

# Market Overview

as of: 23<sup>rd</sup> April 2018






- Copper:** One of the most important event during the calendar year took place in Chile in the recent fortnight. Market participants gathered in the well-known CESCO Conference in Chile to discuss developments on the copper market. General market sentiment was rather neutral - not only during the conference panels but also behind the scenes it was felt that the copper price environment is nearing fair value, as no strong view has been presented supporting either direction. One of the most interesting facts was the strong presence of companies which deliver different services for the copper mining industry - from firm which deal with the mine processes optimisation, through companies which build mines till venture capital companies which are more and more interested in allocating capital (*page 2*).
- Precious metals:** Concerns over escalating tensions in Syria, U.S. sanctions on Russia and the U.S.-China trade stand-off climbed the price to as much as 1360 USD/troz, but soon after the gold prices have been dragged by the U.S. dolar appreciation and political tensions ease. According to Silver Institute, global silver mine production has fallen by 4.1% mainly due to supply disruptions across the Americas (*page 4*).
- Global economy:** The IMF published April edition of World Economic Outlook, projecting further expansion above potential in advanced economies and increased growth of emerging markets until 2019 before next down-turn (*page 6*).

## Key market prices

	Close price	2w chng.
<b>LME (USD/t)</b>		
▼ Copper	6 783.00	-2.0%
▼ Nickel	13 835.00	-1.5%
<b>LBMA (USD/troz)</b>		
▼ Silver	16.42	-3.1%
▼ Gold (PM)	1 309.40	-1.1%
<b>FX</b>		
▼ EURUSD	1.1969	-0.4%
▲ EURPLN	4.2771	2.6%
▲ USDPLN	3.5754	3.3%
▲ USDCAD	1.2861	2.6%
▲ USDCLP	619.18	1.6%
<b>Stocks</b>		
▼ KGHM	92.70	-15.3%

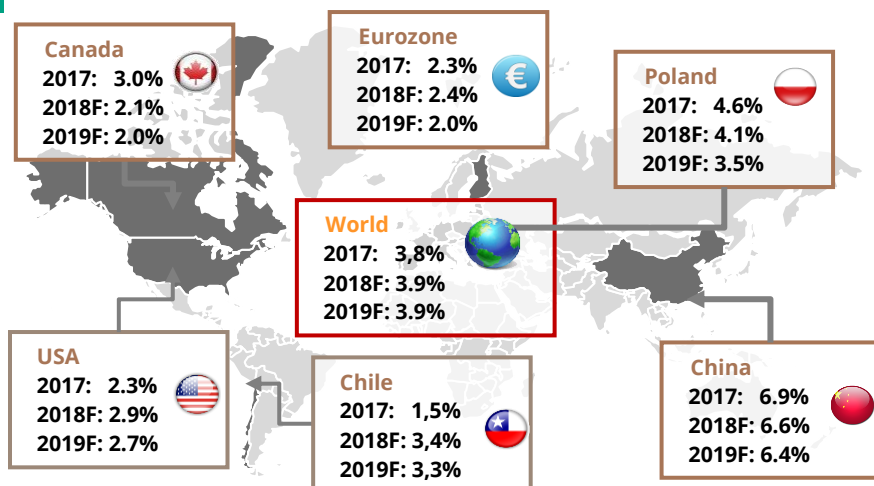
Source: Bloomberg, KGHM Polska Miedź; (*more on page 10*)

## Important macroeconomic data

Release	For	
 GDP (yoy)	1Q	6.8% -
 Industrial prod. (yoy)	Mar	1.8% ▼
 CPI (yoy)	Mar	2.4% ▲
 ZEW survey expectations	Apr	1.9 ▼
 Industrial prod. (yoy)	Feb	4.0% ▲

Source: Bloomberg, KGHM Polska Miedź; (*more on page 8*)

## IMF GDP growth predictions



Source: IMF World Economic Outlook, April 2018

## Market Risk Unit

marketrisk@kgm.com

## Base and precious metals | Other commodities

### Copper

One of the most important event during the calendar year took place in Chile in the recent fortnight. Market participants gathered in the well-known CESCO Conference in Chile to discuss developments on the copper market. General market sentiment was rather neutral - not only during the conference panels but also behind the scenes it was felt that the copper price environment is nearing fair value, as no strong view has been presented supporting either direction. One of the most interesting facts was the strong presence of companies which deliver different services for the copper mining industry - from firm which deal with the mine processes optimisation, through companies which build mines till venture capital companies which are more and more interested in allocating capital.

