

# Market Overview

- **Copper:** Dozens of businesses in Chile, including copper producers signed new contracts with Engie Energia Chile to buy some or all their electricity from renewable sources, taking advantage of the lower prices on offer and to improve their environmental reputation (page 2).
- **Precious metals:** Gold prices rose as the U.S. dollar softened and China raised tariffs on U.S. products, escalating global trade tensions. China imposed extra tariffs of up to 25% on 128 U.S. products including frozen pork and wine in response to U.S. duties on imports of aluminium and steel (page 5).
- **US sanctions:** Aluminum market swings after Sanctions imposed by U.S. on Russian oligarchs and officials. Commodity traders said to stop buying from Rusal (page 6).

**Gold to silver ratio is in the highest level since 2016, significantly above the long term average**



Source: Bloomberg, KGHM Polska Miedź

as of: 9<sup>th</sup> April 2018

## Key market prices

	Close price	2w chng.
<b>LME (USD/t)</b>		
▲ Copper	6 703.00	3.1%
▲ Nickel	12 890.00	0.4%
<b>LBMA (USD/troz)</b>		
▼ Silver	16.28	-2.0%
▼ Gold (PM)	1 331.20	-1.6%
<b>FX</b>		
▲ EURUSD	1.2234	1.8%
▲ EURPLN	4.1984	0.7%
▼ USDPLN	3.4315	-0.9%
▲ USDCAD	1.2764	1.8%
▼ USDCLP	602.71	-1.1%
<b>Stocks</b>		
▼ KGHM	89.86	-17.9%

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

## Important macroeconomic data

Release	For		
GDP (annlzd., qoq)	4Q	2.9%	▲
Official manuf. PMI	Mar	51.5	▲
Non-farm payrolls chng.	Mar	103	▼
Industrial prod. (yoy)	Feb	1.4%	▼
Copper production (mt)	Feb	455 995	▼

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

## Market Risk Unit

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## Base and precious metals | Other commodities

### Copper

**Dozens of businesses in Chile, including copper producers signed new contracts with Engie Energia Chile to buy some or all their electricity from renewable sources, taking advantage of the lower prices on offer and to improve their environmental reputation.**

#### Codelco and other Chile copper producers sign up for renewables

Some of Chile's largest copper producers have agreed to receive a significant part of the electricity for their operations in northern Chile from renewable sources. The copper producers signed new contracts with Engie Energia Chile, one of the country's largest electricity generators. State-owned copper producer Codelco and companies owned by mining giants Freeport-McMoRan and Glencore PLC have signed extensions to existing power supply agreements for around 410 megawatts that will now be based on renewable sources, rather than coal. Chile is the world's largest producer of copper, accounting for around 30 percent of global mine output, mostly from mines in the arid north of the country.

At the same time, the Atacama Desert's unparalleled levels of solar radiation have made it a hot spot for solar developers. In an April 2 statement, Engie said the contracts will help bring about the gradual decarbonization of Chile's energy supplies and the move towards renewables, in line with the country's commitments under the international Paris Accord on climate change and its national energy strategy.

The mining companies are the just latest to join Chile's renewables boom. More than 4,000 megawatts of renewable capacity, largely solar and wind, have been installed in Chile, forcing down long-term power prices from over US\$120/MWh five years ago to just above US\$30/MWh in the latest tender held last October. Dozens of businesses, including local subsidiaries of Nestle and Unilever, have signed up to buy some or all their electricity from renewable sources in recent years, taking advantage of the lower prices on offer and to improve their environmental reputation. Chile's giant mining industry—which consumes around one-third of the electricity generated in the country—has lagged, in part of because of the huge volumes involved.

Last month, Chile's state mining development company ENAMI signed a contract to buy all of the electricity used in its mineral processing plants and smelter from solar energy plants developed by Spain's Acciona. "This agreement is a milestone for the corporation as it marks the first step towards of aiming of decarbonizing our energy supply and at the same time takes advantage of the lower prices in this new scenario in the energy market," said Jose Robles, Codelco's vice president for productivity and costs, in the statement. Glencore, in a company statement, called the action "an important step for the companies involved, as it

**Mining companies are the just latest to join Chile's renewables boom**

**Chile's largest generators agreed not to build any new coal-fired power plants in the country and to begin planning for the closure of existing capacity**

aligns with the aims of providing long-term sustainability to the operations." It is buying electricity for its Altonorte metallurgical complex and the Lomas Bayas copper mine. In parallel to the new contracts, Engie announced it plans to close two 85 megawatt coal-fired generation units at its Tocopilla thermoelectric complex. These would be the first to close since Chile's four largest generators, including Engie, agreed with the government in January not to build any new coal-fired power plants in the country and to begin planning for the closure of their existing capacity.

