

# Market Overview



as of: 24<sup>th</sup> July 2017






- **Copper:** In the recent fortnight the red metal has been trading within a tight range of around 5 800 - 6 000 USD/t. Since the end of first half of 2017, a few mining companies have already reported production numbers and in some of the cases (VALE, Anglo American) the results were lower than initially guided by the companies' managements, thus supporting copper price (*page 2*).
- **Precious metals:** In recent two weeks gold's price grew steadily. The move was supported by political uncertainty in the United States as doubts over the passage of U.S. President Donald Trump's stimulus and tax reform agendas continued to weigh on the dollar and made it to remain near its 13-month lows. Meanwhile, the U.S. Federal Reserve's rate-setting committee is due to meet on July 25 and 26 and investors may start to balance their bullish gold views derived from political uncertainty and lower their growth expectation due to strong economy and probable further rate hikes this year (*page 3*).
- **London Metal Exchange:** The LME launches a new gold future contract in a hope to draw investors from the OTC market (*page 4*).
- **USA:** Over the past two years auto sales in USA stood at nearly 35 million vehicles which was one of the major contributors to the mining industry. However, recent data show that the boom could be over as the U.S. automakers begin to see sales decline (*page 5*).

## Key market prices

	Close price	2w chng.
<b>LME (USD/t)</b>		
▲ Copper	6 001.50	3.3%
▲ Nickel	9 560.00	6.8%
<b>LBMA (USD/troz)</b>		
▲ Silver	16.43	3.7%
▲ Gold (PM)	1 248.55	2.7%
<b>FX</b>		
▲ EURUSD	1.1642	2.0%
▼ EURPLN	4.2311	-0.1%
▼ USDPLN	3.6320	-2.0%
▼ USDCAD	1.2549	-2.6%
▼ USDCLP	651.56	-2.2%
<b>Stocks</b>		
▲ KGHM	118.55	9.2%

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

## Important macroeconomic data

Release	For	
 Industrial prod. (yoy)	Jun	7.6% ▲
 Industrial prod. (mom)	Jun	0.4% ▲
 CPI (yoy)	Jun	1.5% -
 Industr. prod. (wda, yoy)	May	4.0% ▲
 BoC rate decision	Jul	0.75% ▲

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

**Chinese real GDP growth reading was a touch above market consensus and is on a good way to outperform the 2017's 6,5% target**



Source: Bloomberg, KGHM Polska Miedź

## Market Risk Unit

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## Base and precious metals | Other commodities

### Copper

**In the recent fortnight the red metal has been trading within a tight range of around 5 800 - 6 000 USD/t. Since the end of first half of 2017, a few mining companies have already reported production numbers and in some of the cases (VALE, Anglo American) the results were lower than initially guided by the companies' managements, thus supporting copper price.**

#### Important information on copper market:

- *[source: Metal Bulletin]* Antofagasta's Centinela copper mine in Chile has reached a deal with its supervisors' union after nearly two months of negotiations. The agreement was reached during government-mediated talks. It will lead to the first collective labour contract for Centinela's supervisors, and will be valid for 36 months. This is also the first negotiation in the Chilean copper mining industry to take place under the country's new labour law. The deal will put an end to the strike threat at the mine, as the supervisors' union had voted earlier this month to down tools after direct talks with the company had failed. Centinela, 70% owned by Antofagasta, produced 180,400 tonnes of copper in concentrate and 55,800 tonnes of copper cathodes in 2016.
- *[source: CNBC]* The global world refined copper market showed a 53,000 tonnes deficit in April, compared with a 18,000 tonnes deficit in March, the International Copper Study Group (ICSG) said in its latest monthly bulletin. For the first 4 months of the year, the market was in a 80,000 tonnes surplus compared with a 185,000 tonnes deficit in the same period a year earlier. World refined copper output in April was 1.94 million tonnes, while consumption was 2.00 million tonnes. Bonded stocks of copper in China showed a 58,000 tonnes deficit in April compared with a 22,000 tonnes surplus in March.
- *[source: Reuters]* Thousands of workers at Freeport-McMoRan Inc.'s Grasberg copper mine in Indonesia will down tools for a fourth month after talks failed to resolve a labor dispute at the world's second-biggest mine. About 5,000 workers will extend the strike until the end of August, according to Tri Puspital, industrial relations officer at PT Freeport Indonesia's labor union. The stoppage at Grasberg in Papua province started on May 1 as workers protested layoffs and enforced furloughs, hampering production just after the government awarded Freeport an interim permit to export concentrate amid a broader negotiation over the company's operating terms in the Southeast Asian nation. Freeport has invited the striking workers to follow its recruitment process through a third party to fill about 4,000 vacancies. The project, which also mines gold, had about 33,000 staff, including contractors, at the end of last year.