#### CESCO Chile – key takeaways

Among the most important topics one could find the following conclusions:

- Market fundamentals on the copper market; it is worth noting that some of the participating in the conference were not quite able to explain this relatively high price level on the copper market; there were voices that the factor that has the greatest impact on the price of copper is the value of the US dollar and the positioning of investors on the market;
- the application of copper in various industries;
- the role of (financial and corporate) risk in mining operations;
- new supply / mining projects, whose probability of implementation increases along with higher copper price - a significant increase in exploration activity is noticeable, nevertheless the number of mines that are currently being created seems to be insufficient to meet demand. At the moment the market is relatively balanced, information from the market indicates that there is no shortage of material. The market participants, however, are convinced (repeated for some time like a mantra) that in the coming years, due to the reduction of exploration expenditure, which was caused by the need to cut costs and lack of investment in recent years, access to material will be largely limited. With a stable level of demand, this implies the lack of sufficient supply and the imbalance in the market in the form of a deficit. An additional factor of uncertainty is China's limitation of the import of scrap from category 7, which is visible in commercial data from the Customs Chamber of the Middle Kingdom;
- barriers related to investing in mining projects with higher political risk;
- the potential of copper usage in electric cars; germinating electric car industry is a topic which continues to electrify market participants. Participants are not convinced of the material used in the batteries (currently various options and configurations of metals that could be used to produce batteries are considered, e.g. cobalt, nickel, manganese, lithium etc.), however, an

indisputable argument seems that the revolution in the automotive industry is happening and the infrastructure and installation in cars will be based on copper, which in the face of the reorganization of the Chinese economy towards a more service-based economy than industrial production and investment, ensures partial diversification of demand;

- social responsibility and different approaches to the subject in the mining industry.

### Other important information on copper market:

- Chilean-focused copper producer Antofagasta is exploring across the Americas, from Canada to Peru, as it seeks new supplies to meet demand that it predicts will stay strong despite worries over rising protectionism, the CEO said. Antofagasta's current production is all in Chile, but it has expanded into the United States with a new project in Minnesota and has drilled and looked at projects from Australia to Argentina. "Strategically we want to be more geographically focused in the Americas. That's the area we see as of prime interest," Chief Executive Ivan Arriagada said in an interview on the sidelines of the CRU/CESCO copper conference in Santiago on Tuesday. "Canada, the United States, Mexico and Latin America are all appealing jurisdictions for us to look into." Antofagasta wants to expand its geographic reach beyond Chile, the world's biggest copper producer that offers little now in the way of unexplored potential. But the company said its core will remain copper.
- Spot import offers for London Metal Exchange-registered brands of copper cathodes, basis delivered China main ports, inched up this week as buying interest picked up due to the cut in China's VAT, industry sources said Wednesday. The Chinese State Administration of Taxation announced April 4 that China's VAT would be revised to 16% and 10% from the current 17% and 11% respectively from May 1. S&P Global Platts widened the weekly CFR China copper premium assessment to \$70-\$80/mt Wednesday, from \$70-\$75/mt last week. Chinese market participants generally import copper when there are arbitrage opportunities, resulting in profits. An import-related profit occurs when the import cost of LME copper is lower than the SHFE price. Meanwhile, spot treatment and refining charges for imported copper concentrates for Chinese smelters were steady this week amid muted trade after the Qingming Festival over April 5-7, industry sources said. TC/RCs, the fees paid to smelters by mines for converting concentrates into refined copper, are a key source revenue for smelters. China produced 263,380 mt of copper concentrate over January-February, up 27.2% year on year, according to the China Nonferrous Metals Industry Association.
- Chilean copper commission Cochilco forecast on Friday that Chile would produce 5.76 million tonnes of the red metal in 2018, up 4.3 percent from 2017, while estimating copper prices at \$3.06 per pound this year. The projections follow a difficult year for the world's top copper producer in 2017, after workers at BHP's Escondida copper mine, the world's largest, walked off the job for a month and a half, putting a dent in Chile's economy and sending shockwaves through the market. Cochilco said numerous pending labor

negotiations at mines in Chile and Peru this year continue to unnerve the market and raise the specter of supply shortages, but added it was hopeful these would be resolved without issue. The agency said Chile's copper output would jump to 5.94 million tonnes in 2019 and it expects copper prices to rise to \$3.11 per pound next year.

