

# Market Overview

as of: 2<sup>nd</sup> July 2018

- **Copper:** In the recent weeks KGHM Market Risk team has discussed the shape of commodities market as well as macroeconomic situation. Top market analysts were covering – among other industrial and precious metals markets – copper, nickel and molybdenum (*page 2*).
- **Precious metals:** Gold demand improved recently in India as prices fell to their lowest level in nearly three months, while demand elsewhere in Asia remained tepid as investors waited for prices to fall further (*page 4*).
- **Global trade wars:** Fears of a trade war that could harm global growth spurred sales of the Chinese yuan, which fell to a five-month trough in the offshore market, as well as commodity-linked and emerging market currencies (*page 5*).

## Key market prices

	Close price	2w chng.
<b>LME (USD/t)</b>		
▼ Copper	6 646.00	-4.9%
▼ Nickel	14 910.00	-0.4%
<b>LBMA (USD/troz)</b>		
▼ Silver	16.03	-3.5%
▼ Gold (PM)	1 250.45	-2.4%
<b>FX</b>		
▲ EURUSD	1.1658	0.4%
▲ EURPLN	4.3616	1.7%
▲ USDPLN	3.7440	1.2%
▼ USDCAD	1.3168	-0.3%
▲ USDCLP	647.95	1.8%
<b>Stocks</b>		
▲ KGHM	88.00	1.1%

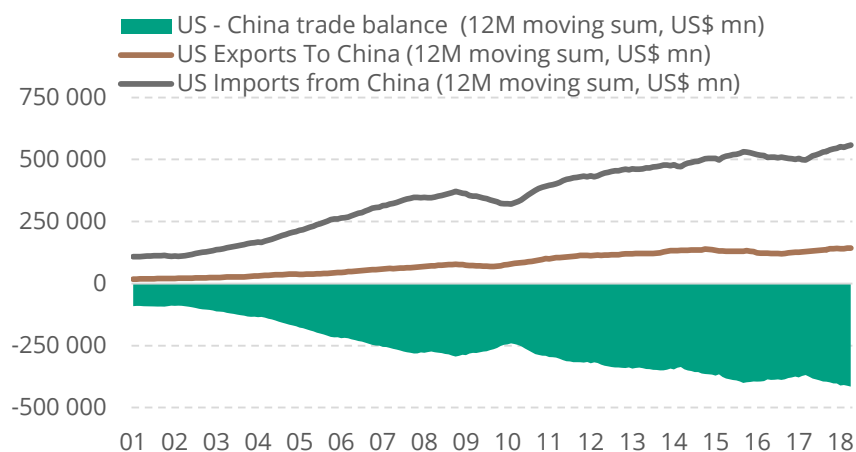
Source: Bloomberg, KGHM Polska Miedź; (*more on page 8*)

## Important macroeconomic data

Release	For		
 CPI estimate (yoy)	Jun	2.0%	▲
 Retail sales (yoy)	May	7.6%	▲
 PCE inflation (yoy)	May	2.0%	▲
 Reserve req. ratio	Jun	15.5%	▼
 Copper production (mt)	May	498 423	▲

Source: Bloomberg, KGHM Polska Miedź; (*more on page 6*)

## The trade balance between USA and China has deteriorated significantly in the recent years



Source: Bloomberg, KGHM Polska Miedź

## Market Risk Unit

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## Base and precious metals | Other commodities

### Copper

In the recent weeks KGHM Market Risk team has discussed the shape of commodities market as well as macroeconomic situation. Top market analysts were covering – among other industrial and precious metals markets – copper, nickel and molybdenum.

#### Notes from meetings with analysts

The interviews performed by KGHM Market Risk team with key commodities market analysts showed generally positive outlook for metals. However, most of them pointed out that it is rather macroeconomic situation (which is difficult to assess) has been recently driving the market rather than fundamentals. Most of recent price fluctuations could be explained by USD movement, which recently received some safe heaven flows, but it's future remains unclear. The key issue remain future shape of Chinese economy, but new key risk appeared – trade war escalation.