## Precious Metals

**In recent two weeks gold's price grew steadily. The move was supported by political uncertainty in the United States as doubts over the passage of U.S. President Donald Trump's stimulus and tax reform agendas continued to weigh on the dollar and made it to remain near its 13-month lows. Meanwhile, the U.S. Federal Reserve's rate-setting committee is due to meet on July 25 and 26 and investors may start to balance their bullish gold views derived from political uncertainty and lower their growth expectation due to strong economy and probable further rate hikes this year.**

### **ICE will probably win the race towards LBMA silver price benchmark operation**

Reuters reported recently that Intercontinental Exchange has been provisionally selected as the new operator of the London Bullion Market Association silver benchmark. A formal decision on the LBMA Silver Price has yet to be made, but is expected within days once final conditions have been settled. A race to provide the auction process that sets the benchmark, for which the LBMA owns the intellectual property rights, narrowed to two potential providers, ICE and the London Metal Exchange a few weeks ago. ICE is the current operator of the LBMA Gold Price benchmark, which is set via an electronic auction process. The exchange introduced clearing of business transacted during the auction in April. As analysts say they were the favorite of the two because they were ready to go and had necessary systems and staff. LBMA said in March that the current incumbents, CME Group and Thomson Reuters, were stepping down from providing the auction process less than three years after they successfully bid to provide it. The benchmark is used by silver producers and consumers globally to price contracts. Its previous incarnation, the 117-year-old London silver "fix", ended in 2014 after its operators said they would stop running the telephone-based auction. The new electronic benchmark has been plagued in the past by big swings away from the underlying spot price, which traders have attributed a lack of liquidity and an unwillingness on the part of the banks taking part in the auction to adjust orders once the process has started.

### **Russian banks expand their scope of influence**

Russia's biggest bank Sberbank said recently its Swiss subsidiary had begun trading physical gold on the Shanghai Gold Exchange. Sberbank was granted international membership of the Shanghai exchange in September last year and in July completed a pilot transaction with 200 kg of gold kilobars sold to local financial institutions, the bank said. Sberbank plans to expand its presence on the Chinese precious metals market and anticipates total delivery of 5-6 tonnes of gold to China in the remaining months of 2017. Gold bars will be delivered directly to the official importers in China as well as through the exchange,

Sberbank said in a report. Russia's second-largest bank VTB is also a member of the Shanghai Gold Exchange.

## London Metals Exchange

**The LME launches a new gold future contract in a hope to draw investors from the OTC market.**

Source: Bloomberg

### LME To Offer Gold, Silver Contracts For First Time In Decades

The world's biggest industrial metals exchange is taking on the most powerful players in the gold market with the launch of its first futures contract for the commodity since the middle of the 1980s. The London Metal Exchange and its partners aim to grab a piece of the action in a city where almost half the world's gold changes hands. At stake are rival visions of how best to run the market, pitching the LME, Goldman Sachs Group Inc. and Morgan Stanley on one side and the London Bullion Market Association representing some of the biggest trading firms on the other. Three years in the making, the gold contract, launched alongside another for silver, aims to draw investors from the off-exchange deals that currently dominate the city's \$5 trillion-a-year market. The LME, World Gold Council representing miners and partner banks hope to capitalize on regulators' push for more scrutiny of markets by allowing investors to trade contracts on an exchange where transactions are tracked and risks managed.

Their LMEprecious venture including Goldman, Morgan Stanley, Natixis SA, ICBC Standard Bank Plc, Societe Generale SA and OSTC will centrally clear daily, monthly and quarterly futures contracts using LME Clear. The group will need to overcome inertia among those wary of moving to a new benchmark for pricing precious metals. Adding to that, the bullion association, which represents firms trading in the market including HSBC Holdings Plc, JPMorgan Chase & Co. and UBS AG, is already revamping the current go-to system to improve over-the-counter transactions. According to Robin Martin (World Gold Council) the wholesale trading on London's OTC market is largely constituted by a dozen or so banks. An exchange-traded model creates a flatter market structure, whereby the full breadth of market participants can directly access the best price. Recent efforts to lure business to futures from Intercontinental Exchange Inc. and CME Group Inc. have had mixed results. CME's contract hasn't traded since it landed in January, while Intercontinental's has pulled in about 4 million ounces.