## Precious Metals

**Concerns over escalating tensions in Syria, U.S. sanctions on Russia and the U.S.-China trade stand-off climbed the price to as much as 1360 USD/troz, but soon after the gold prices have been dragged by the U.S. dolar appreciation and political tensions ease. According to Silver Institute, global silver mine production has fallen by 4.1% mainly due to supply disruptions across the Americas.**

### Global silver mine production falls 4.1% in 2017

Silver mine production fell for the second consecutive year following a string of supply disruptions across the Americas, according to the latest data released by the Silver Institute and the GFMS team at Thomson Reuters. Guatemala stood out as one of the most affected countries with a 15.3 Moz (477 tons) drop in output year-on-year. Collectively, these disruptions caused the balance to contract by 4.1%, or 36.5 Moz (1,136 tons). A large portion of the drop was attributable to the primary silver and gold sectors, where production fell by a combined 29.4 Moz (915 tons). Of the key producing countries, Peru and China registered subtle drops, followed by more acute losses in Australia and Argentina. Offsetting the losses was higher output from Mexico led by a ramp-up and first complete year of operations at Fresnillo's San Julián mine. It is estimated that on a co-product accounting basis, Total Cash Cost + Capex at the global level stood at \$10.54/oz, down 5% from last year.

### Gold consumption down 5.44 pct for Q1 in China

China's gold consumption dropped 5.44% to 284.97 tonnes in the first quarter of this year due to a carryover effect and a sharp sales decline in gold bars, new data showed recently. In the first three months, gold bar sales plunged 27.58% year on year to 73.28 tonnes, according to data from the China Gold Association. Despite the decline, gold consumption still maintained at a relatively high level, said the association. Bucking the trend, consumption of gold jewelry went up 5.6% year on year to 180.5 tonnes, while that for gold coins rose 8% to 2.7 tonnes. Consumption for industrial and other use climbed 6.58% to 28.49 tonnes. In the first quarter, China's gold output went down 2.95% year on year to 98.22 tonnes, continuing the declining trend in 2017. Last year, China's gold output went down 6% to 426 tonnes, but it still retained its position as the world's biggest producer for the 11th consecutive year. China adopted rules in 2016 to raise environmental requirements on solid waste from gold prospecting, leading to a

wave of gold mine closures and output declines in the major producing provinces, including Shandong, Jiangxi, and Hunan.

## Global economies | Foreign exchange markets

### International Monetary Fund

**The IMF published April edition of World Economic Outlook, projecting further expansion above potential in advanced economies and increased growth of emerging markets until 2019 before next down-turn.**

**Positive broad-based GDP readings predicted to stay until 2019, but downturn is possible afterwards.**

Economic activity in 2017 ended on a high note - growth in the second half of the year was above 4 percent, the strongest since the second half of 2010, supported by a recovery in investment. Outcomes exceeded the October 2017 World Economic Outlook forecasts in the euro area, Japan, the United States, and China, and continued to improve gradually in commodity exporters. Financial conditions remain supportive, despite the recent volatility in equity markets and increases in bond yields following signs of firming inflation in advanced economies. With broad-based momentum and expectations of a sizable fiscal expansion in the United States over this year and the next, global growth is now projected at 3.9 percent for 2018–19, a 0.2 percentage point upgrade for both years relative to the October 2017 forecast. This positive momentum will eventually slow, however, leaving many countries with a challenging medium-term outlook. Some cyclical forces will wane: financial conditions are expected to tighten naturally with the closing of output gaps and monetary policy normalization; US tax reform will subtract momentum starting in 2020, and then more strongly as full investment expensing is phased out starting in 2023; and China's transition to lower growth is expected to resume as credit growth and fiscal stimulus diminish. At the same time, while the expected recovery in investment will help raise potential output, weak productivity trends and reduced labor force growth due to population aging constrain medium-term prospects in advanced economies. The outlook is mixed across emerging market and developing economies. Prospects remain favorable in emerging Asia and Europe, but are challenging in Latin America, the Middle East and sub-Saharan Africa, where despite some recovery the medium-term outlook for commodity exporters remains generally subdued, with a need for further economic diversification and adjustment to lower commodity prices.

**Mixed risks to the short-term outlook and more downside scenarios in mid-term.**

Risks around the short-term outlook are broadly balanced, but risks beyond the next several quarters are clearly to the downside. On the upside, the growth spurt in advanced economies may turn out to be stronger and more durable than in the baseline, as slack in labor markets can be larger than currently assessed. Furthermore, the ongoing recovery in investment could foster a rebound in productivity, implying higher potential growth going forward. On the downside, financial conditions - which remain easy despite the onset of monetary policy normalization - could tighten sharply and expose vulnerabilities that have accumulated over the years, with adverse repercussions for growth. In the United States, financial conditions could tighten faster than expected, triggered, for example, by an adjustment in market pricing of the future path of monetary policy or higher realized/expected wage and price inflation. Tighter financial

conditions in the United States would have spillovers to other economies, including through a reduction in capital flows to emerging markets. Very expansionary fiscal policy in the United States, at a time when the current account deficit is already larger than justified by fundamentals, combined with persistent excess current account surpluses in other countries, is projected to widen global imbalances. Anxiety about technological change and globalization is on the rise and, when combined with wider trade imbalances, could foster a shift toward inward-looking policies, disrupting trade and investment. Recent import restrictions announced by the United States, announced retaliatory actions by China, and potential retaliation by other countries raise concerns in this regard and threaten to damage global and domestic activity and sentiment. Similarly, changes in US tax policies are expected to exacerbate income polarization, which could affect the political climate for policy choices in the future. Climate change, geopolitical tensions, and cybersecurity breaches pose additional threats to the subdued medium-term global outlook.

