IMPORTANCE OF SILVER IN PORTFOLIO OF FULLY INTEGRATED MINING COMPANY

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The LBMA/LPPM Precious Metals Conference
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1. Presentation of the KGHM Group
2. Silver resources of KGHM
3. Silver production in KGHM
4. General views regarding silver
5. Summary
Presentation of the KGHM Group

- KGHM is one of world’s leaders in production of electrolytic copper and metallic silver.
- Apart from that, KGHM Polska Miedź S.A. also produces gold, lead, sulphuric acid, rock salt and other minor by-products.
- KGHM processes its copper ore deposits using its own integrated production structure, comprising of three mines, two smelters, a wire rod plant and auxiliary units supporting core business.
- Position of KGHM in terms of copper production strengthened following acquisition of Quadra FNX Mining Ltd. – now KGHM INTERNATIONAL LTD.
Presentation of the KGHM Group (2) – diversified portfolio of products

KGHM mainly produces copper products…

Copper cathodes  Copper wire rod  Copper round billets  Silver-copper wire  Granulated copper

… and precious metals as by-products

Silver ingots  Silver granules  Gold ingots
Presentation of the KGHM Group (3) – diversified portfolio of products

- Subsidiaries of the Group are diversified in terms of types of activity.
- They mainly offer products and services related to basic activities and core business of KGHM Polska Miedź S.A.
- That includes exploring and mining deposits of copper ore and other metals, mine construction, generation of electricity and heat, production of mining machinery and equipment, production of explosives, R&D and many others.

Some of our other by-products…

- Refined lead
- Sulphuric acid
- Rock salt
- Copper sulphate
- Technical selenium
- Nickel sulphate
- Rhenium pellets
- Ammonium perrhenate
Presentation of the KGHM Group (4) – diversified portfolio of mining assets

Canada (Ontario)
- McCreedy West (Cu, Ni, PGM)
- Morrison (Cu, Ni, PGM)
- Podolsky (Cu, Ni, PGM)
- Victoria (Cu, Ni, PGM)
- Kirkwood (Cu, Ni)
- Foy (Cu, Ni)
- Falconbridge (Cu, Ni)

USA
- Robinson (Cu, Au, Mo)
- Carlota (Cu)

Chile
- Franke (Cu)
- Sierra Gorda (Cu, Mo, Au)

Greenland
- Malmbjerg (Mo)

Germany
- Weisswasser (Cu, Ag)

Poland
- Polkowice-Sieroszowice Mine (Cu, Ag, PGM)
- Lubin Mine (Cu, Ag, PGM)
- Rudna Mine (Cu, Ag, PGM)
- Głogów Głęboki (Cu, Ag)
- Local exploration

Canada (B.C.)
- Afton-Ajax (Cu, Au)
KGHM’s silver production facts (1) – # 1 global silver producer…

Factsheet

- No. 1 global silver producer*
- No. 1 European copper miner
- No. 7 global copper miner**
- Among top five Polish companies by revenue and first by profit
- Listed on the Warsaw Stock Exchange since 1997

Group Head Office

Financial results 2012

Total revenues in 2012 at 6,4 bn USD

<table>
<thead>
<tr>
<th>USD bn</th>
<th>Revenues'12 - Copper</th>
<th>Revenues'12 - Silver</th>
<th>Revenues'12 - Other</th>
<th>EBITDA'12</th>
<th>Market Cap</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4.8</td>
<td>1.3</td>
<td>0.9</td>
<td>2.2</td>
<td>7.3</td>
</tr>
</tbody>
</table>

Market Cap at 6th of September 2013

Production in 2012

<table>
<thead>
<tr>
<th></th>
<th>KGHM</th>
<th>KGHMI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Payable copper (Kt)</td>
<td>566</td>
<td>111</td>
</tr>
<tr>
<td>- including from purchased copper-bearing materials (Kt)</td>
<td>147</td>
<td>-</td>
</tr>
<tr>
<td>Nickel (Kt)</td>
<td>-</td>
<td>5</td>
</tr>
<tr>
<td>Silver (K troz)</td>
<td>40 960</td>
<td>-</td>
</tr>
<tr>
<td>Gold (K troz)</td>
<td>29</td>
<td>48</td>
</tr>
<tr>
<td>Platinum (K troz)</td>
<td>-</td>
<td>17</td>
</tr>
<tr>
<td>Palladium (K troz)</td>
<td>-</td>
<td>30</td>
</tr>
</tbody>
</table>

* Source: World Silver Survey 2013
** Source: CRU International, Copper Quarterly April 2013
KGHM’s silver production facts (2) – … with stable silver production

