospitals to archive X-ray films.

6. SILVER BULLION TRADE

- ***Silver bullion trade in 2014 was dominated by flows to India, especially in the final quarter, where total imports reached an all time high of 220 Moz (6,843 t)***

- ***North American bullion imports increased slightly, halting their downward trend, partly due to the strong increase in jewelry demand from the United States.***

- ***Major trading centers for silver such as the United Kingdom and Switzerland lost out in 2014 as producers of silver bullion shipped more metal directly to India.***

- ***Imports of silver to East Asia increased, continuing a long-term upward trend, with imports of bullion to Hong Kong increasing by 24% and imports of concentrates to China increasing by 3%.***

EUROPE

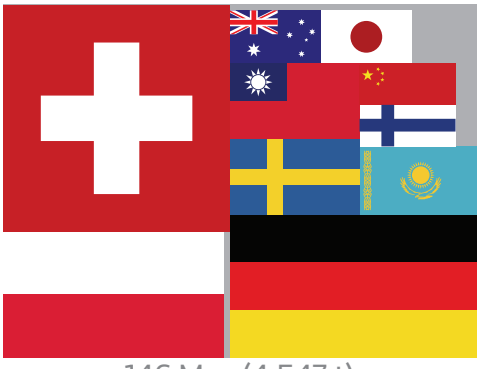
Europe (excluding Russia) is traditionally one of the world's main deficit regions as fabrication demand exceeds mine supply and locally generated scrap and this remained the case in 2014, though the deficit was cut. Fabrication of industrial items, jewelry, silverware and coins fell by 7% to 124.3 Moz (3,866 t), while scrap supply fell by 12% and mine supply rose by 9%, to a total of 108.0 Moz (3,360 t). Europe's fundamental deficit was cut to 16.2 Moz (504 t), compared to a figure of 24.6 Moz (765 t) in 2013. Part of this resultant gap was covered by imported scrap and silver stocks, but that still left room for imports of refined bullion, doré and concentrates.

In 2014, **UK** official exports of bullion fell on a calculated basis by 5% to 106.6 Moz (3,317 t) as the surge of silver moving from the country in 2013 began to tail off. Having said that, exports rose by 228% in 2013, so much of the trade has been maintained as demand from India has continued unabated. Shipments to that country remained steady at 97.6 Moz (3,037 t) and represent 92% of all the silver exported from Britain. Almost all of this trade, as can be seen in the chart below, was in October and November, when Indian demand went through the roof.

UK bullion imports registered a 37% fall to 146 Moz (4,546 t), with most of the bullion coming from Switzerland, Germany and Poland. Much of this fall came from the drop off of flows in October and November as countries preferred to send their bullion direct to India rather than via the UK.

Imports of silver bullion to **Switzerland** slumped in 2014, by 41% year-on-year, to just 34.6 Moz (1,076 t). The vast majority of supply into Switzerland last year was from countries with a mining industry, with Kazakhstan the largest supplier. Flows from this central Asian country stood at 9.2 Moz (286 t). Swiss refiners in part lost out to other countries supplying silver to India. There are a number of factors behind this phenomenon; firstly LBMA 'good delivery' silver, which makes up the vast majority of Swiss output, lost out in supplying the Indian market to non-LBMA accredited silver flowing in large volumes from China. In addition, demand for the metal increasingly came in the form of grain rather than bullion. Rather

2014 UNITED KINGDOM BULLION IMPORTS

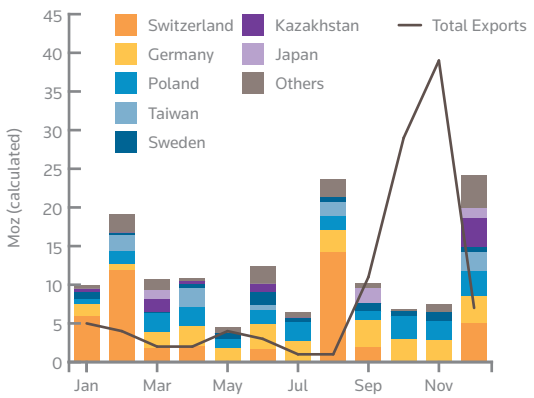


146 Moz (4,547 t)

Source: GFMS, Thomson Reuters; HMRC

One cm squared is equal to 5 Moz (156 t).
Gray areas denote imports from a country not represented by a flag here.

2014 MONTHLY UNITED KINGDOM BULLION IMPORTS



Source: GFMS, Thomson Reuters; HMRC

than go through Switzerland, vaults in London tended to ship silver straight to India. Another factor in the decline in imports is that lower prices meant lower margins, and thus price inelastic costs, such as shipping, become more important. Swiss refineries also lost out to refineries that could be supplied by sea, thereby avoiding higher air freight costs. In that regard Switzerland faced tough competition in supplying silver to the booming Indian market, losing market share to highly competitive suppliers from Germany, Russia and Turkey.

Last year saw a 12% year-on-year decline in exports of silver from Switzerland to 67.8 Moz (2,109 t), though this figure is still significantly higher than any other year in the last decade. This was primarily driven by demand from London vaults in the first nine months of the year and a surge in Indian demand in the last quarter. The largest initial destination for Swiss silver is Britain and it is clear from looking at British trade statistics that this silver goes to India.

Swiss exports direct to India were very similar to UK exports to India. There were relatively low shipments in the first nine months, with a monthly average of 0.2 Moz (6 t). Flows then rocketed to 2.7 Moz (84 t) and it seems that in the last three months of 2014, Indian silver importers were so keen for the metal that they went direct to Switzerland as well as taking material from London and China. This ties into another, albeit minor, movement of silver from Switzerland to Nepal at 2.2 Moz (68 t), which is then almost certainly moved across the border to India.

Official **German** figures showed that bullion imports increased by over 25% in 2014 to around 21.7 Moz (675 t). Italy was the largest supplier at 6.0 Moz (186 t). Shipments from Poland, Switzerland and Argentina all grew substantially, while from Sweden they dropped by nearly 30% as Sweden satiated Indian demand for silver. The strong increase in silver imports was in conjunction with a 17% decline in scrap used in fabrication in Germany last year.

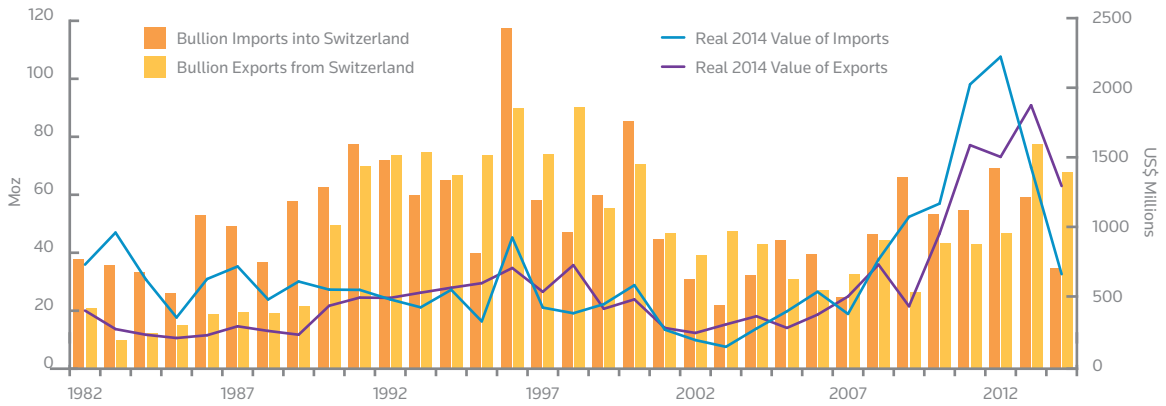
Germany's exports showed a 21% increase to 50.4 Moz (1,567 t). Most of the bullion went to silver vaults in the UK as they restocked after the vast outflows in 2013, with the bulk of the remainder going to Austria, Thailand, Slovakia, Poland and Switzerland.

Silver bullion imports into **Italy** increased by over 21% in 2014 to 26.4 Moz (821 t), making it the second successive year of import increases. Fundamentally this was due to the deficit of supply in the country as jewellery fabrication rose by 12% last year while scrap supply fell by 9%. The largest supplier was Germany, followed by Switzerland and the United States.

Meanwhile, Italy's bullion exports increased by 3% to 13 Moz (407t), with huge movements to Germany offset by a sharp decline in flows to Spain, Switzerland and France.

Russian official statistics for silver have become available for the first time. In 2014, the country exported 25 Moz (782 t), with almost 80% of that going to India, almost double what we estimate flowed in the previous year. In common with most of the flows to India, movements were concentrated in September and October in 2014.

ANNUAL SWISS TRADE SINCE 1982



Source: GFMS, Thomson Reuters; Swiss Impex. Values calculated using trade volumes and values in Swiss Francs

THE AMERICAS

After decreasing by less than 5% in 2013, silver bullion imports into the **United States** rose by less than 2% to 125.3 Moz (3,897 t) in 2014. This still represents a 26% contraction from the record levels of 168.9 Moz (5,253 t) in 2011. The 10% annual increase in jewelry fabrication uplifted the country's demand for silver last year. Mexico and Canada remained the largest silver exporters to the United States, contributing 55% and 29% of total shipments respectively. Silver imports from Mexico grew by 6% year-on-year while imports from Canada fell by over 30%. Shipments from Peru more than doubled, to 2.5 Moz (78 t), while silver from Chile dropped over 98%.

Exports from the United States remained flat last year, at 12.6 Moz (392 t). Exports to Canada, Italy, South Korea and China surged, while there were substantial decreases in shipments to Australia, Germany, Hong Kong, India and Czech Republic. As the United States has the largest refining capacity in the region, we expect heavy trading activities to continue in the United States in 2015.

In **Canada**, silver exports dropped by more than 7% to 58.8 Moz (1,829 t) last year. The United States was the largest buyer of the Canadian silver, but even an improving economy and higher silver demand from the United States could not prevent Canada from losing its market share in supplying silver to its neighbor.

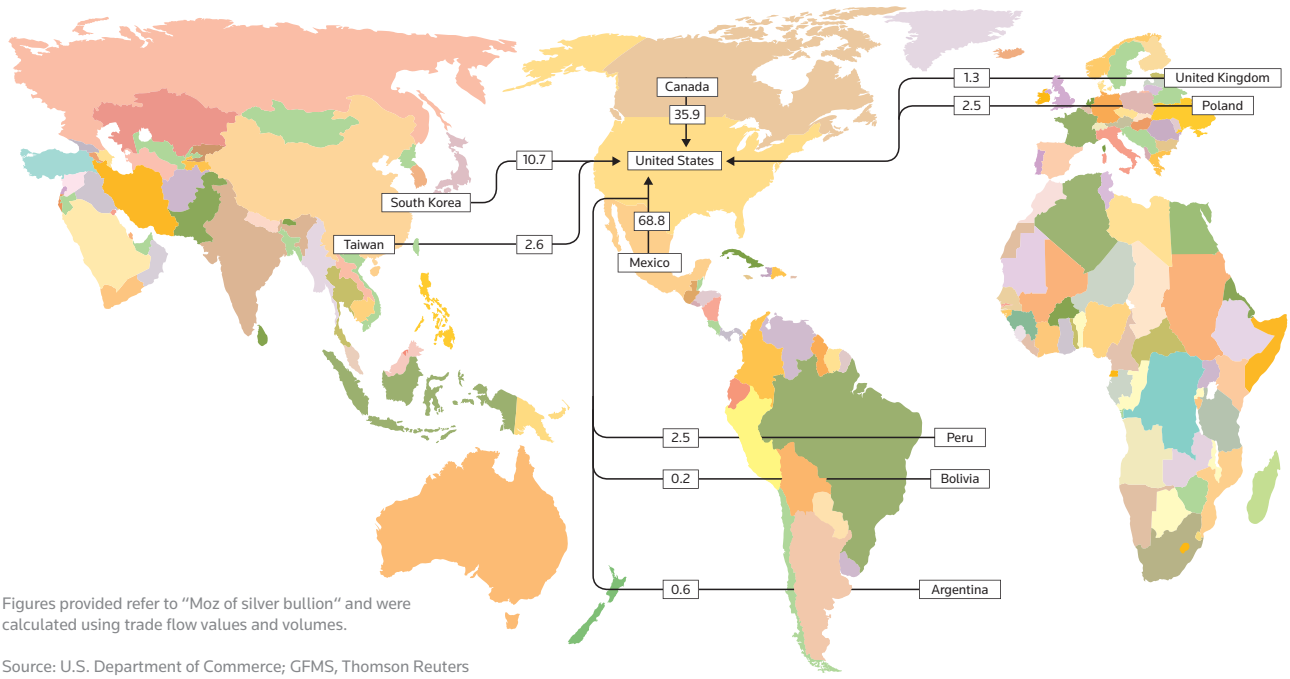
Mexican silver exports fell by 8% in 2014, to an estimated 119 Moz (3,701 t) from 130 Moz (4,047 t) in the previous year. Despite this fact, Mexican mine output actually grew by 5.8 Moz (179 t) to a total of 192.9 Moz (6,000 t). Shipments to the largest buyer, the United States, fell by almost 6% in tonnage terms and fell in every quarter of the year. Silver exports bound for Brazil and Canada were also lower in 2014, while exports to Japan showed a modest uptick last year.

MIDDLE EAST AND INDIAN SUB-CONTINENT

Silver bullion imports into the **United Arab Emirates** (UAE) recorded a significant decrease in 2014, particularly silver imports from Switzerland, which plunged from 3 Moz (93 t) in 2013 to 0.7 Moz (22 t) in 2014, a 76% year-on-year decrease. Silver was shipped directly to India rather than being transshipped or vaulted via Dubai, hence a large fall in import volumes.

Turkey continued to see substantial silver bullion inflows in 2014. We estimate bullion imports (a combination of fine silver, scrap, and mined dore) reached 8.5 Moz (264 t), a year-on-year increase of 10%. Imports were still dominated

MAJOR TRADE FLOWS IN SILVER BULLION TO THE UNITED STATES IN 2014



Figures provided refer to "Moz of silver bullion" and were calculated using trade flow values and volumes.

Source: U.S. Department of Commerce; GFMS, Thomson Reuters

by flows from Switzerland, and despite volumes falling by 25%, it still accounted for a third of total imports. Inflows were also boosted by a material rise in supply from the Czech Republic, Morocco, China and Hong Kong. Exports declined by 47% to an estimated 3.4 Moz (106 t) last year. Direct shipments to India saw a 47% year-on-year decline, but still consisted of almost a third of total exports.

Indian bullion imports reached a new record high of 220 Moz (6,843 t), rising by 18% from the 2013 record level. In value terms, however, it was marginally lower than 2013 due to the falling silver price. The surge of this magnitude, in volume terms, can be attributed to higher investment demand and to risk free returns in the cash-futures arbitrage. In addition silver jewelry and article fabricators re-stocked in high volumes as the price declined by 55% in rupee terms by mid-2014 from the mid-2013 highs. Imports in November were the highest monthly figures in 2014, at 40 Moz (1,244 t), also making it the second highest on record following the October 2008 import of 51 Moz (1,5886 t).

China was the largest silver supplier to India last year, constituting 29% of total imports, followed by UK, Russia, Germany, South Korea and Hong Kong. All these countries contributed 70% of total silver imports. Taiwan, Switzerland and Sweden combined contributed another 18% of the market share.

The mode of silver transport to India was primarily through sea and only slightly more than 40% of total shipments were by air, as transportation costs by sea were cheaper. However we believe the difference in rates between airborne and seaborne freight are narrowing, as one of the major value cargo service providers has recently hiked shipping rates, mitigating the differential in fees between airborne and seaborne freight. Analyzing the ports of destination, 75% of the silver shipments arrived at Delhi and Ahmadabad. Of this, nearly 80% of the shipments to Ahmadabad and one-third of the shipments to Delhi came by sea, which was then sent via railway to land-locked destinations. About 62% of the shipments by sea came from China and Hong Kong, and about 10% each from Great Britain and South Korea.

Looking at the importers, twenty two licensed agencies imported last year and supplied to the domestic market. Of this, the banks' share was nearly 50% followed by premier and star trading houses, which contributed to about one-third of the supply. The rest came in via government nominated agencies.

The supply of total refined silver from the Hindustan Zinc Ltd (Vedanta Resources) in 2014 declined by 10% to 10.9 Moz (339 t). For 2015, total refined silver supply is seen in the range of 11.1 to 11.4 Moz (345 to 355 t).

INDIAN BULLION IMPORTS

Moz	2010	2011	2012	2013	2014
OGL^	93.8	131.0	59.6	181.7	217.2
Others**	1.8	1.4	2.2	5.4	2.8
Total Imports	**95.6**	**132.4**	**61.8**	**187.1**	**220.0**
Local Premium*	7.8%	5.8%	7.3%	11.0%	13.2%

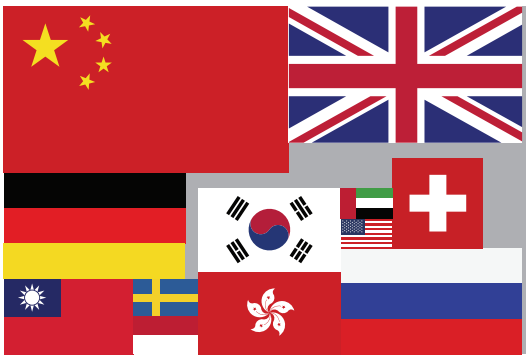
^Open general licence

* average percentage above London price at the official exchange rate (including all local duties and taxes)

** includes Direct Imports, Non-Resident Indians, Special Import Licence, and Replenishment Imports (i.e. imports of silver bullion for manufacture and re-export).

Source: GFMS, Thomson Reuters

2014 INDIAN SILVER IMPORTS

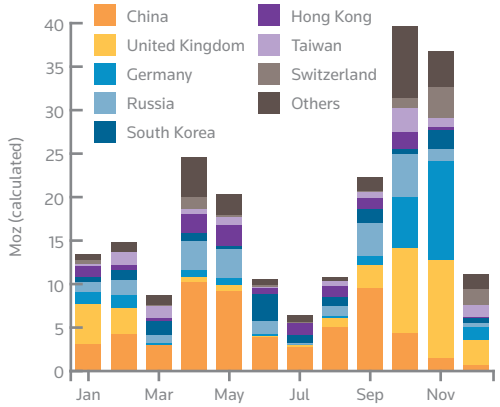


220 Moz (6,843 t)

Source: GFMS, Thomson Reuters; Indian Ministry of Commerce

One cm squared is equal to 7 Moz (218 t).
Gray areas denote imports from a country not represented by a flag here.

2014 MONTHLY INDIAN SILVER IMPORTS



Source: GFMS, Thomson Reuters; Indian Ministry of Commerce

EAST ASIA

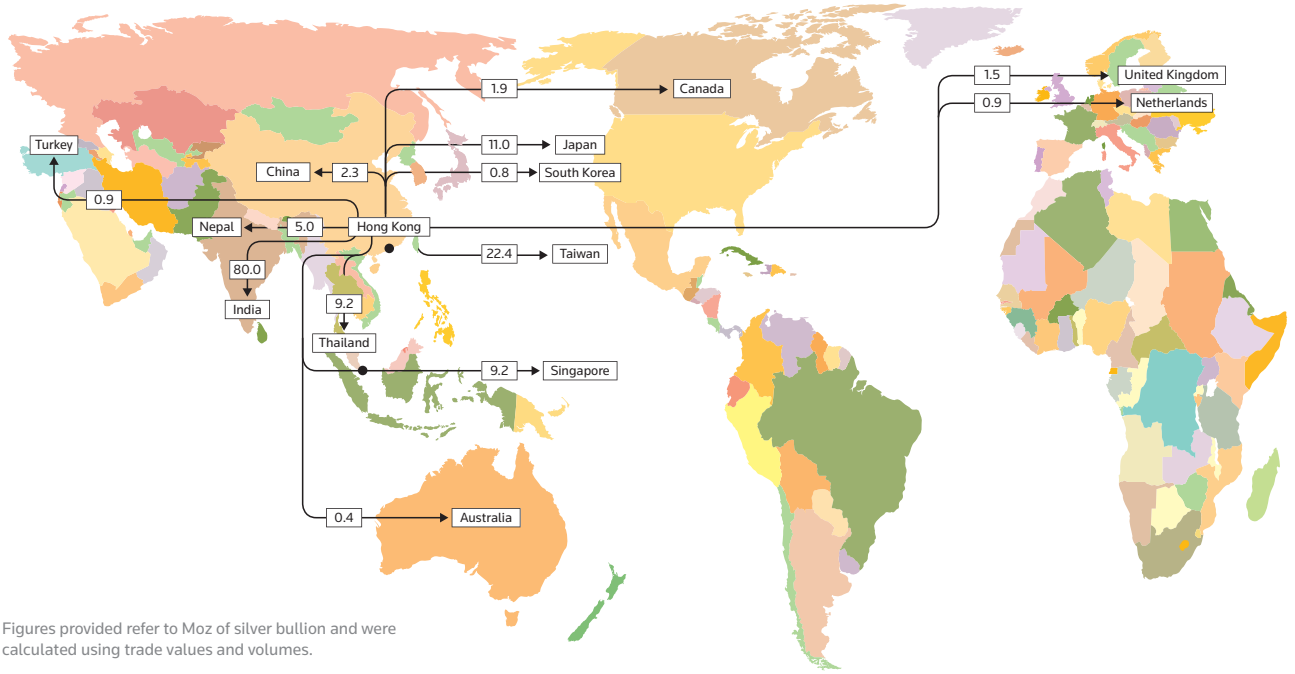
The imports of silver to **China** discussed here consist of metal inflows derived from base metal concentrates as well as the import of silver in bullion form. Imports rose marginally last year by 3% to a new high of 247 Moz (7,683 t) of contained silver. This augmented level of concentrates imports was in line with a long-term upward trend that has seen volumes swell five-fold over the last decade. The marginal growth rate reflected a slowing economy, however. Imports of silver bullion rose by 7% to a calculated volume of approximately 7.1 Moz (221 t). Australia and Switzerland remained the largest silver exporters to China last year, contributing 25% and 16% of total imports respectively. However, shipments from Switzerland declined by 30% year-on-year, while import volumes from South Korea, United States and Russia surged.

Looking at bullion exports, after jumping by 58% in 2013, Chinese silver bullion outflows held steady, posting only a 3% decline in 2014, to 44 Moz (1,369 t). For comparison purposes, previous export volumes, particularly between 2006 and 2009, exceeded 128.6 Moz (4,000 t). However we believe the historical high volume was inflated by round tripping activities between China and Hong Kong (designed to claim the VAT rebate on exports from China). Silver round tripping appears to have abated in the last few years as such activities are no longer profitable.

Due to the VAT structure in China, various parties tried to exploit loopholes, aiming for profits and arbitrage opportunities. Although Chinese silver prices quoted on local exchanges are always trading at higher levels compared to the international benchmark, the local silver price is always inclusive of 17% VAT. Without the VAT, the Chinese silver price is actually lower than the international quotation. As a result, parties would try to smuggle silver into the country, and with fake tax invoices, they could essentially sell the silver at a level inclusive of VAT, making profits through 'tax reclamation'. On the other hand, parties would also try to smuggle silver that was gathered in various ways but without valid tax invoices out of China. It is difficult to determine how much silver is being smuggled in and out of China, however.

In addition, industrial participants also tried to exploit the tax loopholes by exporting semi-manufactured products out of the country. Therefore although by looking on the surface it appears that silver bullion exported by China last year declined annually, silver products (jewelry, silverware, electronics parts) actually increased.

MAJOR TRADE FLOWS IN SILVER BULLION FROM HONG KONG IN 2014



Figures provided refer to Moz of silver bullion and were calculated using trade values and volumes.

Source: Hong Kong Census & Statistics Department; GFMS, Thomson Reuters

According to official trade statistics, meanwhile, silver bullion imports into **Hong Kong** increased 24% to an estimated 41.5 Moz (1,291 t) in 2014. South Korea surpassed China to become the largest silver bullion supplier to Hong Kong last year, with shipments equivalent to 22.2 Moz (690 t) and market share of over 50%. China's silver shipments decreased by 28%, to 14 Moz (435 t), compared to the historic peak level of around 141 Moz (4,400 t) in 2006 but, as explained already, this was partly due to round tripping activities. Flows from the United Kingdom, Taiwan and Indonesia all recorded material gains. On the other hand, bullion inflows from the United States, Australia and Switzerland all posted a notable fall.

Exports jumped by 44% last year, to an estimated 137.5 Moz (4,277 t). The notable increase was due to a rise in export volumes to India, Japan, Thailand and Nepal. After rising from 13.3 Moz (414 t) in 2012 to 42 Moz (1,306 t) in 2013, Hong Kong's silver exports to India surged again in 2014, almost doubling shipment volumes to 80.0 Moz (2,488 t). On the other hand, shipments to the United Kingdom, Singapore and Taiwan all declined significantly.

In value terms, **Taiwan's** total silver bullion imports fell almost 20% last year, but in tonnage terms were on par with the 2013 level, at 30 Moz (933 t). China remained Taiwan's biggest silver supplier, contributing 83% of Taiwan's total silver bullion imports. Shipment volumes from China also increased by 12% year-on-year. In contrast, silver shipments from the United States and Japan fell markedly. Meanwhile, Taiwan's silver exports fell 23% to 0.6 Moz (19t). The rebound of the Taiwanese economy, particularly support from the local electronics sector, increased its consumption of silver in 2014.