According to analysts copper market will remain relatively balanced in short term, with China playing pivotal role on the demand side with slowing, but still relatively strong growth in the upcoming years. Key risk to that scenario – significant strikes in BHP's and Codelco's mines – analysts assessed as having relatively low probability, with general opinion that these companies should be more conciliatory because of relatively high copper prices. However, situation looks quite different in the medium to long-term, where analysts were pointing out the lack of new copper projects which would lead to deficit on the market. This scenario could not materialize though once metal prices remain at current prices for further two or three years, which would be enough time for miners to pay back remaining debts, accumulate cash and decide upon extending capex expenditures. Other important risk to that scenario are significant China slowdown and/or potential U.S. recession. Analysts though also sees some significant chances in long-term, but impact of some of them, like potential demand from EV sector or projects like One Belt One Road are difficult to estimate. Some analysts were also pointing out toward growing importance of copper scrap, which marginal curve is so stiff that even small difference of copper price was reflected by large reaction of material inflow.

**Metals market lately remains mostly macro-driven**

**Electric vehicles development will positively impact nickel market**

Potential EV revolution could have significant impact also on nickel market, where new batteries technology could significantly boost demand for high quality nickel in longer-term, especially because – according to analysts – limitation of potential for new production outside the nickel pig-iron sphere. In a short term analysts are pointing towards large stocks overhang as a main barrier against further price increases.

Worse news come from molybdenum market, where analysts see further price increase in short term to be very limited by increasing production in primary

Chinese mines, despite oil price recovery. In medium to long term growth of stainless steel production (from which comes 25% of molybdenum demand) is likely to flatten, which wouldn't support the price either. Situation looks quite different in long-term, where EVs light structure may require some new alloys with high molybdenum content.

### **Codelco Gets \$1 Billion Funding for Projects**

Chile just delivered some good news for Codelco bondholders – and long-term copper bears. The world's largest producer will get \$1 billion from the government to help fund investments that aim to avoid a slump in production at its aging operations. That compares with the \$633 million-plus that Chief Executive Officer Nelson Pizarro said he'd need this year, easing concern that the company would have to rely more on debt markets. "This is a show of support for Codelco's ambitious investment program," Finance Minister Felipe Larrain told reporters Friday. "If Codelco doesn't invest, there will be an exhaustion of mines and production -- not in a few decades, but in a few years." Codelco's project budget through 2022 stands at \$21 billion. It's looking to get that work done without increasing debt, which rose sharply during President Sebastian Pinera's last term in office and remains at about \$15 billion. At the same time, the government has pledged to save \$1.2 billion a year over the next four years to narrow the fiscal deficit and restore the country's credit rating. The funds, which come directly from the state rather than reinvested profit, will allow Codelco to keep its credit rating and continue with its investment program, he said. About half of the money will be transferred now.

### **Other important information on copper market:**

- The global world refined copper market showed a 55,000 tonnes surplus in March, compared with a 87,000 tonnes surplus in February, the International Copper Study Group (ICSG) said in its latest monthly bulletin. For the first 3 months of the year, the market was in a 153,000 tonnes surplus compared with a 84,000 tonnes surplus in the same period a year earlier, the ICSG said. World refined copper output in March was 2.03 million tonnes, while consumption was 1.97 million tonnes. Bonded stocks of copper in China showed a 48,000 tonnes surplus in March compared with a 90,000 tonnes surplus in February.
- Peruvian export volumes of copper, zinc, silver and molybdenum all gained in April, while gold, lead and tin shipments fell, the government said Monday. Copper shipments were up 10.4% to 219,500 mt from 198,800 mt a year earlier, spurring export revenue by 48% to \$1.38 billion as prices jumped 33.8% to \$2.85/lb from \$2.13/lb, the bank said. Zinc shipments increased by 46.2% to 103,900 mt from 71,100 mt a year earlier, while silver gained 24.6% to 600,000 oz from 500,000 oz. Molybdenum shipments gained 11.5% to 1,900 mt from 1,400 mt. Gold exports fell 9.6% to 455,400 oz from 503,800 oz a year ago. Lead slid 1.2% to 57,800 mt from 58,500 mt. Tin shipments from Minsur's San Rafael mine dropped 6.7% to 1,600 mt from 1,800 mt.

