

# Layers of possibilities



**Group results**  
**1st half 2016**

*18 August 2016*

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# Highlights of the first half of 2016 in the KGHM Polska Miedź S.A. Group

## Key events

Work begun on the process of optimising the long-term operating and development plan for the international assets of KGHM

**Sierra Gorda** – the project's assumptions are being optimised and reviewed

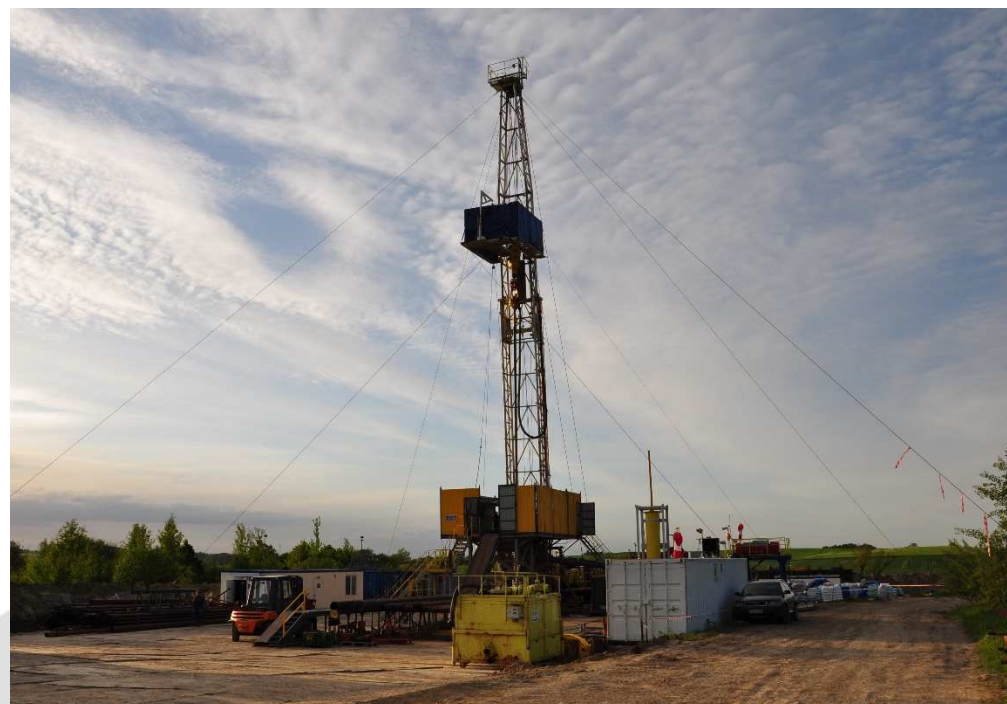
**Deep Głogów** – work continues on sinking the GG-1 ventilation shaft (at the end of the first half of 2016 the shaft had reached a depth of 785 m of the target 1 340 m)

**Pyrometallurgy Modernization Program** – assembly and preliminary start-up work underway

**Dividend** – decision made to pay out a dividend of PLN 300 million (in 2 instalments), representing PLN 1.50 per share

Contract signed with China Minmetals for the sale of copper cathodes in the years 2017-2021

## Application submitted to mine the Radwanice-Gaworzyce deposit



## Production highlights

- |                   |            |
|-------------------|------------|
| ▪ Payable copper  | 336 kt     |
| ▪ Metallic silver | 575 tonnes |
| ▪ TPM             | 111.8 koz  |

## Economic results

- |                         |            |
|-------------------------|------------|
| ▪ Sales revenue         | PLN 8.5 bn |
| ▪ EBITDA                | PLN 2.1 bn |
| ▪ Profit for the period | PLN 298 mn |

# Sierra Gorda – challenges to achieving target financial and production parameters

## Sierra Gorda

### Mined metals



### Ownership

55% KGHM  
45% Sumitomo

### Mine profile

Open-pit



Ore processing at the Sierra Gorda mine

## Key events update

- In the first half of 2016 production of copper in concentrate by the Sierra Gorda mine was around 48 thousand tonnes, while production of molybdenum in concentrate was around 12.5 million pounds (on a 100% basis).
- The level of recovery achieved by the molybdenum plant, as well as the functioning of the plant itself, were impacted by the high pyrite content in the ore.
- Key challenges involve achieving target Phase I production volumes, including target recoveries and processing plant stability. The intensive work being carried out by employees of Sierra Gorda, KGHM and Sumitomo is supported by world-class experts.
- In June 2016, Mr. Robert Wunder was appointed General Manager of Sierra Gorda.
- Cooperation continues with Chile's Environmental Enforcement Agency, SMA. In April 2016, Sierra Gorda submitted a program of compliance by the plant with the regulator's requirements. Following numerous meetings with SMA, in July 2016, Sierra Gorda submitted an updated plan. At present its formal approval by SMA is awaited.
- Based on proven solutions from Poland, an international team of experts responsible for overseeing Sierra Gorda's tailings storage facility was appointed.
- Selected contracts and agreements signed by Sierra Gorda are being renegotiated.
- The Company is continuing work on reviewing the long-term operating and development plan of Sierra Gorda.

# Review of the assets of KGHM International



Ajax



Victoria



Robinson



- The technical and economic assumptions related to the operation and development of individual assets of KGHM International are being reviewed.
- The process of review is supported by an external team of technical experts.
- Based on this technical review, plans for the development of individual assets are being prepared to maximise their economic value.

**Development of the assets of KGHM International will be matched to the anticipated financial possibilities of the KGHM Group.**

# Legnica-Głogów Copper Belt\* ore access program (OP)

## Deep Głogów\*\* deposit

### Work performed in H1 2016

#### Ore access program status

- The sinking of the GG-1 ventilation (input) shaft continues. At the end of 1H 2016 **the shaft depth had reached 785 m** (of a target 1 340 m). Construction of the shaft includes a concrete lining. The cascade drainage system is being developed, research holes for further sinking were drilled and the tube lining injection process was commenced.
- Since 2006, **102 873 meters of tunnel together with necessary technical infrastructure have been built.** In 1H 2016, **16 778 meters** of mine tunnels in the Rudna and Polkowice-Sieroszowice mines were excavated, representing **69%** of the total amount of access and development tunnels in KGHM (**24 235 m**).
- Work continues on **Stage II of the Surface-based Cooling Station at the R XI shaft as well as development of the central underground cooling system**, which will enable the use of ice water in the mine at the 1200 m level, to 25 MW. Planned date of completion is the second half of 2016.



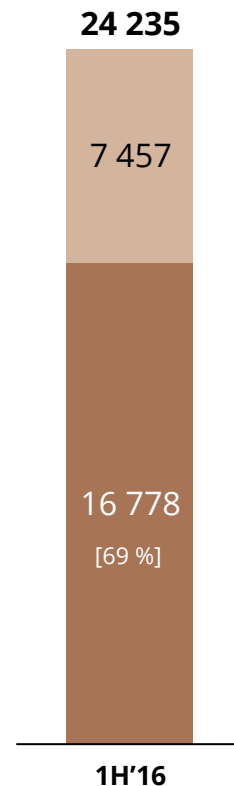
Cooling tower and heat transfer building



GG-1 shaft

#### Areas excavated by the Mining Divisions in LGOM [meters]

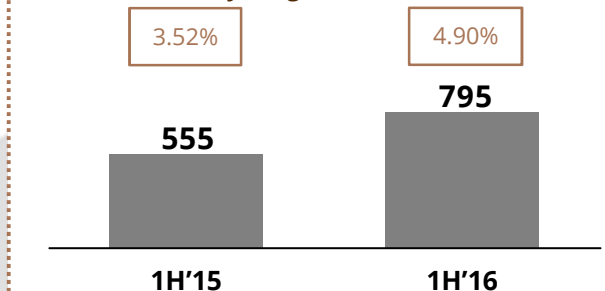
- Other LGOM
- Under the OP Program



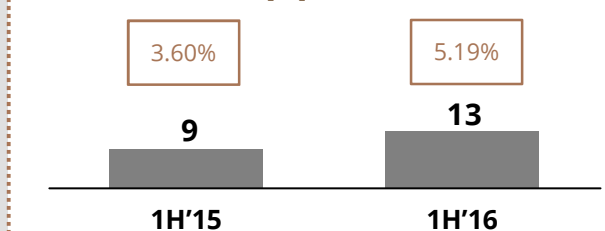
#### Share of production from Deep Głogów in LGOM results

- GGP
- % Share of % GGP in total LGOM

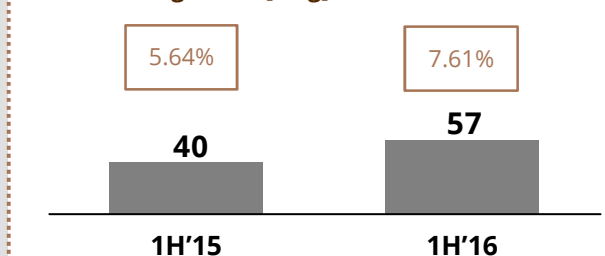
#### Ore extraction dry weight [kt]



#### Amount of Cu in ore [kt]



#### Amount of Ag in ore [k kg]



\*aka LGOM  
\*\*aka GGP

# Metallurgy Development Program in KGHM

## Construction of a Flash Furnace and associated infrastructure at Głogów I

### Work performed in H1 2016

#### Status of PMP\*

- Equipment and installations were assembled with respect to:
  - the Flash Furnace,
  - the Electrical Furnace,
  - the Power Building, and
  - parts of the Charge Preparation Section at the Głogów I smelter/refinery.
- The shutdown schedule for Głogów I was reviewed and updated
- The majority of construction work has been completed. Work is currently focused on **equipment related to automation and power.**

#### Major facilities realised

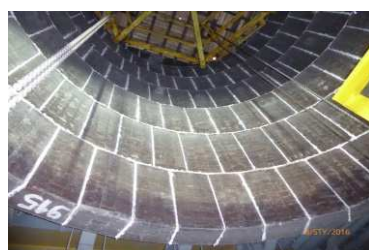
- Work on lining the Flash and Electrical furnaces is near completion.
- The Concentrate Drier was handed over.
- The air cooler of the Electrical Furnace Deduster was completed.
- Final assembly of the Electrofilter in the Electrical Furnace unit continues.
- Programming of the Main Control System is underway.