#### **The time for reforms is now.**

The current juncture offers a window of opportunity to advance policies and reforms that safeguard the upswing and raise medium-term growth to the benefit of all. Below are key points of consideration:

- Strengthen the potential for higher and more inclusive growth - by implementing structural reforms and fiscal policies that raise productivity and enhance inclusiveness;
- Complete the recovery and build buffers - by adequate normalization of fiscal and monetary policies;
- Improve financial resilience - macro and micro-prudential policies can curb rising leverage and contain financial market risks;
- Improve convergence prospects for low-income developing countries;
- Foster cooperation - maintaining financial and regulatory reform momentum and preserving an open, multilateral trade system should take priority.

# Macroeconomic calendar

## Important macroeconomic data releases

Weight	Date	Event	For	Reading <sup>1</sup>	Previous	Consensus <sup>2</sup>	
<b>China</b>							
⊕⊕⊕⊕	11-Apr	Consumer inflation CPI (yoy)	Mar	2.1% ▼	2.9%	2.6%	☹
⊕⊕	11-Apr	Producer inflation PPI (yoy)	Mar	3.1% ▼	3.7%	3.3%	☹
⊕⊕	13-Apr	Trade balance (USD bn)‡	Mar	- 5.0 ▼	33.5	27.5	☹
⊕⊕	13-Apr	Exports (yoy)‡	Mar	-2.7% ▼	44.1%	11.8%	☹
⊕	13-Apr	New yuan loans (CNY bn)	Mar	1 120 ▲	839	1 176	☹
⊕⊕⊕⊕⊕	17-Apr	GDP (yoy)	1Q	6.8% -	6.8%	6.8%	⊕
⊕⊕⊕⊕⊕	17-Apr	GDP (sa, qoq)	1Q	1.4% ▼	1.6%	1.5%	☹
⊕⊕⊕⊕⊕	17-Apr	Reserve requirement ratio	Apr	16.0% ▼	17.0%	--	
⊕⊕⊕⊕	17-Apr	Industrial production (yoy)	Mar	6.0% ▼	6.2%	6.3%	☹
⊕⊕	17-Apr	Fixed assets investments (ytd, yoy)	Mar	7.5% ▼	7.9%	7.7%	☹
⊕	17-Apr	Retail sales (yoy)	Mar	10.1% ▲	9.4%	9.7%	☺
<b>Poland</b>							
⊕⊕⊕⊕⊕	11-Apr	NBP base rate decision	Apr	1.50% -	1.50%	1.50%	⊕
⊕⊕⊕⊕	13-Apr	Consumer inflation CPI (yoy) - final data	Mar	1.3% -	1.3%	--	
⊕⊕	13-Apr	Trade balance (EUR mn)‡	Feb	- 573 ▼	- 156	- 515	☹
⊕⊕	13-Apr	Exports (EUR mn)‡	Feb	16 271 ▼	17 046	16 700	☹
⊕⊕	13-Apr	Current account balance (EUR mn)‡	Feb	-1 017 ▼	2 072	- 355	☹
⊕⊕⊕⊕	16-Apr	Core CPI (excluding food and energy, yoy)	Mar	0.7% ▼	0.8%	0.8%	☹
⊕⊕	18-Apr	Average gross salary (yoy)	Mar	6.7% ▼	6.8%	6.5%	☺
⊕	18-Apr	Employment (yoy)	Mar	3.7% -	3.7%	3.7%	⊕
⊕⊕⊕⊕	19-Apr	Sold industrial production (yoy)	Mar	1.8% ▼	7.4%	3.0%	☹
⊕⊕	19-Apr	Producer inflation PPI (yoy)‡	Mar	0.3% ▲	-0.1%	0.0%	☺
<b>US</b>							
⊕⊕⊕⊕	11-Apr	Consumer inflation CPI (mom)	Mar	-0.1% ▼	0.2%	0.0%	☹
⊕⊕⊕⊕	11-Apr	Consumer inflation CPI (yoy)	Mar	2.4% ▲	2.2%	2.4%	⊕
⊕⊕	13-Apr	University of Michigan confidence index - preliminary data	Apr	97.8 ▼	101	100	☹
⊕⊕	16-Apr	Retail sales (excluding autos, mom)	Mar	0.2% -	0.2%	0.2%	⊕
⊕⊕⊕⊕	17-Apr	Industrial production (mom)‡	Mar	0.5% ▼	1.0%	0.3%	☺
⊕	17-Apr	Capacity utilization‡	Mar	78.0% ▲	77.7%	77.9%	☺
⊕⊕	19-Apr	Philadelphia Fed business outlook	Apr	23.2 ▲	22.3	21.0	☺
<b>Eurozone</b>							
⊕⊕⊕⊕	12-Apr	Industrial production (sa, mom)‡	Feb	-0.8% ▼	-0.6%	0.1%	☹
⊕⊕⊕⊕	12-Apr	Industrial production (wda, yoy)‡	Feb	2.9% ▼	3.7%	3.5%	☹
⊕	13-Apr	Trade balance (EUR mn)	Feb	18.9 ▲	3.3	--	
⊕	17-Apr	ZEW survey expectations	Apr	1.9 ▼	13.4	--	
⊕⊕⊕⊕	18-Apr	Consumer inflation CPI (yoy) - final data‡	Mar	1.3% ▲	1.1%	1.4%	☹
⊕⊕⊕⊕	18-Apr	Core CPI (yoy) - final data	Mar	1.0% -	1.0%	1.0%	⊕
⊕	20-Apr	Consumer confidence - estimation	Apr	0.4 ▲	0.1	- 0.1	☺
<b>Germany</b>							
⊕⊕⊕⊕	13-Apr	Harmonized consumer inflation HICP (yoy) - final data	Mar	1.5% -	1.5%	1.5%	⊕
⊕⊕⊕⊕	13-Apr	Consumer inflation CPI (yoy) - final data	Mar	1.6% -	1.6%	1.6%	⊕
<b>France</b>							
⊕⊕⊕⊕	10-Apr	Industrial production (yoy)‡	Feb	4.0% ▲	1.4%	4.3%	☹
⊕⊕⊕⊕	12-Apr	Harmonized consumer inflation HICP (yoy) - final data	Mar	1.7% -	1.7%	1.7%	⊕
⊕⊕⊕⊕	12-Apr	Consumer inflation CPI (yoy) - final data‡	Mar	1.6% -	1.6%	1.5%	☺