Additionally, Daniel Malchuk, head of BHP's Minerals Americas division, spoke at opening ceremony for desalination plant at Escondida copper mine, that BHP will reduce fresh water use worldwide by 15% in next five years. Seawater use will significantly impact costs at Escondida, where copper grades have fallen 30% in past five years.

### **China's Jiangxi Copper posts fastest annual net profit growth in seven years**

Jiangxi Copper Co Ltd, one of China's biggest copper smelters, said on Wednesday its 2017 net profit more than doubled, growing at the fastest pace in seven years, mainly due to higher copper prices. The Nanchang-based company also aims to increase its copper output in 2018, though it will be monitoring the market due to the country's expected slower growth in key infrastructure sectors and rising inventories. Jiangxi Copper's net profit for 2017 came in at 1.60 billion yuan (\$254.34 million), up 104.6 percent from a revised 784.1 million yuan a year earlier, it said in a filing on the Shanghai stock exchange. Fourth-quarter profit came in at 23.4 million yuan, versus a loss of 201 million yuan a year ago.

The 2017 growth marked the strongest pace since 2010, when net profit was up by 109 percent. In January, it had said it expected its 2017 net profit to rise 100-130 percent. Revenues were up 1.35 percent to 205 billion yuan in 2017, Jiangxi Copper said.

Apart from rising metal prices, with the benchmark three-month copper prices on the London Metal Exchange climbing by over 30 percent in 2017, non-recurring items and provisions of assets impairment helped boost net profit, it said. "We expect copper prices to hover around highs in 2018 due to domestic property and infrastructure sectors experiencing easing growth, monetary policy remaining relatively tight and rising copper inventories," it said. Jiangxi Copper set its output for copper cathode at 1.42 million tonnes this year, up from 1.37 million tonnes in 2017, it said in its earnings report. The results announcement comes as Jiangxi Copper and nine other Chinese smelters are due to meet in Shanghai on Friday to set their floor treatment and refining charges (TC/RCs) for copper concentrate in the second quarter. Miners pay TC/RCs to the smelters to process their ore. The first-quarter TC floor was set at \$87 per tonne, while the RC floor was 8.7 cents per pound.

### Other important information on copper market:

- Chile's state copper company Codelco said on Thursday it produced 1.734 million tonnes of copper in 2017, its second highest output ever, despite persistently low ore grades at its aging mines. The world's top copper miner posted a 2017 pre-tax profit of \$2.885 billion, a six-fold increase over its earnings in 2016, even as production costs jumped 7.8 percent to \$1.359 per pound of copper. Codelco CEO Nelson Pizarro said a sharp increase in copper prices in 2017 assured a healthy profit despite only a 1.5 percent rise in production over the previous year. The company was nationalized in the 1970s and provided an important source of income to Chile. "Codelco greatly surpassed its commitments to the state," Pizarro said. Pizarro said he expected copper prices to be slightly under \$3 per pound for 2018, though he added that a looming global supply deficit could see prices increase in 2019. Codelco is striving to produce slightly more than 1.7 million tonnes of copper in 2018, Pizarro said, counter-balancing decreasing ore grades with a \$22 billion multi-year investment drive to open new projects and revamp older ones.
- China imported 847,635 mt of copper concentrate from Peru over January-February, up 7.8% year on year, according to data released by General Administration of Customs last week. Peru is China's top supplier for copper concentrate. The other suppliers were Chile (734,674 mt), Australia (224,709 mt), Mexico (210,746 mt), Mongolia (204,422 mt), Spain (143,067 mt), Kazakhstan (120,897 mt), Canada (95,740 mt), Iran (92,260 mt) and Indonesia (70,032 mt). Imports from these 10 countries totalled 2.74 million mt, representing 89.3% of China's total copper concentrate imports of 3.07 million mt during the period.
- Workers at Antofagasta PLC's Los Pelambres copper mine in Chile reached agreement on a new labour contract, defusing the risk of a strike, the union said on Monday. Workers in the mine's largest union had last week rejected an offer for a new labour contract, triggering a period of government mediation and raising the spectre of the first-ever strike at a mine owned by Chilean miner Antofagasta. The new contract, agreed upon by 82 percent of union members, includes a signing bonus of \$30,500 per worker, and an average salary increase of 3 percent. "After six months of negotiations, we've reached a satisfactory deal. All of the conditions and benefits we obtained are above market-average," said Sergio Munoz, president of Los Pelambres' largest union of workers.