#### Expected impact in LGOM

- Will account for approx. 80% of copper production using the **best available and most cost-efficient technology.**
- Elimination of environmental and cost-related risks for approx. 40% of pyrometallurgical production by the Głogów metallurgical complex :**
  - dust emissions lower by approx. 55%,
  - gas emissions lower by approx. 58%,
  - decrease in the amount of tailings to be stored.
- Improved workplace safety.**
- Possibility to **intensify processing of imported chalcopyrite concentrates.**



Concentrate Drier



Lining of the Electrical Furnace

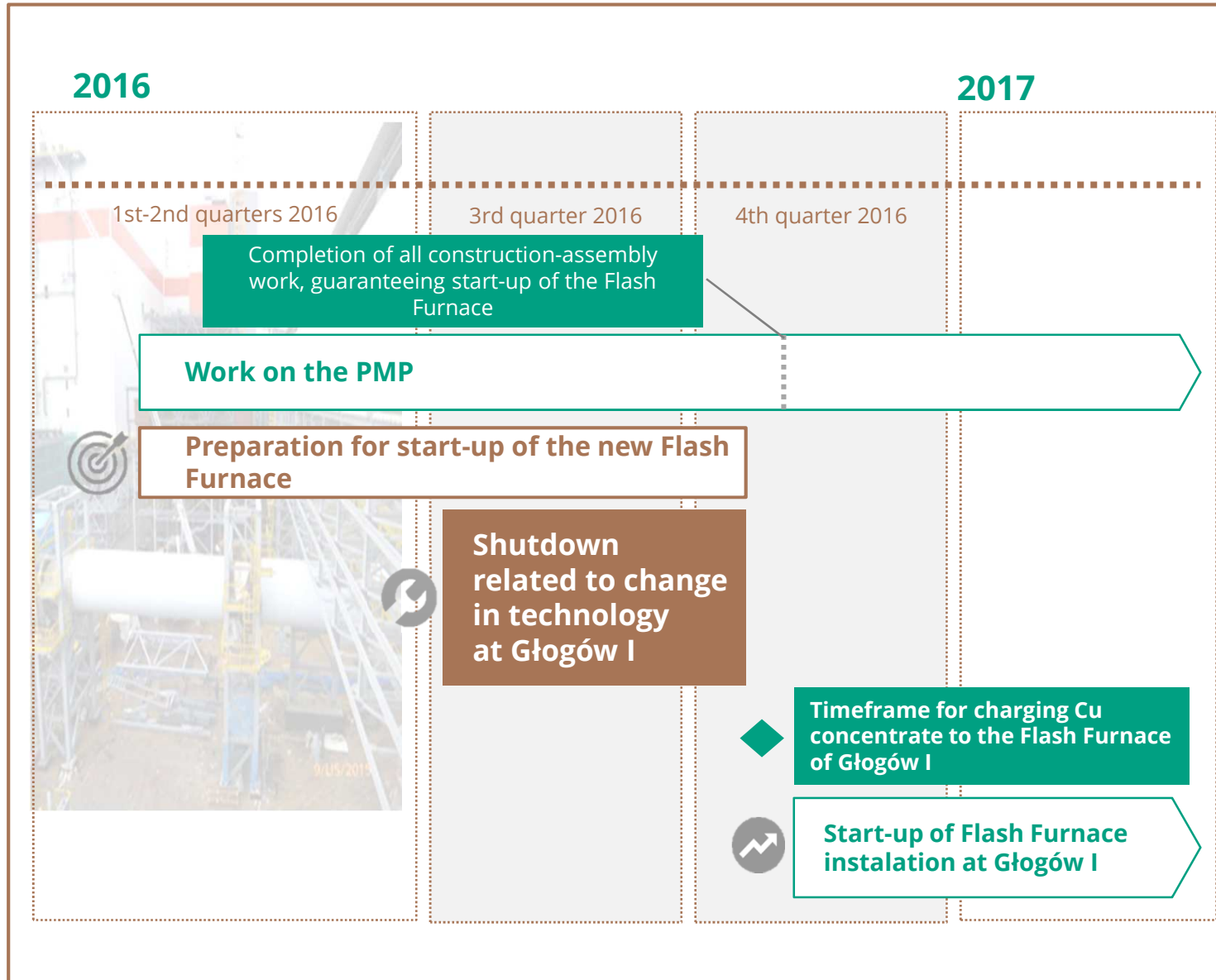


Main Control System

# Metallurgy Development Program in KGHM

Work begun to prepare the Głogów I smelter/refinery for its shutdown related to the change in technology

## Completion schedule



- The shutdown schedule for Głogów I was reviewed and updated during the transfer of operations from the shaft to the flash furnace while at the same time **minimising shutdown time**.
- As a result of optimising the schedule, **the length of the shutdown was reduced by 17 days**.
- The decision was made to **start the shutdown on 16 July 2016**.
- To maintain the volume of sales of copper and silver produced from own concentrates, KGHM plans to **sell payable Cu and Ag in concentrate** while at the same time optimising the level of inventories at the end of 2016.



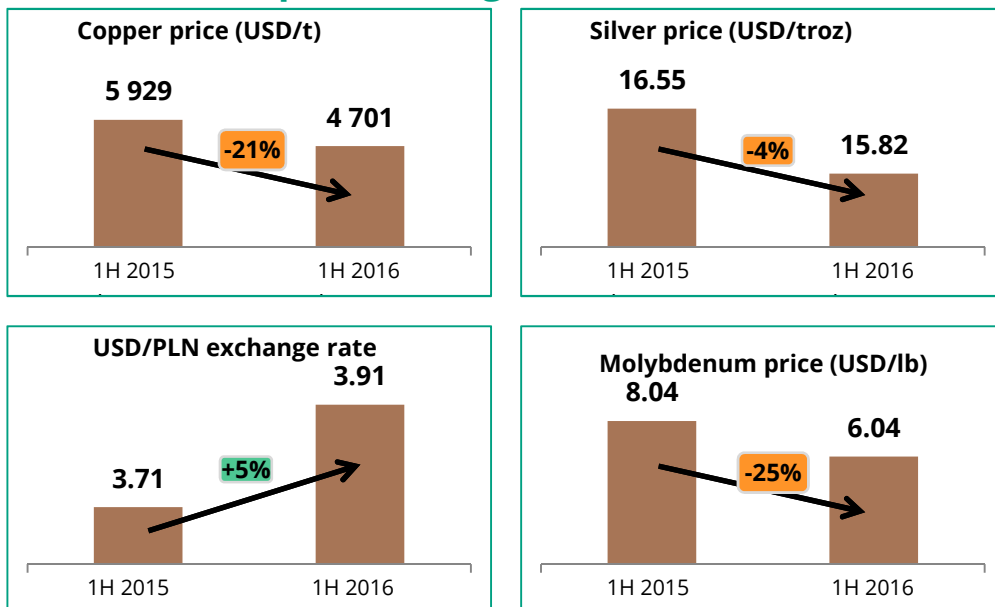


## Macroeconomic environment

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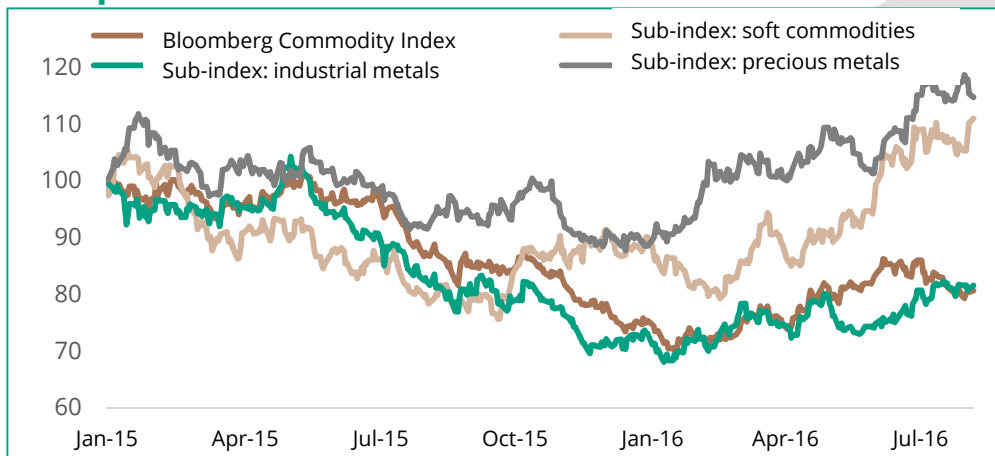
# PLN relatively weak; precious metals gaining, but copper remains at the relatively low level from the start of 2016