- BHP and the union representing workers at its Escondida copper mine in Chile have reached consensus on 18 “basic” points in the first week of wage talks, according to the union’s internal communication to members. The union is looking to clear as many points as possible in order to focus on the issues that matter most to workers. Agreements were reached on points such as: Definitions of concepts at the beginning of the contract; Holiday and seniority bonuses; Public and Christmas holidays. Eight basic points remain open to discussion, including medical coverage. The company also wants to discuss the definition of which workers will come under the contract, according to the union. The current contract expires July 31.

## Precious Metals

**Gold demand improved recently in India as prices fell to their lowest level in nearly three months, while demand elsewhere in Asia remained tepid as investors waited for prices to fall further.**

### Platinum jewellery recycling falls 5% to 20.5 tons

Platinum jewellery recycling weakened by 5 percent in 2017 to 0.66 million ounce (20.5 tons), the lowest level since 2009, according to GFMS Platinum Group Metals Survey 2018. Weaker platinum prices were largely to blame, reducing the incentive to sell back old jewellery.

The biggest falls were seen in Japan and China which retreated 7% and 4% respectively although most markets saw a decline last year with the exception of North America, which inched 2% higher, and Other Regions category, which recorded a double-digit increase, albeit from a very low base. Despite an uptick in autocatalyst recycling and resilient mine production, platinum supply was tempered by a falling jewellery scrap, leaving total supply almost unchanged in 2017.

On the demand side offtake was slightly weaker as stronger industrial demand was more than offset by falls in jewellery and retail investment, leaving the overall market in a physical deficit for the fourth consecutive year at 0.05 Moz (1.6 t).

## Global economies | Foreign exchange markets

### Global tensions mount as the risk of potential trade war rises





**Fears of a trade war that could harm global growth spurred sales of the Chinese yuan, which fell to a five-month trough in the offshore market, as well as commodity-linked and emerging market currencies.**

The world's two biggest economies threatened punishing tariffs in the opening shots of a trade war, with Beijing vowing to retaliate "forcefully" against President Donald Trump's pledge to slap duties on another \$200 billion in Chinese imports. Global stocks declined amid little sign of negotiations to resolve the dispute. Donald Trump would like to revamp the trade exchange between US and China, as the practice which has been going on in the last 25 year is unfair according to the US president. In addition to that, Trump ordered up identification of \$200 billion in Chinese imports for additional tariffs of 10% - with another \$200 billion after that if Beijing retaliates. While the \$50 billion in tariffs already announced on Friday were mainly on industrial goods, the broader move would push up prices for toys, tools, t-shirts and a lot more for U.S. shoppers. China promised to retaliate and will have to take comprehensive quantitative and qualitative measures, according to a statement from the Chinese Ministry of Commerce. By targeting goods that are finished in China but whose components are often sourced from neighboring South Korea, Japan and Taiwan and more, the U.S. strategy could hurt the economies of America's allies too.

The European Union's retaliatory tariffs on U.S. products came into force on Friday, the latest shots fired in what increasingly looks like a global trade war. The EU, the world's largest trading bloc, imposed levies on 2.8 billion euros (\$3.3 billion) of American products in response to U.S. duties on its steel and aluminum exports that were justified on national security grounds. The European reaction opens up another front in Washington's battle to reshape its commercial relationship with the world. What is more, U.S. President Donald Trump threatened to impose a 20% tariff on all European Union-assembled cars coming into the United States, a month after the administration launched an investigation into whether auto imports pose a national security threat.