## Precious Metals

**Gold prices rose as the U.S. dollar softened and China raised tariffs on U.S. products, escalating global trade tensions. China imposed extra tariffs of up to 25% on 128 U.S. products including frozen pork and wine in response to U.S. duties on imports of aluminium and steel.**

### Zimbabwe signs \$4.2 billion platinum deal to overhaul mining sector

**Zimbabwe opens up for investors; plans include building platinum mine**

In a bid to transform its mining sector, Zimbabwe has signed a \$4.2 billion deal with a Cypriot investor to develop a platinum mine and refinery in the country. Zimbabwe mines minister Winston Chitando who signed the agreement with Cyprus base Karo resources said work would start in July with the first output of platinum expected in 2020. The project is located in Mhondoro-Ngezi platinum belt, west of Harare will include a coal mine and a power station to produce electricity for the smelter and aims to employ 15,000 people when fully implemented. President Emmerson Mnangagwa lauded the move and said it was a sign that the country was open for business. Adding that the project was first mooted six years ago but held back by government red tape and other vested interests. The mine aims to reach an output of 1.4 million ounces per year within the next 3 years. Zimbabwe holds the world's second-largest platinum deposits but foreign investment had stalled during the latter years of former president Robert Mugabe's reign.

### Gold demand tipped to firm just 1% in 2018

**Gold demand is expected to increase by 1% in 2018, according to Metal Focus**

Gold demand will change little this year from 2017 levels as slim gains in physical investment and jewelry and industrial demand are partially offset by a drop in central bank buying to its lowest since 2010, according to an industry report. Global gold demand is seen at 3,969 tonnes in 2018, up 1% from last year's levels but some 10% below the average for the last five years, consultancy Metals Focus said in its Gold Focus 2018 report. "Physical investment is projected to grow by 4% this year. China will account for the largest share of gains, thanks to improving price expectations and a desire for safe-haven assets," it said. Central bank buying is expected to slip 6 percent to 350 tonnes, however, an eight-year low. "Net official sector purchases are forecast to decline slightly," it added. "We expect Russia and Turkey to maintain a similar pace of acquisitions to 2017. Excluding these two, net buying is likely to remain relatively low. The gold market surplus, which fell by a third last year, is expected to ease to 510 tonnes from 548 tonnes in 2017, it said. Prices are forecast to average \$1,345 an ounce, just 1 percent above last year's level. Investment in gold-backed exchange-traded funds is tipped to fall by a quarter to 150 tonnes this year, its lowest since 2015. Mine production is forecast to be broadly flat at 3,295 tonnes, Metals Focus said, while supply of recycled gold is expected to edge up 2 percent to 1,185 tonnes.

## Global economies | Foreign exchange markets

### US sanctions

**Aluminium market swings after Sanctions imposed by U.S. on Russian oligarchs and officials. Commodity traders said to stop buying from Rusal.**

**US sanctions are aimed at the oligarchs connected to President Putin**

The United States imposed major sanctions against 24 Russians, striking at allies of President Vladimir Putin in one of Washington's most aggressive moves to punish Moscow for what it called a range of "malign activity," including alleged meddling in the 2016 U.S. election. The action, taken under pressure from the U.S. Congress, freezes the U.S. assets of "oligarchs" such as aluminum tycoon Oleg Deripaska, a close associate of Putin, and lawmaker Suleiman Kerimov, whose family controls Russia's largest gold producer, Polyus. The sanctions are largely a reply to what U.S. intelligence agencies say was Russian interference in the presidential election, although the Treasury Department painted them as a response to a series of adversarial actions by Moscow. U.S. President Donald Trump has been under fire for not taking strong action against Russia after a series of diplomatic disputes reminiscent of the Cold War era.