Weight	Date	Event	For	Reading <sup>1</sup>	Previous	Consensus <sup>2</sup>
<b>Italy</b>						
⊗⊗⊗⊗	10-Apr	Industrial production (wda, yoy)‡	Feb	2.5% ▼	4.4%	4.7% ◡
⊗⊗⊗⊗	17-Apr	Harmonized consumer inflation HICP (yoy) - final data	Mar	0.9% ▼	1.1%	1.1% ◡
<b>UK</b>						
⊗⊗⊗⊗	11-Apr	Industrial production (yoy)‡	Feb	2.2% ▲	1.2%	2.9% ◡
⊗⊗	17-Apr	Unemployment rate (ILO, 3-months)	Feb	4.2% ▼	4.3%	4.3% ◡
⊗⊗⊗⊗	18-Apr	Consumer inflation CPI (yoy)	Mar	2.5% ▼	2.7%	2.7% ◡
<b>Japan</b>						
⊗⊗⊗⊗	17-Apr	Industrial production (yoy) - final data‡	Feb	1.6% =	1.6%	--
⊗⊗⊗⊗	20-Apr	Consumer inflation CPI (yoy)	Mar	1.1% ▼	1.5%	1.1% ○
<b>Chile</b>						
⊗⊗⊗	09-Apr	Copper exports (USD mn)	Mar	3 223 ▲	3 214	--
<b>Canada</b>						
⊗⊗⊗⊗⊗	18-Apr	BoC base rate decision	Apr	1.25% =	1.25%	1.25% ○
⊗⊗⊗⊗	20-Apr	Consumer inflation CPI (yoy)	Mar	2.3% ▲	2.2%	2.4% ◡

<sup>1</sup> Reading difference to previous release: ▲ = higher than previous; ▼ = lower than previous; = = equal to previous.

<sup>2</sup> Reading difference to consensus: ▲ = higher than consensus; ◡ = lower than consensus; ○ = equal to consensus.

mom = month-on-month; yoy = year-on-year; qoq = quarter on quarter; ytd year-to-date; sa = seasonally adjusted; wda = working days adjusted; ‡ = previous data after revision.