## Macroeconomic calendar

### Important macroeconomic data releases

Weight	Date	Event	For	Reading <sup>1</sup>	Previous	Consensus <sup>2</sup>	
<b>China</b> 							
☆☆☆☆☆	24-Jun	Reserve requirement ratio	Jun	15.5% ▼	16.0%	--	
☆☆	27-Jun	Industrial profits (yoy)	May	21.1% ▼	21.9%	--	
☆☆☆	30-Jun	Official manufacturing PMI	Jun	51.5 ▼	51.9	51.6	🔴
<b>Poland</b> 							
☆☆	18-Jun	Average gross salary (yoy)	May	7.0% ▼	7.8%	7.1%	🔴
☆	18-Jun	Employment (yoy)	May	3.7% -	3.7%	3.8%	🔴
☆☆☆☆☆	19-Jun	Sold industrial production (yoy)	May	5.4% ▼	9.3%	3.6%	🟢
☆☆	19-Jun	Producer inflation PPI (yoy)‡	May	2.8% ▲	1.0%	2.7%	🟢
☆☆☆	21-Jun	Retail sales (yoy)	May	7.6% ▲	4.6%	7.4%	🟢
☆	22-Jun	M3 money supply (yoy)‡	May	6.6% ▲	5.7%	5.9%	🟢
☆☆	25-Jun	Unemployment rate	May	6.1% ▼	6.3%	6.1%	🟡
<b>US</b> 							
☆☆	21-Jun	Philadelphia Fed business outlook	Jun	19.9 ▼	34.4	29.0	🔴
☆☆☆	22-Jun	Composite PMI - preliminary data	Jun	56.0 ▼	56.6	--	
☆☆☆	22-Jun	Manufacturing PMI - preliminary data	Jun	--	56.4	56.1	
☆☆☆	22-Jun	PMI services - preliminary data	Jun	56.5 ▼	56.8	56.5	🟡
☆	25-Jun	Dallas Fed manufacturing activity	Jun	36.5 ▲	26.8	24.9	🟢
☆	26-Jun	Richmond Fed manufacturing index	Jun	20.0 ▲	16.0	15.0	🟢
☆	26-Jun	S&P/CaseShiller home price index‡	Apr	210 ▲	209	--	
☆☆	27-Jun	Durable goods orders - preliminary data‡	May	-0.6% ▲	-1.0%	-1.0%	🟢
☆☆☆☆☆	28-Jun	GDP (annualized, qoq) -	1Q	2.0% ▼	2.2%	2.2%	🔴
☆☆☆☆	29-Jun	Consumer spending inflation PCE (mom)	May	0.2% -	0.2%	0.2%	🟡
☆☆☆☆	29-Jun	Consumer spending inflation PCE (yoy)	May	2.0% ▲	1.8%	1.9%	🟢
☆☆	29-Jun	Personal income (sa, mom)‡	May	0.4% ▲	0.2%	0.4%	🟡
☆☆	29-Jun	Personal spending (sa, mom)‡	May	0.2% ▼	0.5%	0.4%	🔴
☆☆	29-Jun	University of Michigan confidence index - final data	Jun	98.2 ▼	99.3	99.0	🔴
<b>Eurozone</b> 							
☆	21-Jun	Consumer confidence - estimation	Jun	-0.5 ▼	0.2	0.0	🔴
☆☆☆	22-Jun	Composite PMI - preliminary data	Jun	54.8 ▲	54.1	53.9	🟢
☆☆☆	22-Jun	Manufacturing PMI - preliminary data	Jun	--	55.5	55.0	
☆☆☆	22-Jun	Services PMI - preliminary data	Jun	55.0 ▲	53.8	53.8	🟢
☆	27-Jun	M3 money supply (yoy)‡	May	4.0% ▲	3.8%	3.8%	🟢
☆	28-Jun	Economic confidence	Jun	112 ▼	113	112	🟢
☆	28-Jun	Industrial confidence‡	Jun	6.9 -	6.9	6.5	🟢
☆	28-Jun	Consumer confidence - final data	Jun	-0.5 -	-0.5	-0.5	🟡
☆	28-Jun	Business climate indicator‡	Jun	1.4 ▼	1.4	1.4	🔴
☆☆☆☆	29-Jun	Core CPI (yoy) - estimation	Jun	1.0% ▼	1.1%	1.0%	🟡
☆☆☆☆	29-Jun	CPI estimate (yoy)	Jun	2.0% ▲	1.9%	2.0%	🟡

