THE SILVER MARKET IN 2017

• SILVER PRICES
• DEMAND
• SUPPLY
• INVESTMENT
• PRICE OUTLOOK
SILVER PRICE IN DIFFERENT CURRENCIES IN 2017

Prices in different currencies on an intra year basis: Silver in...

- Lira: + 4%
- US$: + 1%
- GBP: - 5%
- EUR: - 7%

Source: Thomson Reuters Eikon
SILVER PRICE RANGE, US$/OZ

Source: Thomson Reuters Eikon

GFMS
LONG TERM GOLD/SILVER RATIO
(BASIS MONTHLY AVERAGE PRICES)

Source: Thomson Reuters Eikon
THE SILVER MARKET IN 2017

- PRICES
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- OUTLOOK
## World Silver Supply and Demand

<table>
<thead>
<tr>
<th></th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017e</th>
<th>% Δ - 2016</th>
<th>% Δ - 2013</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Moz</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mine Production</td>
<td>824</td>
<td>869</td>
<td>894</td>
<td>886</td>
<td>870</td>
<td>-1.8%</td>
<td>6%</td>
</tr>
<tr>
<td><strong>Total Supply</strong></td>
<td>988</td>
<td>1,051</td>
<td>1,043</td>
<td>1,007</td>
<td>1,008</td>
<td>0.1%</td>
<td>2%</td>
</tr>
<tr>
<td>Jewelry &amp; Silverware</td>
<td>280</td>
<td>288</td>
<td>290</td>
<td>258</td>
<td>265</td>
<td>2.6%</td>
<td>-5%</td>
</tr>
<tr>
<td>Coins &amp; Bars</td>
<td>240</td>
<td>233</td>
<td>291</td>
<td>206</td>
<td>130</td>
<td>-37%</td>
<td>-46%</td>
</tr>
<tr>
<td>Industrial Fabrication</td>
<td>605</td>
<td>596</td>
<td>570</td>
<td>562</td>
<td>581</td>
<td>3%</td>
<td>-4%</td>
</tr>
<tr>
<td><strong>Physical Demand</strong></td>
<td>1,124</td>
<td>1,117</td>
<td>1,151</td>
<td>1,026</td>
<td>976</td>
<td>-5%</td>
<td>-13%</td>
</tr>
<tr>
<td><strong>Annual Average Silver Price $/oz</strong></td>
<td>23.79</td>
<td>19.08</td>
<td>15.68</td>
<td>17.14</td>
<td>17.13</td>
<td>-0.1%</td>
<td>-28%</td>
</tr>
</tbody>
</table>

Source: GFMS, Thomson Reuters
WORLD PHYSICAL SILVER DEMAND
ANNUAL CHANGES: 2015-2016 vs 2016-2017 (Moz)

-100 -80 -60 -40 -20 0 20 40

Jewellery  Coins & Bars  Silverware  Industrial Fabrication

15-16  16-17

GFMS
REGIONAL WORLD PHYSICAL SILVER DEMAND
FORECAST ANNUAL CHANGES: 2016-2017 (Moz)

Source: GFMS, Thomson Reuters
NORTH AMERICAN SILVER DEMAND
FORECAST ANNUAL CHANGES: 2016-2017 (Moz)

<table>
<thead>
<tr>
<th>Jewelry</th>
<th>-35</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coins</td>
<td>-16</td>
</tr>
<tr>
<td>Bars</td>
<td></td>
</tr>
<tr>
<td>Silverware</td>
<td></td>
</tr>
<tr>
<td>Electronics</td>
<td></td>
</tr>
<tr>
<td>Brazing</td>
<td></td>
</tr>
<tr>
<td>Photo</td>
<td></td>
</tr>
<tr>
<td>Solar</td>
<td></td>
</tr>
<tr>
<td>EO</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
</tbody>
</table>

Source: GFMS, Thomson Reuters
INDIAN SILVER IMPORTS

Source: GFMS, Thomson Reuters
INDUSTRIAL FABRICATION FORECAST
ANNUAL CHANGES: 2015-2016 vs 2016-2017 (Moz)

Source: GFMS, Thomson Reuters
SOLAR DEMAND - SILVER POWDER PRODUCTION

Source: GFMS, Thomson Reuters
DEMAND SUMMARY

• Physical silver demand expected to decline 5% to below 1bn ounces for first time since 2012.
• Strong decline in physical bar and coin demand which has been particularly driven by very weak sentiment in North America.
• Jewelry fabrication switched marginally positive from the weak sentiment last year.
• Solar demand remained again a positive outlier this year driven in large by capacity expansions in China and a triple growth in installations.
• Thrifting continued to weigh on electronics demand countered by increased electrification in industries such as automotive.
THE SILVER MARKET IN 2017

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SILVER MINE PRODUCTION BY REGION