## Lower metals prices alongside a weaker PLN



Source: Thomson Reuters, KGHM Polska Miedz

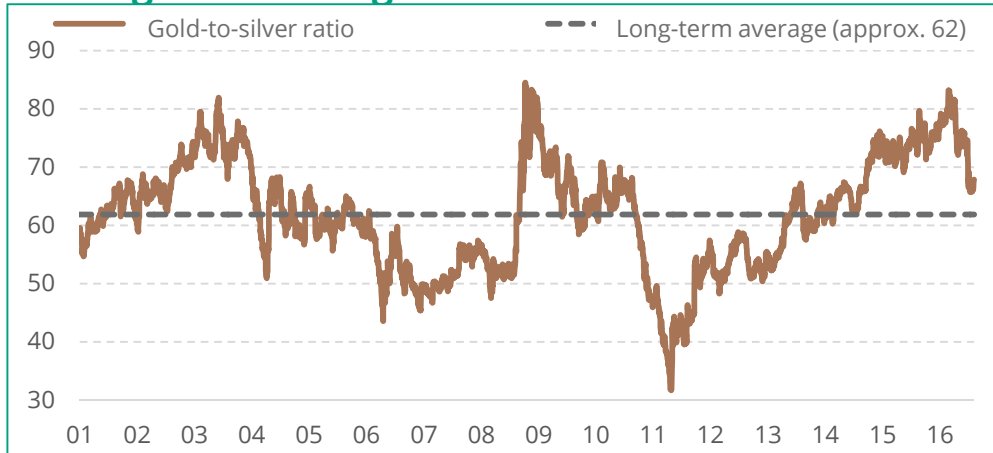
## Precious metals a positive stand-out compared to other commodities in 2016



- After January's weakening versus the USD, the PLN appreciated in subsequent months until it reached this year's maximum at the start of April 2016 (USD/PLN: 3.72, EUR/PLN: 4.24). From that moment, among others due to the June referendum in the United Kingdom, the PLN again lost in value, and at the end of June reached 3.98 PLN to the USD and 4.42 PLN to the euro.
- The commodities market in the first half of 2016 performed better than the stock market. The Bloomberg Commodity Index gained over 13%, mainly due to the gains in precious metals prices. In the first half of 2016 copper was one of the weakest metals, gaining only about 3% from the start of the year.
- Precious metals gained the most in the first half of 2016, as a result among others of more dovish announcements by the Fed regarding the rate at which interest rates will be raised in the USA and of the unexpected results of the Brexit referendum.
- The price of molybdenum, while stable in the first months of the year, began to gain rapidly in the first days of April, which trend continued to the end of the first half. The rise in the price of this metal may be partly a reaction to the deep falls of prior years, but are also a reaction to the recovery in the oil market.

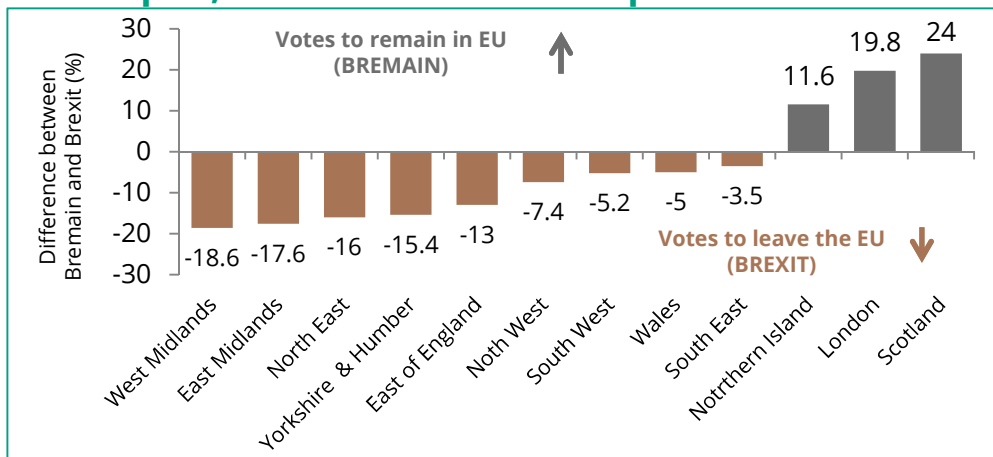
# Silver gained faster than gold; central banks remain the center of attention; Brexit generating uncertainty

## The gold-to-silver ratio continued to move toward its long-term average



The drop in the ratio *ceteris paribus* may mean that silver will gain faster than gold.  
Source: Bloomberg, KGHM Polska Miedź

## The breakdown of voting in various parts of the UK is unequal; further referendums possible



Source: Goldman Sachs, KGHM Polska Miedź

- Precious metals are of particular interest in times of macroeconomic or geopolitical uncertainty. In the final weeks of the first half of 2016 investors preferred exposure to the precious metals market due to fears associated with the potential exit of the UK from the EU (Brexit) and with other geopolitical threats.
- The greatest gain was recorded by silver, which traditionally decreases in value faster than gold during economic downturns but also rises faster when demand grows for precious metals.
- The attention of financial markets remains focused on central banks. The results of the referendum on the UK's continued membership of the EU were a great shock for the market, and increased not only investors' uncertainty but also their expectations in terms of further interventions by central banks aimed at stabilising the condition of the global economy as needed.
- Relatively good data are coming from the USA, in particular from the labour market. Developing markets remain under pressure. In China housing prices and mortgages are again rising, which is a positive signal, but fears remain regarding the sustainability of this recovery.



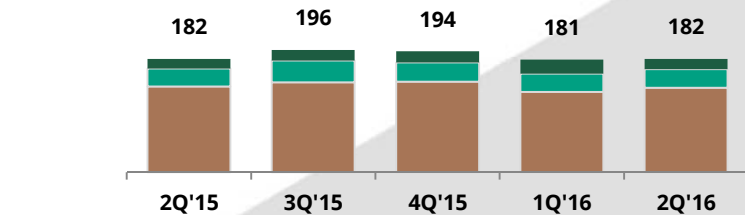
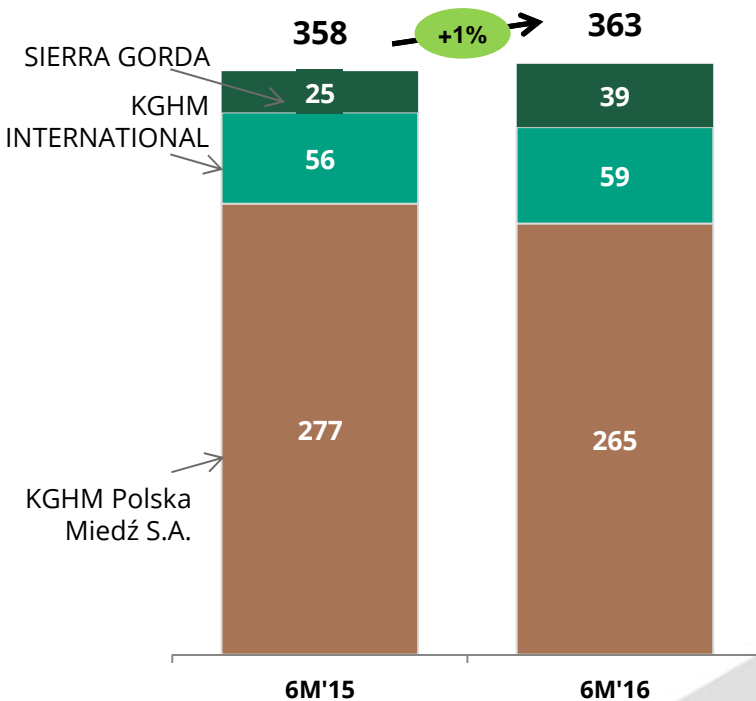
# Economic results

## KGHM Polska Miedź S.A. Group

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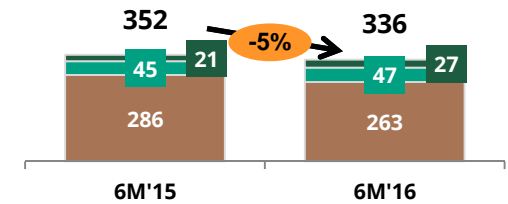
# Higher copper equivalent production by the Group

**Production of copper equivalent from own concentrate (kt)**

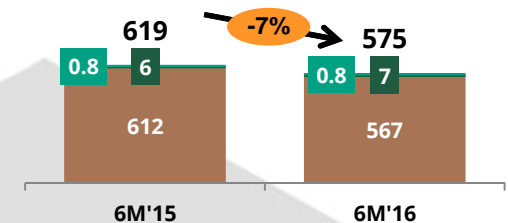


- The higher production of copper equivalent from own concentrates in the Group was due to higher production of gold and molybdenum.
- Production of payable copper and silver was lower due to preparations for the start-up of the flash furnace by KGHM Polska Miedź S.A., and the related build up of half-finished products inventories.
- The substantially higher volume of precious metals (by 26%) as compared to 2015 was due to the higher processing of concentrates rich in gold by KGHM Polska Miedź S.A. and to higher production by the Robinson and Sierra Gorda mines.
- Molybdenum – production of this metal by the Sierra Gorda mine commenced in April 2015.