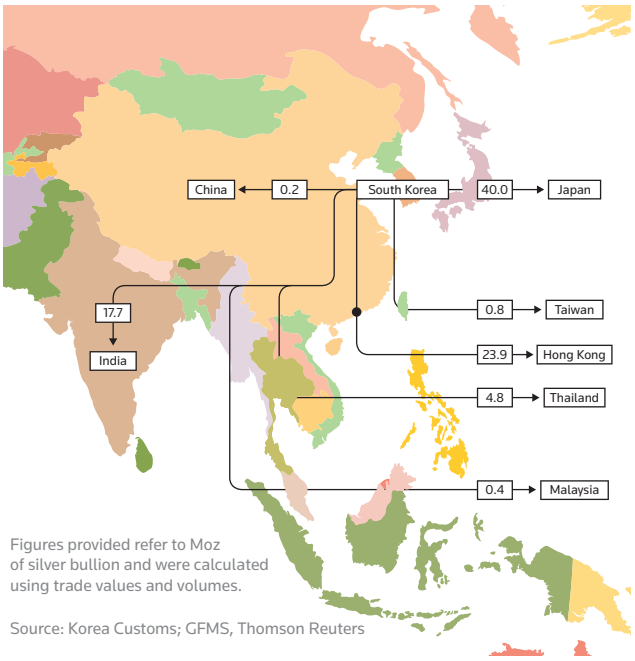
Singapore's imports rose slightly by 2% to an estimated 3.9 Moz (121 t) last year. Indonesia remained the dominant supplier, registering about 74% of Singapore's total silver imports. Imports from Belgium, Taiwan and the United Kingdom also surged. On the other hand, Singapore's silver exports nosedived 82%, to 2.9 Moz (90 t) in 2014. An 86% reduction in shipments to India contributed to this significant decline.

South Korea's silver exports, driven by its refining industry, grew by 33% to 90.9 Moz (2,827 t) last year, mainly driven by flows to Japan, Hong Kong and India. Meanwhile, the country's silver imports rose by 22% to approximately 1.2 Moz (37 t) last year. China was the major supplier, with shipping volumes jumping almost five-fold to 1.1 Moz (34 t), representing 89% of South Korea's total imports. Shipments from the United States also surged. Meanwhile, the country's silver exports grew by 33% to 90.9 Moz (2,827 t) last year, mainly driven by flows to Japan, Hong Kong and India.

Silver bullion imports into **Japan** decreased by less than 5% last year, to 52.5 Moz (1,633 t), with the decline contributed by lower shipments from South Korea, Mexico, and the United States, while shipping volumes from China surged to 1 Moz (31 t). Japan's silver exports also decreased, to 0.7 Moz (22 t), or 80% less than the level achieved in 2013. A huge drop in shipments to the United Kingdom contributed to the fall, and even the increase in export volumes to Singapore, Indonesia and Thailand could not reverse the down trend.

In 2014, silver bullion imports into **Thailand** rose by 8%, to an estimated 15.4 Moz (479 t), despite a weakening domestic jewelry fabrication sector. Imports from Switzerland increased by 14% to 4.5 Moz (140 t) and became the largest supplier to Thailand, while shipments from Germany, South Korea, Italy and Japan all saw substantial decreases. Thailand's exports increased in 2014, with higher shipments to Indonesia, Vietnam, Italy and Singapore which was only partially offset by lower shipments to Japan, Germany and the United States.

MAJOR TRADE FLOWS IN BULLION FROM SOUTH KOREA IN 2014



Figures provided refer to Moz of silver bullion and were calculated using trade values and volumes.

Source: Korea Customs; GFMS, Thomson Reuters

7. INDUSTRIAL FABRICATION

- ***World industrial fabrication totaled 594.9 Moz (18,504 t) in 2014, a slight 0.5% decline from the previous year. Weaker fabrication demand in developed countries outweighed modest growth in developing countries.***

- ***Photovoltaic (PV) demand for silver totaled 59.9 Moz (1,862 t) in 2014, up 7% from the previous year. This was the first increase in two years and was driven by a combination of less aggressive thifting of silver content per solar cell and an 11% rise in solar panel installations.***

- ***Brazing alloy and solder silver fabrication also increased last year, by 3 Moz (93 t), stemming the decline in total industrial fabrication. Most of the increase came from China, the largest source of demand in this sector.***

- ***Demand for silver from the ethylene oxide (EO) industry increased last year, by 6%, mostly driven by newly commissioned EO plants in China.***

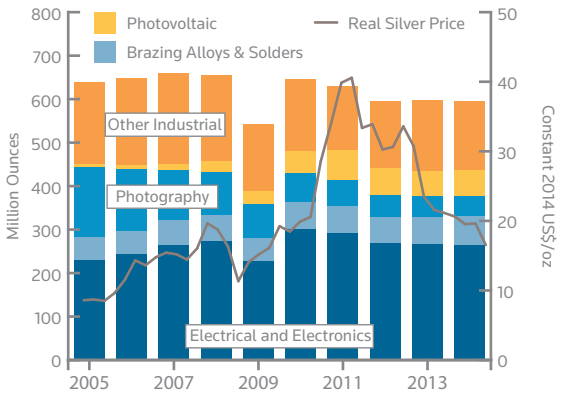
- ***Declines in silver demand from the electronics and photography sectors and other miscellaneous applications amounted to 10.3 Moz (319 t), which offset the 7.3 Moz (228 t) increase in photovoltaic, brazing alloys and solders, and EO demand.***

Industrial manufacturers used 594.9 Moz (18,504 t) of silver in 2014, down 0.5% or 2.9 Moz (91 t) from a year ago. Increases in brazing alloys and solders, photovoltaic, and ethylene oxide (EO) demand were slightly offset by lower demand for silver in electronics and electrical components, photographic papers, and other miscellaneous applications. While Chinese demand increased a healthy 4%, lower demand in the United States, Japan, and Europe outweighed this growth.

Industrial silver fabrication is heavily influenced by economic and industrial production growth. The global economy expanded by 3.4% in 2014, similar to growth in the previous two years. Industrial production expanded by an estimated 2.7% in 2014, the strongest annual rate since 2010, a recovery year. Based on data going back to 1990, there is a very strong positive (0.88) correlation between growth in silver industrial fabrication and industrial production, but growth in the global economy and industrial activity last year conflicts with the 0.5% decline seen in industrial silver demand. This discrepancy is due to a couple of other factors, such as thrifting and the slowdown in Chinese economic activity.

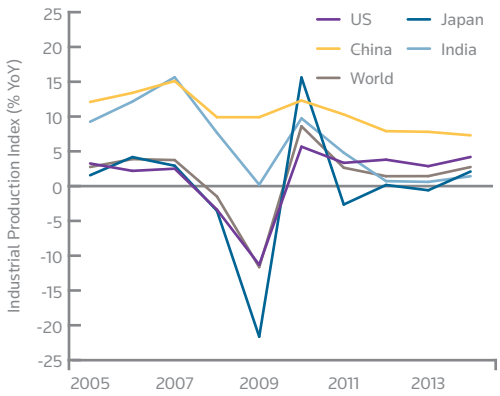
The reduction of silver per unit, referred to as "thrifting", remained a key driver in limiting growth last year. Thrifting activity, while it weighed on growth, was not as significant a driver as in recent years, however. For example, the average reduction to silver per solar cell in 2014 was 4%, a stark contrast to the double-digit reductions seen in the previous four years. Lower silver prices have also reduced the rate of thrifting activity. Another major factor was the slower growth in demand in China. Even though Chinese silver industrial demand rose 4% last

INDUSTRIAL SILVER FABRICATION (BY CATEGORY)



Source: GFMS, Thomson Reuters

INDUSTRIAL PRODUCTION IN KEY SILVER-USING COUNTRIES



Source: GFMS, Thomson Reuters; Oxford Economics

TABLE 5 - SILVER FABRICATION: INDUSTRIAL APPLICATIONS (INCLUDING THE USE OF SCRAP)

(million ounces)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Europe										
Germany	23.9	25.5	27.4	27.5	20.2	26.5	25.4	21.7	21.3	21.0
Russia	20.7	21.7	22.2	21.9	18.7	20.3	19.4	19.1	19.2	18.2
UK	40.9	30.8	23.8	22.0	17.7	19.2	20.7	19.0	17.9	17.6
Belgium	26.6	29.2	27.8	24.3	19.4	17.6	14.3	13.2	11.9	11.3
Italy	10.9	10.9	11.3	11.2	9.0	9.9	9.2	8.6	8.4	8.4
France	10.2	10.4	10.7	10.8	7.5	8.8	8.0	7.2	7.0	6.8
Czech Republic	1.6	2.1	2.4	2.7	2.1	2.4	2.6	2.8	3.0	3.1
Switzerland	2.6	2.5	2.5	2.5	2.2	2.4	2.4	2.3	2.3	2.3
Turkey	1.5	1.6	1.6	1.6	1.3	1.4	1.5	1.4	1.5	1.5
Netherlands	1.6	1.6	1.6	1.6	1.3	1.5	1.5	1.4	1.4	1.4
Spain	1.9	1.9	1.9	1.9	1.7	1.8	1.4	1.2	1.1	1.1
Poland	0.7	0.7	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7
Austria	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Norway	0.7	0.6	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4
Sweden	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Romania	0.4	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Hungary	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Portugal	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Slovakia	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Other Countries	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3
Total Europe	**146.0**	**141.3**	**136.2**	**131.0**	**103.7**	**114.5**	**109.0**	**100.6**	**97.7**	**95.4**
North America										
United States	157.1	153.2	149.0	149.5	124.4	151.2	138.0	132.7	127.4	125.5
Mexico	3.2	3.1	3.3	3.1	3.1	4.8	6.0	6.6	6.5	6.7
Canada	1.0	1.7	2.7	2.4	1.3	1.9	1.9	1.8	1.9	1.8
Total North America	**161.4**	**158.0**	**155.0**	**155.0**	**128.8**	**157.9**	**145.9**	**141.1**	**135.8**	**134.0**
Central & South America										
Brazil	5.9	2.9	5.4	5.2	4.6	5.7	5.4	5.3	4.5	4.3
Argentina	2.2	1.5	1.4	1.0	0.8	0.9	0.9	0.9	0.9	0.8
Colombia	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.3	0.6
Other Countries	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4
Total C. & S. America	**8.6**	**5.1**	**7.4**	**6.8**	**5.9**	**7.2**	**6.9**	**6.8**	**6.1**	**6.1**
Asia										
China	102.7	111.1	127.7	145.5	136.7	156.8	164.1	165.4	179.7	186.1
Japan	122.0	129.7	123.6	102.9	66.5	95.2	88.0	74.9	75.9	72.6
India	46.1	44.5	47.0	47.7	46.0	50.7	53.9	49.9	47.2	47.3
South Korea	20.8	22.3	24.1	25.9	19.7	24.5	24.5	23.9	22.7	21.0
Taiwan	11.8	13.6	16.7	16.6	12.3	15.1	15.8	14.3	14.6	15.1
Hong Kong	6.2	6.7	7.1	6.9	5.5	6.4	6.4	6.2	5.8	4.9
Indonesia	0.6	0.6	0.6	0.6	0.5	0.8	0.8	0.9	0.8	0.9
Singapore	0.0	0.0	0.0	0.0	0.1	0.3	0.4	0.5	0.7	0.8
Israel	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.8
Saudi Arabia	2.5	1.4	1.4	0.2	5.3	5.1	2.0	0.5	0.5	0.5
Thailand	0.0	0.9	0.6	0.3	0.5	0.2	0.2	0.2	0.2	0.2
Kuwait	0.1	0.1	0.1	2.1	1.2	0.1	0.1	0.1	0.1	0.1
Other Countries	3.8	5.0	5.1	5.8	3.5	4.0	3.7	3.7	3.7	3.6
Total Asia	**317.4**	**336.6**	**354.8**	**355.4**	**298.5**	**359.9**	**360.7**	**341.1**	**352.6**	**353.8**

TABLE 5 - SILVER FABRICATION: INDUSTRIAL APPLICATIONS (INCLUDING THE USE OF SCRAP)

(million ounces)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Oceania										
Australia	5.0	5.1	5.1	5.1	4.6	4.9	5.1	5.0	5.0	5.0
Africa										
Morocco	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3
South Africa	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Other Countries	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Total Africa	**0.7**	**0.7**	**0.7**	**0.7**	**0.7**	**0.7**	**0.7**	**0.7**	**0.7**	**0.7**
World Total	**639.1**	**646.7**	**659.2**	**654.1**	**542.2**	**645.1**	**628.3**	**595.2**	**597.9**	**594.9**

year, growth was much slower relative to the 9% increase in 2013. Additionally, Chinese industrial demand growth was lower compared to the compound annual rate of 7% between 2005 and 2013. Slower economic activity in the country also impacted silver industrial demand in Japan, where silver industrial fabrication fell 4% last year. Japan's industrial sector is highly export-driven. To illustrate, Japan is the largest silver powder exporter in the world, accounting for 50% of gross silver powder exports by value in 2014.

Photovoltaic (PV) demand was a bright spot within the industrial demand category, expanding by 7% last year. PV demand accounted for 10% of total industrial fabrication in 2014, a material increase compared with over 1% a decade ago. Brazing alloys and solders demand also rose, by 5%, last year. Healthy housing market growth in the US, India, and the UK helped boost demand last year.

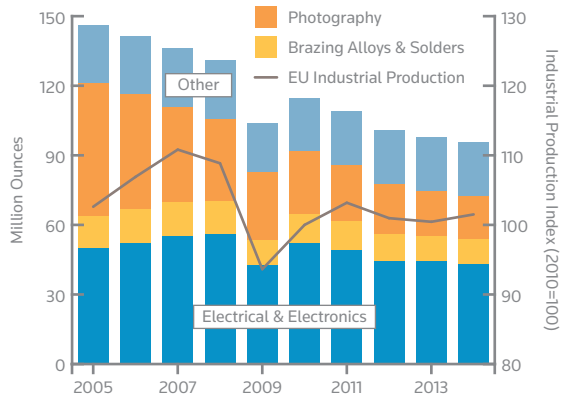
The photography sector continued its chronic decline in silver demand for photographic papers. The 5% drop, however, was the slowest rate of decline since 2002. Further declines from this source of demand are expected in the medium term, but decreases are expected to be smaller than the 10% compound annual growth rate sustained between 1999 and 2014.

EUROPE

European silver industrial demand fell by 2% last year to 95.4 Moz (2,967 t), posting a fourth annual consecutive fall. The drop was somewhat slower than in to previous years, which was mainly due to a rise in the number of silver-containing items, lifting demand, but countered by a continuation in thrifting, which consequently pushed net fabrication down. In addition, just like gold, silver has been subject to substitution pressures, replacing it with copper and copper/aluminium alloys in the case of silver-based coatings. The substitution of gold to silver in some electronic applications offset declines, however. The continuous thrifting and substitution in various applications has in our view reached a certain threshold level, as many other metals simply don't share the same characteristics as silver, in turn reducing manufacturers' ability to thrift further without significantly compromising the functionality of the applications. Fabrication of brazing alloys fell as well last year, as did fabrication demand in electronics, by 1% and 2% respectively. On the positive side, a continued robustly performing automotive industry coupled with new applications in batteries helped to support the numbers.

Industrial fabrication of silver was down in **Germany** by 2% year-on-year to 21.0 Moz (652 t). Silver is largely used in a variety of applications such as light switches and brazing and alloys. Silver-based brazing alloys and solders find a wide adoption in the so-called heating, ventilation, air conditioning and refrigeration (HVACR) applications.

EUROPE INDUSTRIAL FABRICATION



Source: GFMS,Thomson Reuters; Oxford Economics

Demand for these household appliances is big business in China, but in Germany increasingly less so, particularly with regard to applications that contain silver-based solders and brazes. This is mainly a function of substitution into other metals such as copper and zinc but also due to less significant economic growth and consumer spending on consumer appliances compared to some developing countries. In addition, and on top of various base metals, plastics are being used in a broader array of applications, also in some cases supplanting silver. Therefore, despite the absence of significant pressures to reduce costs due to the lower silver price, thrifting and substitution continues to persist, albeit at a slightly slower pace than recorded in previous years.

The 6% decline year-on-year in European photographic fabrication was the slowest decrease in four years, which implies that the structural decent might have found a floor. **Belgium** is the largest user of silver in photographic applications within Europe. Demand fell 4.5% in the country last year.

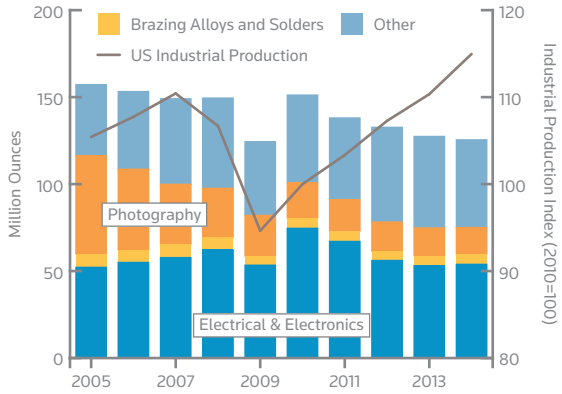
The drive towards new applications that could revive the usage of silver in industrial applications is strong, but so far no real significant breakthroughs have been recorded. Various promising technologies are on the horizon, of which one is related to LED applications that could find a reasonably wide adoption and have a positive impact on the demand for silver. But that is unlikely to result in a regional wide revival, as at present at best it will merely stall the declining trend in Europe. A fly in the ointment for a potential upswing in fabrication was the changes to Chinese tariffs, which meant that European fabricators were prevented from exporting finished silver containing products to China. As a consequence, in an effort to circumvent the tariffs, and in a similar vein to some of the automakers, companies localized their production in China, which meant that various European fabricators have seen fabrication decline but not to the same extent as fabrication in Europe.

NORTH AMERICA

United States industrial silver fabrication fell 2% to 125.5 Moz (3,902 t) in 2014. Industrial fabrication dropped for the fourth consecutive year, to its lowest level in our data series, which began in 2000. Last year's decline, however, was the smallest percentage drop in the four year period of declining industrial demand. The bulk of the 2 Moz (63 t) drop in 2014, was driven by a 4 Moz (125 t) fall in silver powder production sourced to the photovoltaic (PV) industry. Some silver powder production was offshored to China, where the majority of solar panel production is based. Additionally, the global silver powder industry is highly competitive, with releases of new generations of silver powder products sometimes resulting in rapid shifts in market shares by company as well as country. Consequently, PV silver powder accounted for 21% of US industrial silver demand in 2014, down from 23% in 2013.

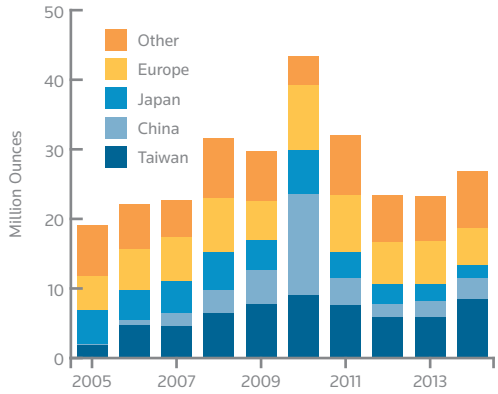
Increased use of silver among industrial users elsewhere, however, helped stem last year's total decline. Excluding PV silver powder, industrial fabrication increased 0.1% last year, for the third year in a row. Manufacturers saw increased use of silver in antimicrobial applications, in which the US accounts for the lion's share of the

US INDUSTRIAL FABRICATION



Source: GFMS, Thomson Reuters; Oxford Economics

US SILVER POWDER EXPORTS



Source: GFMS, Thomson Reuters

global market, electrical contacts, brazing alloys and solders, backlight defoggers, sputtering targets (used in semiconductor, connector, and printed circuit board production) and transparent conductors (used in touch screens). In the U.S. silver use in backlight defoggers increased due to cold weather conditions in the region, which required greater use of window defogging agents. Better economic activity and an improving labor and housing market also helped boost demand for these silver-using applications.

Electronics demand in the U.S. for silver totaled 53.9 Moz (1,676 t) last year, up 2% year-on-year. This increase was the first annual rise following three successive declines. In contrast to the previous three years, there was less thrifting activity reflecting lower silver prices. Other positive factors include stronger semiconductor sales growth in the Americas relative to global growth, U.S. consumer electronics sales growing at a faster rate in 2014 than in 2013, and U.S. PC shipments growth was stronger in the U.S. than in other countries. Additionally silver use in electronics applications in automobiles increased last year, mostly a function of the 5% increase in domestic auto production. Silver is used in sensors, such as the fuel level sensor, as well as a variety of other applications in the vehicle.

Brazing alloys and solders fabrication rose to 5.8 Moz (182 t) last year in the U.S., up 2% from the previous year. This was a slower increase than the 7% growth seen in 2013. New housing starts increased by 8% last year, a slower pace than the 19% growth in 2013, which helps explain silver demand growth. Silver brazing alloys and solders are used in piping, a major component of a house's infrastructure; therefore the rate of growth in newly built houses is a major indicator of silver demand from this source.

Silver demand from the ethylene oxide (EO) industry amounted to 0.1 Moz in 2014, down 24%. There were no new EO plants built last year in the country; demand came entirely from replacing silver during catalyst recycling. The decline in demand was due to fewer plants recycling catalyst relative to the previous year. EO catalyst recycling is a closed-loop process; however there is a 2% loss rate, on average, in recycling silver catalyst. This 2% loss is replenished during recycling.

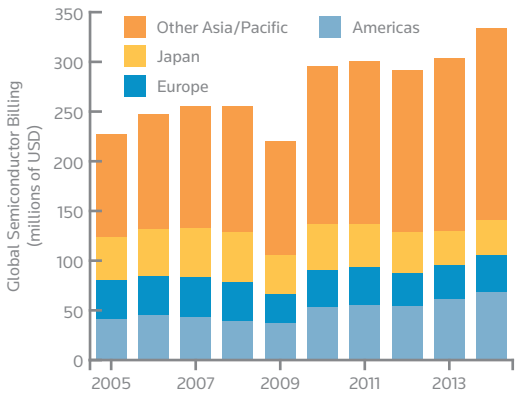
EAST ASIA

Chinese silver industrial demand rose for the fifth consecutive year in 2014, rising by 4% to 186.1 Moz (5,788 t), a record high.

The electrical and electronics sector continued its recovery from the 2009 slowdown by ramping up to 77.8 Moz (2,419 t) in 2014, remaining the largest area of silver industry demand. As in previous years this resulted largely from the outstanding performance from the personal electronic products sector. Smartphones sales in China reached 460 million units in 2014, compared to 329 million units a year earlier. Xiaomi, a local brand, became the largest market player in China, recording 60.8 million units sold. The traditional electronics sector such as personal computer and 2G cell phones continued to slip, while annual demand for 4G cell phones increased tremendously, rising from a market share of 27.1% in 2013 to 38.8% in 2014. Looking at the electrical sector, total floor space under construction rose only 10.4% year-on-year, with housing starts actually decreasing by 14.4%. The difficulty that the property sector faced limited the growth in usage of silver conductors, contacts, switches and fuses application.

Meanwhile, total sales by the Chinese automobile industry increased only 7% to a record high of 23 million units in 2014, compared to a 15% annual growth in 2013. However, this sector saw increasing silver usage in a growing range of automobile applications such as wireless connectivity, in-vehicle infotainment, security systems and sensors.

GLOBAL SEMI-CONDUCTOR BILLINGS



Source: SIA

Turning to silver brazing alloys and solder, demand grew by 8%, to 37.6 Moz (1,169 t) in 2014. According to China Household Electrical Appliances Association, the country's production of refrigerators and washing machines decreased by 1% and 3.3% respectively, while production of air conditioners increased by 11.5%. The growth in demand for refrigeration compressors, which is the primary application of silver in home appliances was limited. On the other hand, the strong growth in the railway sector, with 8,427 kilometers of new railroad construction last year, increased demand from this sector. With the Chinese government boosting the infrastructure and property development during the first quarter of 2015, we expect industrial demand to pick up momentum in 2015.

The Chinese photovoltaic industry continued to expand in 2014, with solar cell production reaching 34.5 GW. Despite falling short of the initial target, there was still a total of 10.6 GW of solar power connected to the grid last year. This brings the country's total grid-connected solar power capacity to 28.05 GW, up 60% year-on-year. Of the total solar power capacity, over 83% consisted of solar power stations, while the rest was panels installed by individuals and connected to the grid. Total solar power generation reached 25 bln kilowatt hours, up by more than 200% from 2013. We expect the Chinese solar industry to continue its upward momentum into 2015, as the Chinese government has recently announced that it has revised up its 2015 solar installation target to 17.8 GW, representing a 60% annual increase. Meanwhile, although the local solar industry has been growing at a fast pace, most of the silver powder and paste needed was imported, and we estimated only 10%-15% of silver paste demand was being satisfied by domestic paste production last year. Additionally, China only began producing silver powder that meets the specs for PV paste in the past three years.

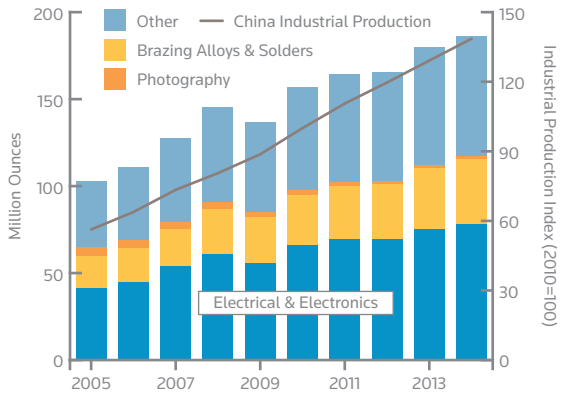
After soaring by more than 2.5 times in 2013, silver usage in the ethylene oxide (EO) industry rose by more than 8% to 4.5 Moz (141 t). The huge margin producing ethylene oxide attracted various players to enter the industry in the last few years. In 2000, the local production capacity of EO was only 885,000 t; but by the end of 2014, the local production capacity increased to 5,206,000 t, with 854,000 t of new capacity added last year.