**Trade ban influenced Rusal – world's major aluminium producer**

In the effect of sanctions, international trading houses have stopped buying aluminum from United Co. Rusal as U.S. sanctions on the Russian company sent shock waves through the market for the widely-used metal. Trading houses have been advised by their banks and lawyers that they can't continue trading with the Russian company, according to executives at five companies that regularly buy from Rusal, who spoke under condition of anonymity due to the sensitivity of the discussions. Rusal, the biggest aluminum supplier outside China, has also asked them to "immediately withhold all payments" to the company, according a copy of a letter sent by its head of marketing. The price of aluminum surged the most in more than two years on the London Metal Exchange. John Whittaker, a partner at law firm Clyde & Co LLP who advises commodity traders, compared the restrictions on Rusal with the U.S. sanctions against Iran that restricted oil exports from the country and helped lift global prices. Rusal and seven other firms linked to Oleg Deripaska were the most prominent targets in a list of 12 Russian companies the U.S. hit with sanctions on Friday intended to punish the country for actions in Crimea, Ukraine and Syria, and attempting to subvert Western democracies. Deripaska is Rusal's largest shareholder and a close associate of President Vladimir Putin. While the sanctions don't directly apply to non-U.S. companies, they are likely to have an effect anyway as international banks are wary of financing any transactions involving entities under U.S. sanctions. However, Rusal's aluminum remains deliverable on the London Metal Exchange and some trading house executives said they didn't expect any problems continuing to trade Rusal metal that they had already paid for and delivered. Many trading houses own large inventories of Rusal-produced aluminum that they have accumulated over time. Rusal produced 3.8 million metric tons of aluminum last year, making it the largest producer outside China, according to CRU Group. The single largest buyer of Rusal's aluminum is Glencore






Plc, which bought \$2.4 billion of metal from it last year. Glencore, which also owns an 8.75 percent stake in Rusal and has a seat on its board, has yet to comment on the sanctions. Meanwhile Rusal shares noted a heavy downfall of around 50 percent to HK\$2.32, according to the Hong Kong Exchanges & Clearing Ltd. website.