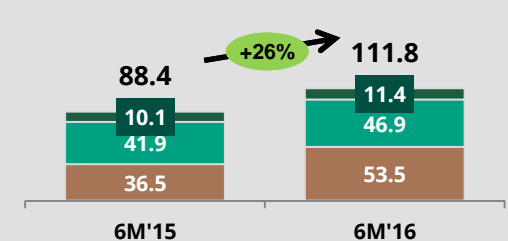
**Payable copper production (kt)**



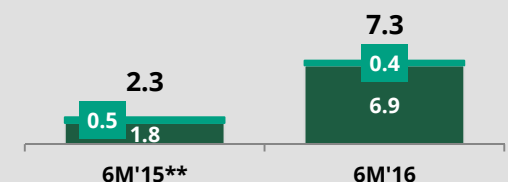
**Silver production (t)**



**TPM production\* (koz t)**



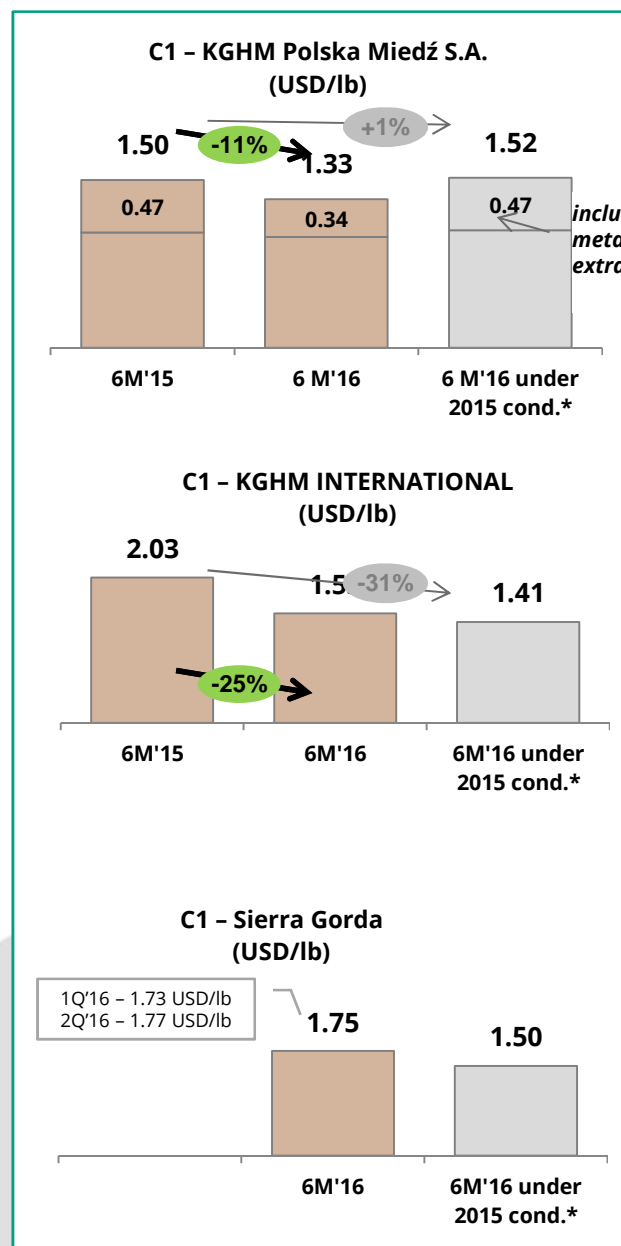
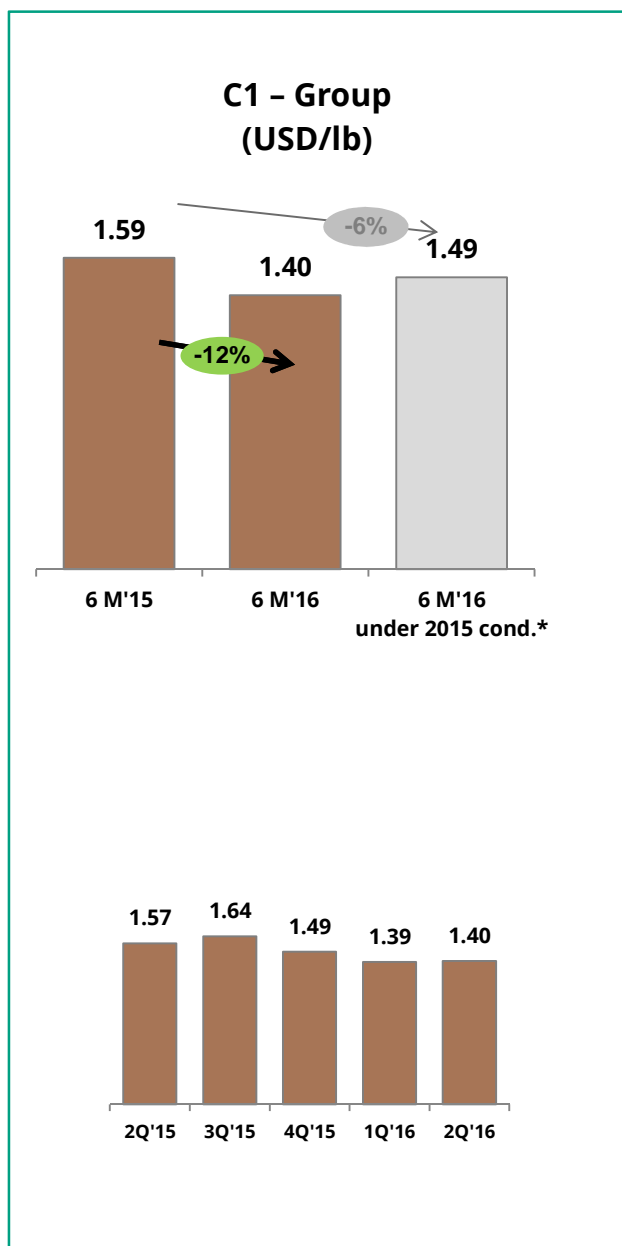
**Molybdenum production (mn lbs)**



\* TPM – Total Precious Metals, comprising gold, platinum and palladium

\*\* Sierra Gorda during the period April-June 2015

# Decrease in C1 unit cost in the Group

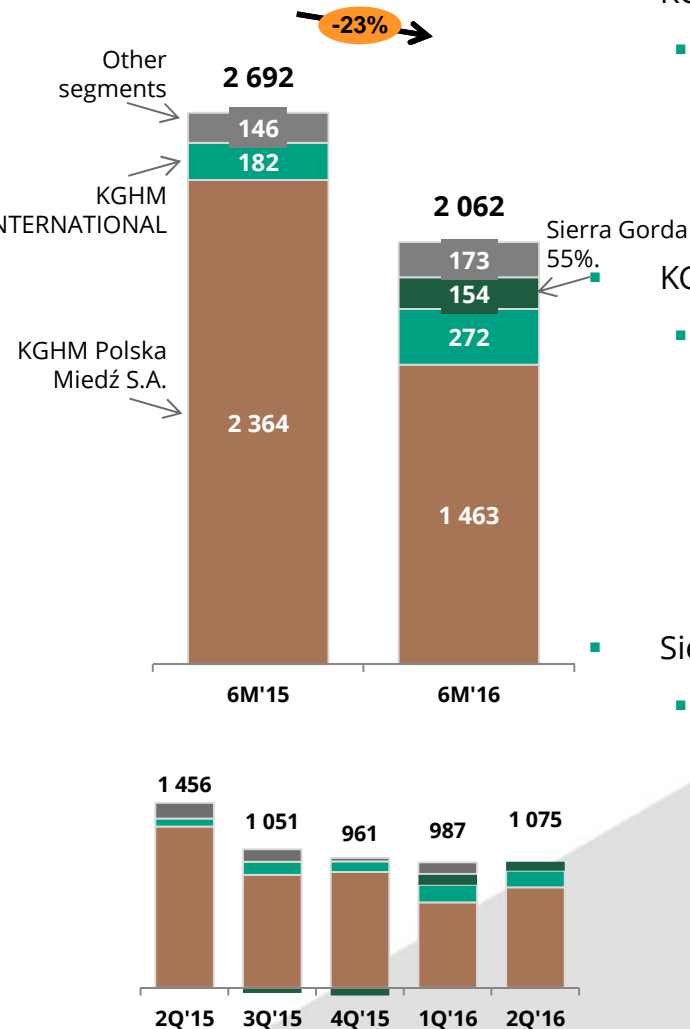


- C1 cost in the Group in the first half of 2016 was lower by 12%, mainly due to an increase in the value of associated metals.

Under the metals prices and exchange rates of the same period of 2015, C1 cost would have been lower by 6%.
- The drop in C1 cash cost in KGHM Polska Miedź S.A. by 11% was mainly due to the weaker PLN as compared to the USD and to a lower metals extraction tax (due to lower metals prices).
- The drop in C1 cost in KGHM INTERNATIONAL was due to lower production costs achieved as a result of saving initiatives, as well as higher revenues from precious metals sales.
- In the second quarter of 2016 Sierra Gorda recorded an increase in C1 cost by 2% as compared to the prior quarter. The increase was mainly due to a lower volume of copper sales as well as to the processing of ore from a transition zone, characterised by greater hardness and the content of undesired elements which made processing more difficult, which resulted in higher processing costs. Additionally, non-variable energy costs increased at the end of the quarter.

# Operating results of the Group

## Adjusted EBITDA \* (mn PLN)



- The decrease in the Group's EBITDA by PLN 630 million was mainly due to the fall in metals prices.
- KGHM Polska Miedź S.A.

- The lower EBITDA by PLN 901 million (-38%) was mainly due to the deterioration in metals prices and to the lower sales volume (due to the planned shutdown at the Głogów smelter/refinery) which was partially offset by the weaker PLN versus the USD and lower costs.

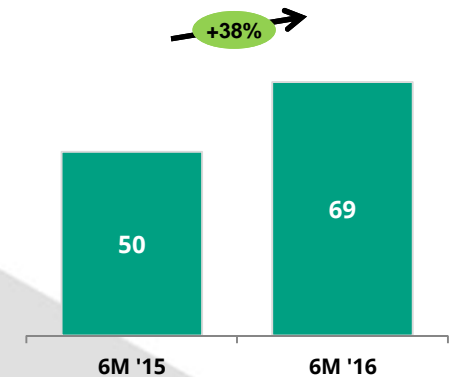
### KGHM International

- EBITDA in the segment KGHM International in the first half of 2016 amounted to PLN 272 million (USD 69 million). The increase in USD terms by 38% compared to the corresponding period in 2015 was the result of consistent cost discipline and improved production results. The improved EBITDA was achieved despite the lower revenues caused by lower prices.