Source: Bloomberg, KGHM

## Key market data

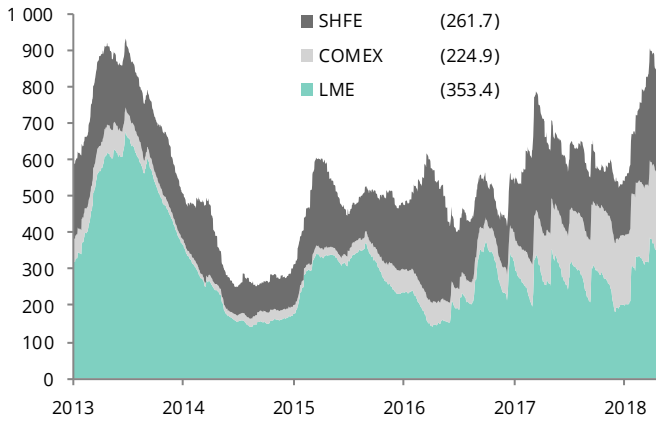
### Key base & precious metal prices, exchange rates and other important market factors

<i>(as of: 20-Apr-18)</i>		Price change <sup>1</sup>					From year beginning <sup>2</sup>		
	Price	2W	QTD	YTD	1Y	Average	Min	Max	
<b>LME (USD/t)</b>									
Copper	6 939.00	▲ 2.5%	▲ 3.8%	▼ -3.0%	▲ 23.7%	6 934.40	6 500.00	7 202.50	
Molybdenum	26 000.00	- 0.0%	- 0.0%	▲ 62.5%	▲ 70.5%	19 253.25	16 000.00	26 000.00	
Nickel	14 640.00	▲ 10.6%	▲ 10.5%	▲ 19.4%	▲ 56.1%	13 389.55	12 415.00	15 710.00	
Aluminum	2 463.00	▲ 16.6%	▲ 23.3%	▲ 9.9%	▲ 27.4%	2 173.42	1 967.00	2 602.50	
Tin	22 050.00	▲ 4.5%	▲ 4.4%	▲ 10.9%	▲ 10.8%	21 209.94	19 960.00	22 105.00	
Zinc	3 243.50	▲ 0.8%	▼ -2.7%	▼ -2.0%	▲ 24.5%	3 380.98	3 115.00	3 618.00	
Lead	2 366.00	▼ -1.3%	▼ -1.9%	▼ -5.2%	▲ 9.5%	2 494.45	2 329.00	2 683.00	
<b>LBMA (USD/troz)</b>									
Silver	17.11	▲ 4.7%	▲ 5.1%	▲ 1.5%	▼ -5.9%	16.74	16.25	17.52	
Gold <sup>2</sup>	1 336.75	▲ 0.4%	▲ 1.0%	▲ 3.1%	▲ 4.3%	1 331.29	1 307.75	1 354.95	
<b>LPPM (USD/troz)</b>									
Platinum <sup>2</sup>	933.00	▲ 1.1%	▼ -0.3%	▲ 0.6%	▼ -4.4%	968.73	911.00	1 020.00	
Palladium <sup>2</sup>	1 031.00	▲ 10.9%	▲ 6.3%	▼ -2.4%	▲ 29.8%	1 023.83	909.00	1 129.00	
<b>FX<sup>3</sup></b>									
EURUSD	1.2309	▲ 0.0%	▼ -0.1%	▲ 2.6%	▲ 14.6%	1.2298	1.1932	1.2493	
EURPLN	4.1724	▼ -0.6%	▼ -0.9%	▲ 0.0%	▼ -2.1%	4.1815	4.1423	4.2416	
USDPLN	3.3881	▼ -0.9%	▼ -0.8%	▼ -2.7%	▼ -14.4%	3.4000	3.3173	3.4999	
USDCAD	1.2728	▼ 0.0%	▼ -1.3%	▲ 1.5%	▼ -5.6%	1.2655	1.2288	1.3088	
USDCNY	6.2964	▼ -0.2%	▲ 0.3%	▼ -3.2%	▼ -8.5%	6.3461	6.2690	6.5297	
USDCLP	594.42	▼ -1.8%	▼ -1.5%	▼ -3.4%	▼ -8.2%	601.73	588.28	614.75	
<b>Money market</b>									
3m LIBOR USD	2.359	▲ 0.02	▲ 0.05	▲ 0.66	▲ 1.21	2.001	1.696	2.362	
3m EURIBOR	-0.328	▲ 0.00	- 0.00	▲ 0.00	▲ 0.00	-0.328	-0.329	-0.327	
3m WIBOR	1.700	- 0.00	- 0.00	▼ -0.02	▼ -0.03	1.713	1.700	1.720	
5y USD interest rate swap	2.918	▲ 0.19	▲ 0.21	▲ 0.67	▲ 1.03	2.660	2.283	2.918	
5y EUR interest rate swap	0.423	▲ 0.07	▲ 0.05	▲ 0.11	▲ 0.27	0.415	0.292	0.509	
5y PLN interest rate swap	2.355	▲ 0.02	▼ -0.02	▼ -0.15	▼ -0.01	2.491	2.280	2.740	
<b>Fuel</b>									
WTI Cushing	68.38	▲ 7.8%	▲ 5.3%	▲ 13.2%	▲ 36.0%	63.42	59.19	68.47	
Brent	73.63	▲ 7.4%	▲ 6.5%	▲ 10.2%	▲ 41.7%	67.72	62.33	73.91	
Diesel NY (ULSD)	213.18	▲ 6.5%	▲ 5.6%	▲ 3.3%	▲ 35.6%	199.33	183.32	213.18	
<b>Others</b>									
VIX	16.88	▼ -4.89	▼ -3.09	▲ 5.84	▲ 2.73	17.66	9.15	37.32	
BBG Commodity Index	89.85	▲ 2.1%	▲ 2.7%	▲ 1.9%	▲ 6.4%	88.27	85.64	90.80	
S&P500	2 670.14	▲ 2.2%	▲ 1.1%	▼ -0.1%	▲ 13.3%	2 717.62	2 581.00	2 872.87	
DAX	12 540.50	▲ 2.3%	▲ 3.7%	▼ -2.9%	▲ 4.3%	12 592.46	11 787.26	13 559.60	
Shanghai Composite	3 071.54	▼ -2.1%	▼ -3.1%	▼ -7.1%	▼ -3.2%	3 301.59	3 066.80	3 559.47	
WIG 20	2 298.20	▲ 1.6%	▲ 4.0%	▼ -6.6%	▲ 0.5%	2 403.48	2 200.99	2 630.37	
KGHM	95.72	▲ 7.5%	▲ 10.3%	▼ -13.9%	▼ -21.4%	103.37	84.20	115.00	