## Macroeconomic calendar

### Important macroeconomic data releases

Weight	Date	Event	For	Reading <sup>1</sup>	Previous	Consensus <sup>2</sup>
<b>China</b> 						
***	31-Mar	Official manufacturing PMI	Mar	51.5 ▲	50.3	50.6 ▲
***	02-Apr	Caixin's manufacturing PMI	Mar	51.0 ▼	51.6	51.7 ▼
*	08-Apr	Foreign reserves (USD bn)	Mar	3 143 ▲	3 134	3 146 ▼
<b>Poland</b> 						
***	03-Apr	Manufacturing PMI	Mar	53.7 -	53.7	53.0 ▲
****	04-Apr	Consumer inflation CPI (yoy) - preliminary data	Mar	1.3% ▼	1.4%	1.7% ▼
<b>US</b> 						
*	26-Mar	Dallas Fed manufacturing activity	Mar	21.4 ▼	37.2	33.5 ▼
*	27-Mar	Richmond Fed manufacturing index	Mar	15.0 ▼	28.0	22.0 ▼
*	27-Mar	S&P/CaseShiller home price index‡	Jan	205 ▲	204	--
*****	28-Mar	GDP (annualized, qoq) -	4Q	2.9% ▲	2.5%	2.7% ▲
****	29-Mar	Consumer spending inflation PCE (mom)	Feb	0.2% ▼	0.3%	0.2% ○
****	29-Mar	Consumer spending inflation PCE (yoy)	Feb	1.6% ▲	1.5%	1.6% ○
**	29-Mar	Personal income (sa, mom)	Feb	0.4% -	0.4%	0.4% ○
**	29-Mar	Personal spending (sa, mom)	Feb	0.2% -	0.2%	0.2% ○
**	29-Mar	University of Michigan confidence index - final data	Mar	101 ▼	102	102 ▼
***	02-Apr	Manufacturing PMI - final data	Mar	55.6 ▼	55.7	55.7 ▼
**	02-Apr	ISM Manufacturing	Mar	59.3 ▼	60.8	59.6 ▼
***	04-Apr	Composite PMI - final data	Mar	54.2 ▼	54.3	--
***	04-Apr	PMI services - final data	Mar	54.0 ▼	54.1	54.2 ▼
**	04-Apr	Durable goods orders - final data	Feb	3.0% ▼	3.1%	--
**	06-Apr	Change in non-farm payrolls (ths)‡	Mar	103 ▼	326	185 ▼
**	06-Apr	Underemployment rate (U6)	Mar	8.0% ▼	8.2%	--
**	06-Apr	Unemployment rate	Mar	4.1% -	4.1%	4.0% ▲
*	06-Apr	Average hourly earnings (yoy)	Mar	2.7% ▲	2.6%	2.7% ○
<b>Eurozone</b> 						
*	27-Mar	M3 money supply (yoy)‡	Feb	4.2% ▼	4.5%	4.6% ▼
*	27-Mar	Economic confidence‡	Mar	113 ▼	114	113 ▼
*	27-Mar	Industrial confidence	Mar	6.4 ▼	8.0	6.9 ▼
*	27-Mar	Consumer confidence - final data	Mar	0.1 -	0.1	0.1 ○
*	27-Mar	Business climate indicator	Mar	1.3 ▼	1.5	1.4 ▼
***	03-Apr	Manufacturing PMI - final data	Mar	56.6 -	56.6	56.6 ○
****	04-Apr	Core CPI (yoy) - estimation	Mar	1.0% -	1.0%	1.1% ▼
****	04-Apr	CPI estimate (yoy)‡	Mar	1.4% ▲	1.1%	1.4% ○
**	04-Apr	Unemployment rate	Feb	8.5% ▼	8.6%	8.5% ○
***	05-Apr	Composite PMI - final data	Mar	55.2 ▼	55.3	55.3 ▼
***	05-Apr	Services PMI - final data	Mar	54.9 ▼	55.0	55.0 ▼
**	05-Apr	Retail sales (yoy)‡	Feb	1.8% ▲	1.5%	2.2% ▼
**	05-Apr	Producer inflation PPI (yoy)‡	Feb	1.6% -	1.6%	1.5% ▲