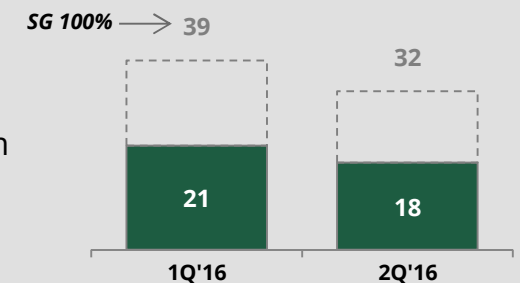
- Sierra Gorda (55%)

- Apart from macroeconomic factors, EBITDA achieved by Sierra Gorda in the first half of 2016 was significantly impacted by problems of a technological nature arising from the processing of relatively low quality ore from a so-called transition zone. The increase in non-variable energy costs also has a substantial impact.

## Adjusted EBITDA in KGHM International (mn USD)



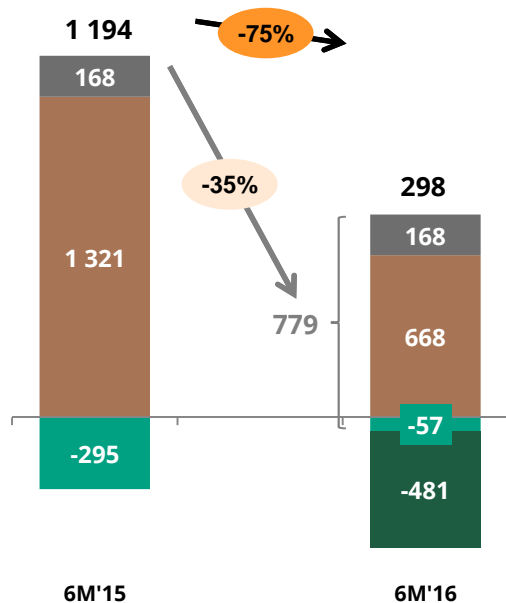
## Adjusted EBITDA in Sierra Gorda 55% (mn USD)



\* Adjusted EBITDA = EBITDA (profit/(loss) on sales + depreciation/amortisation) adjusted by impairment losses on non-current assets

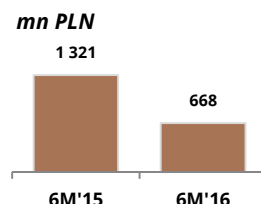
# Financial results of the Group

## Profit for the period (mn PLN)



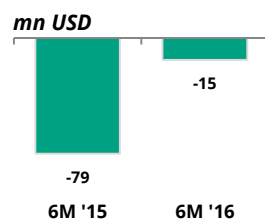
- In the first half of 2016 consolidated profit for the period amounted to PLN 298 million and was 75% lower than in the first half of 2015.
- The result includes the loss of the segment Sierra Gorda in the amount of PLN 481 million.

## Profit for the period of the segment KGHM Polska Miedź S.A.



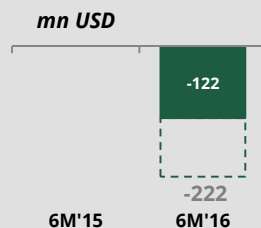
- Profit for the period of KGHM Polska Miedź S.A. decreased by 49%. Detailed information on the results of the Parent Entity is presented on subsequent slides.

## Loss for the period of the segment KGHM International – excluding Sierra Gorda



- The lower net loss of KGHM International (excluding the results of Sierra Gorda) is the result of an improved result on sales (higher volumes, lower costs) and lower depreciation by USD 47 million related to the impairment losses recognised in the fourth quarter of 2015.

## Loss for the period of the segment Sierra Gorda (55%) – accounted for using the equity method

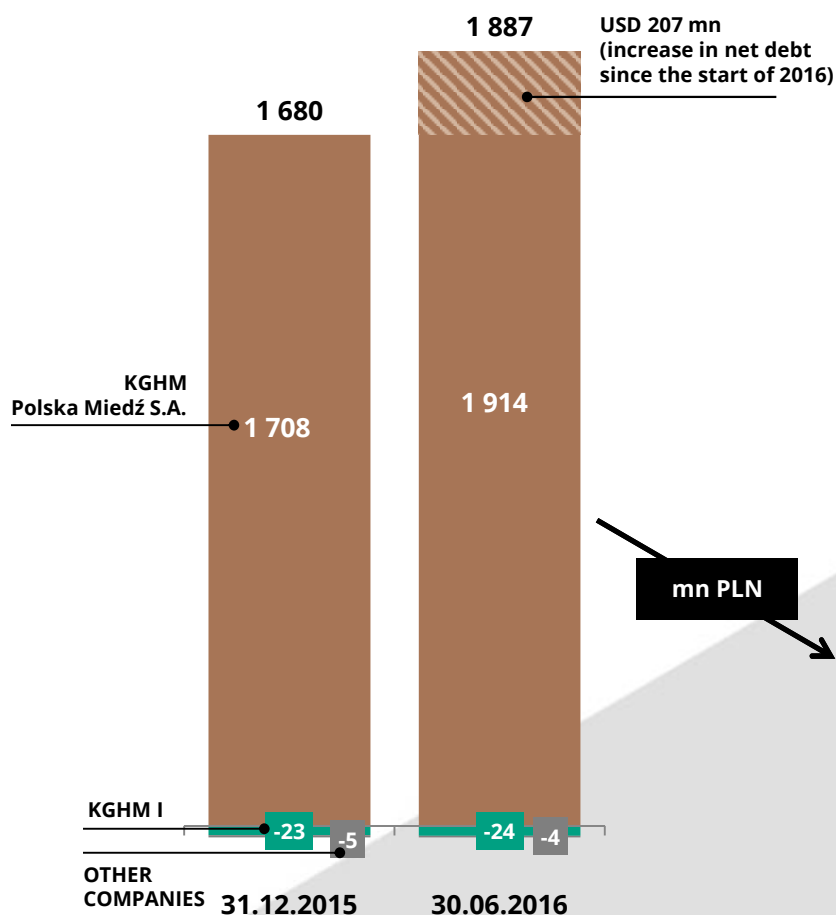


- Apart from operating factors, the net loss was mainly due to the costs of interest on the owner loans granted by the Partners to finance construction of the mine in the years 2012-2014. Interest on these loans, charged to the financial result for the first half of 2016, amounted to USD 147 million (on a 100% basis).
- In the first half of 2015, Sierra Gorda functioned under the project stage, and therefore the financial results were not recognised.



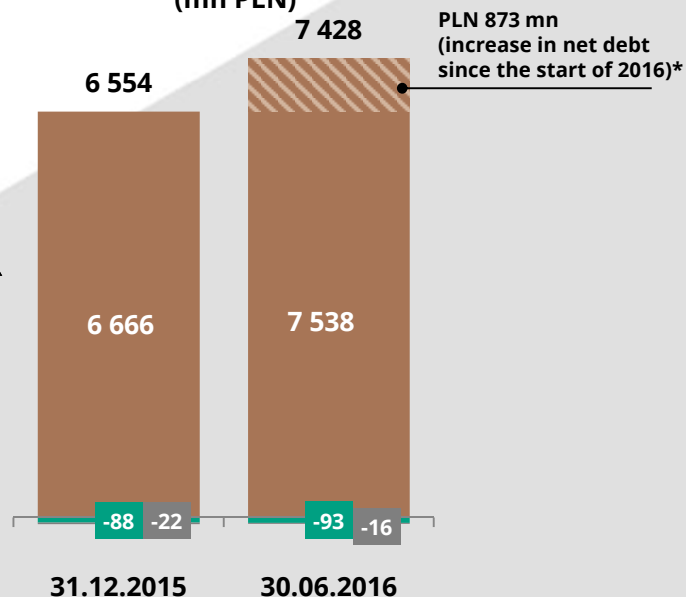
# Net debt of the Group – as at the end of June 2016

**KGHM Group net debt  
(mn USD)**

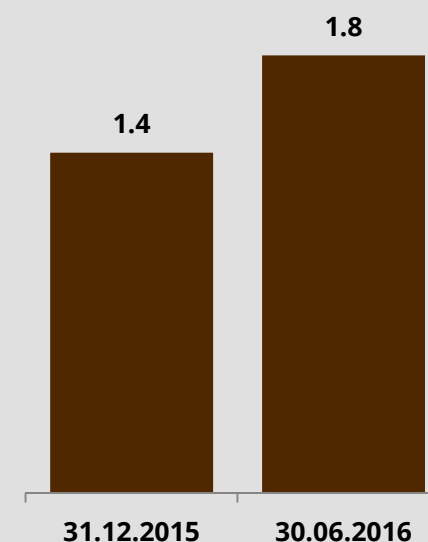


- Consistently, pursuant to the financial strategy adopted by KGHM Polska Miedź S.A., the basic currency in which debt is incurred is the USD (natural hedging).
- The increase in the Group's debt in the period January-June 2016 was mainly due to the financing of investments, of which the main projects were:
  - OP (GGP) – Ore Access Program (Deep Głogów + Mine Access and Development Program),
  - PMP – Pyrometallurgy Modernisation Program at the Głogów smelter/refinery,
  - MDP – Metallurgy Development Program,
  - International development projects, mainly Sierra Gorda.