Still, some of the precious-metals dealers in London, plan to keep using the LBMA benchmark rather than any LME equivalent. They point out that market needs a consolidation rather than another trading venue and remain skeptical whether new futures contract will get the momentum it needs. However, the London exchange's venture partners say pressure from regulators to bring clarity to murky precious metals trading, along with reduced costs for investors will generate interest in the contracts.

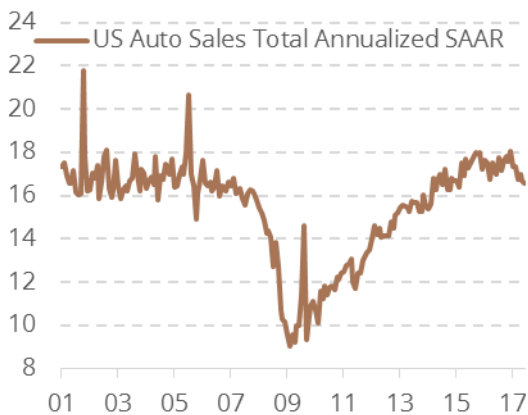
## Global economies | Foreign exchange markets

### USA: Does the decline in the U.S. auto sales raise red flag for metals industry?

**Over the past two years auto sales in USA stood at nearly 35 million vehicles which was one of the major contributors to the mining industry. However, recent data show that the boom could be over as the U.S. automakers begin to see sales decline.**

Declining car sales might be bad news for aluminum and copper suppliers, who have experienced a tough few years with the reinvigorated auto sales providing a needed lifeline. With US gross domestic product growth hovering at around 2% per year and the construction industry showing middling expansion, the automotive industry was a rare bright spot for the metals industry. Low gas prices are fueling sports utility vehicles (SUVs) and truck sales, but car sales dwindled as the first half of the year concluded. Overall, US auto sales fell 2.3% during the first six months of the year compared with the same period in 2016.

#### The auto sales cycle in USA shows signs of stabilization/maturity














Source: Bloomberg, KGHM Polska Miedź

Each automobile possesses copper electrical wires and frames designed with specialised aluminum or steel, meaning that 500,000 or 1 million fewer car sales could eliminate hundreds of thousands of pounds of metal demand. And the metals industry has not been the only sector to benefit from the auto sales surge, with top economists acknowledging its impact on the entire US economy. US Federal Reserve members have been monitoring the sector after US automakers used historically low rates to attract consumers due to a near collapse during the Great Recession. Easy credit has led to increased loan lengths, higher average costs owed and more defaults, signaling to the market that Americans cannot keep buying vehicles at the same pace set in 2015 and 2016, according to Edmunds.com analysis. Still, even with the downturn, Edmunds.com is still holding its US vehicle sales forecast solid at 17.2 million units, down 2% from 2016 but the fourth best year in US auto sales history. Nevertheless, metals industry participants will have their eyes focused on how sales perform over the next few months and hope the falloff is not too severe.