Weight	Date	Event	For	Reading <sup>1</sup>	Previous	Consensus <sup>2</sup>
<b>Germany</b> 						
☉☉	28-Mar	GfK consumer confidence	Apr	10.9 ▲	10.8	10.7 ▲
☉☉☉☉	29-Mar	Harmonized consumer inflation HICP (yoy) - preliminary data	Mar	1.5% ▲	1.2%	1.6% ▼
☉☉☉☉	29-Mar	Consumer inflation CPI (yoy) - preliminary data	Mar	1.6% ▲	1.4%	1.7% ▼
☉☉	29-Mar	Unemployment rate	Mar	5.3% ▼	5.4%	5.3% ○
☉☉☉	03-Apr	Manufacturing PMI - final data	Mar	58.2 ▼	58.4	58.4 ▼
☉☉☉	03-Apr	Retail sales (yoy)‡	Feb	1.3% ▼	2.5%	2.4% ▼
☉☉☉	05-Apr	Composite PMI - final data	Mar	55.1 ▼	55.4	55.4 ▼
☉☉☉	05-Apr	Factory orders (wda, yoy)‡	Feb	3.5% ▼	8.6%	6.5% ▼
☉☉☉☉	06-Apr	Industrial production (wda, yoy)‡	Feb	2.6% ▼	6.3%	4.4% ▼
<b>France</b> 						
☉☉☉☉☉	26-Mar	GDP (yoy) - final data	4Q	2.5% -	2.5%	2.5% ○
☉☉☉☉☉	26-Mar	GDP (qoq) - final data	4Q	0.7% ▲	0.6%	0.6% ▲
☉☉☉☉	30-Mar	Harmonized consumer inflation HICP (yoy) - preliminary data	Mar	1.7% ▲	1.3%	1.5% ▲
☉☉☉☉	30-Mar	Consumer inflation CPI (yoy) - preliminary data	Mar	1.5% ▲	1.2%	1.4% ▲
☉☉☉	03-Apr	Manufacturing PMI - final data	Mar	53.7 ▲	53.6	53.6 ▲
☉☉☉	05-Apr	Composite PMI - final data	Mar	56.3 ▲	56.2	56.2 ▲
<b>Italy</b> 						
☉☉☉☉	30-Mar	Harmonized consumer inflation HICP (yoy) - preliminary data	Mar	1.1% ▲	0.5%	0.8% ▲
☉☉☉	03-Apr	Manufacturing PMI	Mar	55.1 ▼	56.8	55.5 ▼
☉☉	04-Apr	Unemployment rate - preliminary data	Feb	10.9% ▼	11.1%	11.0% ▼
☉☉☉	05-Apr	Composite PMI	Mar	53.5 ▼	56.0	54.9 ▼
<b>UK</b> 						
☉☉☉☉☉	29-Mar	GDP (yoy) - final data	4Q	1.4% -	1.4%	1.4% ○
☉☉☉☉☉	29-Mar	GDP (qoq) - final data	4Q	0.4% -	0.4%	0.4% ○
☉☉☉	03-Apr	Manufacturing PMI (sa)‡	Mar	55.1 ▲	55.0	54.7 ▲
☉☉☉	05-Apr	Composite PMI	Mar	52.5 ▼	54.5	54.0 ▼
<b>Japan</b> 						
☉☉☉☉	30-Mar	Industrial production (yoy) - preliminary data	Feb	1.4% ▼	2.5%	2.3% ▼
☉☉☉	02-Apr	Manufacturing PMI - final data	Mar	53.1 ▼	53.2	--
☉☉☉	04-Apr	Composite PMI	Mar	51.3 ▼	52.2	--
<b>Chile</b> 						
☉☉☉	29-Mar	Total copper production (metric tons)	Feb	455 995 ▼	503 840	--
☉☉☉	29-Mar	Manufacturing (yoy)	Feb	3.7% ▼	5.7%	5.9% ▼
☉☉☉☉	05-Apr	Economic activity (yoy)‡	Feb	4.0% ▲	3.5%	4.5% ▼
☉☉	05-Apr	Nominal wages (yoy)	Feb	3.7% ▼	3.9%	4.1% ▼