Source: GFMS, Thomson Reuters
### Top 20 Silver Producing Companies

<table>
<thead>
<tr>
<th>Rank</th>
<th>Company Name</th>
<th>Output (Moz)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>H1 2016</td>
<td>H1 2017</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Fresnillo plc.</td>
<td>22.8</td>
<td>25.8</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Glencore plc.</td>
<td>18.8</td>
<td>19.5</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>KGHM Polska Miedz S.A. Group</td>
<td>18.5</td>
<td>19.3</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Goldcorp Inc.</td>
<td>13.0</td>
<td>14.5</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Cia De Minas Buenaventura S.A.A.</td>
<td>12.2</td>
<td>12.9</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Polymetal International plc.</td>
<td>14.2</td>
<td>12.8</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Pan American Silver Corp.</td>
<td>12.8</td>
<td>12.5</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Corp Nacional del Cobre de Chile</td>
<td>10.5</td>
<td>9.8</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Tahoe Resources Inc.</td>
<td>11.5</td>
<td>9.8</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Hochschild Mining plc.</td>
<td>8.2</td>
<td>8.9</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Volcan Cia. Minera S.A.A.</td>
<td>11.6</td>
<td>8.3</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Sumitomo Corp.</td>
<td>9.8</td>
<td>8.2</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Hindustan Zinc Ltd.</td>
<td>6.8</td>
<td>8.2</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Coeur Mining, Inc.</td>
<td>7.4</td>
<td>7.9</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Southern Copper Corp.</td>
<td>8.1</td>
<td>7.9</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Bolden A.B.</td>
<td>7.1</td>
<td>6.9</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Hecla Mining Company</td>
<td>8.2</td>
<td>6.9</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>South 32 Ltd.</td>
<td>9.5</td>
<td>6.9</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>Industrias Peñoles S.A.B. De C.V.</td>
<td>6.2</td>
<td>6.1</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>First Majestic Silver Corp.</td>
<td>5.9</td>
<td>5.0</td>
<td></td>
</tr>
</tbody>
</table>

**Total**: 222.9 Moz

Source: GFMS, Thomson Reuters; Company Reports

1 Including 100% of Penmont mines, excluding silverstream; 2 Primary silver producer; 3 Includes minority partners; 4 Reported metallic silver production; 5 Estimate; 6 Includes 100% from Pallancata, includes Moris; 7 Integrated refined metal; 8 Mined silver; 9 Metal in concentrate; 10 Excludes 100% of Fresnillo plc.
CAPITAL EXPENDITURE

Source: GFMS, Thomson Reuters
FCF PROGRESSION

Source: GFMS, Thomson Reuters
SILVER MINE PRODUCTION BY SOURCE METAL

- 61% Primary Base Metals Mines
- 26% Primary Silver
- 13% Primary Gold Mines

Source: GFMS, Thomson Reuters
WORLD SILVER SCRAP SUPPLY

Source: GFMS, Thomson Reuters
OUTSTANDING DELTA ADJUSTED PRODUCERS
HEDGE POSITION

Source: GFMS, Thomson Reuters

Moz year-on-year change

Net Hedging

Net De-hedging

Source: GFMS, Thomson Reuters
SUPPLY SUMMARY

• Following a drop in mine production for the first time in 14 years, mine supply is set to fall another 2% this year.
• Supply from scrap marginally up this year mainly due to a rise in industrial generated waste.
• The hedge book is expected to contract by 3 Moz. Many players are at the side lines at current silver prices.
• Costs have risen slightly due to higher oil prices, production disruptions, lower grades and strong domestic currencies.
• Despite large fluctuations, primary silver miners are FCF positive indicating room for stronger capex further out.
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WORLD SILVER IDENTIFIABLE INVESTMENT
VOLUME AND VALUE

Identifiable Investment is the sum of bars, coins and ETPs.

Source: GFMS, Thomson Reuters
INVESTORS’ POSITIONS IN COMEX SILVER FUTURES & OPTIONS

As of 14th November

Source: Thomson Reuters Datastream, GFMS

GFMS
ABOVE GROUND STOCKS

As of end-Q3. Custodian vault figures exclude ETF holdings

Source: GFMS, Thomson Reuters
GLOBAL SILVER OTC TRANSFERS

Source: LBMA; GFMS, Thomson Reuters
THE SILVER MARKET IN 2017

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EQUITIES BULL RUN

RHS: SP (yellow)
LHS: FTSE (purple), DAX (blue)

Source: Thomson Reuters Eikon

GFMS
EQUITIES P/E, STOCKS LOOK EXPENSIVE
OUTLOOK

• In terms of prices we remain moderately optimistic and forecast average price $18.80/oz next year.
• Investment demand expected to show signs of recovery, although the next boom will be dependent on economic backdrop.
• PV demand in the solar sector is expected to continue to be the star performer of industrial offtake. Electronics will also be a positive driver.
• Mine supply is expected to decline in the long run and we believe that 2016 was the beginning of this protracted decline. Meanwhile, scrap will stabilise if not increase marginally on rising IP.
• Above ground stocks are likely to continue to grow particularly those held in custodian vaults. In the case of lack in significant demand increases, this could dampen sustainable price rises in the next years.
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