# Macroeconomic calendar

## Important macroeconomic data releases

Weight	Date	Event	For	Reading <sup>1</sup>	Previous	Consensus <sup>2</sup>
<b>China</b> 						
★★★★	10-Jul	Consumer inflation CPI (yoy)	Jun	1.5% -	1.5%	1.6%
★★	10-Jul	Producer inflation PPI (yoy)	Jun	5.5% -	5.5%	5.5%
★	12-Jul	New yuan loans (CNY bn)	Jun	1 540 ▲	1 110	1 300
★★	13-Jul	Trade balance (USD bn)‡	Jun	42.8 ▲	40.5	42.6
★★	13-Jul	Exports (yoy)‡	Jun	11.3% ▲	8.3%	8.9%
★★★★★	17-Jul	GDP (yoy)	2Q	6.9% -	6.9%	6.8%
★★★★★	17-Jul	GDP (sa, qoq)	2Q	1.7% ▲	1.3%	1.7%
★★★★	17-Jul	Industrial production (yoy)	Jun	7.6% ▲	6.5%	6.5%
★★	17-Jul	Fixed assets investments (ytd, yoy)	Jun	8.6% -	8.6%	8.5%
★	17-Jul	Retail sales (yoy)	Jun	11.0% ▲	10.7%	10.6%
<b>Poland</b> 						
★★★★	11-Jul	Consumer inflation CPI (yoy) - final data	Jun	1.5% -	1.5%	--
★★★★	12-Jul	Core CPI (excluding food and energy, yoy)	Jun	0.8% -	0.8%	0.8%
★★	14-Jul	Trade balance (EUR mn)‡	May	- 200 ▼	211	- 21.0
★★	14-Jul	Exports (EUR mn)‡	May	16 257 ▲	15 283	15 900
★★	14-Jul	Current account balance (EUR mn)‡	May	- 179 ▼	- 160	335
★★	18-Jul	Average gross salary (yoy)	Jun	6.0% ▲	5.4%	5.0%
★	18-Jul	Employment (yoy)	Jun	4.3% ▼	4.5%	4.3%
★★★★	19-Jul	Sold industrial production (yoy)‡	Jun	4.5% ▼	9.2%	3.9%
★★	19-Jul	Retail sales (yoy)	Jun	6.0% ▼	8.4%	6.8%
★★	19-Jul	Producer inflation PPI (yoy)‡	Jun	1.8% ▼	2.4%	2.1%
★	21-Jul	M3 money supply (yoy)‡	Jun	5.0% ▼	6.3%	5.9%
<b>US</b> 						
★★★★	14-Jul	Consumer inflation CPI (mom)	Jun	0.0% ▲	-0.1%	0.1%
★★★★	14-Jul	Consumer inflation CPI (yoy)	Jun	1.6% ▼	1.9%	1.7%
★★★★	14-Jul	Industrial production (mom)‡	Jun	0.4% ▲	0.1%	0.3%
★★	14-Jul	Retail sales (excluding autos, mom)	Jun	-0.2% ▲	-0.3%	0.2%
★★	14-Jul	University of Michigan confidence index - preliminary data	Jul	93.1 ▼	95.1	95.0
★	14-Jul	Capacity utilization‡	Jun	76.6% ▲	76.4%	76.8%
★★	20-Jul	Philadelphia Fed business outlook	Jul	19.5 ▼	27.6	23.0
<b>Eurozone</b> 						
★★★★	12-Jul	Industrial production (sa, mom)‡	May	1.3% ▲	0.3%	1.0%
★★★★	12-Jul	Industrial production (wda, yoy)‡	May	4.0% ▲	1.2%	3.5%
★	14-Jul	Trade balance (EUR mn)	May	21.4 ▲	17.9	--
★★★★	17-Jul	Consumer inflation CPI (yoy) - final data‡	Jun	1.3% ▼	1.4%	1.3%
★★★★	17-Jul	Core CPI (yoy) - final data	Jun	1.1% -	1.1%	1.1%
★	18-Jul	ZEW survey expectations	Jul	35.6 ▼	37.7	--
★★★★★	20-Jul	ECB main refinancing rate	Jul	0.00% -	0.00%	0.00%
★★★★★	20-Jul	ECB deposit facility rate	Jul	-0.4% -	-0.4%	-0.4%
★	20-Jul	Consumer confidence - estimation	Jul	- 1.7 ▼	- 1.3	- 1.2
<b>Germany</b> 						
★★★★	13-Jul	Harmonized consumer inflation HICP (yoy) - final data	Jun	1.5% -	1.5%	1.5%
★★★★	13-Jul	Consumer inflation CPI (yoy) - final data	Jun	1.6% -	1.6%	1.6%
<b>France</b> 						
★★★★	13-Jul	Harmonized consumer inflation HICP (yoy) - final data	Jun	0.8% -	0.8%	0.8%