<sup>o</sup> change over: 2W = two weeks; QTD = quarter-to-day; YTD = year-to-date; 1Y = one year. <sup>1</sup> based on daily closing prices. <sup>2</sup> latest quoted price. <sup>3</sup> central banks' fixing rates (Bank of China HK for USD/CNY). <sup>4</sup>

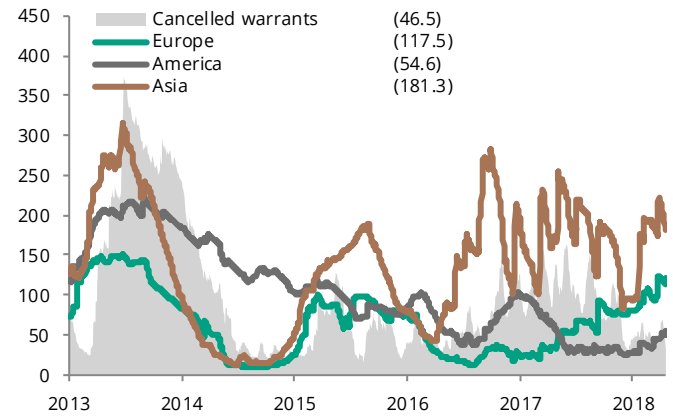
Source: Bloomberg, KGHM

**Copper: official exchange stocks (thousand tonnes)**



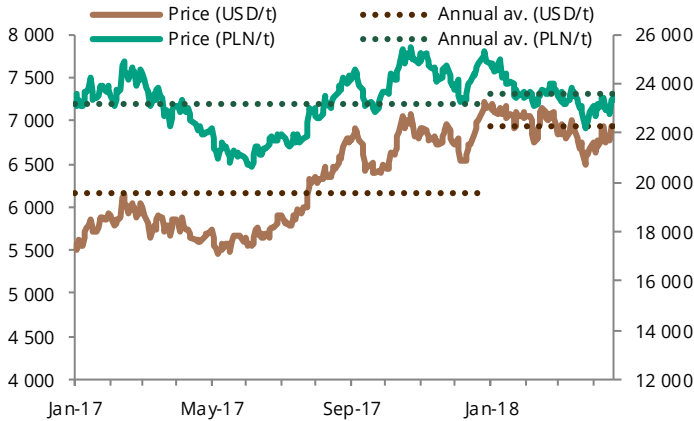
Note: Latest values in brackets. Source: Bloomberg, KGHM