**KGHM Group net debt  
(mn PLN)**



**Net Debt / EBITDA \*\***



\* Including impact of changes in exchange rates (PLN 71 mn)

\*\* EBITDA for the 12 months ended 30 June 2016

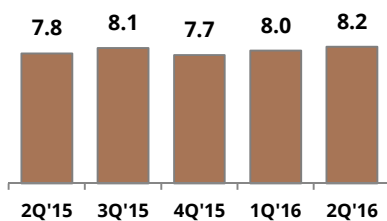
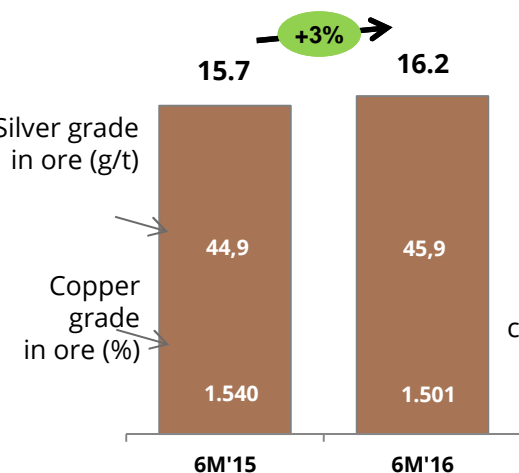


## Economic results of KGHM Polska Miedź S.A.

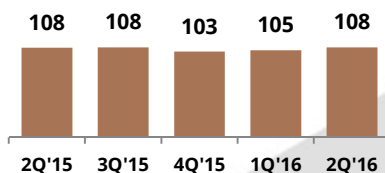
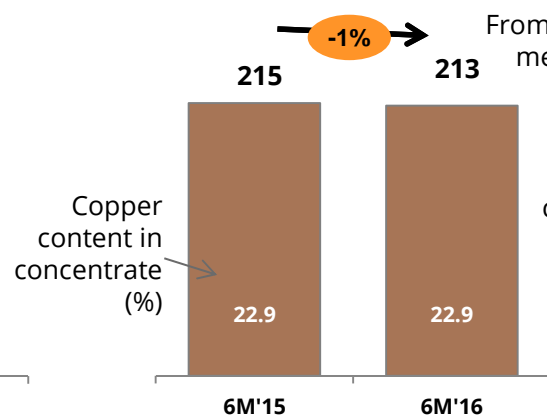
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# Stable level of mine production

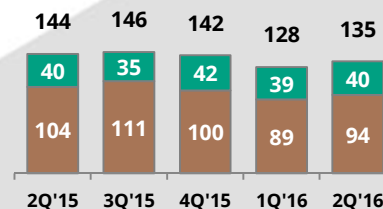
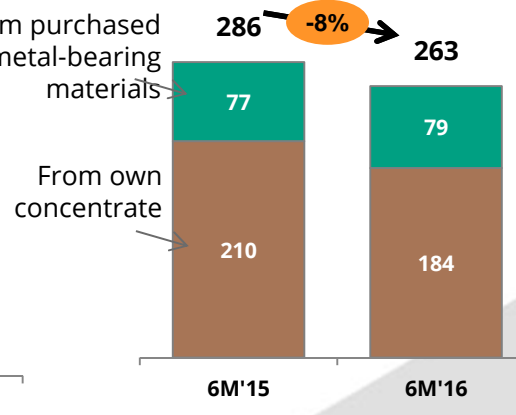
Ore extraction  
(mn t dry weight)



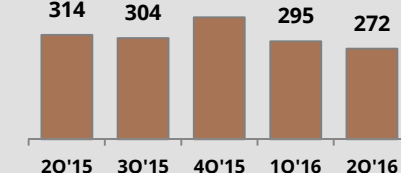
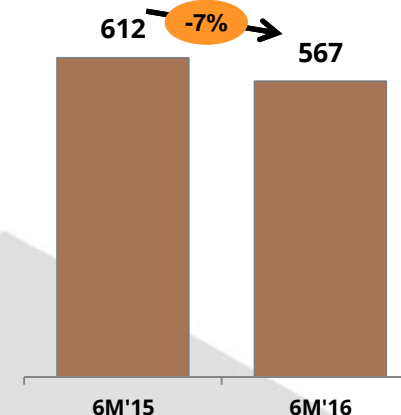
Production of Cu  
in concentrate  
(kt)



Electrolytic copper  
production  
(kt)



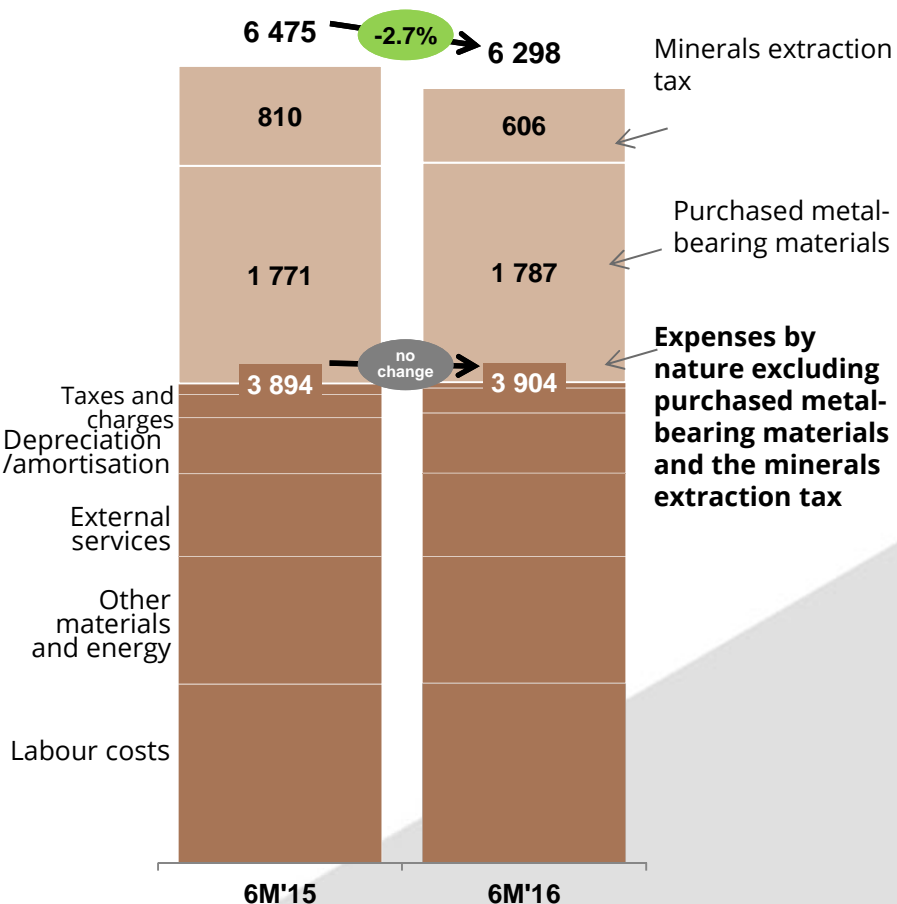
Metallic silver production  
(t)



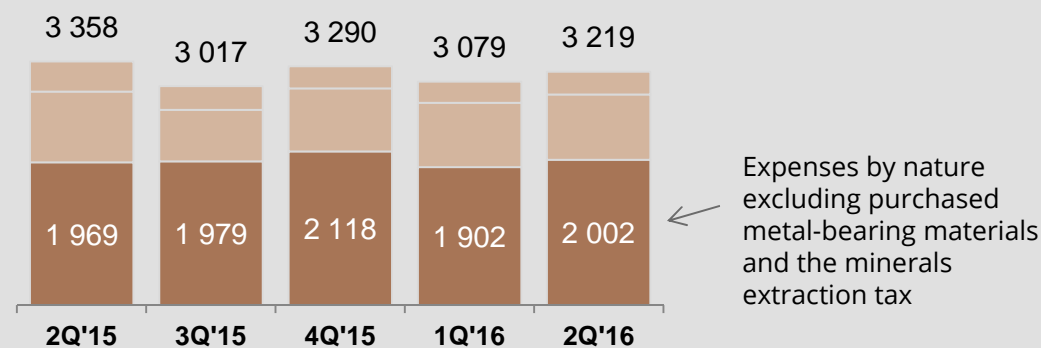
- In 2016 copper grade in ore decreased from 1.540% to 1.501%.
- The Company expects that in subsequent quarters of 2016 copper grade in ore will remain at the level of 1.51%.
- The lower amount of copper in concentrate was due to the lower copper grade in ore as compared to 2015.
- Electrolytic copper production was lower due to setting aside half-finished products as inventory, which will be processed in the second half of 2016 during the three-month shutdown at the Głogów I smelter/refinery.
- The decrease in metallic silver production in the first half of 2016 is associated with the decrease in electrolytic copper production.