Weight	Date	Event	For	Reading <sup>1</sup>	Previous	Consensus <sup>2</sup>
<b>Italy</b> 						
⊕⊕⊕⊕	11-Jul	Industrial production (wda, yoy)‡	May	2.8% ▲	0.9%	2.0% ▲
⊕⊕⊕⊕	14-Jul	Harmonized consumer inflation HICP (yoy) - final data	Jun	1.2% -	1.2%	1.2% ○
<b>UK</b> 						
⊕⊕	12-Jul	Unemployment rate (ILO, 3-months)	May	4.5% ▼	4.6%	4.6% ◡
⊕⊕⊕⊕	18-Jul	Consumer inflation CPI (yoy)	Jun	2.6% ▼	2.9%	2.9% ◡
<b>Japan</b> 						
⊕⊕⊕⊕	14-Jul	Industrial production (yoy) - final data	May	6.5% ▼	6.8%	--
<b>Chile</b> 						
⊕⊕⊕⊕⊕	14-Jul	BCCh overnight rate target	Jul	2.50% -	2.50%	2.50% ○
<b>Canada</b> 						
⊕⊕⊕⊕⊕	12-Jul	BoC base rate decision	Jul	0.75% ▲	0.50%	0.75% ○
⊕⊕⊕⊕	21-Jul	Consumer inflation CPI (yoy)	Jun	1.0% ▼	1.3%	1.1% ◡

<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

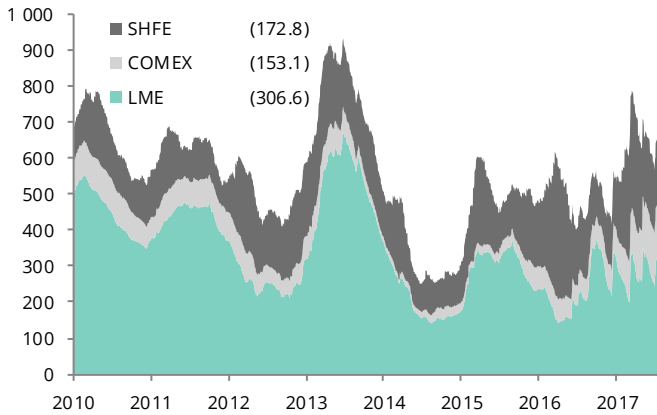
<i>(as of: 21-Jul-17)</i>		Price change °					From year beginning <sup>2</sup>		
	Price	2W	QTD	YTD	1Y	Average	Min	Max	
<b>LME (USD/t)</b>									
Copper	6 001.50	▲ 3.3%	▲ 1.6%	▲ 9.1%	▲ 21.2%	5 762.77	5 466.00	6 145.00	
Molybdenum	16 000.00	- 0.0%	- 0.0%	▲ 4.9%	▲ 4.9%	15 826.79	15 250.00	17 500.00	
Nickel	9 560.00	▲ 6.8%	▲ 3.0%	▼ -4.5%	▼ -10.4%	9 709.61	8 715.00	11 045.00	
Aluminum	1 901.00	▼ -1.0%	▼ -0.4%	▲ 10.9%	▲ 19.2%	1 882.12	1 701.00	1 962.00	
Tin	20 325.00	▲ 1.4%	▲ 0.6%	▼ -3.7%	▲ 14.0%	20 010.61	18 760.00	21 300.00	
Zinc	2 758.00	▼ -0.7%	▲ 0.1%	▲ 7.6%	▲ 22.4%	2 699.99	2 434.50	2 971.00	
Lead	2 212.00	▼ -2.6%	▼ -2.7%	▲ 11.4%	▲ 19.4%	2 225.23	2 007.00	2 442.00	
<b>LBMA (USD/troz)</b>									
Silver	16.43	▲ 3.7%	▼ -0.2%	▲ 1.2%	▼ -15.0%	17.18	15.22	18.56	
Gold <sup>1</sup>	1 248.55	▲ 2.7%	▲ 0.5%	▲ 7.7%	▼ -5.5%	1 236.49	1 151.00	1 293.50	
<b>LPPM (USD/troz)</b>									
Platinum <sup>1</sup>	937.00	▲ 2.9%	▲ 1.6%	▲ 3.3%	▼ -14.0%	954.79	891.00	1 033.00	