Weight	Date	Event	For	Reading <sup>1</sup>	Previous	Consensus <sup>2</sup>
<b>Germany</b> 						
⊕⊕⊕⊕	22-Jun	Composite PMI - preliminary data	Jun	54.2 ▲	53.4	53.4 ▲
⊕⊕⊕⊕	22-Jun	Manufacturing PMI - preliminary data	Jun	--	56.9	56.3
⊕⊕	25-Jun	IFO business climate‡	Jun	102 ▼	102	102 ○
⊕⊕⊕⊕⊕	28-Jun	Harmonized consumer inflation HICP (yoy) - preliminary data	Jun	2.1% ▼	2.2%	2.1% ○
⊕⊕⊕⊕⊕	28-Jun	Consumer inflation CPI (yoy) - preliminary data	Jun	2.1% ▼	2.2%	2.1% ○
⊕⊕	28-Jun	GfK consumer confidence	Jul	10.7 -	10.7	10.6 ▲
⊕⊕⊕⊕	29-Jun	Retail sales (yoy)‡	May	-1.6% ▼	1.0%	1.9% ◡
⊕⊕	29-Jun	Unemployment rate	Jun	5.2% -	5.2%	5.2% ○
<b>France</b> 						
⊕⊕⊕⊕⊕⊕	22-Jun	GDP (yoy) - final data	1Q	2.2% -	2.2%	2.2% ○
⊕⊕⊕⊕⊕⊕	22-Jun	GDP (qoq) - final data	1Q	0.2% -	0.2%	0.2% ○
⊕⊕⊕⊕	22-Jun	Composite PMI - preliminary data	Jun	55.6 ▲	54.2	54.2 ▲
⊕⊕⊕⊕	22-Jun	Manufacturing PMI - preliminary data	Jun	--	54.4	54.0
⊕⊕⊕⊕⊕	29-Jun	Harmonized consumer inflation HICP (yoy) - preliminary data	Jun	2.4% ▲	2.3%	2.4% ○
⊕⊕⊕⊕⊕	29-Jun	Consumer inflation CPI (yoy) - preliminary data	Jun	2.1% ▲	2.0%	2.1% ○
<b>Italy</b> 						
⊕⊕⊕⊕⊕	28-Jun	Harmonized consumer inflation HICP (yoy) - preliminary data	Jun	1.5% ▲	1.0%	1.3% ▲
<b>UK</b> 						
⊕⊕⊕⊕⊕⊕	21-Jun	BoE base rate decision	Jun	0.50% -	0.50%	0.50% ○
⊕⊕⊕⊕⊕	21-Jun	BoE asset purchase target (GBP bn)	Jun	435 -	435	435 ○
⊕⊕⊕⊕⊕⊕	29-Jun	GDP (yoy) - final data	1Q	1.2% -	1.2%	1.2% ○
⊕⊕⊕⊕⊕⊕	29-Jun	GDP (qoq) - final data	1Q	0.2% ▲	0.1%	0.1% ▲
<b>Japan</b> 						
⊕⊕⊕⊕⊕	22-Jun	Consumer inflation CPI (yoy)	May	0.7% ▲	0.6%	0.6% ▲
⊕⊕⊕⊕	22-Jun	Manufacturing PMI - preliminary data	Jun	--	52.8	--
⊕⊕⊕⊕⊕	29-Jun	Industrial production (yoy) - preliminary data	May	4.2% ▲	2.6%	3.4% ▲
<b>Chile</b> 						
⊕⊕⊕⊕	29-Jun	Total copper production (metric tons)	May	498 423 ▲	452 912	--
⊕⊕⊕⊕	29-Jun	Manufacturing (yoy)	May	1.8% ▼	11.8%	2.0% ◡
<b>Canada</b> 						
⊕⊕⊕⊕⊕	22-Jun	Consumer inflation CPI (yoy)	May	2.2% -	2.2%	2.6% ◡
⊕⊕⊕⊕⊕⊕	29-Jun	GDP (yoy)	Apr	2.5% ▼	2.9%	2.5% ○