# Expenses by nature in the first quarter of 2016

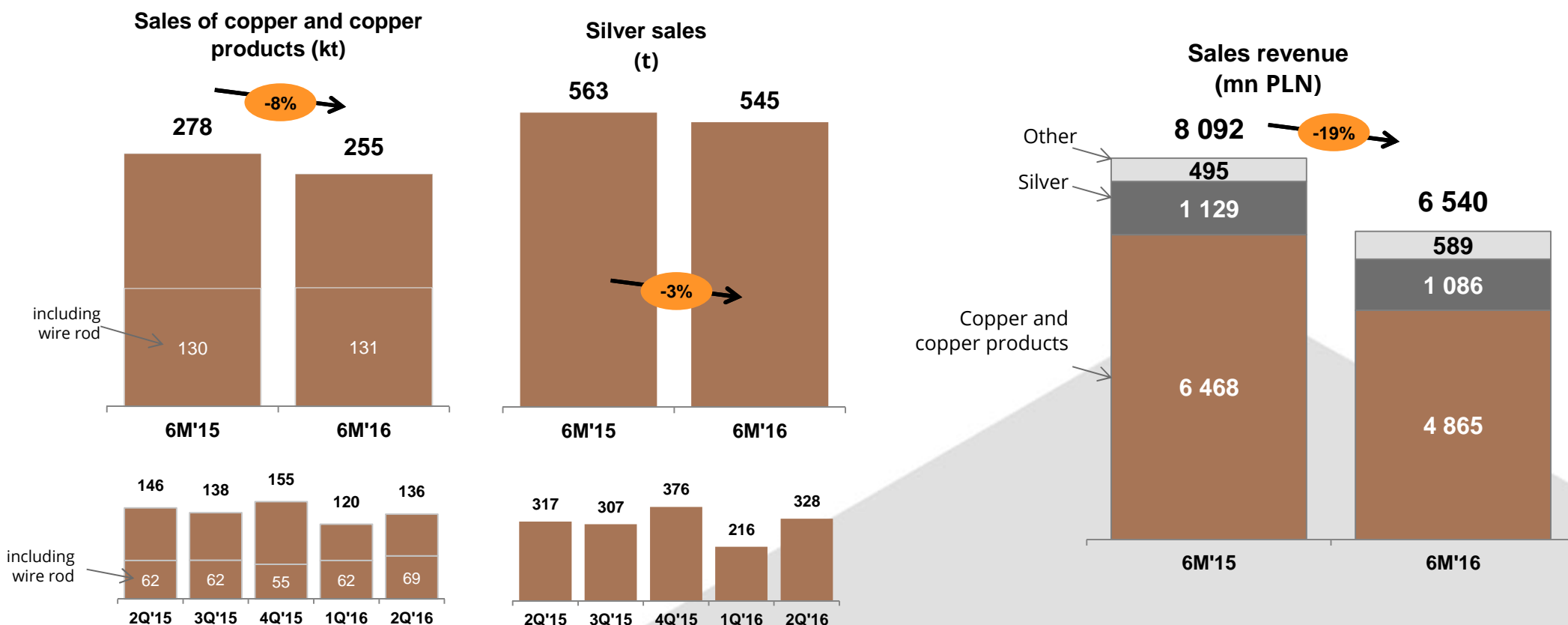
Expenses by nature  
(mn PLN)



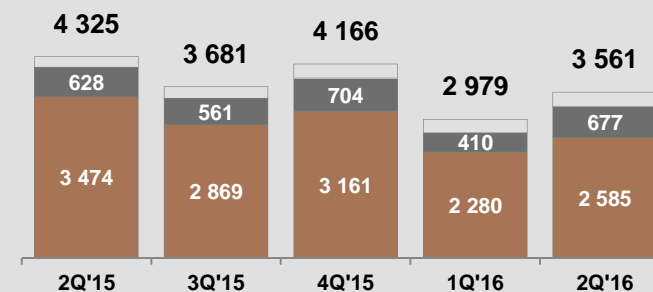
- Total expenses by nature as compared to the first six months of 2015 were lower by PLN 177 million, alongside higher costs of consumed metal-bearing materials purchased by PLN 16 million (10 kt more copper consumed and 10% lower purchase price), alongside a lower metals extraction tax by PLN 204 million.
- After excluding the cost of purchased metal-bearing materials and the minerals extraction tax, expenses by nature were at a similar level to that of the corresponding period of 2015.



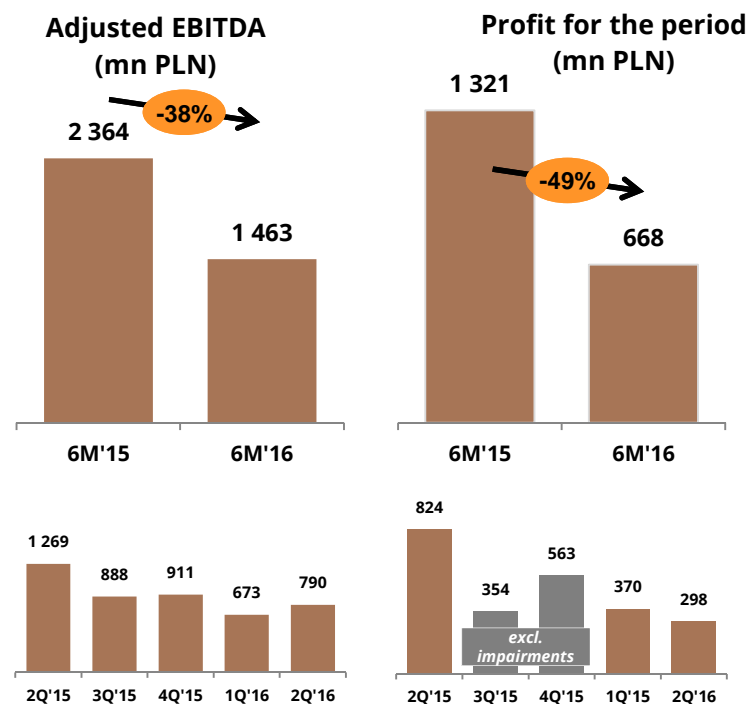
# Lower revenues from sales



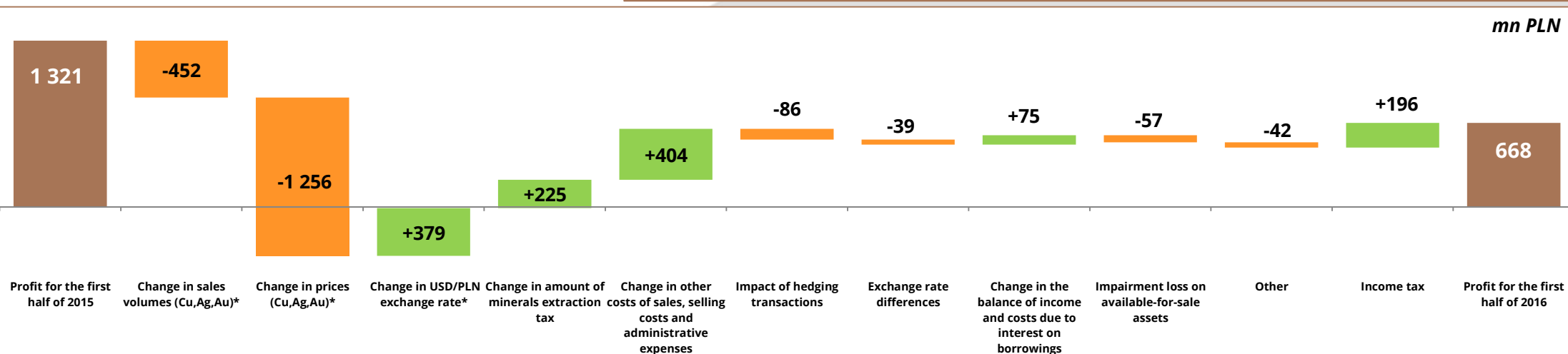
- In the first half of 2016, revenues from sales were lower as compared to the corresponding period of 2015 by PLN 1 552 million, mainly due to:
  - changes in the price of Cu, Ag and Au expressed in PLN (-PLN 877 mn),
  - lower copper sales volume by 22.4 kt (-PLN 505 mn) and silver by 18 t (-PLN 36 mn),
  - hedging of metals prices and the exchange rate (-PLN 215 mn),
  - lower value of sales of other products and merchandise by -PLN 7 mn, alongside the favourable impact of:
    - a higher volume of gold sales by 608 kg (+PLN 89 mn).
- The highest volume of copper wire rod sales in history (131 kt).