Silver production in 2012

In million troz, at 31 Dec 2012

<table>
<thead>
<tr>
<th>Company</th>
<th>Silver Production (million troz)</th>
</tr>
</thead>
<tbody>
<tr>
<td>KGHM</td>
<td>41.0</td>
</tr>
<tr>
<td>BHP Billiton plc.</td>
<td>39.0</td>
</tr>
<tr>
<td>Fresnillo plc.</td>
<td>36.9</td>
</tr>
<tr>
<td>Goldcorp Inc.</td>
<td>30.5</td>
</tr>
<tr>
<td>Polymetal International plc.</td>
<td>26.5</td>
</tr>
<tr>
<td>Pan American Silver Corp.</td>
<td>25.1</td>
</tr>
<tr>
<td>Volcan Cia. Minera S.A.A.</td>
<td>22.0</td>
</tr>
<tr>
<td>Cia. De Minas Buenaventura S.A.A.</td>
<td>18.3</td>
</tr>
<tr>
<td>Coeur d’Alene Mines Corp.</td>
<td>18.0</td>
</tr>
<tr>
<td>Southern Copper Corp.</td>
<td>13.6</td>
</tr>
</tbody>
</table>

Source: GFMS, World Silver Survey 2013

Silver production in KGHM

In million troz, 1993 - 2012

Source: GFMS, World Silver Survey 2013
Did you know?

Up to 2012 KGHM has produced **711 million trotz of silver** (22 123t)

From all our **granules** produced...

...you could build a small death star of ca. 14m in diameter.

From all our **ingots** produced...

...you could build a cube of ca. 9 m in side length.

If you melted all silver that we produced you could fill **olympic swimming pool** (50m by 25m) that would be 1,7m deep
Silver as a by-product:

- Helps lower copper production costs and therefore moves company down the copper production cost curve,
- Helps lower market risk exposure by product diversification and therefore lowers variability of our revenue,
- Gains us participation in growth of industry and new technologies of the future.
KGHM’s Silver assets in Poland – among the world’s largest

**Measured & Indicated**\* resources at 31.12.2011-1.5B tonnes of copper/silver ore

<table>
<thead>
<tr>
<th>Mining Field</th>
<th>Ore resources [M t]</th>
<th>Cu [%]</th>
<th>Cu [M t]</th>
<th>Ag [g/t]</th>
<th>Ag [Moz]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lubin - Małomice</td>
<td>387.5</td>
<td>1.33</td>
<td>5.13</td>
<td>55.6</td>
<td>692</td>
</tr>
<tr>
<td>Polkowice</td>
<td>114.0</td>
<td>2.34</td>
<td>2.67</td>
<td>47.9</td>
<td>176</td>
</tr>
<tr>
<td>Sieroszowice</td>
<td>297.6</td>
<td>2.61</td>
<td>7.77</td>
<td>64.9</td>
<td>621</td>
</tr>
<tr>
<td>Radwanice Wschód</td>
<td>6.48</td>
<td>2.01</td>
<td>0.13</td>
<td>28.1</td>
<td>6</td>
</tr>
<tr>
<td>Rudna</td>
<td>397.6</td>
<td>1.70</td>
<td>6.76</td>
<td>47.3</td>
<td>604</td>
</tr>
<tr>
<td>Glogów Głęboki/under development</td>
<td>291.6</td>
<td>2.40</td>
<td>7.00</td>
<td>78.7</td>
<td>737</td>
</tr>
<tr>
<td>KGHM Polska Miedź S.A.</td>
<td>1 494.9</td>
<td>1.97</td>
<td>29.45</td>
<td>59.0</td>
<td>2 836</td>
</tr>
</tbody>
</table>

**Proven & Probable**\* reserves at 31.12.2011-1.2B tonnes of copper/silver ore

<table>
<thead>
<tr>
<th>Mining Field</th>
<th>Ore reserves [M t]</th>
<th>Cu [%]</th>
<th>Cu [M t]</th>
<th>Ag [g/t]</th>
<th>Ag [Moz]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lubin-Małomice</td>
<td>324.5</td>
<td>1.00</td>
<td>3.24</td>
<td>42</td>
<td>442.4</td>
</tr>
<tr>
<td>Polkowice</td>
<td>96.8</td>
<td>1.71</td>
<td>1.66</td>
<td>34</td>
<td>106.6</td>
</tr>
<tr>
<td>Sieroszowice</td>
<td>272.7</td>
<td>1.93</td>
<td>5.27</td>
<td>50</td>
<td>434.1</td>
</tr>
<tr>
<td>Radwanice Wschód</td>
<td>7.8</td>
<td>1.25</td>
<td>0.1</td>
<td>18</td>
<td>4.4</td>
</tr>
<tr>
<td>Rudna</td>
<td>246.2</td>
<td>1.60</td>
<td>3.94</td>
<td>45</td>
<td>357.0</td>
</tr>
<tr>
<td>Glogów Głęboki/under development</td>
<td>233.1</td>
<td>1.90</td>
<td>4.42</td>
<td>61</td>
<td>460.7</td>
</tr>
<tr>
<td>KGHM Polska Miedź S.A.</td>
<td>1 181.1</td>
<td>1.58</td>
<td>18.62</td>
<td>48</td>
<td>1 805.2</td>
</tr>
</tbody>
</table>

**Estimated mine life ~ 30-40 years** (at the current production level)

Did you know?