<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

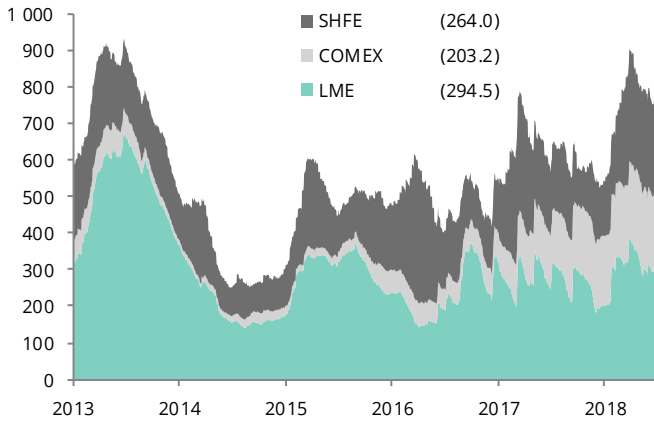
(as of: 29-Jun-18)		Price change <sup>1</sup>					From year beginning <sup>2</sup>		
	Price	2W	QTD	YTD	1Y	Average	Min	Max	
<b>LME (USD/t)</b>									
Copper	6 646.00	▼ -4.9%	▼ -0.6%	▼ -7.1%	▲ 12.5%	6 916.74	6 500.00	7 262.50	
Molybdenum	26 000.00	- 0.0%	- 0.0%	▲ 62.5%	▲ 62.5%	21 844.00	16 000.00	26 000.00	
Nickel	14 910.00	▼ -0.4%	▲ 12.6%	▲ 21.6%	▲ 60.8%	13 871.04	12 415.00	15 750.00	
Aluminum	2 183.00	▼ -1.7%	▲ 9.3%	▼ -2.6%	▲ 15.0%	2 208.80	1 967.00	2 602.50	
Tin	19 675.00	▼ -5.9%	▼ -6.9%	▼ -1.0%	▼ -2.0%	21 076.88	19 675.00	22 105.00	
Zinc	2 948.00	▼ -5.1%	▼ -11.5%	▼ -10.9%	▲ 7.1%	3 267.88	2 895.00	3 618.00	
Lead	2 432.00	▲ 0.9%	▲ 0.9%	▼ -2.5%	▲ 6.1%	2 455.78	2 274.00	2 683.00	
<b>LBMA (USD/troz)</b>									
Silver	16.03	▼ -3.5%	▼ -1.5%	▼ -5.0%	▼ -4.8%	16.65	16.03	17.52	
Gold <sup>2</sup>	1 250.45	▼ -2.4%	▼ -5.5%	▼ -3.6%	▲ 0.6%	1 317.73	1 250.45	1 354.95	
<b>LPPM (USD/troz)</b>									
Platinum <sup>2</sup>	851.00	▼ -3.7%	▼ -9.1%	▼ -8.2%	▼ -6.5%	941.19	851.00	1 020.00	
Palladium <sup>2</sup>	953.00	▼ -3.3%	▼ -1.8%	▼ -9.8%	▲ 12.0%	1 007.49	909.00	1 129.00	
<b>FX<sup>3</sup></b>									
EURUSD	1.1658	▲ 0.4%	▼ -5.4%	▼ -2.8%	▲ 2.1%	1.2104	1.1534	1.2493	
EURPLN	4.3616	▲ 1.7%	▲ 3.6%	▲ 4.6%	▲ 2.8%	4.2201	4.1423	4.3616	
USDPLN	3.7440	▲ 1.2%	▲ 9.7%	▲ 7.5%	▲ 0.9%	3.4872	3.3173	3.7705	
USDCAD	1.3168	▼ -0.3%	▲ 2.1%	▲ 5.0%	▲ 1.2%	1.2781	1.2288	1.3310	