The massive increase in production created an oversupply of EO in the market, resulting in a collapse in the local EO prices. Local EO manufacturers' margins evaporated to razor thin levels, with many even suffering from financial losses as a result. Thus most of the new capacity supposed to go online in 2015 will now be on hold, and ironically, with a tightened supply along with a steady increasing demand for surfactants and diethylene glycol - both downstream products of EO, EO pricings in the local market rebounded during the first quarter of 2015.

Following a modest rise in 2013, **Japanese** demand in 2014 slipped by 4% to an estimated 72.6 Moz (2,257 t), a three-year low and over 44% below the record level registered in 2006. There were a number of reasons behind this fall in offtake. First, domestic consumer spending remained fragile, as evidenced by softer demand for electronics products and household appliances. This was in turn the result of the country's ongoing struggling economy which fell back into a recession in the third quarter of the year. Second, lower fabrication demand was in part driven by weak external orders for some industry segments, despite the weaker yen in the second half of the year which provided a competitive advantage, as demand in China, and most notably Europe, remained hamstrung by their weaker economies.

The year began well with robust domestic demand ahead of the 3% rise in the consumption tax in April. Indeed, many consumers front loaded purchases of household appliances ahead of the tax change. However, demand faltered thereafter, driven lower by a drop in sentiment, as consumers adjusted to the bleak economic environment, in turn delaying non-essential purchases.

CHINESE INDUSTRIAL FABRICATION



Source: GFMS, Thomson Reuters, Oxford Economics

According to The Japanese Ministry of Economy, Trade and Industry (METI) total domestic production for the electronics industry in 2014 was 11.8 trillion yen (about $100 bln), a 2.6% rise from the previous year. The consumer electronics segment posted revenue of 693 bln yen in 2014, down 16% from the previous year. Sales of flat panel TVs declined 6% compared to the previous year, but 2014 was one of the worst years for this segment. Digital cameras are still a major source of income for the industry, but sales fell 30% in 2014. Car navigation systems, which have been a segment of exponential growth in recent years, accounted for almost 51% of revenue for consumer electronics. However, the navigation segment decreased 6% last year.

The bulk of Japanese exports consisted of consumer electronics ten years ago. Today, it only makes up less than one-tenth of exports. The industrial electronics segment posted revenue of 3.6 trillion yen in 2014, a 3.1% decline from the previous year. Sales of cellular phones decreased 38%, while personal computers, including tablet PCs, decreased 1.6%; Japan has approximately 2% share of the global market.

Turning to the individual sectors' performance, the electrical and electronics sector declined by 12% to 33.6 Moz (1,044 t). Demand for silver nitrates, excluding the photographic industry, which appears to have now plateaued after material falls over the last decade, was marginally higher annually and so was silver used in the automotive sector. In the automotive sector silver is increasingly used in the production of thick film grade chip resistors, grade Multilayer Ceramic Capacitors (MLCCs),

JAPANESE NON-PHOTOGRAPHIC NITRATE & CONTACT PRODUCTION

(million ounces)	2010	2011	2012	2013	2014
Non-Photo Nitrates	6.7	5.1	1.2	1.1	1.1
Contacts	4.7	4.0	3.4	3.9	2.1

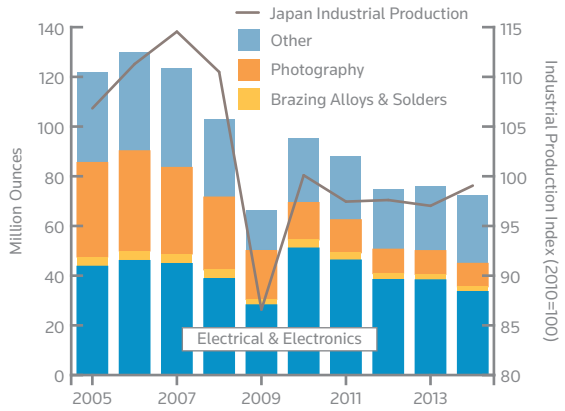
Source: GFMS, Thomson Reuters

and accumulators. By contrast, demand for silver used in contacts, connectors, and switches (the back bone of the industry) saw demand retreat quite considerably.

Silver powder production used in the photovoltaic industry continued the upward trend of recent years, rising by an estimated 10% to 27.5 Moz (855 t). This segment has benefitted strongly from the shift in focus of the Shinzo Abe-led government, which actively steered towards diversifying electricity generation away from nuclear sources following the Fukushima disaster in 2011. This has been done through a national campaign that advocated disseminating renewable energy, boosting new PV module production beyond nine Giga Watts (GW) last year. (this topic will be addressed in more detail in the Photovoltaic section of the chapter).

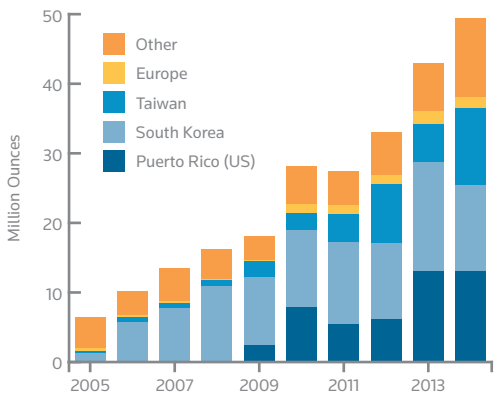
Offtake in the brazing alloys and solders sector declined last year by 12% to 2 Moz (63 t), as weaker domestic demand - coupled with a cooling export sector - dragged silver consumption down. Elsewhere, based on our analysis, silver-based catalyst used during the production of ethylene oxide, increased marginally last year. Indeed, while there were no new capacity installations added in Japan in 2014, replenishment of silver for existing facilities is believed to have increased from the very low level witnessed in the prior year.

JAPANESE INDUSTRIAL FABRICATION



Source: GFMS, Thomson Reuters; Oxford Economics

JAPANESE SILVER POWDER EXPORTS



Source: GFMS, Thomson Reuters

Industrial fabrication in **Hong Kong** is estimated to have eased by 16% in 2014 to reach 4.9 Moz (152 t), in part due to some relocation of production to other Asian regions. Hong Kong's electronics industry is the largest merchandise export earner of the territory, accounting for 61% of Hong Kong's total exports in 2014. A substantial portion of such exports, largely re-export business, are regarded as high-tech products, especially those related to telecommunications equipment, semiconductors and computer items. In value terms, Hong Kong's electronics exports rose by 6% in 2014. Exports to the Chinese Mainland increased steadily and grew by 4% year-on-year, while exports to the United States grew by 12%, due to an improving local economy. However, domestic production for exports fell another 23% in value terms in 2014, after already falling 30% in 2013. We expect this declining trend to continue into 2015.

South Korean industrial offtake slipped 8% in 2014 to an estimated 21 Moz (652 t), the lowest level since 2009. The drop last year was due to a combination of a worsening local economy, some relocation of production to other Southeast Asian countries, and a more competitive global electronics market. Despite the Bank of Korea cutting interest rate twice in 2014, the domestic economy remained lackluster. Wages have grown by less than 1% in inflation adjusted terms a year over the past decade. A strong won relative to the Japanese yen also gave away some competitive advantage of Korean exports. The local economy only grew 0.4% by the final quarter of 2014 from its previous quarter, and the government initiated another rate cut in March this year, hoping to revive the local economy.

In order to counter competition and to control costs, some local manufacturers rellocated some of their production to other Southeast Asian countries. For example, Samsung has already invested billions in Vietnam, with Samsung Vietnam's exports in 2014 worth $26.3 bln. The electronics giant plans to expand its manufacturing operations in Vietnam. In the face of stiffer competition, local manufacturers may continue to reallocate some of its local production overseas to control costs.

Another reason of decline in offtake was due to stiff competition in the electronics sector, particularly in the

TABLE 6 - SILVER FABRICATION: ELECTRICAL AND ELECTRONICS (INCLUDING THE USE OF SCRAP)

(million ounces)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
China	41.1	44.7	53.6	60.9	55.4	66.2	69.1	69.5	75.3	77.8
United States	52.1	55.0	57.7	62.2	53.4	74.6	67.0	56.1	53.1	53.9
Japan	43.7	46.0	44.8	38.7	28.2	51.1	46.2	38.4	38.3	33.6
Germany	18.3	19.7	21.4	21.7	15.7	21.3	20.3	17.2	17.0	16.7
India	10.2	10.8	14.1	15.0	16.1	17.1	17.2	17.6	15.1	16.1
South Korea	12.9	13.8	14.7	15.9	12.5	16.1	16.0	15.8	14.9	13.8
Taiwan	9.4	10.3	11.7	12.3	9.9	12.1	12.7	11.3	11.8	12.3
Russia	10.9	11.5	12.1	12.1	10.3	11.3	10.9	10.7	10.9	10.1
Mexico	2.1	2.0	2.1	2.1	2.2	3.8	5.0	5.7	5.6	5.8
France	8.0	8.2	8.5	8.6	5.7	6.9	6.1	5.3	5.3	5.1
UK	4.5	4.4	4.5	4.7	3.4	3.9	4.0	3.9	3.9	4.0
Italy	3.5	3.6	3.9	4.1	3.4	3.9	3.3	2.8	2.5	2.4
Hong Kong	3.0	3.3	3.5	3.3	2.7	3.1	3.1	3.0	2.8	2.3
Czech Republic	0.7	1.0	1.1	1.3	1.0	1.2	1.3	1.4	1.4	1.5
Brazil	2.1	0.9	1.5	1.5	1.2	1.6	1.6	1.6	1.4	1.4
Turkey	1.0	1.0	1.1	1.1	0.9	0.9	1.0	0.9	0.9	1.0
Australia	0.7	0.7	0.7	0.7	0.6	0.7	0.7	0.7	0.7	0.7
Singapore	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.3	0.5	0.6
Netherlands	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.5
Other Countries	4.9	4.9	5.0	5.1	4.2	4.7	4.5	4.4	4.4	4.4
World Total	**229.7**	**242.3**	**262.5**	**271.7**	**227.4**	**301.2**	**290.8**	**267.0**	**266.2**	**263.9**

cell phone sector. Samsung lost its market share to its competitors, particularly to Xiaomei, who became the market leader in China last year. As a result, Samsung Electronics recorded its first annual earnings decline since 2011 last year as weakness in the company's mobile business dragged down profitability, despite improving performance from the semiconductor division. The mobile segment reported a 19% year-on-year contraction in sales.

In addition some local manufacturers halted the operations that produce Plasma Display Panel (PDP) module in the second half of 2014, also reducing silver demand.

Taiwan's industrial use of silver is estimated to have increased by 4% last year to 15.1 Moz (471 t), still 9% below the peak seen in 2007 but already 23% above the recessionary level witnessed in 2009. Taiwan's industrial production hit a four-year high in 2014 due to the rising popularity of mobile communications devices, which gave a strong boost to the local electronics sector. We estimated that demand for silver from the local electrical and contacts industry rose by 5% to 12.3 Moz (384 t) in 2014. The local photovoltaic industry also recorded a third year of consecutive growth last year, with value terms growing by over 20% year-on-year, even though it was still a far cry from the peak recorded in 2010. The local industry being negatively affected by the United States-China solar trade war, as demand from its largest solar export destination, China, recorded a steep decline during the second half. Silver demand from the petrochemical sector was also noticeably weaker in 2014.

The strong performance from local electronics industry and steadily growing exports in 2014 enhanced the local spending sentiment as well and as a result, Taiwan's GDP recorded an annual growth rate of 3.74% last year, the highest growth rate in the last three years. The Taiwanese authorities have also revised their 2015 economic growth forecast, from the initial 3.5% annual growth rate to 3.75%, demonstrating their confidence in the local economy but particularly strength in the electronics sector could prevail.

INDIA

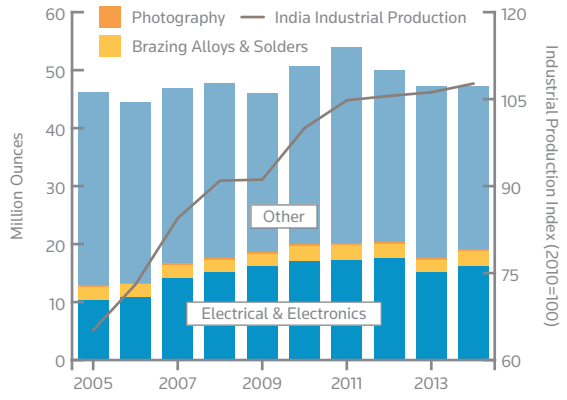
Indian industrial fabrication was broadly flat in 2014 at 47.3 Moz (1,470 t), a growth rate of just 0.1%. This lack of growth was due to sluggish economic activity within the country. Also, competition from China and other Asian countries continued to harm growth in some segments, with a corresponding impact upon silver demand.

In contrast, the electrical and electronics sector rebounded to grow at 7% in 2014 compared to a 14% decline recorded in the previous year. These gains largely emerged from growth in the power transmission, distribution and automation industry. However, the increase was in large part due to an excessive inventory build within the power transmission sector rather than higher end-user consumption. With more than $35 bln in investments planned in the power transmission sector through to 2017 the sector will remain a large consumer and fabricators have been front-running orders. In spite of this it is expected that the market will continue to robust growth in future years however.

Equally significant for Indian demand will be the growth in the low voltage switchgear market along with continued construction activity for both residential and commercial projects. The growth in supporting IT and telecom infrastructure has also been one of the main drivers in the upturn of silver fabrication, but in volume terms this is less significant than the power industry.

The solders and brazing alloys sector, which increased its market share 1% to an average of 6% last year, posted a 26% year-on-year growth in fabrication. This segment, which is highly fragmented and caters to a lot of different industries, is standing at a major turning point, in our view, following the government-led commitments towards increased funding of major infrastructure projects.

INDIAN INDUSTRIAL FABRICATION



Source: GFMS, Thomson Reuters, Oxford Economics

GLOBAL SILVER DEMAND FOR ETHYLENE OXIDE CATALYST

Silver, contained in catalysts at ethylene oxide (EO) production facilities, is used to trigger a reaction between ethylene and oxygen in order to produce ethylene oxide. Ethylene oxide is used to make chemicals that are precursors to antifreeze, polyester fiber, plastic bottles, detergents, paints, and other products.

EO producers have been a source of demand in the silver market since the discovery of this "direct oxidation" process in the 1930s. On average, demand from EO producers has accounted for 1% of annual silver industrial demand since 1990. Although demand on an annual basis is relatively small, the EO industry is an important source of business for silver nitrate and silver oxide producers (silver nitrate is the precursor to silver oxide, the product ultimately used in EO catalysts), refiners and recyclers.

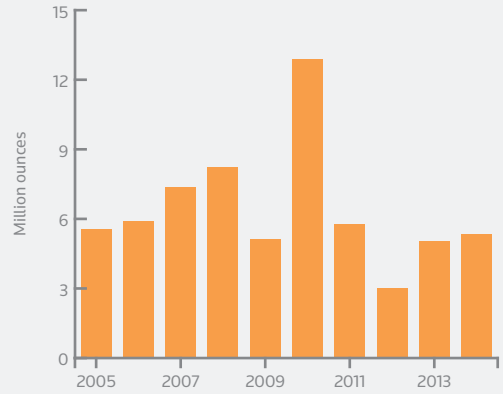
Silver catalysts at EO plants must be recycled every 2.5 years, on average. There is roughly a 2% loss rate on silver EO catalyst recycling, which needs to be replaced. This means that at the end of a catalyst's life cycle, 2% of its original silver content is replaced. To illustrate, the amount of silver sitting in EO plants is 1.7 times higher than a decade ago. Annual replacement demand for the 2% loss from recycling was 1.5 times higher in 2014 than in 2005. The slightly lower multiple is owed to the installation of silver catalysts with longer life cycles in recent years.

GFMS estimates that as of the end of 2014 128.6 Moz (4,001 t) of silver resides in EO plants around the world (refer to the accompanying pie chart for the distribution of this installed capacity). This amount is equivalent to 15% of mine production last year. EO producers adding capacity to new and existing production facilities last year used 4.6 Moz (142.3 t) of silver, up 10.3% from 2013. China was the largest source of silver demand in the EO market, adding 4.4 Moz (137.9 t) to its production capacity. Russia and Canada were the only other two countries to add capacity last year, each using less than 100,000 ounces of silver for their respective catalysts.

Recyclers used 0.8 Moz(23.9 t) of silver to replace metal lost in the recycling process last year. This replacement demand was a 15% decline from the previous year. The decline was a function of the varying life cycles of catalyst at EO plants. Life cycles of a silver catalyst vary from two to 3.5 years depending on the generation of the catalyst and the type.

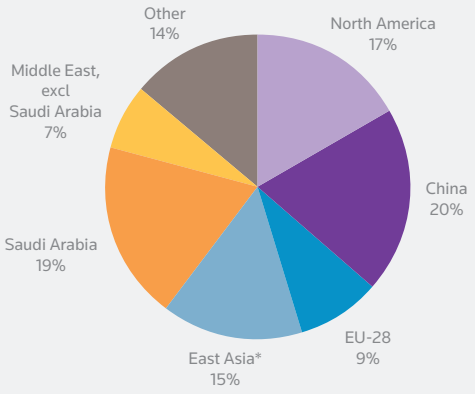
Total silver demand from EO producers was 5.3 Moz (166.1 t) in 2014, a 6% increase over the previous year. The rate of silver accumulation in the EO industry is expected to slow over the next five years. Since 2000, the volume of silver contained in EO plants increased at a compound annual rate of 6%. Going forward through 2019, silver volume in EO plants is projected to increase by half this historical rate, at 3%. Most of this growth is concentrated in China, with additional large volumes coming from India, Iran, Saudi Arabia, and the United States.

GLOBAL SILVER EO DEMAND



Source: GFMS, Thomson Reuters

LOCATION OF SILVER INSTALLED IN EO FACILITIES IN 2014



Source: GFMS, Thomson Reuters

*excl China

NEW USES OF SILVER IN INDUSTRIAL APPLICATIONS

The myriad of well established industrial applications using silver have been outlined elsewhere in this chapter. There are, however, a significant number of emerging uses for silver that, while perhaps still in their development stage or period of early adoption and yet to impact markedly on silver demand, hold the potential to become significant end-users of the metal in future years. It is important to note that, while the silver consumption per unit may be small in each application, their collective use may, over time, amount to substantial volumes.

Silver's main uses, both new and established, are often focused on utilizing its biocidal or conductive properties. Looking firstly at potential biocidal applications, silver use in antimicrobials has been rising exponentially over the past decade; however the volume in use is small as only trace amounts of silver are used in these applications. In the medical industry, silver is used as antimicrobial coating in medical devices such as endotracheal breathing tubes, surgical masks and urinary catheters to minimize infections. Silver is also commonly used as an active ingredient in wound dressings or in topical burn therapy. Silver is also used in water purification where its antimicrobial properties are utilized as a disinfecting agent. In nanoparticle form, silver has found its way into a host of household appliances in the past decade. Samsung, for example, under the trademark name of Silver Nano, has introduced antibacterial technology which uses ionic silver nanoparticles coated on domestic appliances. The aggregate usage of silver as an antimicrobial agent is still an order of magnitude smaller than other established uses, but there is potential for this market to grow through volume and intensity.

The evolution of 'smart' clothing – garments made of fabrics integrated with electronics and computing components – is another new frontier for silver uptake. Thanks to its antimicrobial and conductive properties, silver could be used as a 'smart material' in the manufacturing of these items in the form of nanoparticles embedded into textiles or coatings. Smart fabrics are largely used to monitor vital signs such as heart rate and body temperature where conductive properties of the raw material is integral, alongside other characteristics, such as flexibility, stretchability, printability. Silver's antimicrobial property is also useful in this context as it inhibits microbial growth in clothing and can subsequently prevent odor formation and discoloration in garments, and hence reduce the necessity for frequent washing which can help extend garment life and reduce the environmental impact due to washing activity. There are estimates that the smart materials market could multiply from $24 M to $849 M in 2021. Although silver is one of the many materials that could be chosen in the manufacturing of such garments, this trend is nevertheless promising to silver's uptake in the future.

Silver is also finding uptake in transparent conductors (TCs) in the form of metal mesh and nanowires. TCs are metal or metal compound layers that are optically transparent and electrically conductive. The main applications for TCs include LCD displays, photovoltaic cells and touch screens. While the main material used in the manufacturing of TCs is Indium Tin Oxide (ITO), silver is increasingly displacing ITO, particularly in touch screen applications. Compared to ITO, silver performs better as screen size increases, has higher conductivity and is suitable for applications where flexibility is required. Use of silver in this segment is negligible at present, but since 2013, there have been a growing number of announcements among companies producing silver-based TC inks and materials about partnerships with glass makers, touch screen makers and other users of TCs with plans to source their products for commercially sold touch screen devices.

Image depicts silver metal touch sensors, which are used in cell phones and tablets.
Photo provided courtesy of Kingsbury Corporation

TABLE 7 - SILVER FABRICATION: BRAZING ALLOYS AND SOLDERS (INCLUDING THE USE OF SCRAP)

(million ounces)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
China	18.5	19.4	21.3	25.9	26.6	28.6	30.5	31.4	34.7	37.6
United States	7.7	7.2	7.7	7.2	5.2	5.9	6.0	5.3	5.7	5.8
India	2.4	2.3	2.2	2.2	2.2	2.6	2.7	2.4	2.1	2.6
United Kingdom	2.9	3.1	2.4	2.3	1.8	2.3	2.4	2.2	2.1	2.2
Germany	3.2	3.4	3.6	3.4	2.3	2.8	2.8	2.3	2.2	2.1
Japan	3.8	3.9	4.0	3.7	2.3	3.4	3.0	2.5	2.3	2.0
South Korea	1.9	2.0	2.4	2.6	2.1	2.3	2.4	2.2	2.1	1.9
Russia	1.8	1.9	2.0	2.0	1.7	1.9	1.8	1.8	1.8	1.8
Canada	0.8	1.5	2.4	2.2	1.1	1.7	1.7	1.6	1.6	1.6
Italy	2.2	2.4	2.5	2.4	1.7	1.8	1.7	1.6	1.5	1.5
Switzerland	1.5	1.4	1.4	1.4	1.2	1.3	1.3	1.3	1.2	1.3
Taiwan	1.1	1.2	1.3	1.2	1.0	1.2	1.3	1.2	1.2	1.1
Brazil	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6
Australia	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6
France	0.8	0.8	0.9	0.8	0.5	0.6	0.6	0.5	0.5	0.5
Belgium	0.7	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.5	0.5
Mexico	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4
Czech Republic	0.2	0.2	0.3	0.3	0.2	0.3	0.3	0.3	0.4	0.4
Other Countries	1.4	1.4	1.4	1.5	1.4	1.6	1.6	1.5	1.4	1.4
World Total	**52.6**	**54.7**	**58.3**	**61.6**	**53.6**	**60.9**	**62.7**	**60.6**	**63.1**	**66.1**

The other fabrication segment, which includes plating, pharmaceuticals, chemicals, foils and food, and jari (silver thread), in aggregate recorded a 5% decline in demand last year compared to 2013. Pressures primarily mounted in the plating industry, declining 13% year-on-year. The plating industry has been suffering from competition from China following cheaper imports.

On the chemicals side the published data from the Ministry of Petroleum, Chemicals and Fertilizers, revealed that capacity additions have stagnated over the last two years with respect to acetic acid and formaldehyde plants. Both the manufacturing processes use chemical catalysts loaded with silver gauzes and crystals. However the future looks bright with current capacity utilization averaging only 61%. Another development that is expected to see material increases in silver based chemicals is that of the gradual global phase-out of triclosan; a chemical used as an anti-bacterial in various consumer products such as toothpaste and soaps. Triclosan has been used in cosmetic products for decades but research has found that it increases the risk of cancer. Only a handful of governments have decided to ban products containing triclosan so far but, in our view, many will follow suit in the near future. Silver dehydrogen citrate is going to be a likely substitute and is expected to boost silver consumption from this segment.

Silver nitrate for the pharmaceutical industry is another sector that enjoyed sustained offtake from domestic manufacturers in the last three years, thereby reducing the import dependence. The rise of urbanization and demand for architectural glass has added to the demand for silver nitrate. The largest part of the demand is from the big brand manufacturers, often referred to as the formal sector, which have a global reach and also sell their products outside of India, whereas the less centrally organized small players (informal sector) rely more heavily on domestically manufactured products.

The offtake for silver from the foils and food segment was strong last year, driven by reduced thrifting pressures.

Attracting investments for infrastructure projects and various other related industries along with the Free Trade Agreements that are being put in place within the Asean region will play a key role in determining the future share of industrial fabrication volumes of silver in these price sensitive segments. However, the stronger commitment towards increased spending on improved technology by some firms recently, suggests a greater shift in production to this region, specifically with regard to catalysts for pharmaceutical and oil companies.