<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

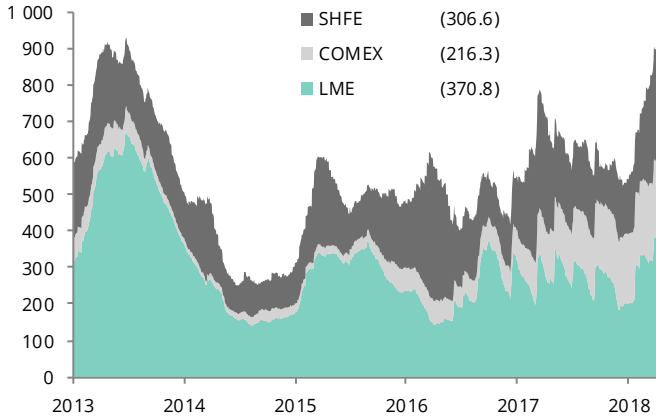
### Key base & precious metal prices, exchange rates and other important market factors

<i>(as of: 06-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	6 703.00	▲ 3.1%	▲ 0.3%	▼ -6.3%	▲ 14.2%	6 945.74	6 500.00	7 202.50	
Molybdenum	26 000.00	▲ 4.0%	- 0.0%	▲ 62.5%	▲ 70.5%	18 246.27	16 000.00	26 000.00	
Nickel	12 890.00	▲ 0.4%	▼ -2.7%	▲ 5.1%	▲ 24.9%	13 271.19	12 415.00	14 150.00	
Aluminum	1 967.00	▼ -2.7%	▼ -1.5%	▼ -12.2%	▲ 0.6%	2 148.40	1 967.00	2 266.00	
Tin	21 050.00	▲ 0.5%	▼ -0.4%	▲ 5.9%	▲ 3.4%	21 185.07	19 960.00	22 105.00	
Zinc	3 222.00	▼ -1.0%	▼ -3.3%	▼ -2.6%	▲ 16.0%	3 410.65	3 215.00	3 618.00	
Lead	2 358.50	▼ -0.3%	▼ -2.2%	▼ -5.5%	▲ 1.3%	2 514.19	2 345.50	2 683.00	
<b>LBMA (USD/troz)</b>									
Silver	16.28	▼ -2.0%	▼ 0.0%	▼ -3.5%	▼ -10.7%	16.75	16.25	17.52	
Gold <sup>2</sup>	1 331.20	▼ -1.6%	▲ 0.6%	▲ 2.7%	▲ 6.3%	1 329.47	1 307.75	1 354.95	
<b>LPPM (USD/troz)</b>									
Platinum <sup>2</sup>	911.00	▼ -4.1%	▼ -2.7%	▼ -1.7%	▼ -4.6%	974.23	911.00	1 020.00	
Palladium <sup>2</sup>	909.00	▼ -6.9%	▼ -6.3%	▼ -13.9%	▲ 13.2%	1 029.12	909.00	1 129.00	
<b>FX<sup>3</sup></b>									
EURUSD	1.2234	▼ -1.4%	▼ -0.7%	▲ 2.0%	▲ 14.7%	1.2291	1.1932	1.2493	
EURPLN	4.1984	▼ -0.8%	▼ -0.2%	▲ 0.7%	▼ -1.0%	4.1821	4.1423	4.2416	
USDPLN	3.4315	▲ 0.5%	▲ 0.5%	▼ -1.4%	▼ -13.8%	3.4023	3.3173	3.4999	
USDCAD	1.2764	▼ -0.9%	▼ -1.0%	▲ 1.7%	▼ -4.9%	1.2659	1.2288	1.3088	
USDCNY	6.3033	▲ 0.5%	▲ 0.4%	▼ -3.1%	▼ -8.6%	6.3561	6.2730	6.5297	
USDCLP	602.71	▼ -0.9%	▼ -0.1%	▼ -2.0%	▼ -8.4%	602.22	588.28	614.75	
<b>Money market</b>									
3m LIBOR USD	2.337	▲ 0.04	▲ 0.03	▲ 0.64	▲ 1.18	1.949	1.696	2.337	
3m EURIBOR	-0.329	- 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	1.715	1.700	1.720	
5y USD interest rate swap	2.727	▼ -0.06	▲ 0.02	▲ 0.48	▲ 0.75	2.638	2.283	2.841	
5y EUR interest rate swap	0.366	▼ -0.04	▼ 0.00	▲ 0.05	▲ 0.21	0.420	0.292	0.509	
5y PLN interest rate swap	2.350	▼ -0.04	▼ -0.02	▼ -0.15	▼ -0.01	2.516	2.350	2.740	
<b>Fuel</b>									
WTI Cushing	62.06	▼ -5.3%	▼ -4.4%	▲ 2.7%	▲ 20.0%	62.91	59.19	66.14	
Brent	66.78	▼ -4.0%	▼ -3.4%	▼ -0.1%	▲ 23.5%	67.08	62.33	70.42	
Diesel NY (ULSD)	195.90	▼ -2.7%	▼ -2.9%	▼ -5.1%	▲ 21.8%	197.94	183.32	212.60	
<b>Others</b>									
VIX	21.49	▲ 0.46	▲ 1.52	▲ 10.45	▲ 9.10	17.63	9.15	37.32	
BBG Commodity Index	86.94	▼ -0.4%	▼ -0.6%	▼ -1.4%	▲ 1.4%	88.12	85.64	90.80	
S&P500	2 604.47	▼ -2.0%	▼ -1.4%	▼ -2.6%	▲ 10.5%	2 725.01	2 581.00	2 872.87	
DAX	12 241.27	▲ 3.9%	▲ 1.2%	▼ -5.2%	▲ 0.1%	12 613.93	11 787.26	13 559.60	
Shanghai Composite	3 131.11	▼ -0.1%	▼ -1.2%	▼ -5.3%	▼ -4.6%	3 328.73	3 122.29	3 559.47	
WIG 20	2 258.80	▲ 0.8%	▲ 2.2%	▼ -8.2%	▲ 0.2%	2 419.58	2 200.99	2 630.37	
KGHM	89.86	▲ 3.4%	▲ 3.5%	▼ -19.2%	▼ -30.2%	104.95	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>