Palladium <sup>1</sup>	852.00	▲ 2.2%	▲ 1.3%	▲ 26.0%	▲ 26.0%	799.31	706.00	898.00	
<b>FX <sup>3</sup></b>									
EURUSD	1.1642	▲ 2.0%	▲ 2.0%	▲ 10.4%	▲ 5.7%	1.0898	1.0385	1.1642	
EURPLN	4.2311	▼ -0.1%	▲ 0.1%	▼ -4.4%	▼ -3.2%	4.2651	4.1737	4.4002	
USDPLN	3.6320	▼ -2.0%	▼ -2.0%	▼ -13.1%	▼ -8.5%	3.9185	3.6320	4.2271	
USDCAD	1.2549	▼ -2.6%	▼ -3.3%	-	-	1.3286	1.2549	1.3743	
USDCNY	6.7667	▼ -0.6%	▼ -0.2%	▼ -2.6%	▲ 1.4%	6.8637	6.7466	6.9640	
USDCLP	651.56	▼ -2.2%	▼ -1.8%	▼ -2.4%	▲ 0.0%	660.13	638.35	679.05	
<b>Money market</b>									
3m LIBOR USD	1.314	▲ 0.01	▲ 0.02	▲ 0.32	▲ 0.60	1.155	0.999	1.314	
3m EURIBOR	-0.331	- 0.00	- 0.00	▼ -0.01	▼ -0.03	-0.329	-0.332	-0.319	
3m WIBOR	1.730	- 0.00	- 0.00	- 0.00	▲ 0.02	1.730	1.730	1.730	
5y USD interest rate swap	1.884	▼ -0.13	▼ -0.07	▼ -0.09	▲ 0.73	1.960	1.797	2.239	
5y EUR interest rate swap	0.254	▼ -0.07	▼ -0.03	▲ 0.18	▲ 0.38	0.186	0.078	0.326	
5y PLN interest rate swap	2.343	▼ -0.08	▼ -0.02	▼ -0.06	▲ 0.48	2.414	2.165	2.625	
<b>Fuel</b>									
WTI Cushing	45.62	▲ 3.1%	▼ -0.9%	▼ -15.1%	▲ 3.8%	49.48	42.31	54.10	
Brent	47.39	▲ 1.8%	▼ -1.7%	▼ -14.5%	▲ 5.9%	51.63	44.21	56.46	
Diesel NY (ULSD)	151.05	▲ 4.8%	▲ 2.2%	▼ -11.0%	▲ 12.7%	153.82	135.85	167.82	
<b>Others</b>									
VIX	9.36	▼ -1.83	▼ -1.82	▼ -4.68	▼ -3.38	11.45	9.36	15.96	
BBG Commodity Index	82.99	▲ 1.4%	▲ 0.5%	▼ -5.2%	▼ -2.3%	84.83	79.36	89.36	
S&P500	2 472.54	▲ 2.0%	▲ 2.0%	▲ 10.4%	▲ 14.2%	2 370.64	2 257.83	2 473.83	
DAX	12 240.06	▼ -1.2%	▼ -0.7%	▲ 6.6%	▲ 20.5%	12 205.53	11 509.84	12 888.95	
Shanghai Composite	3 237.98	▲ 0.6%	▲ 1.4%	▲ 4.3%	▲ 6.5%	3 178.22	3 052.79	3 288.97	
WIG 20	2 343.10	▲ 2.1%	▲ 1.9%	▲ 20.3%	▲ 29.9%	2 238.09	1 989.64	2 413.53	
KGHM	118.55	▲ 9.2%	▲ 7.1%	▲ 28.2%	▲ 54.5%	117.57	94.00	135.50	