TABLE 8 - SILVER FABRICATION: PHOTOGRAPHIC USE (INCLUDING THE USE OF SCRAP)

(million ounces)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
United States	56.4	46.4	34.4	28.1	23.4	20.2	17.9	16.8	16.0	15.3
Belgium	25.7	28.3	26.9	23.5	18.6	16.7	13.4	12.3	11.2	10.7
Japan	38.0	40.2	34.7	29.2	19.6	15.0	13.2	9.7	9.5	9.3
United Kingdom	28.5	18.4	11.8	9.9	8.6	9.0	9.4	8.4	7.4	6.7
China	5.4	5.0	4.6	3.7	3.1	2.6	2.4	2.2	1.9	1.8
Russia	2.6	2.4	2.1	1.8	1.5	1.4	1.2	1.2	1.1	1.1
Brazil	1.4	0.0	1.4	1.3	1.0	1.4	1.2	1.1	0.5	0.3
India	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Czech Republic	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Australia	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Other Countries	1.8	0.8	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0
World Total	**160.3**	**142.2**	**117.0**	**98.2**	**76.4**	**66.8**	**59.1**	**52.1**	**48.0**	**45.6**

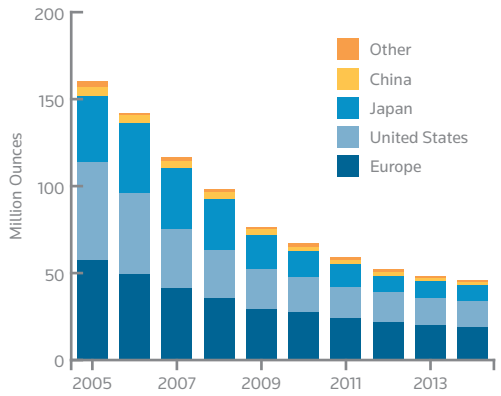
PHOTOGRAPHY

- ***Demand for silver used in photographic papers declined by 5% last year, the slowest rate of decline since 2004.***

In a clear sign that the photographic industry may be reaching a plateau after a decade of considerable declines, demand for silver consumed in photographic applications fell just 5% in 2014 to an estimated 45.6 Moz (1,419 t). The modest fall (the lowest since 2004), followed a drop of 8% in 2013, and perhaps signals that the bulk of structural changes in the photography market have now passed and the current fabrication volumes may be largely sustainable looking forward. In the preceding decade (prior to 2013) demand for silver in this segment declined at an average rate of 12% per annum with the demand last year over 180 Moz (5,560 t) below the peak of 2009. In 2014, photography's share of total silver physical demand stood at just 4%, compared to 17% in 2005, with photography's share in 2000 amounting to 28% of the total.

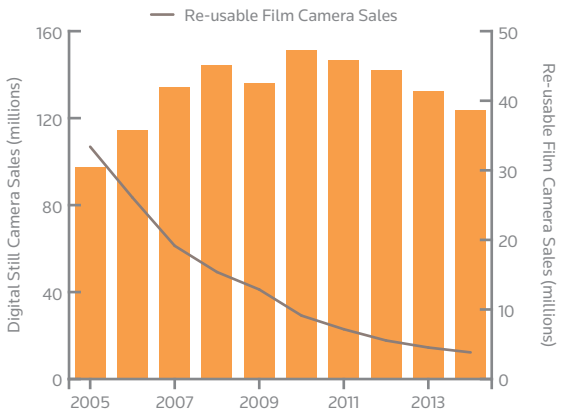
While the dramatic decline was entirely due to the digital revolution in the photographic industry, which has seen silver halide technology displaced by digital processing across a myriad of applications, there have been some industry segments where demand is maintaining or even showing the first green shoots of expansion. One area that has stabilized after the initial surge to digital technology has been in the medical/healthcare field. Indeed, our field research has indicted that silver used in medical, or more specifically X-ray applications, now consumes around 25% of total offtake in this industry. Demand for X-ray has been stable for the last few years, with expansion in the developing world (mainly in South East Asian and Africa) for the more cost effective wet chemical X-ray system offsetting the migration to digital in advanced economies.

WORLD PHOTOGRAPHIC FABRICATION



Source: GFMS, Thomson Reuters

DIGITAL AND FILM CAMERA SALES



Source: Photofinishing News Inc.; GFMS, Thomson Reuters

Another area of expansion that is being driven in part by the photographic film manufacturers, albeit from a very low base, has been that of touch flexible displays. Drawing on the same principles used in the manufacture of monochrome photographic film, this technology applies high sensitivity silver halide, through which an electric current is passing through onto transparent film. This conductive material in the form of a mesh pattern is used increasingly for smart phones, PCs, and tablets.

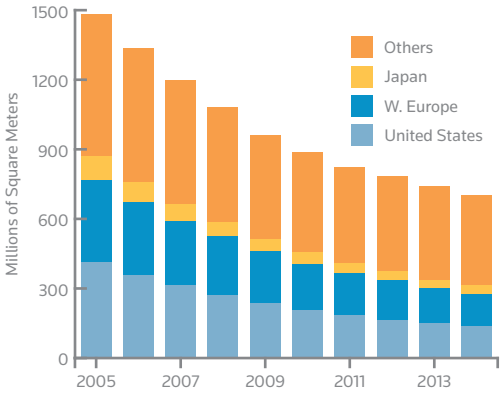
Demand for silver used in photographic applications in Japan fell by only 2% last year to an estimated 9.3 Moz (290 t) in a further sign the industry is on a firmer footing after slipping just 1% in 2013. Moreover, prior to that, demand for silver in this segment had suffered precipitous falls, retreating, on average, by more than 20% per annum in the 2008 -12 period, as both the consumer and commercial markets migrated rapidly from analogue to digital technologies. To place the industry decline into perspective, last year's offtake was 75%, or 28.6 Moz (890 t) below that seen of a decade earlier.

In line with global trends, demand for silver used within the healthcare industry has provided some support to the Japanese industry. Recent field research has shown that offake from developing markets, where costs of implementing digital systems remain prohibitive, continues to expand, as these emerging economies mature. Indeed, our contacts have indicated that they expect further growth in silver halide X-rays in the coming years across East Asia, the Indian Sub Continent, and African countries. While demand for X-ray film may be expanding, the traditional segments of photographic film and paper, which combined consumed 50% of total offtake last year, continue to decline. One individual segment that has bucked the trend in recent years has been the demand for Polaroid film, with this niche market recording exponential growth as it appeals to the youth market. Domestic demand within the graphic arts industry also saw losses last year, though the rate of attrition has dropped significantly. Interestingly, this decline was partially offset by stronger demand from China where demand for analogue systems is still rising.

Turning to China, silver consumed in this industry segment retreated by an estimated 7% last year to 1.8 Moz (56 t); the tenth consecutive decline. Most of the weakness can be apportioned to further erosion of the consumer film and paper market, which continues to feel the impact of digitalization and, most notably, the take up of smart phones that provide users the opportunity to share images without the need for printing. Commercial segments were also weaker last year although China's rapid urbanization is limiting the pace of erosion in both the graphic arts and silver halide X-ray fields, with the latter still widely used in rural regions of the country due to the cost implications of the digital alternatives.

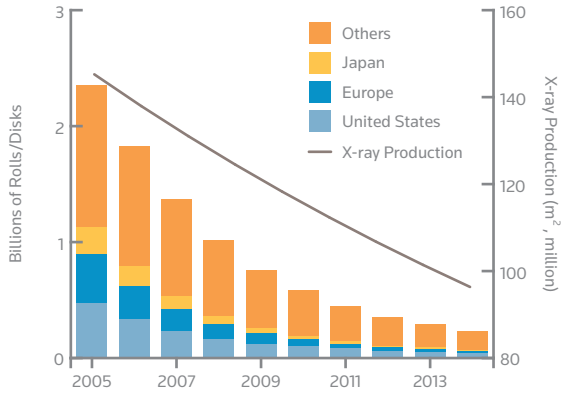
European demand retreated by 6% last year, continuing the decade long run of annual falls. In concert with all other global markets, the digital age has seen the industry heavily reduced over the last fifteen years as operations have been forced to close due to the changing demand trends. Fabrication in this bloc of countries is now largely for the medical sector, where migration to digital radiography has been hampered by economic pressures and budget constraints, and so traditional silver halide

WORLD COLOR PHOTOGRAPHIC PAPER CONSUMPTION



Source: Photofinishing News Inc.

CONSUMER FILM SALES & X-RAY PRODUCTION



Source: Photofinishing News Inc.

film X-rays remain widely used. Meanwhile fabrication of 24 exposure rolls, which are used by amateurs and professionals alike, fell by 21% year-on-year, so that sales were just 2% of the total at the start of the millennium.

Photographic offtake in the United States fell by 4% in 2014 to 15.3 Moz (474 t), the lowest rate of decline since 2005. Demand for both photographic film and color negative paper offtake continued to slide last year, retreating 20% and 8% respectively, with these losses mitigated by a less severe fall in the medical sector.

PHOTOVOLTAICS

- ***Demand for silver from the PV industry rose to 59.9 Moz (1,862 t) in 2014, up 7% from a year ago. This was the first annual increase in two years and was driven by growth in solar panel installations as well as reduced thrifting.***

Demand for silver in the photovoltaic (PV) industry has been driven by a tremendous increase in the uptake of renewable energy over the last decade. The push towards solar energy has been boosted largely by the introduction of government subsidies and feed-in-tariffs aimed at incentivizing the growth and subsequent flourish of the industry. Such developments have lent to the proliferation of solar module production, a development largely in favor of silver consumption. Silver is most commonly used in the front and back contact in solar cells in the form of paste; it is also used in other parts of PV manufacturing such as electrical contacts and inverters. For the purpose of our analysis, our evaluation of silver use in the photovoltaic market primarily focuses on its consumption in metallization paste. Under GFMS methodology, fabrication is defined as the first transformation of silver from its initial refined form, which in the case of photovoltaic cells will be silver powder, as it is the precursor to the production of metallization paste for solar modules. We estimate that silver use in PV industry has grown by a compound annual growth rate of 28% in the past decade.

The rise of silver use in PV industry was not without hindrance, however. Solar cell production grew exponentially in the past decade by with an average growth rate of 47% per annum, with growth peaking at 113% in 2010. The meteoric rise of solar cell production without ensuing growth in demand however, saw a massive build up of excess capacity in the industry, resulting in insolvencies and closures. High profile bankruptcies provoked trade tensions between China, the US and the European Union,

ESTIMATED SILVER POWDER PRODUCTION FOR PV BY COUNTRY

(million ounces)	2011	2012	2013	2014
Japan	22.1	23.6	25.1	27.5
United States	47.0	36.3	29.0	26.9
China	-	0.6	1.7	5.4
World Total	**69.1**	**60.5**	**55.8**	**59.9**

Source: GFMS, Thomson Reuters

leading to anti-dumping tariffs on China-made solar modules. As such, solar cell production growth halted in 2012. Production growth resumed in 2013 onwards, albeit at a more sustainable annual growth rate, compared to the dizzying growth rates between 2005 and 2011, as the market digested the excesses of the previous years.

Overcapacity in the industry, alongside the need to remain competitive against other fuel sources, saw solar cell producers undercutting each other to sustain their profit margins. Production costs were thus subjected to substantial downward pressure to catch up with an ever-falling selling price. Manufacturers sought to reduce costs through two methods, by improving solar cell efficiency and secondly lowering production costs. In the first case, higher efficiency solar cells are favored as they have the potential to reduce total costs per watt of electricity generated. Therefore, thick-film technology, once under threat from the lower cost thin-film technology, is regaining market share thanks to its relatively high efficiency and stability. After reaching a nadir of 82% market share in 2009, we expect thick-film technologies to reclaim its market share of 91%. In fact, thick-film modules are expected to remain the dominant technology and will claim a larger share of the market in the near future. This is a favorable development to silver use as silver paste is used both in the front and rear side of each thick-film cell compared to thin-film cells, where silver is only used in trace amounts.

PV producers are also seeking to lower cost of production by reducing the cost of raw materials. Silver usage is a casualty to such developments as metallization pastes are relatively expensive materials used in cell technologies. Technical advances in screen printing have led to reduction of paste usage, and solar cell manufacturers are looking to reduce the usage of silver on the rear surface. Reductions in silver have thus increased substantially and we estimate that silver loadings per cell have reduced from an average of 0.6g/cell in 2004 to an estimated 0.19g/cell currently, a 68% decline over a decade. The best-in-class solar cells, where thrifting is concerned, may in fact have silver loadings below 0.14g/cell. In an effort to reduce

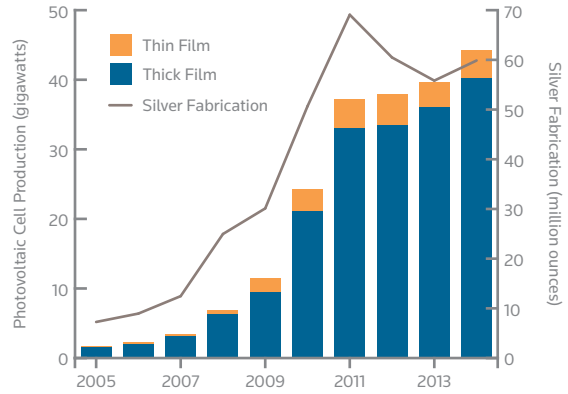
silver use in metallization paste, research is also underway to look into the substitution of silver with copper as an alternative. While this may result in the uptake of copper in thick film cells, the introduction of copper into mass production is not expected to start in the near term as advancement in screen printing technologies, which has brought down paste usage significantly, remains a widespread metallization technology. This may thwart the uptake of copper use in PV cells, which is still struggling with issues related to reliability and adhesion. Furthermore, the price of silver has come down substantially since 2011, reducing the cost per unit of manufacturing. Along with the issue of excess capacity largely behind the market, we believe that the era of rapid price decreases for solar cells and modules is over, easing the pressure for solar cell producers to reduce raw materials cost. Average selling price of solar modules have in fact bottomed out, indicating supply pricing has stabilized. These developments will largely ease silver thrifting, which has characterized silver use in solar modules in previous years.

The PV industry will also continue to benefit from government support. In Japan, authorities want to cut the nation's dependence on nuclear energy and switch towards renewable energy post the Fukushima incident. Generous feed-in-tariffs proposed by the Japanese government would be a huge boost to solar panel production in the future. China, the world's largest solar PV producer, continues to benefit from its government's aim to install 17.8 GW of solar capacity by 2015. These plans have propelled these two countries to the top two spots in terms of annual installations. This has inevitably shifted the manufacturing base of solar panels from traditional markets, for example Germany, to emerging users of solar panel such as China and Japan within the past decade. With China currently the world's largest solar PV producer, the manufacturing of PV systems and its components have been largely concentrated in Far East Asia. The trend has reverberated in the production of silver powder, a precursor to the manufacturing of metallization paste. Silver powder production, a process once largely concentrated in the U.S., has seen it ceding market share to Japan (see Table on page 65).

China has also stepped up its powder manufacturing capability to cater to the demand from domestic metallization paste manufacturers, which has increased by leaps and bounds in the past five years alone. While domestic paste manufacturers in China currently focus on the production of back-end paste, where technical barriers are relatively low, we believe it to be a matter of time before paste manufacturers in China have the capability to manufacture both front and back-end paste for solar cells. As a result, the production of silver powder will increasingly shift to China to minimize logistics costs.

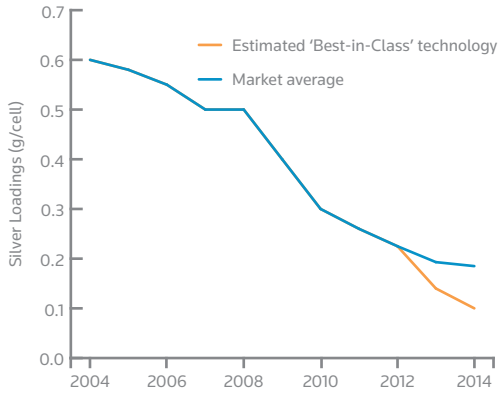
The GFMS team at Thomson Reuters has revised its silver uptake estimate from the PV sector based on new estimates of thick-film vs. thin-film share in the market and a less aggressive thrifting trajectory than originally estimated. We have raised our silver use estimates from the PV industry across 2010 to 2013, and estimate that a total of 60 Moz (1,862 t) of silver was consumed in 2014 - the first year to post a growth after two consecutive years of decline. Thrifting pressure has largely subsided, and we estimate that the reduction in silver loadings has decelerated as silver prices stabilize. In addition, excess capacity is a less pressing issue than it was three years ago too. Looking ahead, we expect silver uptake from the solar industry will track solar cell production growth, with thrifting pressures marginally alleviating the trend.

SILVER PHOTOVOLTAIC FABRICATION



Source: Solarbuzz; Earth Policy Institute; ITRPV; GFMS, Thomson Reuters

SILVER LOADINGS IN PHOTOVOLTAIC CELLS



Source: GFMS, Thomson Reuters; ITRPV

8. JEWELRY & SILVERWARE

JEWELRY

- ***Weaker silver prices, a strong performance from India, and an improving economic environment in western markets helped lift jewelry fabrication to a new record level of 215.2 Moz (6,693 t) in 2014.***

- ***Indian jewelry fabrication surged 47% in 2014, surpassing China to claim top spot on the fabrication table.***

- ***Chinese silver jewelry fabrication retreated to 46.7 Moz (1,452 t) in 2014, a drop of 16.2 Moz (503 t) from record levels in 2013.***

Global jewelry fabrication recorded the second consecutive rise in 2014, increasing 1.5% year-on-year to a new record high of 215.2 Moz (6,693 t). The annual rise follows the 35% growth in 2013 and reflects the weaker silver price and an improving economic environment in the industrialized world that has lifted consumer sentiment and in turn retail sales. A price led surge in supply chain restocking saw Indian fabrication jump 47% last year. While a 10% gain was recorded in the U.S. as lower ticketed prices and an improving economic outlook helped boost demand.

These gains helped offset sizable falls in China and Thailand. The former retreated by 26% last year due in part to a softer local economy, while Thailand dropped 13% as an uncertain political environment and weaker exports to Europe curtailed demand.

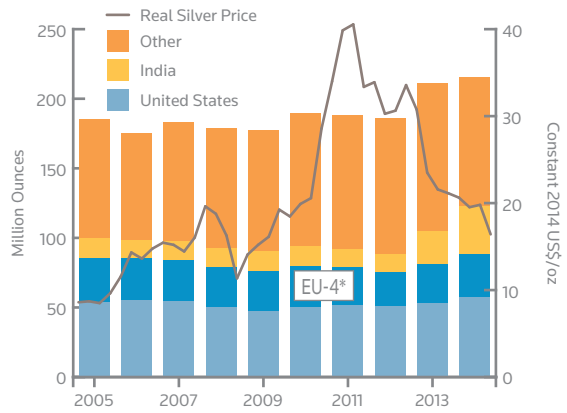
EUROPE

European jewelry fabrication increased by 9% last year, by far the fastest growth rate this century, reaching 34.7 Moz (1,080 t), a four-year high. This stellar performance was driven by lower prices and double-digit growth in the two largest markets, namely Italy and Turkey.

Jewelry fabrication in **Italy** posted a 12% increase in 2014, hitting 17.8 Moz (555 t), the highest level since 2010. The most important factor contributing to last year's growth was a strong rebound in Italian jewelry exports, which we estimate at nearly 20% compared to a more modest increase a year before. As illustrated on the chart on page 69, all the key export destinations registered double-digit percentage increases, with particularly strong gains in the Middle East and East Asia. Exports to the latter, for instance, soared by 40% last year, largely thanks to a notable rise in silver jewelry shipments to Hong Kong, the largest market in the region. While most other markets within the region saw healthy growth, mainland China was the only exception, registering a sharp decline in sales, as softer economy and a lack of confidence in the silver price outlook hampered demand in this market. Meanwhile, higher exports to the United Arab Emirates helped to explain much of the 27% growth in the Middle East.

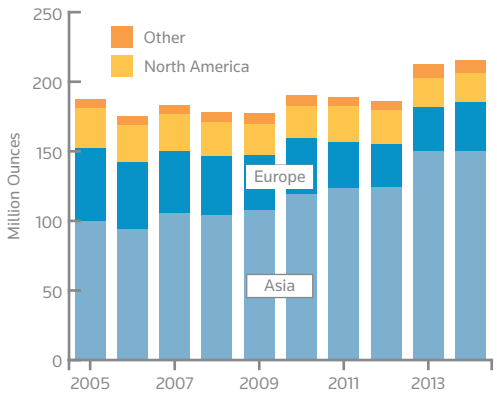
Silver jewelry shipments from Italy to Europe are estimated to have risen by 23%. An improvement in consumer sentiment, along with considerably lower silver prices (the annual average silver price in euro terms was down

WORLD JEWELRY CONSUMPTION



*Germany, Italy, UK, France
Source: GFMS, Thomson Reuters

WORLD JEWELRY FABRICATION



Source: GFMS, Thomson Reuters

20% year-on-year), resulted in positive flows to most of the markets within the region. Interestingly, after three consecutive years of declines, Italian shipments to Russia rose last year. This was largely a reflection of the substitution away from 14-karat gold jewelry towards silver pieces last year in light of difficult economic conditions. Meanwhile, the improving state of the US economy, coupled with the marked decline in the dollar silver price, contributed to 10% growth in shipments to Italy's largest single market.

Some of the above export gains were mitigated by the sustained weakness within Italy, as silver jewelry at the bottom end continued to lose out through substitution to non-precious jewelry, particularly to brass and bronze. In addition, sales were also hit by ongoing losses to branded costume jewelry, which was particularly popular among younger consumers. That said, it is important to emphasize that losses for silver jewelry were less pronounced than for gold, as, at the higher end of the market, silver continued to benefit from substitution gains away from gold jewelry.

Silver jewelry fabrication in **Germany** marginally contracted last year, by 1.5%, driven by continued waning domestic consumption. However, that is not to say that domestic fabricators fared equally badly; in fact, sales abroad turned out to be relatively robust, particularly to other countries in Europe such as the UK, France and Italy. Other markets interesting for German fabricators remain in the Far East, where silver jewelry gets actively marketed and sold by some of the major brands in particular.

Turkish jewelry fabrication was boosted in 2014 as more manufacturers turned to using the material. While silver still makes up a small portion of the domestic market it has increased its market share against gold as the latter's price returned to high levels in Turkish lira terms in 2014, increasing by 3.5% year-on-year. Domestic jewelry purchases were also impacted by a restriction on installment payments on credit cards for purchases of jewelry. Until March 2014 payment for jewelry could be split over 12 installments, however this was cut to zero until a partial lifting to four installments in November. For silver jewelry, with lower sticker prices, this actually provided a boost to purchases as consumers adjusted to buying less expensive pieces.

Production is estimated to have totaled 4.8 Moz (149 t), a 20% increase year-on-year. Turkish fabricators have also been increasingly successful in the export market, increasing the weight of silver-based jewelry exports over the year. With lower value items being exported and a 7.4% price decline in local silver prices the export value remained unchanged.

Silver jewelry fabrication in **Russia** is estimated to have risen by 6% last year, to 2.8 Moz (87 t), the level last visited in 2011. Last year's increase was largely a function of worsening economic conditions in light of rising political tensions, sanctions from the West and declining oil and gas prices, which saw consumers switching from 14-karat gold jewelry towards more affordable silver pieces. Despite the marked weakness in the rouble in the second half of the year, which took the silver price in local terms in December towards levels last posted in 2012, the annual average price was still down 4% year-on-year. This also prompted substitution towards silver jewelry, particularly at the lower-end of the market and among the younger generation.

In **France**, we estimate that silver jewelry fabrication followed the developments in Germany, contracting by 4% year-on-year. However, last year's decline was much less significant than the year before and judging by the various mildly positive signals we get from the domestic market, we would not be surprised to see fabrication bottom out this year. Silver jewelry in France tends to be very popular among the younger generation and the takeup of different styles is quicker than for gold. Therefore, attractive pricing offers tend to be more frequently present in the market which increases the turnover to this generation.

Elsewhere across Europe, the vast majority saw solid if unspectacular gains, with **Poland** and **Cyprus** being notable exceptions with the former suffering from the almost cessation of jewellery exports to Russia and the latter seeing a rapid recovery in demand after a dramatic fall in 2013. A more typical performance for the region came from the **UK** where demand was up for the first time since 2010, as it rose by 7% for 2014 as a whole reaching an estimated 0.3 Moz (10 t). Furthermore, it is noticeable that the performance in the first half of the year was stronger in year-on-year terms than later in the year and the early signs for 2015 are that demand is faltering.

NORTH AMERICA

North American jewelry fabrication increased to 21.2 Moz (661 t) in 2014, up 2% from the previous year. The US, which accounted for 60% of North American silver jewelry fabrication, was the sole contributor to this increase. Mexico and Canada both saw high single to double-digit declines in fabrication. Growth was curbed by lower silver prices, which rendered many North American manufacturers less competitive against foreign competitors with lower cost profiles. That said exports from the US and Canada increased last year, likely due to demand growth for branded jewelry. Growth also was curbed by domestic consumer preferences for yellow colored jewelry over white, a trend that emerged in 2013.

United States manufacturers used 12.8 Moz (398 t) of silver to make jewelry and jewelry parts last year, which was a 10% increase over the previous year. Field research suggests that despite the growing interest among consumers for yellow jewelry, silver volumes were up among the large manufacturers. Indeed, Tiffany's reported a 5% increase in net sales globally. The bulk of their manufacturing, particularly for silver jewelry, takes place at U.S. -based facilities, therefore higher net sales worldwide are to the benefit of domestic manufacturing. Also, given lower precious metals prices, volume growth is likely higher than the 5% net sales growth reported.

Domestically made silver jewelry accounted for 22% of silver jewelry sold to U.S. consumers in 2014. Domestic manufacturers prefer to focus on gold jewelry as it is more profitable than silver. Domestic silver jewelry fabrication has thus maintained its share of retail purchases at around 20% to 25% over the past decade. This share is in contrast to gold jewelry, where domestic fabrication accounted for almost 50% of retail purchases last year.

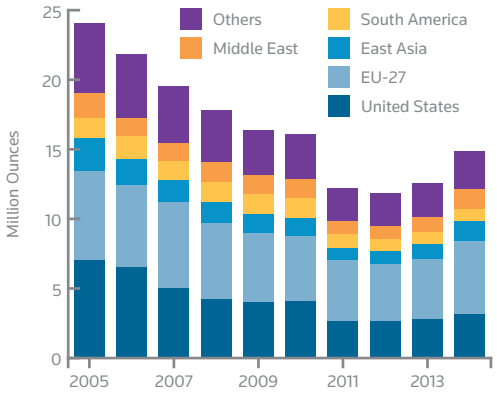
The bulk of silver jewelry purchased at retail stores in the U.S. is made in Thailand, China, and India. These three countries accounted for a little over 80% of U.S. jewelry import volumes last year. Additionally, a good chunk of these imports actually are jewelry parts, which are assembled in the U.S. or in Mexico. U.S. jewelry imports totaled 52.2 Moz (1,623 t) last year, up 7% from the previous year. This was a much slower increase compared to the 23% rate seen in 2013. Imports from Thailand rose 12% to 21.5 Moz (669 t) last year, while Indian imports rose to 8.7 Moz (271 t), up 9% year-on-year. Chinese imports growth slowed to 3%, totaling 10 Moz (311 t) in 2014. Growth in 2013 was 9%. China lost some market share of U.S. imports to Thailand and India last year.