On average 1 tonne of our ore contains 1,61 troz of silver (that is 50g) so …

… to produce one of these …

… we have to process ca. 622 tonnes of copper ore.

Silver from one tonne of copper ore.
High quality of KGHM’s Silver – thanks to integrated smelting process…

When we are done with copper refining, then there is only anode slime to clean up …
High quality of KGHM’s Silver – … and input from own resources

CHEMICAL COMPOSITION:

<table>
<thead>
<tr>
<th>Component</th>
<th>Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ag min.</td>
<td>99.99%</td>
</tr>
<tr>
<td>Cu</td>
<td>≤ 80 ppm</td>
</tr>
<tr>
<td>Pb</td>
<td>≤ 10 ppm</td>
</tr>
<tr>
<td>Fe</td>
<td>≤ 10 ppm</td>
</tr>
<tr>
<td>Zn</td>
<td>≤ 10 ppm</td>
</tr>
</tbody>
</table>

Total impurities 100 ppm max.

KGHM’s SILVER BARS ARE:

“Good Delivery” CERTIFIED by:

- LBMA
- DMCC
- CME Group

on “Approved Refiners and Brands” list of COMEX under KGHM HG Brand Mark
Did you know?

Typical working depth is about 800m - 1 100m but…

… currently we are developing Głogów Głęboki - Przemysłowy mine, where we will be operating up to 1400m deep…

Temperature there is more than 40°C …

… in fact it is so hot and humid there that our miners call that place „French Guiana”.
Applications – Silver is the metal of the future

GOLD VS SILVER

- Silver in Green Technologies – Solar Energy, Water Purification, Silver-Coated Windows and Glass,
- Silver in Medicine – Anti-Bacterial Biocide, X-Rays,
- Silver in Nanotechnology – Pigments, Photographic, Conductive/Antistatic Composites,
- Silver in Batteries – Silver Oxide Batteries, Silver-Zinc Battery Replacing Lithium Ion Batteries,
- Silver in Bearings – Essential Component in Many Types of Engines,
- Silver in Electronics – Excellent Electrical Conductivity,
- Silver in Catalysts – Production of Foundation for Plastics Including Polyester,
- Silver in Brazing & Soldering – High Tensile Strength, Ductility and Thermal Conductivity,
- Silver in Automotive Industry – Silver Coated Contacts, Silver-Ceramic Lines in Windows.

Source: The Silver Institute
General views on silver market (1) – economic situation

- The world of quantitative easing (QE) supports silver as a proxy for (hiper) inflation hedge. One of the key inflation-hedge hit products sold by the US mints are silver and gold coins.
- Global economics recovery still looks vulnerable (especially in Europe), yet, recent macro publications show some optimism.
- Although prices of precious metals have fallen dramatically, the net inflows in silver ETFs are still positive.
- Short covering and fresh length, caused mainly by alleviated pessimism towards precious metals, have recently lifted net long positions.
General views on silver market (2) – upward and downward risks

**UPWARD**
- Reduction of Fed’s quantitative easing does not mean that financial conditions will be stricter; despite lowering the amount of government securities purchases, Fed’s balance sheet will still grow, however, with a slower pace.
- Apart from Fed, there are other central banks (ECB, BoJ, BoE, SNB) which are still in the monetary expansion phase.
- Geopolitics – Middle East conflicts might cause oil price squeeze which in turn will rise inflation pressure.
- Constant investor demand through ETFs or coins.

**DOWNWARD**
- Federal Reserve is said to cut part of QE programme.
- Market is oversupplied (both in terms of production and scrap) and industry demand is still sluggish.
- Macroeconomic framework still looks uneasy and the rebound in global economy is said to be slow.
- Financial institutions believe in US dollar appreciation which is negatively correlated with (precious) metals prices.
- Rotation shift from commodities to equity markets.
General views on silver market (3) – is an inflation lurking out there?

After price slump, silver have rebounded sharply

ETF holdings on the record high

Central banks’ assets more than doubled from the beginning of the 2008 financial crisis

Non-commercial COMEX short covering has gained momentum recently, rebounding from local lows

Source: KGHM Polska Miedź S.A., Thomson Reuters
Summary - KGHM’s Silver

1. Is company’s strategic metal

2. Can be viewed as a substitute for non-productive gold

3. Is the cheapest precious metal and therefore easily accessible for many groups of investors

4. Is a safe heaven metal to have in portfolio in recession or market turmoil

5. Is an industrial metal widely used in present as well as future technologies