USDCNY	6.6210	▲ 2.8%	▲ 5.5%	▲ 1.8%	▼ -2.4%	6.3711	6.2690	6.6270	
USDCLP	647.95	▲ 1.8%	▲ 7.4%	▲ 5.3%	▼ -2.2%	611.72	588.28	647.95	
<b>Money market</b>									
3m LIBOR USD	2.336	▲ 0.01	▲ 0.02	▲ 0.64	▲ 1.04	2.130	1.696	2.369	
3m EURIBOR	-0.321	▲ 0.00	▲ 0.01	▲ 0.01	▲ 0.01	-0.327	-0.329	-0.321	
3m WIBOR	1.700	- 0.00	- 0.00	▼ -0.02	▼ -0.03	1.708	1.700	1.720	
5y USD interest rate swap	2.890	▼ -0.05	▲ 0.18	▲ 0.65	▲ 0.97	2.762	2.283	3.036	
5y EUR interest rate swap	0.271	▼ -0.01	▼ -0.10	▼ -0.04	▲ 0.00	0.391	0.224	0.509	
5y PLN interest rate swap	2.455	▼ 0.00	▲ 0.09	▼ -0.04	▲ 0.09	2.474	2.280	2.740	
<b>Fuel</b>									
WTI Cushing	74.15	▲ 12.6%	▲ 14.2%	▲ 22.7%	▲ 65.0%	65.49	59.19	74.15	
Brent	78.60	▲ 5.2%	▲ 13.7%	▲ 17.6%	▲ 68.0%	70.82	62.33	79.18	
Diesel NY (ULSD)	220.68	▲ 3.7%	▲ 9.3%	▲ 6.9%	▲ 52.8%	206.68	183.32	229.33	
<b>Others</b>									
VIX	16.09	▲ 3.78	▼ -3.88	▲ 5.05	▲ 4.65	16.32	9.15	37.32	
BBG Commodity Index	87.41	▼ -0.2%	▼ -0.1%	▼ -0.9%	▲ 7.5%	88.70	85.64	91.57	
S&P500	2 718.37	▼ -2.0%	▲ 2.9%	▲ 1.7%	▲ 12.3%	2 717.94	2 581.00	2 872.87	
DAX	12 306.00	▼ -4.1%	▲ 1.7%	▼ -4.7%	▼ -0.9%	12 656.09	11 787.26	13 559.60	
Shanghai Composite	2 847.42	▼ -5.8%	▼ -10.1%	▼ -13.9%	▼ -10.7%	3 209.96	2 786.90	3 559.47	
WIG 20	2 135.47	▼ -0.7%	▼ -3.4%	▼ -13.2%	▼ -8.3%	2 336.01	2 098.75	2 630.37	
KGHM	88.00	▲ 1.1%	▲ 1.4%	▼ -20.9%	▼ -21.8%	98.88	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