Canadian jewelry fabrication fell to 0.6 Moz (20 t) in 2014, down 12% from a year ago. This was the fourth consecutive decline in fabrication. Canadian manufacturers face stiff competition from foreign sources and only account for around 15% of domestic silver jewelry retail sales. Retail purchases increased last year, largely due to healthy economic conditions. The decline in fabrication is more a function of cost-competitiveness within the global jewelry manufacturing industry.

Mexican silver jewelry fabrication fell 7% to 7.8 Moz (243 t) in 2014. This was the third consecutive decline for the country. Demand came off last year mostly due to weaker consumer sentiment in the country relative to the previous year. However, Mexico still accounted for 37% of North American silver jewelry fabrication last year.

Mexico enjoys a close proximity to silver supply and a pro-silver culture. Most jewelry purchases in the country are dominated by silver not only because of its cultural value, but also because of its low price relative to gold. That said there has been increasing market penetration by lower carat gold jewelry in recent years as prices become more affordable. This material is often imported in to the country and competes with domestically manufactured silver peices. Total silver jewelry exports from the country were broadly flat year-on-year in value terms in 2014.

ITALIAN JEWELRY EXPORTS*



Source: GFMS, Thomson Reuters; *finished pieces only

CAN GROWTH IN THE BRANDED JEWELRY SECTOR BE SUSTAINED?

While jewelry consumption in its core market of the industrialized world looks to have increased by a little over 5% last year (1.5% globally), due in part to weaker silver prices and an improving economic outlook, the modest outcome somewhat masks the expansion and penetration of branded silver designs into the broader retail and fashion industries. This trend has been gathering momentum for several years now, assisted initially by the substitution from gold to silver as consumers traded down in an environment of acutely higher yellow metal prices and a fragile economy which limited discretionary spending.

Turning to the present, and an environment of declining precious metals prices, there has been some migration back to gold at the lower end of the market. However, branded silver, both from recognized jewelry fabricators and indeed fashion clothing brands, continues to gain market share. Moreover, it is often preferred by retailers as it can sustain generally higher markups over the fine metal price, delivering a greater return than the other precious metals alternatives. Branded silver jewelry provides retailers the opportunity to cover a range of price points, from the semi-disposable accessory market to the higher end fashion brands where items can retail at several hundred dollars/ euros per piece. Growth last year was dominated by the plain sector with items such as wrist cuffs, pendants, and large rings still selling well.

Based on industry feedback we would expect this market to continue to expand in coming years. Not just in the established industrialized world as western economies return to healthier growth, but increasingly in the developing world markets where an immense middle class sector is emerging and is slowly adopting a more western approach to fashion. Indeed, these emerging markets are steering away from investment motivated purchases to recognized fashion brands. The silver price has only a modest bearing on this sector - given the healthy markup structure, so economic expansion, and the rate of adoption of branded silver by the younger generations, will certainly be the main driver looking forward.

Clockwise from top: A selection of sterling silver Bangles by.**Charles Garnier**, Stephanie necklace in sterling silver and leather by **Somers**, Hinged Cuff in Sterling Silver by **Thistle & Bee**, Narissa Large Necklace in Sterling Silver by **Alex Woo**

AFRICA

The lower silver price, coupled with an improving political and economic environment, provided the platform for a 9% year-on-year rise in **Egyptian** jewelry fabrication last year, reaching an estimated 0.9 Moz (27 t). The healthy annual rise was the third in succession and a positive sign the market is gaining a firmer footing after being reduced in 2011 during the political upheaval. The tourist market remains under pressure and this limited further gains last year, although there are signs this is also improving.

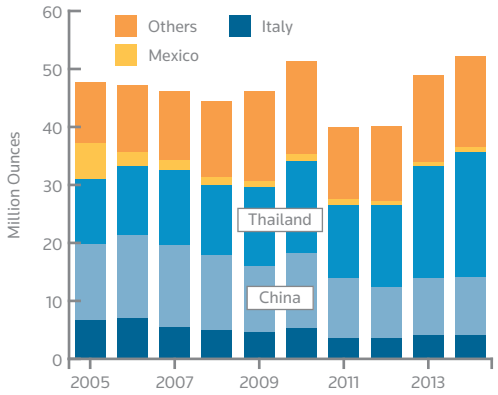
ASIA

China's silver jewelry fabrication registered a steep decline and fell by 26% year-on-year in 2014, the first annual decline recorded in our series. A softer domestic economy, and a lack of confidence in the silver price outlook contributed to the weakness. The GFMS team at Thomson Reuters estimates that Chinese silver jewelry fabrication retreated to 46.7 Moz (1,453 t) last year, a drop of 16.2 Moz (503 t) from the 2013 record levels.

Despite the Chinese economy growing at a reported 7.4% in 2014, the true impact on the ground failed to reflect this robust performance. Moreover, the anticorruption policy also heavily discouraged gifting activities, and it created a series of negative chain reactions throughout the whole economy. Consumers were less inclined to spend as a result, with gold, silver, and platinum jewelry all recording annual declines as sentiment became more cautious.

There was an overcapacity of silver jewelry fabrication in the Chinese market last year, with total capacity much larger than market demand. As a result, the utilization rate fell, to an average of less than 70% throughout the industry. The industry has already seen some contraction due to consolidations within the silver fabrication sector, though the rate of attrition was less severe compared to their gold fabricator peers. Other than the lackluster demand, the fall in production was also attributed to the tightened liquidity in the market last year, evidenced by the eventual 2014 money supply growth, which at 12.2% was lower than the government's initial target of 13%. Some fabricators failed to obtain the capital required to keep the lights on, and were forced to close or to suspend operations.

US OFFICIAL SILVER JEWELRY IMPORTS



Source: GFMS, Thomson Reuters

Turning to China's external trade, jewelry exports jumped over 34% to an estimated 48.8 Moz (1,518 t) last year. The massive increase in exports was a reflection of lackluster demand from the local market, and aided by the improving economies in the Western world. The United States and Hong Kong remained the two key trading partners of China, although both remained fairly stable in 2014. On the other hand, massive growth in demand for Chinese silver jewelry came from European countries including France, Russia and Spain.

Looking at this year, industry participants are not overly optimistic on the outlook of the local silver jewelry market. Although wholesalers are trying to expand their business through deeper penetration in rural areas, the strong performance of the local stock market may drain capital away from any form of silver for investment purpose. There is a good chance that the total silver demand from the Chinese jewelry sector may fall for a second consecutive year in 2015, although we expect the annual decline in percentage terms to be smaller than that of 2014.

Indian jewelry fabrication in 2014 surged 47% to 62.3 Moz (1,936 t) the highest on record and making it the third consecutive year of rise in demand, also surpassing Chinese demand. Lower prices were the key factor which led to high re-stocking by retailers to make up the shortfall during period of higher prices. In other words the replenishment of such high magnitude was a reflection of retailers' expectation that the prices were near the lower end of the range.

Volumes of this magnitude emerged primarily due to the purchase of fresh pieces, a result of lower ticketed prices. In recent years jewelry offtake was often dominated by the exchange of old jewelry for new, especially during 2011 and 2012. As a result, the base level demand had risen by around 40 to 50% according to feedback from retailers. Although known for its affordability, traditionally silver leg chains or anklets are gender and income neutral in the toddlers segment, as it is related not just to certain cultural beliefs but for traditional medical reasons as well. In a similar manner, the women's ring category regularly sees ladies purchase silver to wear on one or two of their toes. Additionally, weddings and other function related purchases across the Hindu community is a common aspect and the volumes in these segment only rise where income levels are low or in regions where silver is the major jewelry for adornment.

All of these constitute the base level demand where the price elasticity response is lower. The segment that generally responds to price variation is the daily wear jewelry segment where more often consumers tend to exchange jewelry for a new piece every year. However, even in this case consumers preferred to purchase a new piece instead of exchange last year, considering the lower return following fall in prices and the deduction of making charges which is normally between 30% and 40%.

On the purity front we have yet to see a great shift in the categories like payals (leg chains with heavy designs), though complexity of design is a reason for purity ranging from 40 to 70%, while in addition hallmarking is less popular with silver jewelry in rural regions. That said, we

have noticed purity for similar products higher than 90% amongst organized retailers. Plain machine made chains in India with .925 purity has seen increased offtake from urban and semi-urban population. The market in this space has widened beyond the working woman population.

Fabrication volumes also got a fillip from an increase in exports as India gained ground in sterling jewelry manufacturing. Also interesting to note was a trend that gained momentum during periods of higher prices in western markets was for silver coated chains and imitation jewelry; despite the fall in prices in this category continued to find demand, albeit at lower volumes.

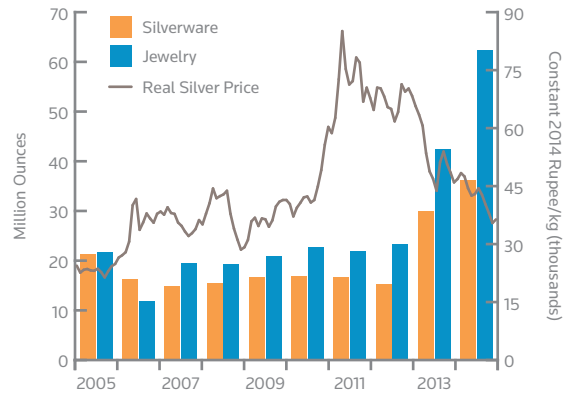
Thailand's silver jewelry fabrication fell by 13% last year to an estimated 18.0 Moz (559 t) in spite of the 20% fall in the dollar silver price. The double-digit decline follows a modest rise in 2013 although it reflects the broader trend that has emerged in recent years, with fabrication slumping 44% from the record high recorded in 2006. At that time, Thailand was the number one ranked nation for silver jewelry production globally, however, in recent years it has been relegated to third on the podium behind China and India, the latter rocketing to the top of the table last year.

There were a number of factors last year that contributed to the market weakness. The political protests that have plagued the country for a number of years finally erupted in early 2014, with the army seizing power in May in an attempt to end the turmoil. The uncertainly, which, combined with GDP growth of just 0.7% - the lowest since floods affected 2011, impacted on consumer spending across the country and led to a devastating impact on tourism. Indeed, a large proportion of Thailand silver jewelry offtake is considered luggage trade. Wholesalers (mainly from the Asean region) travel to Thailand and collect stock to take back to their country of origin. The political unrest last year severely hampered this vital trade. In addition, Thai fabricators are reeling from the impact of rising competition, with several fabricators suggesting they were losing business to China and the Koreans at the higher end of the market.

A trend that has emerged in recent years and continued last year was the growth of branded jewelry produced under contract in Thailand. Often these well known U.S. and European international fashion brands are fabricated in Thailand (and other South East Asian markets), in a bid to save on the lower labor costs. These items, which tend to be larger and often plainer (such as sterling silver pendants or wrist cuffs) than the typical low-end products that tend to be of much lower weight and often stone set. It is this low-end segment of the market that had faced stiff head winds in a competitive environment with heavy losses in recent years offsetting gains within the branded segment.

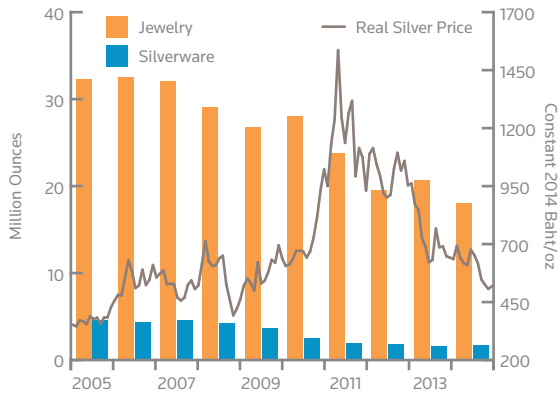
There was no significant change in jewelry styles last year though fabricators indicated to GFMS that average weights at the low-end of the market continued to retreat. Items in the range of 1-3 grams now dominate market share. What was previously in the range of 7-8 grams a few years ago now typically would not exceed 2.5 grams. Highly polished items with cubic zirconia inlay was popular in 2014, while there was a notable shift away from large individual stones and the burnished or antique look, both of which featured heavily in 2013.

INDIAN JEWELRY AND SILVERWARE FABRICATION



Source: GFMS, Thomson Reuters

THAI JEWELRY AND SILVERWARE FABRICATION



Source: GFMS, Thomson Reuters

TABLE 9 - SILVER FABRICATION: JEWELRY (INCLUDING THE USE OF SCRAP)

(million ounces)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Europe										
Italy	31.5	28.2	25.8	22.6	21.3	21.8	16.5	15.1	15.9	17.8
Turkey	5.7	4.8	4.1	4.5	3.9	3.4	3.1	3.4	4.0	4.8
Germany	3.8	3.8	3.9	3.9	3.7	3.8	3.7	3.6	3.4	3.3
Russia	1.5	1.6	2.3	2.5	3.0	3.3	2.7	2.6	2.6	2.8
France	1.5	1.6	1.7	1.6	1.7	1.9	2.2	2.0	1.7	1.6
Spain	1.4	1.3	1.1	1.1	1.2	1.1	1.1	1.0	0.9	0.9
Poland	1.9	1.7	1.9	1.9	1.5	1.3	0.8	0.6	0.6	0.6
Greece	1.1	1.1	1.0	1.2	1.0	0.9	0.7	0.6	0.5	0.5
UK	1.0	1.0	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.3
Sweden	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Portugal	1.0	0.9	0.7	0.6	0.6	0.6	0.4	0.2	0.2	0.3
Denmark	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Switzerland	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Netherlands	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Norway	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Other Countries	0.9	0.8	0.8	0.8	0.6	0.6	0.6	0.6	0.5	0.6
Total Europe	**52.7**	**48.0**	**44.9**	**42.3**	**40.1**	**40.3**	**33.2**	**31.1**	**31.8**	**34.7**
North America										
United States	14.1	13.5	12.9	12.0	10.7	12.0	11.1	10.3	11.6	12.8
Mexico	14.0	12.0	12.2	11.8	10.5	10.4	13.9	13.3	8.5	7.8
Canada	1.2	1.0	0.9	0.8	0.8	0.8	0.8	0.8	0.7	0.6
Total North America	**29.3**	**26.4**	**26.0**	**24.6**	**22.0**	**23.2**	**25.8**	**24.3**	**20.8**	**21.2**
Central & South America										
Brazil	1.4	1.5	1.5	1.5	1.7	1.9	1.5	1.5	3.0	2.6
Peru	0.3	0.4	0.3	0.4	0.5	0.5	0.5	0.5	0.7	0.7
Colombia	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4
Argetina	0.2	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3
Other Countries	1.3	1.4	1.6	1.9	2.4	2.6	1.9	2.0	2.5	2.3
Total C. & S. America	**3.4**	**3.8**	**3.8**	**4.4**	**5.3**	**5.6**	**4.4**	**4.5**	**6.9**	**6.3**
Asia										
India	21.6	11.9	19.4	19.3	20.8	22.7	21.8	23.3	42.3	62.2
China	26.7	30.3	34.3	36.1	40.0	46.4	54.4	56.6	62.9	46.7
Thailand	32.3	32.5	32.0	29.1	26.7	28.0	22.9	18.9	20.0	18.0
Indonesia	3.7	4.4	4.2	4.2	4.2	4.7	5.5	6.2	6.5	6.2
South Korea	3.9	4.0	4.2	4.1	4.2	4.7	5.2	5.4	5.5	5.0
Japan	2.0	1.9	2.1	2.0	2.1	2.2	2.2	2.3	2.4	2.2
Saudi Arabia	0.5	0.6	0.6	0.6	0.6	0.7	0.8	0.8	0.8	0.8
Malaysia	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.8	0.8	0.8
Myanmar & Laos	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.8	0.8	0.8
UAE	0.4	0.4	0.5	0.5	0.5	0.6	0.7	0.7	0.8	0.8
Cambodia	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.8	0.8	0.7
Nepal	1.1	1.0	1.1	1.1	1.2	1.1	1.1	1.2	0.7	0.7
Bangladesh	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.5	0.6
Israel	0.4	0.4	0.5	0.5	0.4	0.4	0.3	0.3	0.4	0.4
Sri Lanka	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4
Pakistan	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3

TABLE 9 - SILVER FABRICATION: JEWELRY (INCLUDING THE USE OF SCRAP)

(million ounces)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Taiwan	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Iran	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3
Hong Kong	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Philipines	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Bahrain	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2
Syria	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1
Vietnam	1.0	1.1	1.2	1.2	1.4	1.5	1.5	1.5	1.6	0.1
Other Countries	0.7	0.9	1.1	1.0	0.9	1.5	2.1	2.4	2.3	3.4
Total Asia	**99.3**	**94.1**	**105.3**	**104.0**	**107.4**	**118.8**	**123.2**	**124.0**	**150.1**	**150.2**
Africa										
Egypt	1.4	1.3	1.4	1.3	1.2	1.1	0.5	0.7	0.8	0.9
Morocco	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.3
Tunisia	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Other Countries	0.4	0.4	0.4	0.5	0.4	0.5	0.5	0.5	0.4	0.0
Total Africa	**2.3**	**2.2**	**2.3**	**2.3**	**2.0**	**2.0**	**1.4**	**1.6**	**1.7**	**1.8**
Oceania										
Total Oceania	**0.7**	**0.7**	**0.7**	**0.7**	**0.7**	**0.7**	**0.8**	**0.8**	**0.8**	**0.8**
World Total	**187.6**	**175.2**	**182.9**	**178.2**	**177.5**	**190.7**	**188.8**	**186.3**	**212.1**	**215.2**

The key Thai export markets were mixed last year. After a weaker first half, the U.S. market (which attracts almost 40% of total exports) recovered strongly in the second half of the year, delivering a modest full year gain. However, deliveries to European markets were down sharply on a gross weight basis, affected by the ongoing economic uncertainly impacting the region. Thailand is in the process of negotiating with the European Union over a Thai-EU Free Trade Agreement which may assist the jewelry export trade in future years. However, in the interim, fabricators face fresh pressures as the EU terminated the Generalized System of Preferences (GSP) for the country in January 2015, providing less incentive for the supply chain to look to Thailand for finished goods as the tax relief privileges were withdrawn.

Jewelry fabrication in **South Korea** fell 10% last year, making it the first annual decline since 2008, to an estimated 5 Moz (156 t). The state of the Korean economy was quite fragile last year, especially after the sinking of the MV Sewol incident in April 2014, which weakened sentiment and discouraged discretionary consumer spending. The domestic jewelry sector continues to contract, even though the pace of that decline has fallen, with the number of participants in the market across the entire supply chain, from fabricators to retailers down a an estimated 20% in the last ten years.

Indonesian silver jewelry fabrication is estimated to have slipped back from the record level seen in 2013, easing 5% in 2014 to 6.2 Moz (192 t). Domestic consumption looks to have declined last year, after several years of healthy growth, with some consumers drawn back to low purity white gold. This is not to say silver jewelry is losing significant market share. Field research last year would suggest that the expansion of standalone silver outlets is continuing though at a much slower rate than seen previously. Growth in this segment has been dominated by a younger demographic who are turning to silver for its low entry point status though in volumes terms this segment of the market is still only modest and is concentrated in larger urban centers. Jewelry exports picked up last year, aided by an increase in deliveries to the U.S., Singapore, and Hong Kong though the hand carry or luggage trade, which services Australia and the surrounding region were reportedly weaker year-on-year.

SILVERWARE

- ***Global silverware fabrication rose for the second year in succession to an estimated 60.7 Moz (1,888 t), assisted in the main by lower silver prices.***

Global silverware fabrication gained by a modest 3% year-on-year to 60.7 Moz (1,887 t). Much of the increase can be attributed to a 20% rise in demand from the Indian Sub-Continent, which contributed 61% of the world volumes against 53% in 2013. This was largely an outcome of re-stocking following the sharp price decline in the second half as the price in rupee terms declined by more than 25% from the February high. Elsewhere, the significant drop in the silver price and an improved economic drop saw gains in several markets last year, while the ongoing anticorruption crackdown accounted for the sizable fall in China.

EUROPE

European silverware fabrication continued its long decline in 2014, but at the lowest rate since 2000, to 10.3 Moz (322 t), representing a 3% year-on-year decline and only 44% of the total a decade earlier. Much of the historic decline was driven by societal changes, such as the drop in formal dining or gifting of silverware at weddings and christenings. While price declines have made pieces more affordable in the past couple of years, the desirability of such items is no longer quite as widespread.

Russia's silverware fabrication declined for the fourth consecutive year, dropping to 4.4 Moz (136 t) in 2014, representing a 5% year-on-year decline. While this was partly due to continuing structural shift away from heavyweight objects and lower gifting demand for religious and family celebrations, difficult economic conditions, rising inflation and a slump in consumer confidence played a significant role in hitting retail sales and driving silverware offtake down to its lowest level since 2007.

The bleak picture for **Italian** fabricators was continued, with a 7% year-on-year decline in production, due to consumers' lower disposable income, a wavering economy and weaker exports to the U.S. While seeing weaker exports, in contrast to most of the rest of the continent, British fabrication was up slightly by 5% year-on-year reflecting lower silver prices in sterling terms and a growing economy. Meanwhile **German** fabrication was down 3% year-on-year ,showing the wider European trend of not only losses in traditional flatware, but also in areas once comparatively resilient such as photoframes. Despite the fall of the silver price in euro terms it seems as if the move towards thinner walled items and from sterling silver to plated or bonded items has become permanent.

In **Turkey** silverware production increased by 14% year-on-year to its highest level since 2010, although this is still less than half of the peak production volume seen in 2003. We understand that silver is increasingly favored in the country and Turkish producers are also increasingly competitive in export markets. Local consumption also benefitted from a 7.4% year-on-year decline in average annual silver prices.

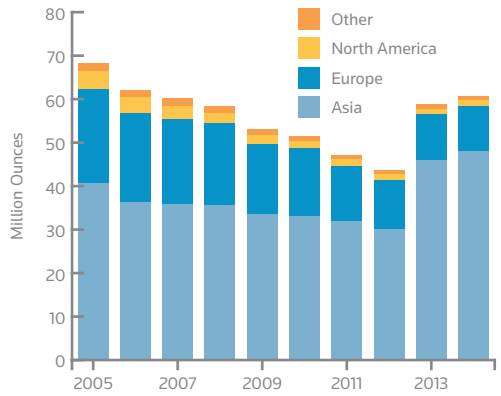
NORTH AMERICA

U.S. silverware fabrication impressively increased 5% to 0.7 Moz (21 t) in 2014. Stronger domestic retail demand for silverware amid lower sticker prices and better economic conditions, which boosted discretionary spending, drove fabrication higher last year. U.S. silverware manufacturers even saw a 5% increase in exports in volume terms last year. Last year's growth was the first increase in silverware fabrication in over 15 years, but likely is not suggestive of a trend reversal.

ASIA

Indian silverware fabrication gained by 20% to 36.1 Moz (1,122 t) last year, thereby rising to the highest level since 2001. This marked the second consecutive year of gains. Price played a key role as its decline by 28% (in rupee

WORLD SILVERWARE FABRICATION



Source: GFMS, Thomson Reuters

TABLE 10 - SILVER FABRICATION: SILVERWARE (INCLUDING THE USE OF SCRAP)

(million ounces)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Europe										
Russia	2.9	3.0	4.3	5.2	5.5	6.0	5.0	4.8	4.6	4.4
Italy	8.0	7.2	6.6	5.5	4.6	4.0	2.8	2.3	2.0	1.9
Turkey	2.6	2.4	2.1	2.2	1.8	1.5	1.3	1.1	1.2	1.4
Germany	3.0	2.9	2.7	2.3	1.6	1.6	1.4	1.1	1.0	0.9
Norway	0.9	0.9	0.6	0.7	0.5	0.5	0.4	0.4	0.4	0.4
Greece	1.5	1.4	1.2	1.0	0.8	0.6	0.5	0.4	0.3	0.3
Sweden	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3
Denmark	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2
UK	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2
France	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.1	0.1	0.1
Finland	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1
Other Countries	1.1	0.9	0.8	0.6	0.3	0.3	0.2	0.2	0.2	0.1
Total Europe	**21.7**	**20.3**	**19.7**	**19.0**	**16.3**	**15.7**	**12.8**	**11.3**	**10.6**	**10.3**
North America										
United States	1.5	1.4	1.4	1.0	0.9	0.8	0.8	0.7	0.7	0.7
Mexico	2.5	2.0	1.4	1.2	0.9	0.7	0.5	0.5	0.6	0.6
Canada	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Total North America	**4.3**	**3.6**	**2.9**	**2.3**	**1.9**	**1.6**	**1.4**	**1.3**	**1.3**	**1.4**
Central & South America										
Colombia	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1
Peru	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1
Other Countries	0.5	0.6	0.6	0.6	0.6	0.5	0.4	0.3	0.3	0.3
Total C. & S. America	**1.2**	**1.3**	**1.3**	**1.2**	**1.0**	**0.9**	**0.8**	**0.8**	**0.7**	**0.6**
Asia										
India	121.2	16.2	14.9	15.5	16.6	16.9	16.6	15.2	30.0	36.1
China	7.2	8.4	9.1	8.7	6.9	7.6	8.3	8.6	10.0	6.1
Thailand	4.5	4.3	4.5	4.3	3.7	2.5	1.9	1.8	1.6	1.7
Iran	1.4	1.4	1.4	1.4	1.2	1.2	1.0	0.9	0.9	0.8
Israel	1.5	1.5	1.4	1.3	1.1	1.0	0.7	0.6	0.7	0.8
Indonesia	0.8	0.7	0.6	0.6	0.7	0.7	0.6	0.5	0.4	0.4
South Korea	0.8	0.7	0.7	0.7	0.6	0.6	0.6	0.5	0.5	0.4
Bangladesh	0.8	0.8	0.7	0.7	0.7	0.6	0.6	0.5	0.4	0.4
Pakistan	0.6	0.6	0.6	0.6	0.5	0.5	0.4	0.4	0.3	0.3
Sri Lanka	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.2	0.2	0.3
Nepal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Countries	1.3	1.2	1.2	1.2	1.1	1.0	0.9	0.8	0.8	0.7
Total Asia	**40.5**	**36.4**	**35.7**	**35.5**	**33.5**	**32.9**	**31.9**	**30.0**	**45.9**	**48.1**
Africa										
Africa	0.6	0.5	0.5	0.5	0.5	0.4	0.3	0.3	0.3	0.3
Total Africa	**0.6**	**0.5**	**0.5**	**0.5**	**0.5**	**0.4**	**0.3**	**0.3**	**0.3**	**0.3**
Oceania										
Australia	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Oceania	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
World Total	**68.3**	**62.1**	**60.2**	**58.4**	**53.2**	**51.6**	**47.2**	**43.7**	**58.8**	**60.7**

terms) in nine months from the February high helped increase retail level consumption. Moreover, as it also coincided with the peak demand season, consumption overshot retailers' expectation, increasing by 35% from 2013 levels.