**Copper: official LME stocks (thousand tonnes)**



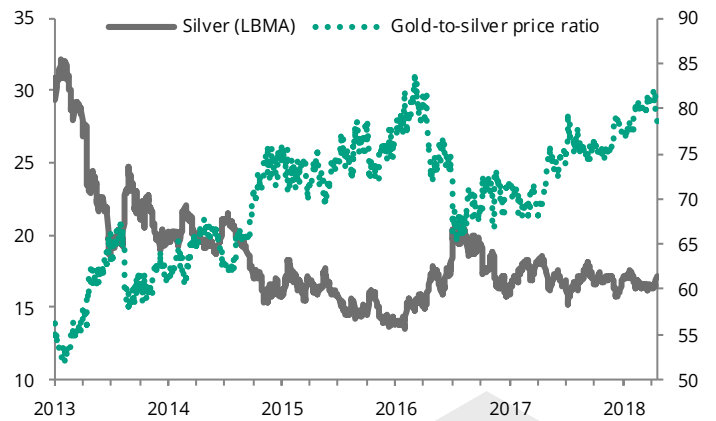
Note: Latest values in brackets. Source: Bloomberg, KGHM

**Copper: price in USD (lhs) and PLN (rhs) per tonne**



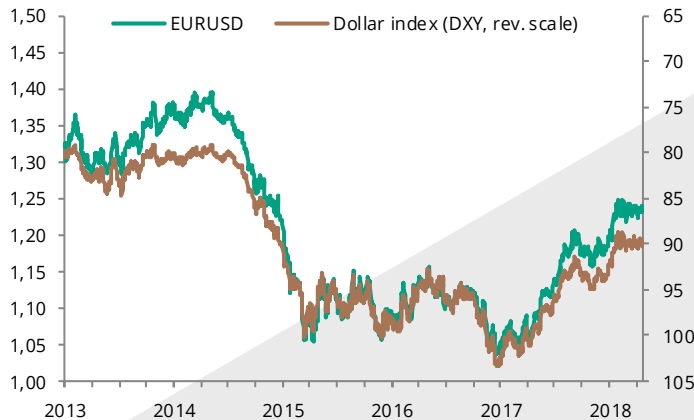
Source: Bloomberg, KGHM Polska Miedź

**Silver: price (lhs) and gold ratio (rhs)**



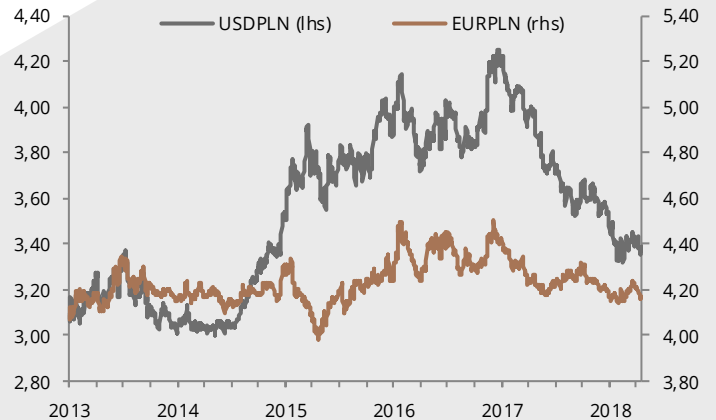
Source: Bloomberg, KGHM Polska Miedź

**USD: dollar index (lhs) and ECB-based EURUSD (rhs)**



Source: Bloomberg, KGHM Polska Miedź

**PLN: NBP-fixing based rate vs. USD (lhs) and EUR (rhs)**



Source: Bloomberg, KGHM Polska Miedź

## Legal note

This document has been prepared based on the below listed reports, among others, published in the following period:  
**9<sup>th</sup> – 22<sup>nd</sup> April 2018.**

- Barclays Capital, ▪ BofA Merrill Lynch, ▪ Citi Research, ▪ CRU Group, ▪ Deutsche Bank Markets Research,
- GavekalDragonomics, ▪ Goldman Sachs, ▪ JPMorgan, ▪ Macquarie Capital Research, ▪ Mitsui Bussan Commodities,
- Morgan Stanley Research, ▪ SMM Information & Technology.

Moreover, additional information published here was acquired in direct conversations with market dealers, from financial institution reports and from the following websites: ▪ thebulliondesk.com, ▪ lbma.org.uk, ▪ lme.co.uk, ▪ metalbulletin.com, ▪ nbp.pl, , also: Bloomberg and Thomson Reuters.

Official metals prices are available on following websites:

- base metals: [www.lme.com/dataprices\\_products.asp](http://www.lme.com/dataprices_products.asp) (charge-free logging)
- silver and gold: [www.lbma.org.uk/pricing-and-statistics](http://www.lbma.org.uk/pricing-and-statistics)
- platinum and palladium: [www.lppm.com/statistics.aspx](http://www.lppm.com/statistics.aspx)

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In case of questions or comments please contact us:

KGHM Polska Miedz (Polish Copper) S.A.

Departament Zarządzania Ryzykiem Rynkowym i Kredytowym (Market and Credit Risk Management Department)

Wydział Ryzyka Rynkowego (Market Risk Unit)

ul. M. Skłodowskiej-Curie 48

59-301 Lubin, Poland