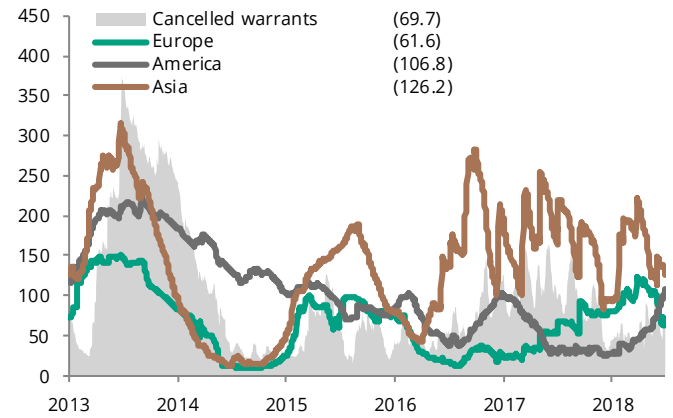


**Copper: official exchange stocks (thousand tonnes)**



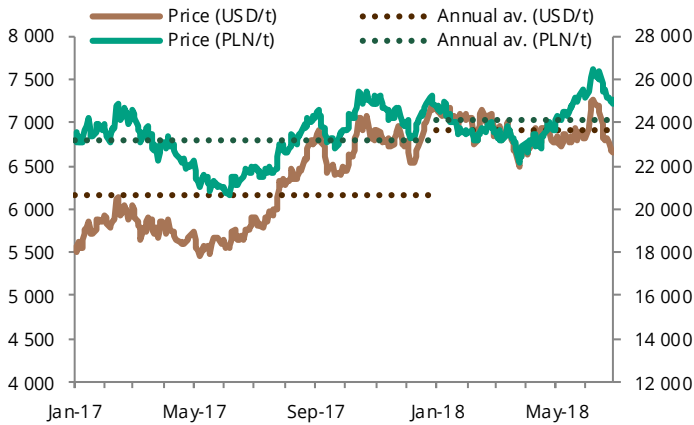
Note: Latest values in brackets. Source: Bloomberg, KGHM

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



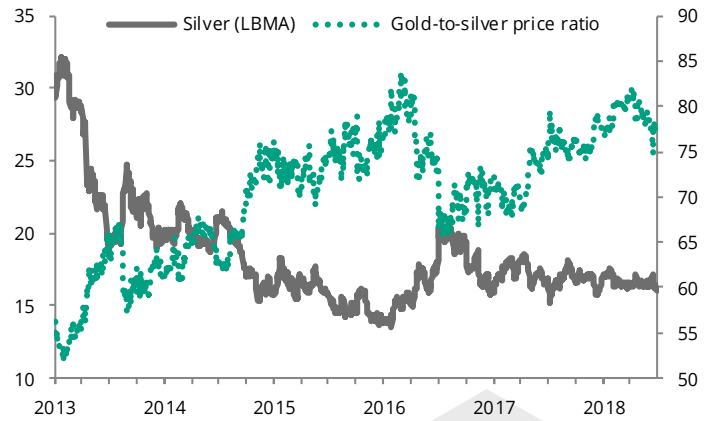
Note: Latest values in brackets. Source: Bloomberg, KGHM

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



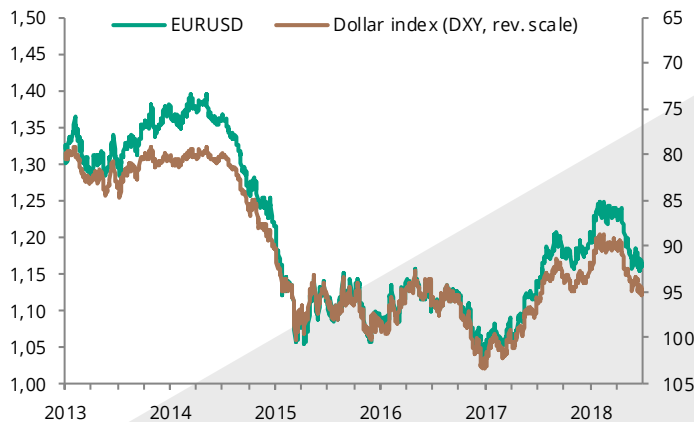
Source: Bloomberg, KGHM Polska Miedź

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



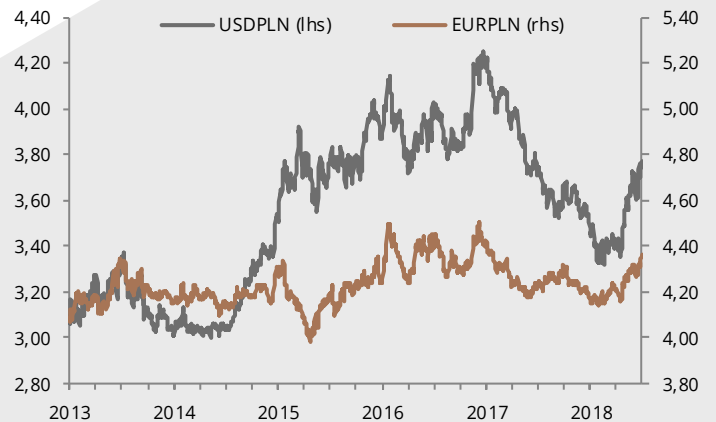
Source: Bloomberg, KGHM Polska Miedź

**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:  
**18<sup>th</sup> Jun – 1<sup>st</sup> July 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, ▪ Sharps Pixley.

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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