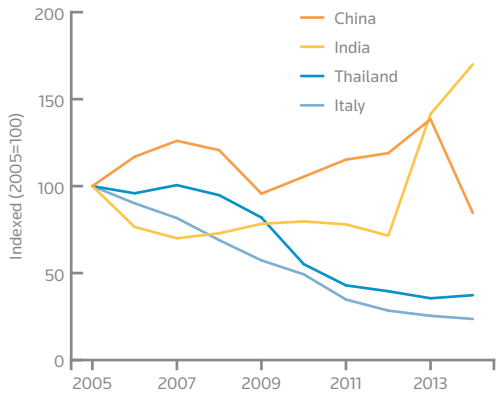
Looking at the various individual segments, it was largely utensils that drove the volumes and more so as part of gifting. Considering the level of cultural affinity and expenditure at each of the functions it is not a surprise to see a surge of this magnitude when prices were more than 60% lower from the 2012 and 2011 averages. Purchases that would normally be expected from households within the higher income segment cascaded down to the middle and lower income groups last year. The purity of metal in the silver articles has also increased over the years, as the top ten largest fabricators and wholesalers indicating that their articles were more than 90% purity. Another category that we have been monitoring closely is the sale of showpieces priced at more than Rs. 200,000; this clocked growth of more than 25%, attributed to the rise in the affluent population. Export demand also played a significant role in improving volumes to an extent that many large fabricators reporting year-on-year-growth in exports of over 15%.

After setting a new record in silverware offtake in 2013, **Chinese** silverware fabrication fell 39% in 2014, to an estimated 6.1 Moz (190 t). It was the first annual decline recorded since 2009, and the lowest level since 2003. The anticorruption policy introduced by the Chinese government initially in mid-2013 heavily discouraged gifting activities, and as a result, the silverware sector was hit severely. Meanwhile, a tightening of liquidity and access to finance also created difficulties for some silverware fabricators, as they did not have the sufficient capital needed to remain in operation. While the strong exports of Chinese silverware last year may have reflected the price led recovery globally, it also demonstrated that local demand was rather weak, with fabricators turning to export markets after struggling to offload their products locally. Indeed, exports surged by more than 135% last year, to an estimated 1.9 Moz (58 t).

Thailand's silverware fabrication benefited from the lower silver price environment in 2014, rising 5% to an estimated 1.7 Moz (52 t). This marks the first rise in output since 2007. While the annual increase last year may signal a reversal of trend the market as a whole remains quite weak after several years of contraction. Indeed, Thai fabrication has fallen more than 60% since 2007 as the market battled higher silver prices and societal and consumer trend changes in key export markets. This has led to many of the smaller family run businesses exiting the industry and forced consolidation among larger companies. One of the key drivers for the rise last year was the rebound in export demand, which according to available trade data rose almost 20% year-on-year, aided by strong demand from the UK, Russia, and U.S. markets. Domestically, demand was relatively flat. The lower prices stimulated offtake although this was offset by a weak tourist market (the backbone of the industry), following the military coup and political uncertainty that prevailed for most of last year.

Silverware production in **Israel** saw modest increases over the course of 2014 as trends continue toward heavier pieces and away from plated material. In particular the thickness of silver used in many pieces increased as manufacturers made the most of lower prices to revert to easier to produce items which are less susceptible to damage. Major exports markets for menorahs, candlesticks and Kiddush cups in Europe and the USA also saw steady increases in demand. Total fabrication is estimated to have increased by 6% year-on-year to 0.8 Moz (23 t), its highest level since 2008. There has been increasing competition from Turkey and Italy, however, in silverware markets as lower prices have brought more participants back to the sterling silver market. In particular Turkey has seen an increase in silver jewelry and silverware product manufacture over the course of 2014, taking advantage of lower labor costs in comparison to Western Europe and Israel.

MAIN GLOBAL SILVERWARE FABRICATORS



Source: GFMS, Thomson Reuters

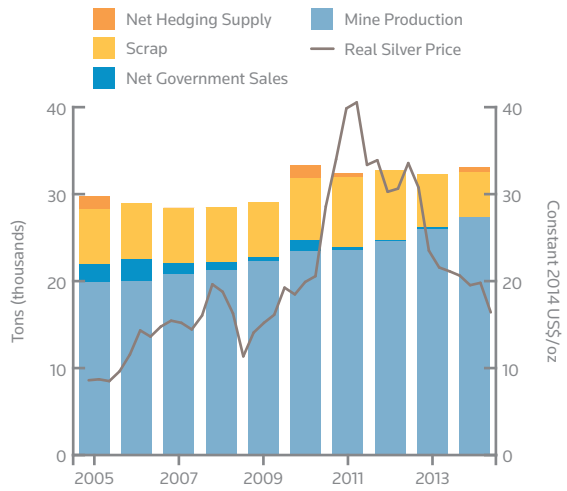
9. APPENDICES

APPENDIX 1

WORLD SILVER SUPPLY AND DEMAND

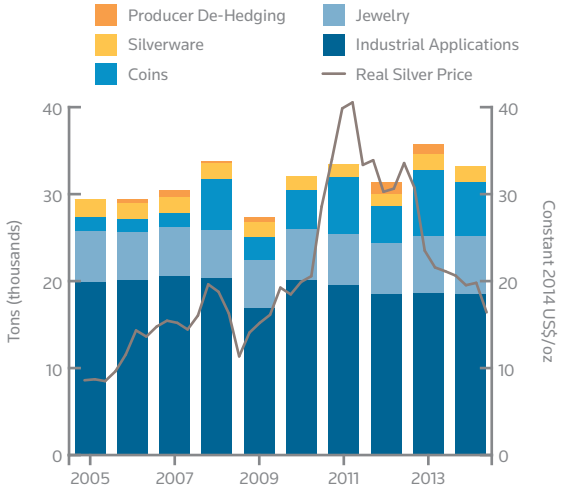
(tons)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Supply										
Mine Production	19,902	20,008	20,735	21,235	22,279	23,364	23,493	24,551	25,981	27,293
Net Government Sales	2,051	2,441	1,322	949	486	1,375	374	229	245	-
Old Silver Scrap	6,326	6,441	6,351	6,283	6,257	7,077	8,133	7,948	5,993	5,242
Net Hedging Supply	1,427	-362	-750	-269	-541	1,569	381	-1,464	-1,102	492
Total Supply	**29,706**	**28,529**	**27,658**	**28,197**	**28,479**	**33,384**	**32,381**	**31,264**	**31,118**	**33,027**
Demand										
Jewelry	5,835	5,448	5,689	5,543	5,521	5,931	5,872	5,795	6,597	6,693
Coins & Bars	1,605	1,515	1,594	5,825	2,722	4,458	6,550	4,293	7,577	6,095
Silverware	2,124	1,933	1,873	1,818	1,654	1,606	1,467	1,359	1,830	1,887
Industrial Fabrication	19,877	20,116	20,505	20,345	16,863	20,064	19,542	18,514	18,596	18,504
...of which Electrical & Electronics	7,143	7,537	8,165	8,451	7,072	9,367	9,044	8,305	8,281	8,209
...of which Brazing Alloys & Solders	1,637	1,701	1,814	1,916	1,666	1,895	1,951	1,884	1,963	2,056
...of which Photography	4,987	4,423	3,638	3,054	2,377	2,078	1,839	1,621	1,493	1,419
...of which Photo-Voltaic	226	278	388	776	937	1,576	2,149	1,881	1,736	1,862
...of which Other Industrial	5,885	6,178	6,500	6,148	4,812	5,148	4,559	4,822	5,122	4,958
Physical Demand	**29,441**	**29,012**	**29,661**	**33,531**	**26,761**	**32,058**	**33,431**	**29,960**	**34,599**	**33,179**
Physical Surplus/ Deficit	**266**	**-483**	**-2,002**	**-5,334**	**1,719**	**1,326**	**-1,050**	**1,303**	**-3,481**	**-152**
ETF Inventory Build	-	3,944	1,704	3,152	4,880	4,027	-747	1,714	48	43
Exchange Inventory Build	494	-279	669	-222	-475	-231	378	1,934	273	-277
Net Balance	**-229**	**-4,148**	**-4,374**	**-8,263**	**-2,687**	**-2,471**	**-682**	**-2,345**	**-3,803**	**82**
Silver Price (London US$/oz)	**7.31**	**11.55**	**13.38**	**14.99**	**14.67**	**20.19**	**35.12**	**31.15**	**23.79**	**19.08**

WORLD SILVER SUPPLY



Source: GFMS, Thomson Reuters

WORLD SILVER DEMAND



Source: GFMS, Thomson Reuters

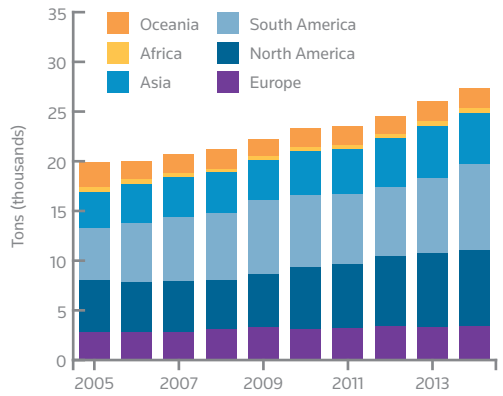
WORLD SILVER MINE PRODUCTION

(tons)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Europe										
Russia	1,011	974	911	1,132	1,313	1,145	1,197	1,384	1,428	1,334
Poland	1,260	1,260	1,232	1,213	1,219	1,169	1,269	1,285	1,169	1,263
Sweden	283	267	292	261	271	286	283	305	336	395
Turkey	162	187	233	314	389	383	289	227	187	205
Portugal	25	19	28	40	22	22	31	34	44	53
Spain	6	3	3	3	3	22	34	37	40	40
Greece	0	25	34	34	28	28	25	31	28	28
Bulgaria	22	19	12	12	16	12	16	19	19	19
Macedonia	6	12	9	9	9	9	9	9	9	9
Romania	28	16	3	0	3	6	12	9	9	3
Ireland	6	6	6	6	3	0	0	3	0	3
Italy	3	3	0	0	0	0	0	0	0	0
Other Countries	0	0	0	0	0	0	0	0	3	3
Total Europe	**2,812**	**2,787**	**2,768**	**3,026**	**3,278**	**3,089**	**3,169**	**3,344**	**3,281**	**3,359**
North America										
Mexico	2,896	2,970	3,135	3,238	3,555	4,410	4,777	5,359	5,823	6,000
United States	1,219	1,141	1,260	1,120	1,250	1,281	1,120	1,061	1,039	1,169
Canada	1,064	970	830	669	610	572	582	663	647	482
Total North America	**5,179**	**5,079**	**5,225**	**5,026**	**5,412**	**6,264**	**6,479**	**7,082**	**7,508**	**7,655**
Central & South America										
Peru	3,194	3,471	3,502	3,686	3,922	3,639	3,418	3,480	3,717	3,779
Chile	1,378	1,602	1,938	1,403	1,300	1,275	1,272	1,151	1,219	1,574
Bolivia	398	473	526	1,114	1,325	1,275	1,213	1,235	1,281	1,344
Argentina	190	215	255	336	560	725	709	762	774	905
Guatemala	9	50	87	100	131	196	274	205	280	858
Dominican Republic	0	0	0	0	19	19	19	28	87	140
Honduras	53	56	53	59	59	59	50	50	50	56
Ecuador	9	12	12	12	12	16	16	16	16	19
Nicaragua	3	3	3	3	3	6	9	9	12	16
Brazil	9	9	12	12	12	12	12	12	16	16
Colombia	6	9	9	9	9	16	25	19	12	12
Panama	0	0	0	0	0	0	0	3	3	0
Other Countries	6	6	6	6	6	6	3	3	3	3
Total C. & S. America	**5,260**	**5,903**	**6,404**	**6,743**	**7,359**	**7,244**	**7,020**	**6,977**	**7,474**	**8,728**
Asia										
China	2,103	2,361	2,467	2,613	2,697	2,942	3,191	3,474	3,596	3,568
Kazakhstan	812	796	709	628	613	547	547	544	610	544
India	103	184	177	212	193	255	233	280	333	261
Indonesia	308	246	267	249	239	208	190	165	255	239
Armenia	37	40	53	44	40	50	75	90	106	115
Islamic Rep. Of Iran	90	100	90	100	106	112	112	109	96	100
Mongolia	37	37	37	34	34	34	34	34	50	65
Uzbekistan	65	65	78	53	53	59	59	59	59	59
Dem. Rep. of Laos	6	6	3	6	16	19	19	19	31	40
Thailand	19	16	12	12	22	22	25	37	37	34
North Korea	25	28	28	28	25	25	28	28	28	28

WORLD SILVER MINE PRODUCTION

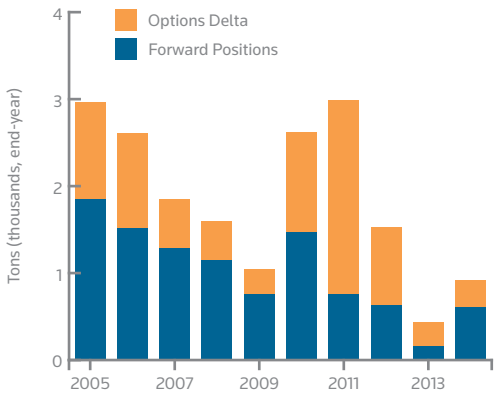
(tons)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Philippines	19	25	28	16	34	44	44	47	47	28
Saudi Arabia	12	9	9	12	12	12	9	9	19	22
Japan	31	34	12	12	12	9	16	19	16	16
Kyrgyzstan	0	6	6	9	9	9	9	6	9	9
Tajikistan	0	0	0	0	0	0	3	3	3	3
Pakistan	3	3	3	3	3	3	3	3	3	3
Other Countries	3	3	3	3	3	9	6	6	3	3
Total Asia	**3,676**	**3,956**	**3,984**	**4,034**	**4,112**	**4,361**	**4,600**	**4,930**	**5,303**	**5,132**
Africa										
Morocco	246	236	215	243	277	308	249	233	255	277
South Africa	87	93	87	84	90	93	93	90	87	87
Eritrea	0	0	0	0	0	0	3	22	25	47
Burkina Faso	0	0	0	0	0	0	0	0	0	12
Zambia	9	9	9	9	12	12	12	12	12	12
Tanzania	12	12	9	9	9	12	12	12	12	12
Botswana	3	3	3	3	3	6	6	6	9	9
Dem. Rep. of the Congo	53	68	72	34	0	6	12	12	62	9
Zimbabwe	3	3	3	3	3	3	3	3	3	3
Ethiopia	0	0	0	0	0	3	3	3	3	3
Ghana	3	3	3	3	3	3	3	3	3	3
Other Countries	34	37	12	9	3	3	3	6	6	3
Total Africa	**454**	**467**	**411**	**398**	**404**	**445**	**401**	**407**	**479**	**479**
Oceania & Other										
Australia	2,407	1,729	1,879	1,925	1,630	1,879	1,726	1,726	1,841	1,848
Papua New Guinea	68	50	44	50	68	65	93	81	90	87
New Zealand	47	34	19	31	16	12	9	6	6	6
Other Countries	0	0	0	0	0	0	0	0	0	0
Total Oceania & Other	**2,522**	**1,816**	**1,941**	**2,009**	**1,711**	**1,960**	**1,826**	**1,813**	**1,938**	**1,941**
World Total	**19,902**	**20,008**	**20,735**	**21,235**	**22,279**	**23,364**	**23,493**	**24,551**	**25,981**	**27,293**

WORLD SILVER MINE PRODUCTION



Source: GFMS, Thomson Reuters

SILVER PRODUCER HEDGING: OUTSTANDING POSITIONS



Source: GFMS, Thomson Reuters

SILVER FABRICATION: COINS AND MEDALS INCLUDING THE USE OF SCRAP

(tons)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
United States	517	548	497	790	1,067	1,296	1,276	1,084	1,374	1,417
Canada	51	89	133	281	336	579	729	561	925	953
Australia	32	43	110	182	201	272	350	201	283	245
India	-	-	-	-	-	-	58	58	169	195
China	57	50	81	88	94	46	128	141	193	185
Austria	18	17	17	259	296	360	571	285	458	149
United Kingdom	14	13	14	16	17	16	31	22	68	66
Mexico	81	58	51	43	52	64	52	23	34	31
Germany	303	272	195	223	232	200	102	35	20	20
Spain	54	46	38	20	18	18	14	12	12	15
Other Countries	129	100	100	100	107	139	110	210	86	70
World Total	**1,255**	**1,235**	**1,236**	**2,001**	**2,420**	**2,991**	**3,422**	**2,632**	**3,621**	**3,346**

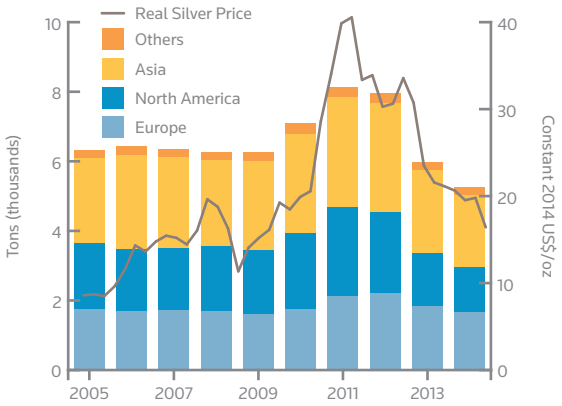
SUPPLY OF SILVER FROM THE RECYCLING OF OLD SCRAP

(tons)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Europe										
Germany	546	470	471	455	391	465	519	672	537	446
Russia	266	262	274	258	261	356	346	340	311	320
Italy	133	170	175	183	181	203	303	309	270	245
UK	360	340	348	340	316	198	350	305	223	173
France	127	139	142	158	170	193	217	182	161	153
Turkey	41	35	30	36	33	32	36	32	32	46
Czech Republic	20	23	27	27	28	37	48	51	45	42
Austria	40	40	38	36	33	35	38	37	36	34
Spain	13	13	12	14	16	23	40	41	35	32
Poland	20	21	23	22	23	28	35	36	31	29
Netherlands	42	40	35	34	32	35	38	39	27	25
Sweden	31	29	28	27	26	26	28	28	22	20
Belgium	20	20	20	19	18	20	21	22	15	15
Switzerland	22	17	16	15	11	13	12	12	12	12
Denmark	16	16	16	15	14	16	17	16	13	12
Portugal	13	13	13	12	12	12	14	14	11	10
Hungary	4	5	6	6	6	8	11	11	10	9
Finland	12	11	11	10	10	10	11	11	9	8
Slovakia	5	5	6	5	6	7	10	11	9	8
Norway	9	9	8	9	9	10	10	10	8	7
Other Countries	30	27	29	28	27	28	29	29	24	22
Total Europe	**1,748**	**1,689**	**1,711**	**1,694**	**1,612**	**1,742**	**2,122**	**2,197**	**1,831**	**1,656**
North America										
United States	1,772	1,656	1,666	1,724	1,692	2,015	2,375	2,143	1,457	1,252
Canada	46	44	50	52	48	51	56	51	34	30
Mexico	64	72	84	95	98	123	140	145	50	20
Total North America	**1,882**	**1,772**	**1,800**	**1,871**	**1,838**	**2,189**	**2,571**	**2,339**	**1,541**	**1,302**
Central and South America										
Brazil	**32**	**32**	**32**	**32**	**34**	**46**	**78**	**79**	**62**	**59**
Uruguay	**6**	**6**	**6**	**6**	**5**	**8**	**13**	**12**	**11**	**11**

SUPPLY OF SILVER FROM THE RECYCLING OF OLD SCRAP

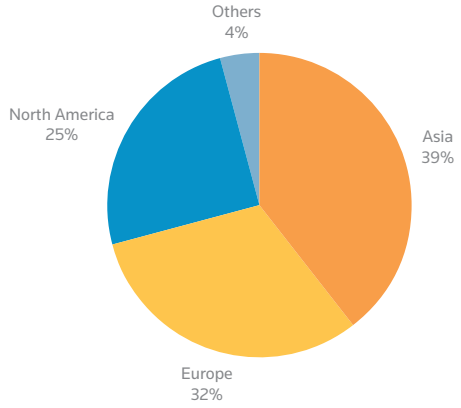
(tons)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Venezuela	7	8	8	8	8	10	11	10	12	11
Other Countries	50	59	52	48	44	58	68	66	49	31
Total C.&S. America	**84**	**90**	**99**	**92**	**87**	**85**	**113**	**160**	**158**	**133**
Asia										
China	544	636	700	705	787	909	992	962	935	830
Japan	852	810	800	736	662	649	714	662	623	609
South Korea	226	240	242	240	262	294	310	281	262	215
Taiwan	84	88	91	97	111	129	140	133	113	97
India	535	705	502	429	465	558	642	771	169	92
Thailand	69	80	85	91	96	115	116	99	87	69
Saudi Arabia	50	56	58	59	60	69	73	68	64	58
Israel	12	12	13	13	13	16	17	16	13	14
Singapore	14	16	16	15	15	17	18	17	16	14
Indonesia	11	12	12	12	12	13	15	14	13	11
Hong Kong	13	14	14	14	14	15	16	15	13	11
Vietnam	11	11	12	12	11	12	12	11	10	9
Kazakhstan	7	7	7	7	7	9	9	9	8	8
Uzbekistan	5	6	6	6	6	6	7	7	6	5
Other Countries	33	37	37	37	40	49	55	53	42	27
Total Asia	**2,466**	**2,729**	**2,594**	**2,474**	**2,561**	**2,861**	**3,137**	**3,120**	**2,374**	**2,069**
Africa										
Morocco	19	29	28	29	31	32	35	35	31	29
Egypt	43	46	48	51	55	62	27	23	21	20
Other Countries	17	18	18	18	18	20	22	22	19	18
Total Africa	**80**	**93**	**94**	**99**	**105**	**114**	**84**	**80**	**71**	**66**
Oceania										
Australia	55	53	52	51	49	49	49	45	41	37
Total Oceania	55	53	52	51	49	49	49	45	41	37
World Total	**6,326**	**6,441**	**6,351**	**6,283**	**6,257**	**7,077**	**8,133**	**7,948**	**5,993**	**5,242**