# Financial results in the first quarter of 2016



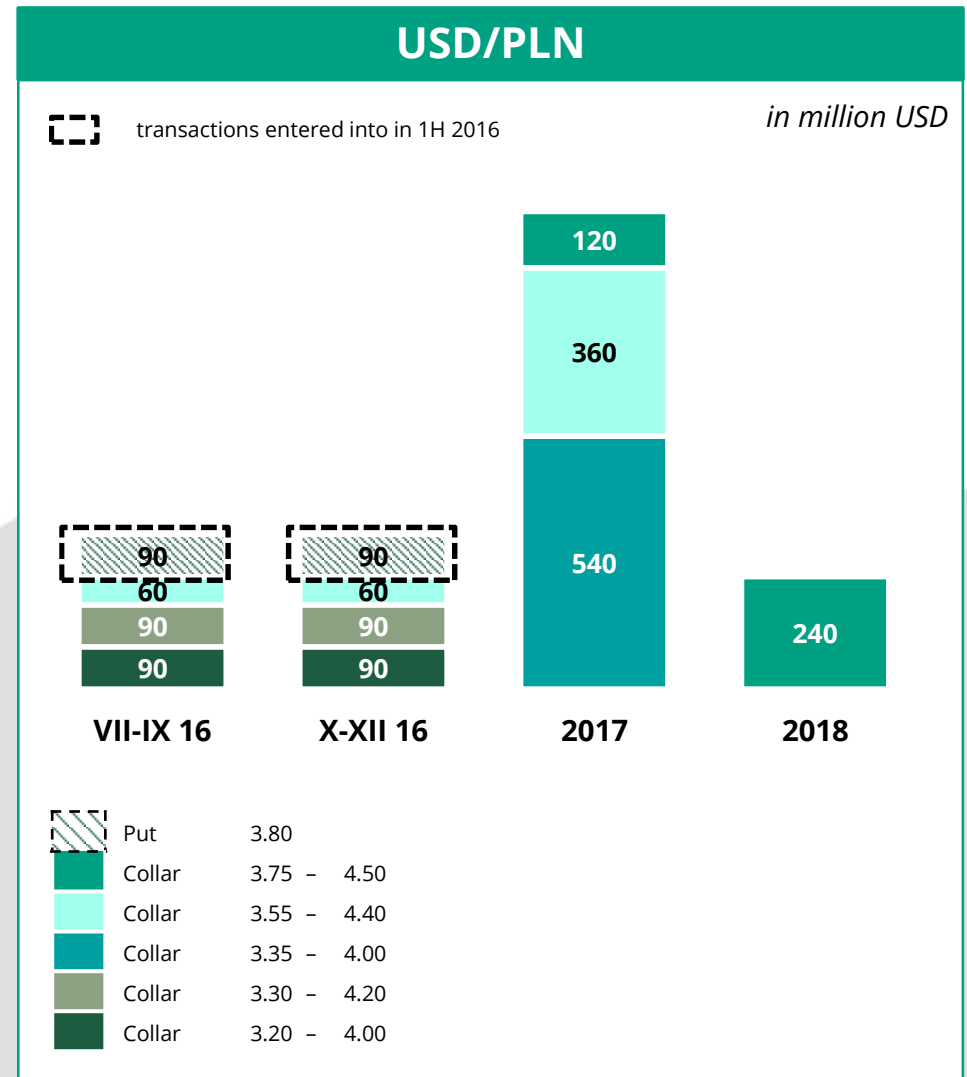
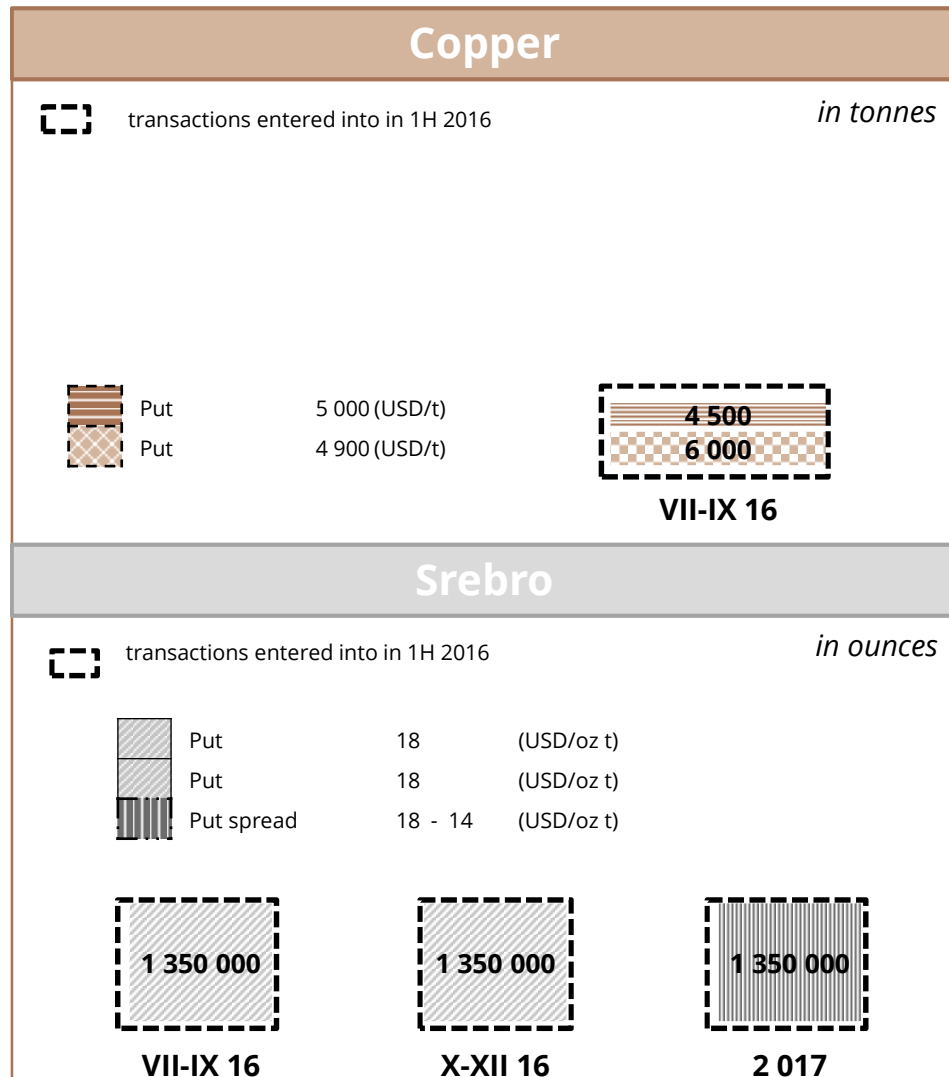
- The decrease in adjusted EBITDA by PLN 901 million (-38%) was mainly due to the deterioration in metals prices and to the lower sales volumes (due to the planned shutdown at the Głogów I smelter/refinery), and was partially offset by a weakening in the Polish zloty versus the US dollar (favourable for the company) and by a lower level of costs.
- The decrease in profit for the period results from the lower result on sales achieved by the Company – as a result profit for the period decreased by PLN 653 million.



# The accrued result on derivatives achieved by KGHM Polska Miedź S.A. as at 30 June 2016 amounted to PLN (61) million

## Market risk management – hedging position (as at 30 June 2016)

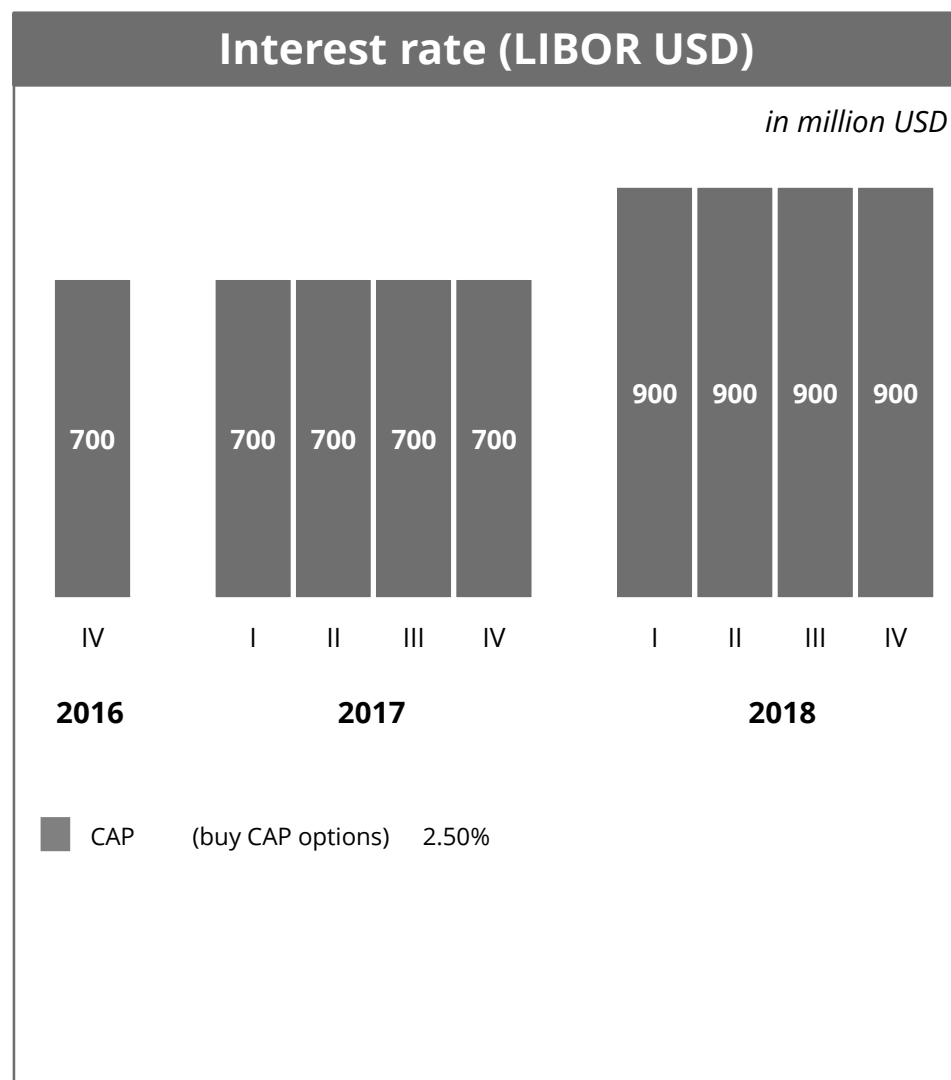
Position in derivatives on the metals and currencies markets



# The accrued result on derivatives achieved by KGHM Polska Miedź S.A. as at 30 June 2016 amounted to PLN (61) million

## Market risk management – hedging position (as at 30 June 2016)

Position in derivatives on the interest rates market



## Result on derivatives

- In the period January–June 2016, KGHM Polska Miedź S.A. recorded a negative result on derivatives in the amount of PLN 61 million, of which:
  - PLN 6 million increased sales revenue (transactions settled in the January–June period),
  - PLN 67 decreased the result on other operating activities (mainly a change in the measurement of open transactions as at 30 June, hedging the period to the end of 2018).
- The fair value of derivatives (MtM) in KGHM Polska Miedź S.A. as at 30 June 2016 amounted to PLN (84) million.
- The revaluation reserve on cash flow hedging instruments as at 30 June 2016 amounted to PLN (0.4) million.



# Goals and priorities for the second half of 2016



- **Sierra Gorda** – improve the production parameters of the Sierra Gorda mine. Renegotiate selected contracts and agreements entered into by Sierra Gorda.



- **KGHM International** – review and select an optimum growth path for the assets.



- **PMP** – bring the flash furnace installation at the Głogów I smelter/refinery on-line in accordance with the schedule, in the fourth quarter of 2016.



- **Strategy** – continue the process of reviewing the Strategy of KGHM for the years 2015-2020.



- **MAR** – maintain the highest standards of communication with the market.



**Thank you for your attention!**

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