° 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

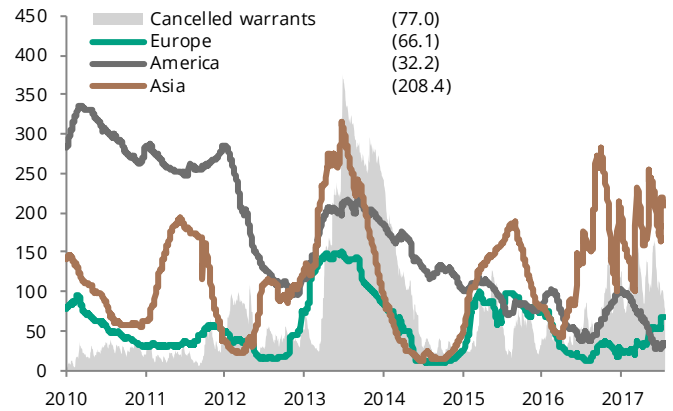


**Copper: official exchange stocks (thousand tonnes)**



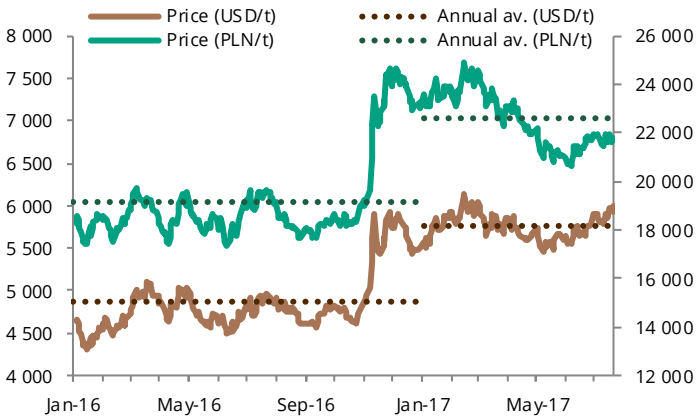
Note: Latest values in brackets. Source: Bloomberg, KGHM

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



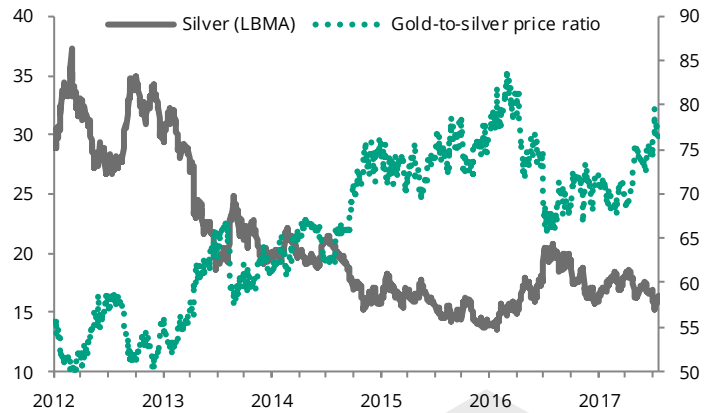
Note: Latest values in brackets. Source: Bloomberg, KGHM

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



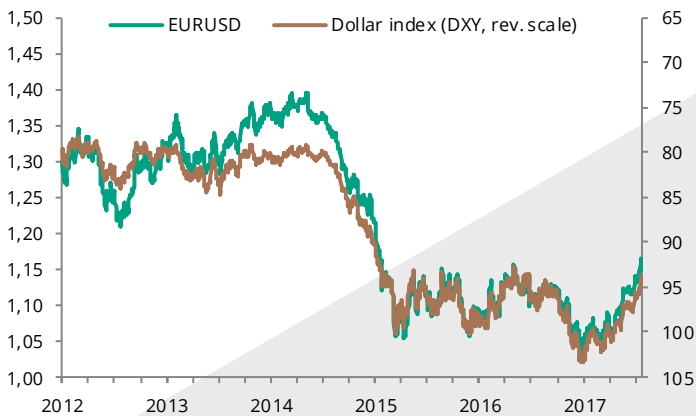
Source: Bloomberg, KGHM Polska Miedź

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



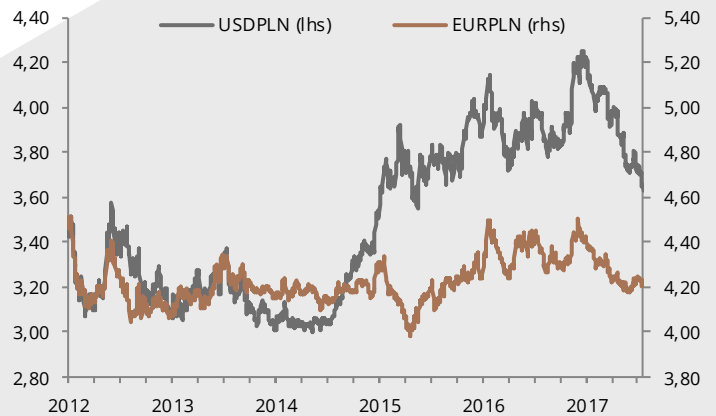
Source: Bloomberg, KGHM Polska Miedź

**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: **10<sup>th</sup> – 23<sup>rd</sup> July 2017.**

- 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](http://thebulliondesk.com), ▪ [lbma.org.uk](http://lbma.org.uk), ▪ [lme.co.uk](http://lme.co.uk), ▪ [metalbulletin.com](http://metalbulletin.com), ▪ [nbp.pl](http://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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