WORLD SILVER SCRAP SUPPLY



Source: GFMS, Thomson Reuters

WORLD SCRAP SUPPLY, 2014



Source: GFMS, Thomson Reuters

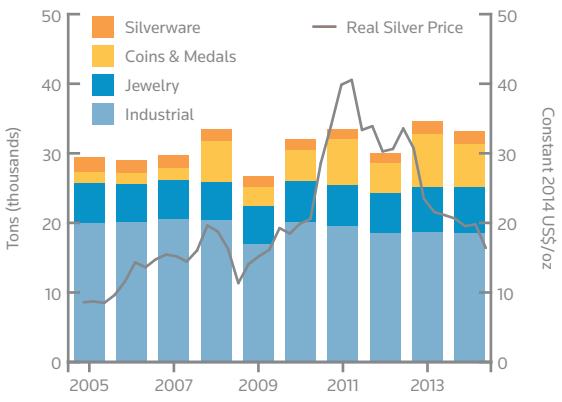
WORLD SILVER FABRICATION INCLUDING THE USE OF SCRAP

(tons)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Europe										
Italy	1,577	1,449	1,366	1,233	1,095	1,117	894	815	828	882
Germany	1,260	1,275	1,249	1,271	1,028	1,193	1,052	856	818	803
Russia	795	826	902	930	854	944	864	845	832	793
UK	1,330	1,013	780	725	588	634	694	631	641	629
Belgium	846	920	877	767	614	556	453	419	374	358
France	381	387	401	401	299	346	325	298	277	273
Turkey	309	276	247	262	221	201	181	184	209	241
Spain	175	175	175	175	175	175	175	175	175	175
Czech Republic	58	74	84	91	71	84	89	94	99	102
Switzerland	98	94	94	94	86	92	92	89	88	87
Netherlands	81	69	70	66	58	63	61	61	62	56
Poland	101	92	97	99	82	77	58	48	48	42
Austria	40	40	40	40	40	40	40	40	40	40
Norway	56	52	40	40	30	33	34	34	32	30
Sweden	38	37	35	34	29	39	28	28	27	27
Greece	82	77	70	68	56	46	36	28	24	25
Denmark	21	21	21	20	18	19	18	18	16	17
Portugal	48	39	31	25	25	25	17	12	11	12
Romania	12	12	8	8	6	7	7	7	7	7
Hungary	14	8	8	10	8	8	8	8	4	5
Finland	1	1	1	1	1	1	1	1	1	1
Other Countries	37	14	(4)	216	239	302	497	196	359	55
Total Europe	**7,360**	**6,952**	**6,593**	**6,576**	**5,623**	**5,999**	**5,624**	**4,887**	**4,971**	**4,658**
North America										
United States	5,891	5,778	5,575	5,843	5,297	4,147	3,705	4,155	3,293	4,022
Canada	126	178	250	386	404	667	816	644	1,011	1,032
Mexico	693	587	576	545	504	556	689	657	517	501
Other Countries	-	-	-	-	-	-	-	-	-	-
Total North America	**6,710**	**6,543**	**6,401**	**6,773**	**6,206**	**5,370**	**5,210**	**5,456**	**4,821**	**5,556**
Central & South America										
Brazil	232	145	223	215	199	241	219	216	236	218
Argentina	80	60	56	43	34	39	39	38	40	37
Colombia	21	21	21	19	17	18	17	17	24	35
Peru	19	22	21	23	25	26	22	22	30	27
Other Countries	62	67	68	85	103	103	80	82	97	91
Total C.&S.America	**414**	**316**	**389**	**385**	**379**	**426**	**376**	**375**	**426**	**407**
Asia										
China	4,307	4,711	5,402	6,013	5,843	6,792	7,534	7,711	8,448	7,808
India	3,116	2,538	2,885	5,775	1,793	2,823	4,477	3,119	5,756	6,676
Japan	3,860	4,097	3,912	3,272	2,145	3,050	2,806	2,404	2,440	2,329
South Korea	794	842	903	955	763	929	941	927	895	820
Thailand	1,150	1,178	1,159	1,051	967	957	808	673	702	622
Taiwan	380	438	534	533	397	486	510	463	471	488
Indonesia	159	178	170	168	166	199	225	245	254	243
Hong Kong	204	219	233	224	182	210	211	300	192	162
Isreal	86	88	87	82	69	67	55	50	57	62
Saudi Arabia	98	64	64	29	190	192	98	55	60	55
Vietnam	32	35	37	39	40	45	49	50	49	52

WORLD SILVER FABRICATION INCLUDING THE USE OF SCRAP

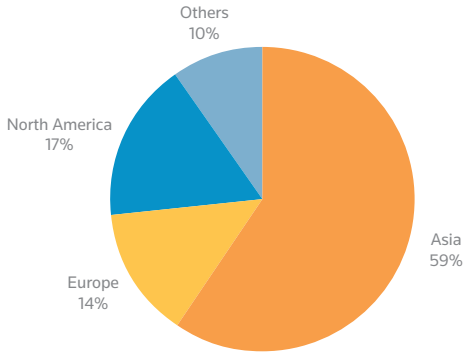
(tons)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
UAE	18	18	19	19	21	36	45	47	49	45
Iran	50	80	78	102	45	51	43	40	39	38
Singapore	3	3	3	3	6	14	18	23	29	35
Malaysia	22	22	21	21	21	22	24	26	27	27
Other Countries	356	358	366	430	377	350	338	334	301	300
Total Asia	**14,635**	**14,868**	**15,874**	**18,717**	**13,027**	**16,223**	**18,181**	**16,466**	**19,771**	**19,759**
Africa										
Egypt	55	52	53	49	44	43	19	27	29	32
Morocco	19	19	20	19	17	18	18	18	18	19
Tunisia	11	10	11	11	10	11	10	10	11	11
South Africa	8	8	8	8	8	8	8	8	8	8
Algeria	6	6	6	6	6	6	5	5	6	6
Other Countries	13	13	14	15	13	13	13	13	13	14
Total Africa	**113**	**108**	**112**	**109**	**98**	**99**	**74**	**81**	**85**	**89**
Oceania										
Australia	210	225	292	362	368	450	535	387	471	430
Other Countries	1	1	1	1	1	1	1	2	2	2
Total Oceania	211	226	294	363	369	452	536	388	472	432
World Total	**29,441**	**29,012**	**29,661**	**33,531**	**26,761**	**32,058**	**33,431**	**29,960**	**34,599**	**33,179**

WORLD SILVER FABRICATION



Source: GFMS, Thomson Reuters

WORLD SILVER FABRICATION, 2014*



Source: GFMS, Thomson Reuters

SILVER FABRICATION: INDUSTRIAL APPLICATIONS INCLUDING THE USE OF SCRAP

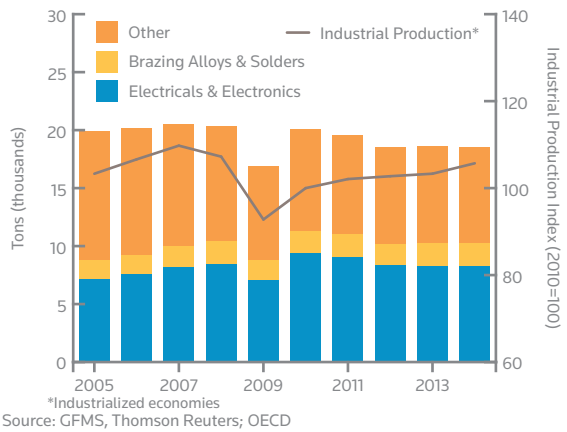
(tons)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Europe										
Germany	744	794	851	856	630	824	791	674	664	652
Russia	645	674	689	681	582	630	602	593	599	565
UK	1,273	960	740	686	550	596	643	591	557	546
Belgium	828	908	864	757	604	546	444	410	369	353
Italy	338	340	352	350	281	307	287	267	261	260
France	317	322	334	336	232	274	248	223	218	211
Czech Republic	51	67	76	83	64	76	82	88	93	97
Switzerland	81	77	77	76	69	75	74	71	70	72
Turkey	47	48	50	51	42	44	46	45	46	48
Netherlands	49	49	49	49	40	47	46	45	44	45
Spain	60	58	59	58	53	55	45	38	35	36
Poland	22	23	24	25	21	23	22	22	22	23
Austria	17	17	17	17	15	16	16	16	16	15
Norway	22	17	16	15	11	13	12	12	12	12
Sweden	10	10	11	11	8	10	9	9	9	9
Romania	11	11	7	7	5	6	6	6	6	6
Hungary	8	3	3	3	3	3	3	3	3	3
Portugal	3	3	3	3	3	3	3	3	3	3
Slovakia	3	3	3	3	2	3	3	3	3	3
Other Countries	11	11	12	12	10	11	11	10	10	10
Total Europe	**4,540**	**4,395**	**4,235**	**4,076**	**3,225**	**3,561**	**3,391**	**3,128**	**3,039**	**2,967**
North America										
United States	4,887	4,765	4,636	4,649	3,868	4,702	4,293	4,126	3,963	3,902
Mexico	101	95	102	97	97	148	187	206	202	208
Canada	31	53	83	75	40	60	59	56	59	56
Total North America	5,019	4,913	4,821	4,821	4,006	4,910	4,539	4,388	4,224	4,167
Central & South America										
Brazil	182	91	169	161	142	177	168	165	141	133
Argentina	68	48	42	31	24	28	28	27	27	25
Colombia	5	5	5	5	4	5	4	4	9	19
Other Countries	14	14	14	14	13	14	13	13	13	13
Total C.&S. America	**269**	**158**	**230**	**211**	**183**	**223**	**214**	**210**	**189**	**190**
Asia										
China	3,195	3,455	3,972	4,525	4,251	4,876	5,104	5,145	5,590	5,788
Japan	3,795	4,034	3,844	3,201	2,068	2,961	2,737	2,330	2,362	2,257
India	1,433	1,384	1,462	1,485	1,431	1,576	1,676	1,553	1,468	1,470
South Korea	647	694	750	806	612	762	761	742	705	652
Taiwan	367	423	518	518	382	470	492	445	453	471
Hong Kong	193	208	222	213	171	199	199	193	180	152
Indonesia	19	19	20	19	17	24	26	27	26	28
Singapore	-	-	-	-	3	9	13	16	21	26
Israel	25	26	26	25	21	23	22	21	22	23
Saudi Arabia	77	43	43	7	164	159	62	14	15	16
Thailand	-	28	19	10	16	5	5	5	5	5

GFMS, Thomson Reuters / The Silver Institute

SILVER FABRICATION: INDUSTRIAL APPLICATIONS INCLUDING THE USE OF SCRAP

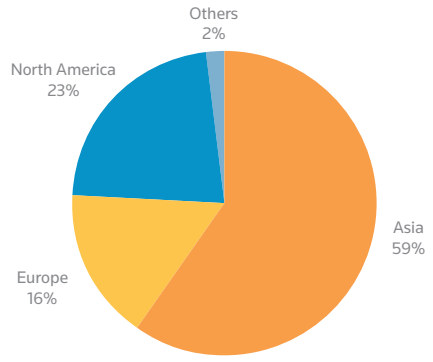
(tons)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Kuwait	2	2	2	65	39	3	4	4	4	4
Other Countries	117	154	157	182	108	125	116	114	115	113
Total Asia	**9,872**	**10,469**	**11,036**	**11,056**	**9,285**	**11,193**	**11,218**	**10,610**	**10,967**	**11,005**
Africa										
Morocco	8	9	9	8	7	8	8	8	8	8
South Africa	4	4	4	4	4	4	4	4	4	4
Other Countries	9	10	10	11	9	11	9	9	9	9
Total Africa	22	22	23	23	20	23	21	21	21	22
Oceania										
Australia	155	159	160	158	144	154	158	157	155	154
Total Oceania	155	159	160	158	144	154	158	157	155	154
World Total	**19,877**	**20,116**	**20,505**	**20,345**	**16,863**	**20,064**	**19,542**	**18,514**	**18,596**	**18,504**

COMPONENTS OF INDUSTRIAL DEMAND



*Industrialized economies
Source: GFMS, Thomson Reuters; OECD

WORLD SILVER INDUSTRIAL FABRICATION, 2014



Source: GFMS, Thomson Reuters

SILVER FABRICATION: ELECTRICAL AND ELECTRONICS INCLUDING THE USE OF SCRAP

(tons)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
China	1,277	1,391	1,667	1,893	1,722	2,058	2,148	2,161	2,343	2,419
United States	1,622	1,710	1,796	1,935	1,660	2,320	2,085	1,745	1,651	1,676
Japan	1,360	1,432	1,394	1,204	877	1,588	1,438	1,194	1,190	1,044
Germany	569	613	665	674	488	664	631	534	529	521
India	318	335	440	468	502	531	534	547	470	501
South Korea	400	430	456	495	390	500	499	491	464	430
Taiwan	293	320	363	384	309	377	395	353	367	384
Russia	339	359	375	375	321	353	339	334	338	315
Mexico	64	61	65	64	69	118	157	177	174	179
France	248	254	264	269	178	215	189	166	164	159
UK	141	138	139	145	107	120	125	122	121	125
Italy	108	112	121	127	107	121	103	86	78	75
Hong Kong	94	101	108	104	83	97	97	94	87	72
Czech Republic	22	30	35	39	30	36	39	42	45	46
Brazil	66	27	48	46	37	50	49	48	45	43
Turkey	31	32	33	34	28	29	31	29	29	30
Australia	22	23	23	22	20	21	22	21	21	20
Singapore	-	-	-	-	-	6	9	10	15	19
Netherlands	17	17	17	17	13	16	15	15	14	15
Other Countries	153	153	157	157	131	147	140	136	137	136
World Total	**7,143**	**7,537**	**8,165**	**8,451**	**7,072**	**9,367**	**9,044**	**8,305**	**8,281**	**8,209**

SILVER FABRICATION: BRAZING ALLOYS AND SOLDERS INCLUDING THE USE OF SCRAP

(tons)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
China	574	604	664	805	826	890	949	975	1,079	1,169
United States	240	224	240	225	162	182	187	166	178	182
India	75	70	68	67	68	80	83	75	65	82
UK	90	95	76	72	57	72	76	67	66	68
Germany	98	105	112	107	71	87	86	70	68	66
Japan	119	122	123	114	70	105	94	77	71	63
South Korea	59	64	74	81	64	72	73	68	64	59
Russia	56	60	62	62	54	59	56	56	56	55
Canada	24	46	76	68	34	53	53	49	49	48
Italy	67	74	78	75	52	57	54	50	48	47
Switzerland	48	44	44	42	38	41	41	39	39	40
Taiwan	36	39	39	39	31	38	39	38	36	35
Brazil	25	26	26	25	27	30	31	30	29	28
Australia	16	17	17	17	15	16	18	18	17	17
France	25	26	27	26	17	20	19	17	16	16
Belgium	20	20	20	19	18	20	21	22	15	15
Mexico	16	15	16	14	12	13	12	12	12	12
Czech Republic	5	7	9	10	7	9	10	10	11	12
Other Countries	43	44	44	48	42	51	48	45	44	44
World Total	**1,637**	**1,701**	**1,814**	**1,916**	**1,666**	**1,895**	**1,951**	**1,884**	**1,963**	**2,056**

SILVER FABRICATION: PHOTOGRAPHIC USE INCLUDING THE USE OF SCRAP

(tons)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
United States	1,753	1,442	1,071	875	728	630	556	521	498	476
Belgium	800	880	836	730	580	520	416	382	347	331
Japan	1,180	1,251	1,080	908	610	465	410	303	295	290
United Kingdom	888	572	368	308	268	280	292	260	229	207
China	167	157	143	115	95	81	74	69	60	56
Russia	80	76	64	56	47	42	38	37	36	34
Brazil	43	-	45	40	32	45	37	35	14	10
India	10	10	10	10	10	10	10	10	10	10
Czech Republic	6	6	5	4	4	3	3	3	2	2
Australia	4	4	4	3	3	3	2	2	2	2
Other Countries	54	25	12	4	0	0	0	0	0	0
World Total	**4,987**	**4,423**	**3,638**	**3,054**	**2,377**	**2,078**	**1,839**	**1,621**	**1,493**	**1,419**

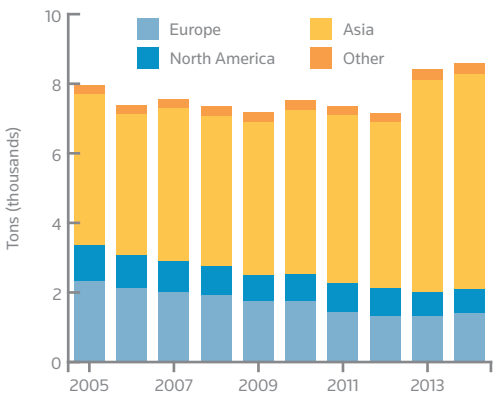
SILVER FABRICATION: JEWELRY AND SILVERWARE INCLUDING THE USE OF SCRAP

(tons)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Europe										
Italy	1,230	1,101	1,006	875	806	802	599	540	559	614
Russia	138	144	205	241	263	291	240	228	225	223
Turkey	258	224	194	207	175	153	134	139	162	192
Germany	213	210	203	193	166	169	159	147	134	131
France	55	57	59	57	59	64	73	67	56	54
Spain	61	52	44	41	41	37	37	32	29	30
Greece	82	77	70	68	56	46	36	28	24	25
Poland	62	55	62	62	49	41	24	19	20	19
Sweden	27	26	24	22	20	20	19	19	18	18
Norway	32	34	25	26	19	20	18	18	16	17
UK	43	41	26	23	21	21	20	18	16	17
Denmark	18	18	18	17	15	16	16	15	14	15
Portugal	35	31	24	21	22	21	14	9	8	9
Netherlands	8	8	8	8	8	8	7	7	7	7
Switzerland	7	7	7	7	7	7	7	7	7	7
Belgium	5	5	5	5	4	4	4	4	4	4
Czech Republic	5	5	5	5	4	5	4	3	4	4
Finland	9	10	7	7	5	5	5	5	4	3
Austria	5	4	4	4	3	3	3	3	3	3
Cyprus	9	6	6	5	3	3	3	2	1	2
Croatia	2	2	2	2	2	2	2	2	2	2
Serbia	2	2	2	2	2	2	2	2	2	2
Other Countries	6	5	5	5	5	4	3	3	3	3
Total Europe	**2,311**	**2,123**	**2,008**	**1,904**	**1,754**	**1,744**	**1,429**	**1,317**	**1,318**	**1,401**
North America										
United States	487	465	442	404	362	400	370	342	381	419
Mexico	511	434	423	404	355	344	450	428	281	261
Canada	44	36	34	30	28	28	27	26	26	23
Other Countries	-	-	-	-	-	-	-	-	-	-
Total North America	**1,042**	**935**	**899**	**838**	**745**	**772**	**847**	**797**	**688**	**703**
Central & South America										
Brazil	50	54	54	54	57	64	50	50	94	82
Peru	16	19	18	19	22	23	19	19	27	24
Colombia	16	16	16	14	13	14	13	13	15	16
Argentina	12	12	14	12	10	11	11	11	13	12
Chile	10	10	10	10	10	10	9	9	11	9
Bolivia	7	9	7	14	16	14	9	9	10	9
Ecuador	8	10	10	10	7	7	7	7	9	9
Total C.&S. America	**144**	**157**	**157**	**173**	**195**	**202**	**161**	**163**	**236**	**215**
Asia										
India	1,333	874	1,065	1,082	1,164	1,233	1,194	1,196	2,248	3,058
China	1,054	1,206	1,348	1,392	1,457	1,681	1,952	2,029	2,266	1,642
Thailand	1,145	1,146	1,136	1,037	946	947	798	662	692	611
Indonesia	140	158	151	149	150	168	190	207	215	206
South Korea	147	149	153	149	150	167	179	183	186	167
Japan	64	61	65	62	65	70	69	72	75	70
Vietnam	32	35	37	39	40	45	49	50	49	52
Israel	59	61	59	55	46	42	32	29	34	37

SILVER FABRICATION: JEWELRY AND SILVERWARE INCLUDING THE USE OF SCRAP

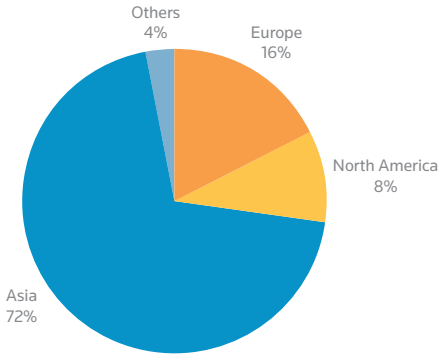
(tons)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Iran	50	49	49	48	44	43	40	37	37	34
Bangladesh	46	45	45	46	45	43	41	40	28	30
Saudi Arabia	20	21	22	22	23	24	26	28	28	27
Malaysia	21	20	20	20	20	21	23	24	25	25
UAE	17	17	18	18	19	21	23	25	26	24
Nepal	34	34	34	36	37	36	36	37	23	22
Sri Lanka	28	28	28	29	28	26	23	22	19	21
Pakistan	32	32	32	32	31	28	24	23	20	20
Philippines	8	8	8	8	8	8	8	9	9	9
Bahrain	4	4	4	4	4	4	4	4	4	4
Taiwan	8	8	8	7	8	8	7	5	4	3
Croatia	2	2	2	2	2	2	2	2	2	2
Hong Kong	3	3	2	2	1	1	1	1	1	1
Other Countries	99	97	100	98	94	101	104	105	105	102
Total Asia	**4,347**	**4,058**	**4,387**	**4,339**	**4,382**	**4,720**	**4,825**	**4,792**	**6,095**	**6,167**
Africa										
Egypt	52	48	50	46	42	39	17	24	27	29
Morocco	11	11	11	11	9	10	10	10	10	10
Tunisia	10	9	10	10	10	10	9	9	10	10
Other Countries	18	17	18	18	17	17	16	17	17	18
Total Africa	**91**	**86**	**89**	**86**	**78**	**75**	**53**	**60**	**64**	**67**
Oceania										
Australia	22	21	21	20	20	22	23	24	25	25
Total Oceania	**23**	**22**	**22**	**22**	**22**	**23**	**25**	**26**	**26**	**27**
World Total	**7,959**	**7,381**	**7,562**	**7,361**	**7,175**	**7,537**	**7,339**	**7,154**	**8,427**	**8,580**

WORLD JEWELRY & SILVERWARE FABRICATION



Source: GFMS, Thomson Reuters

WORLD JEWELRY & SILVERWARE FABRICATION, 2014



Source: GFMS, Thomson Reuters

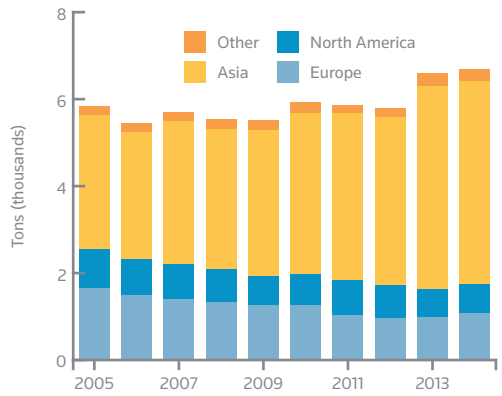
SILVER FABRICATION: JEWELRY INCLUDING THE USE OF SCRAP

(tons)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Europe										
Italy	980	876	802	703	663	679	512	469	495	555
Turkey	176	150	127	139	120	105	95	105	124	149
Germany	118	119	120	122	115	119	115	113	104	103
Russia	48	51	70	79	92	104	84	80	82	87
France	48	50	52	49	54	59	68	63	53	51
Spain	44	40	35	35	38	34	35	30	27	29
Poland	60	53	60	61	48	41	23	18	19	19
Greece	34	33	32	36	32	28	22	18	16	17
UK	32	30	16	14	12	13	12	11	9	10
Sweden	12	12	11	10	9	10	9	10	10	10
Portugal	31	27	21	17	18	18	12	8	7	8
Denmark	8	8	8	8	7	7	7	7	7	7
Switzerland	7	7	7	7	7	7	7	7	7	7
Netherlands	7	7	7	7	7	7	6	7	6	6
Norway	5	5	5	4	5	5	5	5	5	5
Other Countries	28	25	24	25	20	20	18	17	16	17
Total Europe	**1,638**	**1,492**	**1,397**	**1,315**	**1,246**	**1,254**	**1,032**	**966**	**988**	**1,080**
North America										
United States	440	420	400	372	334	374	346	321	361	397
Mexico	434	372	380	368	327	323	433	412	263	244
Canada	36	30	28	26	24	25	24	23	23	20
Other Countries	-	-	-	-	-	-	-	-	-	-
Total North America	**910**	**822**	**808**	**766**	**685**	**722**	**803**	**757**	**647**	**661**
Central & South America										
Brazil	45	48	48	48	52	60	47	47	92	81
Peru	8	11	10	13	16	17	14	15	23	20
Colombia	6	6	6	6	7	7	7	7	10	12
Argentina	7	8	9	8	7	8	8	8	11	10
Other Countries	39	44	44	61	83	82	61	63	80	75
Total C.&S. America	**105**	**117**	**117**	**136**	**165**	**174**	**137**	**140**	**215**	**197**
Asia										
India	673	369	603	601	647	707	679	724	1,315	1,936
China	829	943	1,065	1,121	1,243	1,444	1,693	1,762	1,955	1,452
Thailand	1,005	1,012	995	904	832	870	738	607	642	559
Indonesia	117	137	131	129	129	146	172	192	201	192
South Korea	122	122	122	122	122	122	122	122	122	122
Japan	63	60	64	61	64	69	68	71	74	70
Saudi Arabia	17	18	18	18	20	21	23	25	26	25
Malaysia	19	19	18	19	19	20	21	23	24	24
Myanmar, Laos & Cambodia	20	19	19	19	19	22	23	24	24	24
UAE	13	14	15	15	15	16	18	20	22	24
Cambodia	20	19	19	19	19	22	23	24	24	23
Nepal	33	33	33	35	36	35	35	37	22	21
Bangladesh	22	22	22	23	24	23	23	24	16	17
Israel	14	13	14	14	12	13	10	10	11	13
Sri Lanka	15	15	15	16	17	16	14	14	12	13
Pakistan	12	12	13	13	14	13	11	11	10	10

SILVER FABRICATION: JEWELRY INCLUDING THE USE OF SCRAP

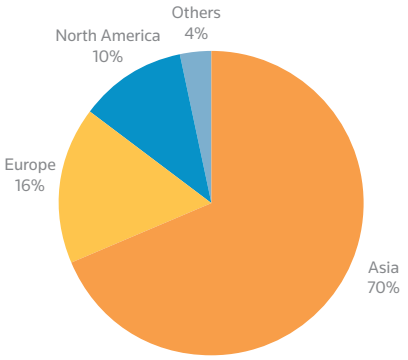
(tons)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Taiwan	9	9	9	8	8	9	10	10	10	9
Iran	6	6	6	6	6	7	8	8	9	9
Hong Kong	7	8	8	8	8	9	10	11	10	8
Philipines	6	6	6	6	6	6	7	7	7	7
Bahrain	4	4	4	4	4	5	5	5	6	5
Syria	6	6	6	6	6	7	6	5	4	3
Vietnam	32	34	36	37	42	47	48	47	50	-
Other Countries	23	29	33	31	28	47	65	73	73	106
Total Asia	**3,087**	**2,928**	**3,275**	**3,236**	**3,341**	**3,696**	**3,833**	**3,857**	**4,668**	**4,673**
Africa										
Egypt	43	41	43	40	36	34	15	22	24	27
Morocco	8	8	9	8	7	8	8	8	8	8
Tunisia	7	6	7	7	7	7	7	7	7	7
Other Countries	14	13	14	15	14	14	13	14	14	15
Total Africa	**73**	**69**	**72**	**70**	**64**	**62**	**43**	**50**	**54**	**57**
Oceania										
Total Oceania	**22**	**21**	**21**	**20**	**21**	**22**	**24**	**25**	**26**	**26**
World Total	**5,835**	**5,448**	**5,689**	**5,543**	**5,521**	**5,931**	**5,872**	**5,795**	**6,597**	**6,693**