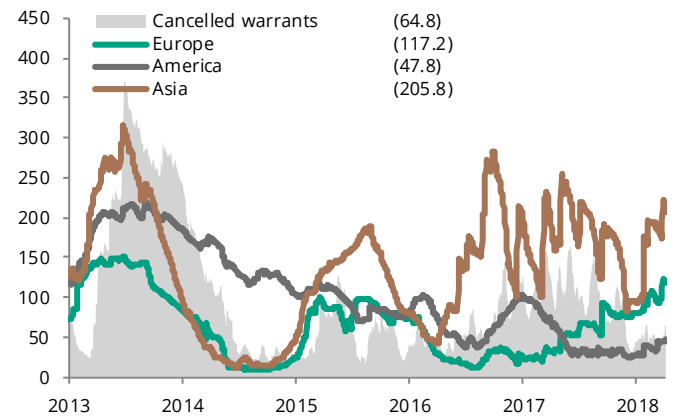
Source: Bloomberg, KGHM

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



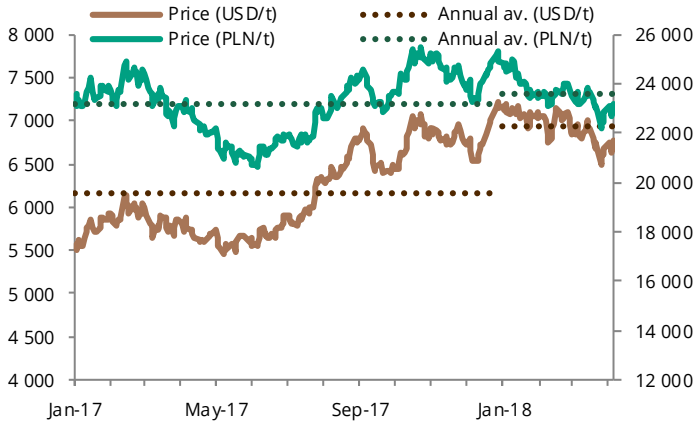
Note: Latest values in brackets. Source: Bloomberg, KGHM

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



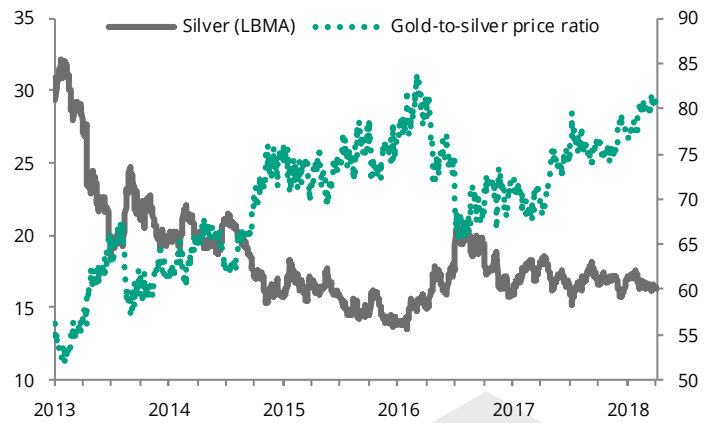
Note: Latest values in brackets. Source: Bloomberg, KGHM

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



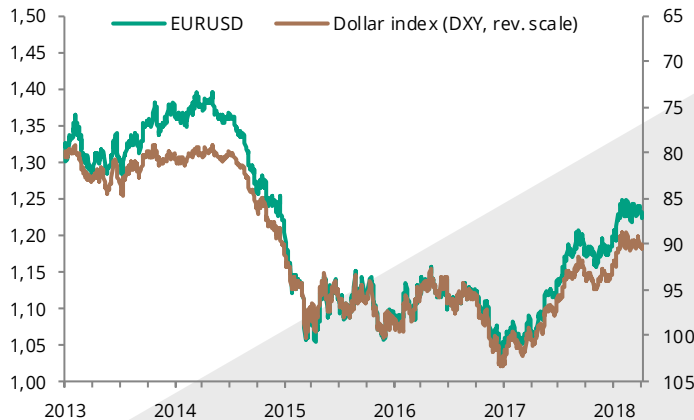
Source: Bloomberg, KGHM Polska Miedź

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



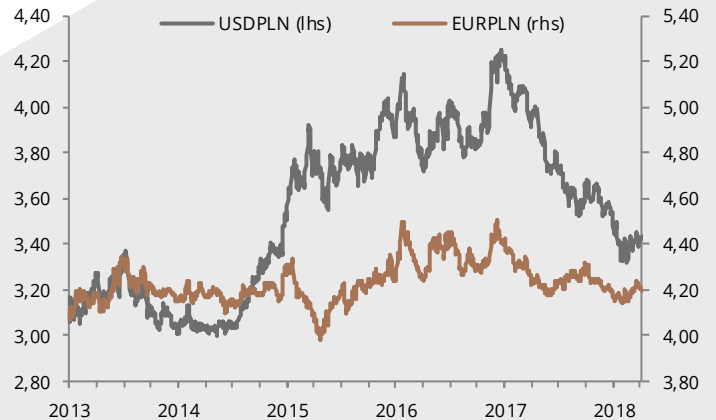
Source: Bloomberg, KGHM Polska Miedź

**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:  
**26<sup>th</sup> March – 8<sup>th</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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