WORLD JEWELRY FABRICATION



Source: GFMS, Thomson Reuters

WORLD JEWELRY FABRICATION, 2014

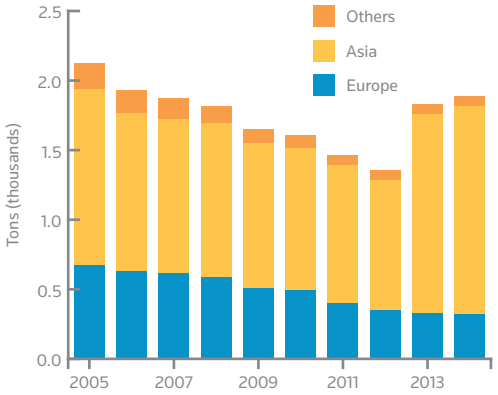


Source: GFMS, Thomson Reuters

SILVER FABRICATION: SILVERWARE INCLUDING THE USE OF SCRAP (TONS)

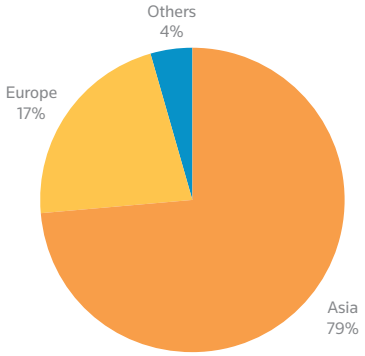
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Europe										
Russia	91	93	134	162	171	187	156	148	144	136
Italy	250	225	204	172	143	123	87	71	64	59
Turkey	82	74	67	68	55	48	39	34	38	43
Germany	95	91	83	71	51	51	44	34	30	29
Norway	27	29	20	21	14	15	14	14	12	12
Greece	48	44	38	32	24	18	14	10	8	8
Sweden	15	14	12	12	10	10	9	9	8	8
Denmark	10	10	10	10	9	9	9	8	7	7
UK	11	11	10	10	9	8	8	7	6	7
France	7	7	8	8	6	5	5	4	3	3
Finland	6	7	5	5	3	3	3	3	3	2
Other Countries	32	25	22	19	13	13	10	8	8	7
Total Europe	**674**	**631**	**612**	**589**	**508**	**490**	**397**	**350**	**330**	**322**
North America										
United States	47	45	42	32	28	26	24	21	20	21
Mexico	77	62	43	36	28	21	17	16	18	18
Canada	8	6	6	4	4	3	3	3	3	3
Total North America	**132**	**113**	**91**	**72**	**60**	**51**	**45**	**40**	**41**	**42**
Central & South America										
Colombia	10	10	10	8	7	7	6	6	5	5
Peru	8	8	8	6	6	6	4	4	4	3
Other Countries	21	22	23	22	17	15	13	13	11	10
Total C.&S. America	**39**	**40**	**41**	**36**	**30**	**27**	**24**	**23**	**21**	**18**
Asia										
India	660	505	462	481	517	526	515	472	933	1,122
China	224	262	283	271	215	237	259	267	311	190
Thailand	140	134	141	133	115	77	60	55	50	52
Iran	44	43	43	42	37	36	32	29	28	26
Israel	45	48	45	41	34	30	22	19	23	24
Indonesia	23	21	20	20	21	22	18	15	14	14
South Korea	25	23	23	22	20	19	17	15	14	12
Bangladesh	24	24	23	23	21	20	17	16	13	12
Pakistan	20	20	20	19	17	15	13	11	10	10
Sri Lanka	13	13	13	13	11	10	9	8	7	8
Nepal	1	1	1	1	1	1	1	1	1	1
Other Countries	39	37	38	37	33	32	28	26	25	23
Total East Asia	**1,260**	**1,131**	**1,112**	**1,103**	**1,041**	**1,024**	**992**	**934**	**1,427**	**1,495**
Africa										
Africa	18	17	17	16	14	13	9	10	10	10
Total Africa	**18**	**17**	**17**	**16**	**14**	**13**	**9**	**10**	**10**	**10**
Oceania										
Australia	1	1	1	1	1	1	1	1	1	1
Total Oceania	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
World Total	**2,124**	**1,933**	**1,873**	**1,818**	**1,654**	**1,606**	**1,467**	**1,359**	**1,830**	**1,887**

WORLD SILVERWARE FABRICATION



Source: GFMS, Thomson Reuters

WORLD SILVERWARE FABRICATION, 2014



Source: GFMS, Thomson Reuters

TOP 20 SILVER PRODUCING COUNTRIES

Rank 2014	Rank 2013	Country	Output (tons) 2013	Output (tons) 2014
1	1	Mexico	5,821	6,000
2	2	Peru	3,717	3,778
3	3	China	3,595	3,569
4	4	Australia	1,840	1,847
5	7	Chile	1,218	1,345
6	6	Bolivia	1,281	1,345
7	5	Russia	1,428	1,335
8	8	Poland	1,170	1,264
9	9	United States	1,040	1,170
10	10	Argentina	774	906
11	15	Guatemala	281	858
12	12	Kazakhstan	611	543
13	11	Canada	646	483
14	13	Sweden	337	396
15	17	Morocco	254	276
16	14	India	333	261
17	16	Indonesia	255	240
18	18	Turkey	188	205
19	23	Dominican Republic	87	141
20	19	Armenia	105	114
		Rest of World	**1,000**	**986**
		World Total	**25,981**	**27,293**

Source: GFMS, Thomson Reuters

TOP 20 SILVER PRODUCING COMPANIES

Ranking 2013	Ranking 2014		Output (tons) 2013	Output (tons) 2014
4	1	KGHM Polska Miedź S.A. [1]	1,161	1,256
2	2	Fresnillo plc. [2 3]	1,212	1,255
5	3	Goldcorp Inc.	943	1,145
1	4	Glencore plc. [4]	1,214	1,086
3	5	BHP Billiton plc. [5]	1,189	1,056
6	6	Polymetal International plc.	846	893
7	7	Pan American Silver Corp. [3]	807	812
8	8	Volcan Cia. Minera S.A.A. [4]	644	700
n/a	9	Tahoe Resources Inc. [3 6]	62	631
18	10	Corp. Nacional del Cobre de Chile [6]	296	618
9	11	Cia. De Minas Buenaventura S.A.A. [4]	588	613
10	12	Coeur Mining, Inc. [3]	529	535
11	13	Hochschild Mining plc. [7]	518	503
12	14	Sumitomo Corp. [6]	429	476
14	15	Industrias Peñoles S.A.B. De C.V. [8]	411	438
13	16	Southern Copper Corp. [9]	420	404
16	17	Teck Resources Ltd. [6]	354	396
17	18	First Majestic Silver Corp. [3]	331	365
20	19	Hecla Mining Company	277	345
21	20	Boliden A.B. [5]	262	323

1 Reported metallic silver production; 2 Including 100% of Penmont mines, excluding silverstream;
3 Primary silver producer; 4 Includes minority partners; 5 Metal in concentrate; 6 Estimate;
7 Includes 100% from Pallancata, includes Moris; 8 Excludes 100% of Fresnillo plc.; 9 Mined silver;

Source: GFMS, Thomson Reuters

APPENDIX 2

NOMINAL SILVER PRICES IN VARIOUS CURRENCIES

Prices are calculated from the London price and the average exchange rate for the year.
In the case of India, the price shown is the one actually quoted in the Mumbai market.

	London US$/oz	India Rupee/kg	Thai Baht/oz	Japan Yen/10g	Korea Won/10g	China Yuan/kg	Eurozone* Euro/kg	Mexico Peso/oz
1980	20.984	2,783	429.67	1,530	4,098	1,011	628	0.48
1981	10.487	2,650	228.83	744	2,296	575	390	0.26
1982	7.922	2,675	182.21	634	1,862	482	316	0.45
1983	11.415	3,435	262.89	873	2,851	726	479	1.37
1984	8.145	3,514	192.53	622	2,111	608	382	1.37
1985	6.132	3,880	166.54	470	1,715	579	296	1.58
1986	5.465	4,105	143.71	296	1,549	607	195	3.34
1987	7.016	5,124	180.46	326	1,855	840	208	9.67
1988	6.532	6,231	165.23	269	1,536	782	189	14.85
1989	5.500	6,803	141.36	244	1,187	666	170	13.54
1990	4.832	6,779	123.62	225	1,099	743	129	13.59
1991	4.057	6,993	103.51	176	956	694	111	12.24
1992	3.946	7,580	100.24	161	991	700	101	12.21
1993	4.313	6,163	109.20	154	1,113	799	117	13.44
1994	5.285	6,846	132.92	174	1,365	1,465	141	17.84
1995	5.197	6,864	129.49	157	1,289	1,395	122	33.36
1996	5.199	7,291	131.77	182	1,345	1,390	128	39.51
1997	4.897	7,009	153.60	191	1,498	1,305	139	38.78
1998	5.540	8,016	229.30	233	2,498	1,476	160	50.65
1999	5.218	8,022	197.38	191	1,994	1,389	158	49.90
2000	4.953	8,002	198.61	172	1,800	1,318	172	46.82
2001	4.370	7,420	194.15	171	1,814	1,163	157	40.82
2002	4.599	7,934	197.57	185	1,850	1,224	156	44.41
2003	4.879	8,138	202.39	182	1,869	1,298	139	52.64
2004	6.658	10,606	267.79	232	2,452	1,772	172	75.14
2005	7.312	11,083	294.07	259	2,407	1,926	189	79.68
2006	11.549	17,843	437.51	432	3,545	2,958	296	125.88
2007	13.384	18,794	461.98	507	3,999	3,273	314	146.26
2008	14.989	21,620	499.34	498	5,311	3,349	328	166.82
2009	14.674	23,815	503.12	441	6,024	3,223	339	198.30
2010	20.193	32,007	640.59	570	7,507	4,393	489	255.16
2011	35.119	55,638	1,069.25	900	12,508	7,296	811	436.30
2012	31.150	57,086	967.03	799	11,187	6,309	777	405.47
2013	23.793	48,618	730.53	743	8,366	4,708	576	303.52
2014	19.078	41,805	585.76	646	6,448	3,778	461	253.93

* From 1977-1998, the DM/kg price is expressed in Euro/kg at the official conversion rate of 1.95583

APPENDIX 3

REAL SILVER PRICES IN VARIOUS CURRENCIES (CPI DEFLATED - CONSTANT 2014 MONEY TERMS)

Prices are calculated from the London price and the average exchange rate for the year.
In the case of India, the price shown is the one actually quoted in the Mumbai market.

	London US$/oz	India* Rupee/kg	Thai Baht/oz	Japan Yen/10g	Korea Won/10g	China Yuan/kg	Eurozone** Euro/kg	Mexico Peso/oz
1980	60.286	38,681	1,475.99	2,037	18,419	5,762	1,164	717.75
1981	27.312	32,642	697.77	944	8,505	3,193	679	298.85
1982	19.434	30,530	528.11	784	6,433	2,625	524	326.67
1983	27.132	35,202	735.18	1,059	9,524	3,877	769	498.66
1984	18.558	33,113	533.06	738	6,892	3,157	598	299.81
1985	13.491	34,696	449.89	547	5,467	2,689	454	219.02
1986	11.803	33,701	381.74	342	4,804	2,634	299	249.44
1987	14.607	38,679	468.19	376	5,586	3,399	318	311.26
1988	13.077	43,096	412.34	308	4,316	2,666	286	223.22
1989	10.503	45,482	334.75	273	3,156	1,919	250	169.57
1990	8.754	41,562	276.84	245	2,692	2,078	184	134.40
1991	7.051	37,762	219.03	185	2,142	1,875	168	98.72
1992	6.658	36,572	203.59	166	2,087	1,777	146	85.25
1993	7.068	27,912	214.74	158	2,239	1,771	162	85.46
1994	8.441	28,187	249.06	176	2,584	2,613	190	106.06
1995	8.074	25,630	229.12	160	2,335	2,130	162	146.94
1996	7.848	24,967	220.54	185	2,322	1,958	167	129.51
1997	7.223	22,416	243.18	190	2,476	1,789	179	105.36
1998	8.045	22,645	336.25	231	3,841	2,040	204	118.72
1999	7.416	21,618	288.68	190	3,042	1,948	199	100.32
2000	6.809	20,728	285.97	172	2,686	1,843	215	85.96
2001	5.843	18,538	274.92	172	2,599	1,614	191	70.47
2002	6.053	19,008	278.00	190	2,580	1,712	188	72.98
2003	6.278	18,762	279.48	186	2,519	1,795	165	82.74
2004	8.345	23,599	359.97	236	3,189	2,359	202	112.83
2005	8.863	23,648	377.95	265	3,047	2,518	218	115.06
2006	13.563	35,839	537.47	441	4,389	3,812	336	175.40
2007	15.281	35,513	555.27	517	4,828	4,027	348	196.03
2008	16.481	37,707	568.84	501	6,127	3,891	355	212.69
2009	16.193	37,443	578.48	450	6,763	3,772	366	240.10
2010	21.923	44,938	712.97	586	8,186	4,976	522	296.62
2011	36.961	71,732	1,146.51	928	13,115	7,840	847	490.48
2012	32.119	67,352	1,006.83	824	11,478	6,604	796	437.82
2013	24.179	51,712	743.90	763	8,473	4,802	582	315.72
2014	19.078	41,805	585.76	646	6,448	3,778	461	253.93

* From 1977-1998, the DM/kg price is expressed in Euro/kg at the official conversion rate of 1.95583

APPENDIX 4

SILVER PRICES IN US$ PER OUNCE

	London Silver Market Fix*			COMEX Settlement Price		
	High	Low	Average	High	Low	Average
1989	6.2100	5.0450	5.4999	6.1940	5.0300	5.4942
1990	5.3560	3.9500	4.8316	5.3320	3.9370	4.8187
1991	4.5710	3.5475	4.0566	4.5450	3.5080	4.0355
1992	4.3350	3.6475	3.9464	4.3180	3.6400	3.9353
1993	5.4200	3.5600	4.3130	5.4430	3.5230	4.3049
1994	5.7475	4.6400	5.2851	5.7810	4.5730	5.2808
1995	6.0375	4.4160	5.1971	6.1020	4.3750	5.1850
1996	5.8275	4.7100	5.1995	5.8190	4.6760	5.1785
1997	6.2675	4.2235	4.8972	6.3350	4.1550	4.8775
1998	7.8100	4.6900	5.5398	7.2600	4.6180	5.4953
1999	5.7500	4.8800	5.2184	5.7600	4.8720	5.2142
2000	5.4475	4.5700	4.9525	5.5470	4.5630	4.9653
2001	4.8200	4.0650	4.3702	4.8050	4.0260	4.3597
2002	5.0975	4.2350	4.5990	5.1130	4.2160	4.5955
2003	5.9650	4.3700	4.8787	5.9830	4.3460	4.8916
2004	8.2900	5.4950	6.6578	8.2110	5.5140	6.6927
2005	9.2250	6.3900	7.3115	9.0000	6.4270	7.3220
2006	14.9400	8.8300	11.5492	14.8460	8.8090	11.5501
2007	15.8200	11.6700	13.3835	15.4990	11.4650	13.3762
2008	20.9200	8.8800	14.9891	20.6850	8.7900	14.9471
2009	19.1800	10.5100	14.6743	19.2950	10.4200	14.6961
2010	30.7000	15.1400	20.1929	30.9100	14.8230	20.2382
2011	48.7000	26.1600	35.1192	48.5840	26.8110	35.2485
2012	37.2300	26.6700	31.1497	37.1400	26.2470	31.1459
2013	32.2300	18.6100	23.7928	32.4090	18.5330	23.7469
2014	22.0500	15.2800	19.0778	22.0470	15.3920	19.0304

* The LBMA Silver price auction is operated by CME and administered by Thomson Reuters with effect from 15 August, 2014

US PRICES IN 2014

COMEX Settlement

US$ per ounce	High	Low	Average
January	20.3610	19.1050	19.8519
February	22.0470	19.3890	20.8285
March	21.5420	19.6900	20.6850
April	20.0780	19.1190	19.6895
May	19.7350	18.6530	19.2919
June	21.1110	18.7090	19.8922
July	21.4590	20.3730	20.8837
August	20.3320	19.3380	19.6907
September	19.1080	17.0060	18.3110
October	17.5040	16.0770	17.1287
November	16.5540	15.3920	15.9728
December	17.1330	15.5650	16.2441

Source: COMEX

CALCULATED LEASING RATES IN 2014*

Monthly Averages

Average	3-month	6-month	12-month
January	-0.41%	-0.32%	-0.10%
February	-0.35%	-0.27%	-0.09%
March	-0.37%	-0.27%	-0.07%
April	-0.40%	-0.31%	-0.11%

* calculated using silver forward offered rate and LIBOR;
forward rates dataset was discontinued with effect from May, 2014.

The lease rates shown here are indicative, reflecting the difference between prevailing forward rates in the currency markets and in the silver market itself. They do not take into account the counter-party risk that any lender would apply to a transaction, or any other external imfluences, and should therefore be seen as a guide to the shape of the forward curve, rather than absolute levels.

Source: Eikon, Thomson Reuters

APPENDIX 5

LEADING PRIMARY SILVER MINES

Rank	Mine Name	Country	Company	2013 Moz	2014 Moz
1	Cannington [1]	Australia	BHP Billiton plc.	29.09	24.73
2	Escobal [2]	Guatemala	Tahoe Resources Inc.	2.00	20.30
3	Fresnillo Mine	Mexico	Fresnillo plc.	22.76	20.10
4	Dukat [3]	Russia	Polymetal International plc.	18.30	19.50
5	Saucito	Mexico	Fresnillo plc.	11.58	15.40
6	Uchucchacua	Peru	Compañía de Minas Buenaventura S.A.A.	11.44	12.06
7	Pirquitas	Argentina	Silver Standard Resources Inc.	8.22	8.73
8	Greens Creek	United States	Hecla Mining Company	7.45	7.83
9	Palmarejo	Mexico	Coeur Mining Inc.	7.60	6.56
10	Pallancata	Peru	Hochschild Mining plc.	7.63	6.53
11	San José	Argentina	Hochschild Mining plc. / McEwen Mining Inc.	6.36	6.47
12	Imiter	Morocco	Société Métallurgique d'Imiter	6.24	5.99
13	San Bartolomé	Bolivia	Coeur Mining Inc.	5.94	5.85
14	Arcata	Peru	Hochschild Mining plc.	4.98	5.83
15	Gümüşköy [2]	Turkey	Eti Gümüş A.Ş.	5.09	5.79

[1] reported payable metal in concentrate; [2] estimate for 2013; [3] including Goltsovoye

SILVER MINE PRODUCTION BY SOURCE METAL

(million ounces)	2010	2011	2012	2013	2014
Primary					
Mexico	68.7	72.7	72.8	77.4	80.3
Peru	49.7	45.4	47.1	50.3	51.4
Australia	38.6	32.5	33.4	30.8	25.1
Other	81.8	82.2	83.5	90.0	112.6
Total	**238.8**	**232.8**	**236.7**	**248.5**	**269.5**
Gold					
Mexico	20.5	24.5	27.2	30.0	30.7
Russia	11.5	11.8	15.9	13.0	11.6
Chile	14.3	13.9	12.1	10.4	9.5
Other	43.5	46.9	47.3	53.6	58.3
Total	**89.8**	**97.2**	**102.4**	**107.1**	**110.1**
Copper					
Poland	37.3	40.5	41.0	37.3	40.4
Chile	26.6	25.7	21.9	25.4	37.5
Peru	21.8	18.8	19.1	23.1	23.5
Other	75.5	74.3	73.9	82.6	78.4
Total	**161.2**	**159.2**	**155.9**	**168.5**	**179.8**
Lead/Zinc					
China	66.7	73.6	79.3	82.4	80.6
Mexico	49.0	50.7	66.0	73.2	75.6
Peru	35.9	36.3	37.0	36.7	37.3
Other	104.8	99.6	106.0	111.7	117.2
Total	**256.4**	**260.2**	**288.2**	**304.1**	**310.6**
Other	**5.1**	**6.0**	**6.2**	**7.1**	**7.5**
World Total	**751.2**	**755.3**	**789.3**	**835.3**	**877.5**

Source: GFMS, Thomson Reuters; Company Reports

SILVER MINE PRODUCTION BY MAIN REGION AND SOURCE METAL

(million ounces)	2010	2011	2012	2013	2014
North America					
primary	83.6	87.9	86.4	93.7	96.9
lead/zinc	65.2	65.2	82.7	86.1	87.7
copper	19.1	18.9	18.6	18.8	19.1
gold	32.2	34.4	38.3	40.6	40.3
other	1.3	1.9	1.8	2.2	2.1
Total	**201.4**	**208.3**	**227.7**	**241.4**	**246.1**
South America					
primary	76.7	74.6	78.2	83.1	103.8
lead/zinc	68.4	66.1	68.0	68.9	72.3
copper	50.6	46.2	43.1	51.3	63.0
gold	35.0	36.3	32.2	33.7	37.7
other	2.2	2.5	2.8	3.4	3.8
Total	**232.9**	**225.7**	**224.3**	**240.3**	**280.6**
Asia					
primary	6.3	6.1	7.3	7.2	7.6
lead/zinc	82.1	89.9	98.1	105.0	99.9
copper	42.5	41.3	40.9	44.9	43.1
gold	7.7	9.1	10.6	11.8	12.8
other	1.6	1.6	1.6	1.6	1.6
Total	**140.2**	**147.9**	**158.5**	**170.5**	**165.0**
Rest of the World					
primary	72.2	64.2	64.8	64.6	61.2
lead/zinc	40.6	39.0	39.4	44.0	50.7
copper	48.9	52.9	53.3	53.5	54.5
gold	15.0	17.4	21.3	21.1	19.4
other	0.0	0.0	0.0	0.0	0.0
Total	**176.7**	**173.4**	**178.9**	**183.2**	**185.8**
World Total	**751.2**	**755.3**	**789.3**	**835.3**	**877.5**

APPENDIX 6

COMEX FUTURES AND OPTIONS TURNOVER AND OPEN INTEREST, AND LONDON BULLION MARKET (LBMA) TURNOVER

	Comex Number of Contracts				LBMA Clearing Turnover [3]		
	Futures		Options		Ounces transferred (millions)	Value (US$bn)	Number of transfers
	Turnover [1]	Open Interest [2]	Turnover [1]	Open Interest [2]			
13-Jan	1,021,718	149,854	150,591	205,369	151.7	4.7	764
Feb	1,346,410	144,813	175,827	177,993	122.0	3.7	776
Mar	780,310	153,912	117,518	182,828	132.5	3.8	765
Apr	1,980,453	143,477	238,760	194,244	165.2	4.2	1007
May	1,172,026	145,316	185,830	209,317	142.6	3.3	1027
Jun	1,555,352	138,472	176,432	201,546	153.3	3.2	900
Jul	932,287	133,980	154,336	223,012	122.7	2.4	862
Aug	1,651,965	117,915	238,275	224,173	122.4	2.7	1096
Sep	958,149	113,065	161,582	237,221	137.4	3.1	902
Oct	948,432	118,494	167,893	244,475	110.1	2.4	769
Nov	1,270,262	132,752	154,576	174,004	110.5	2.3	764
Dec	857,717	132,475	122,368	174,426	168.0	3.3	828
14-Jan	915,025	147,000	170,972	194,577	144.7	2.9	733
Feb	1,498,846	135,849	186,896	183,306	185.7	3.9	907
Mar	973,739	150,831	120,590	193,009	134.0	2.8	779
Apr	1,388,927	153,088	146,215	197,168	122.1	2.4	732
May	883,117	160,695	125,040	216,057	136.9	2.7	898
Jun	1,459,081	156,636	179,043	211,176	163.4	3.2	843
Jul	957,168	160,918	116,897	222,635	121.7	2.6	719
Aug	1,216,690	161,839	114,805	210,879	121.0	2.4	709
Sep	990,802	173,778	188,635	248,189	142.2	2.6	775
Oct	1,013,749	179,095	180,744	266,262	135.8	2.3	669
Nov	1,435,078	156,064	199,190	197,929	172.3	2.8	772
Dec	964,739	151,410	124,625	183,571	152.8	2.5	795

[1] Monthly total; [2] Month-end; [3] Daily average; Source: LBMA, COMEX

SILVER ETF HOLDINGS

(Moz, end-period)		iShares Silver Trust	ETF Securities*	ZKB	Sprott Silver Trust	Other**	Total	Value US$ Bn***
2013	Q1	344.1	53.2	90.9	49.3	116.6	654.1	18.73
	Q2	318.5	51.9	89.5	49.3	117.1	626.2	11.81
	Q3	341.8	58.2	87.3	49.3	119.2	655.9	14.22
	Q4	320.2	59.6	84.7	49.3	119.2	632.9	12.34
2014	Q1	328.3	66.9	84.0	49.3	121.0	649.6	12.97
	Q2	322.7	67.7	83.0	49.3	118.3	641.0	13.38
	Q3	349.9	63.5	80.9	49.3	117.7	661.3	11.32
	Q4	329.6	62.5	77.1	49.3	117.1	635.5	10.15

*Includes ETF Securities LSE, Australia, NYSE, GLTR and WITE

**Other: includes Julius Bär, DB Physical Silver, iShares Silver Bullion ETF, Silver Bullion Trust, Mitsubishi UFJ Tokyo, iShares Physical Silver ETC, Central Fund of Canada, Source Physical Silver, Royal Canadian Mint ETR

***Using the quarter-end London price

Source: Respective issuers; GFMS, Thomson Reuters

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