

Market Overview

as of: 29th May 2017

- **Copper:** Range-bound trading on copper without much volatility on the market has been the main theme in the recent fortnight. Market volatility is down on its knees with the trader society focused more on writing options (=selling gamma), thereby keeping options space relatively cheap. Fundamental view is concentrated on the Grasberg strike development as well as on the uncertain demand picture in China (*page 2*).
- **Precious metals:** In recent two weeks gold rose to near its highs buoyed by the weaker dollar and geopolitical tensions which boosted its safe-haven appeal. Political turmoil surrounding U.S. President Donald Trump, next week's election in Britain, the prospect of early elections in Italy and worries over Greek debt was providing safe-haven support for gold as well (*page 3*).
- **China:** Moody's Investors Service cut its rating to A1 from Aa3 on China's debt for the first time since 1989 (*page 5*).

Key market prices

	Close price	2w chng.
LME (USD/t)		
▲ Copper	5 671.00	2.7%
▼ Nickel	9 005.00	-3.4%
LBMA (USD/troz)		
▲ Silver	17.29	6.1%
▲ Gold (PM)	1 265.05	2.7%
FX		
▲ EURUSD	1.1196	2.9%
▼ EURPLN	4.1803	-0.9%
▼ USDPLN	3.7248	-4.1%
▼ USDCAD	1.3456	-1.9%
▼ USDCLP	669.42	-0.3%
Stocks		
▼ KGHM	110.75	-5.7%

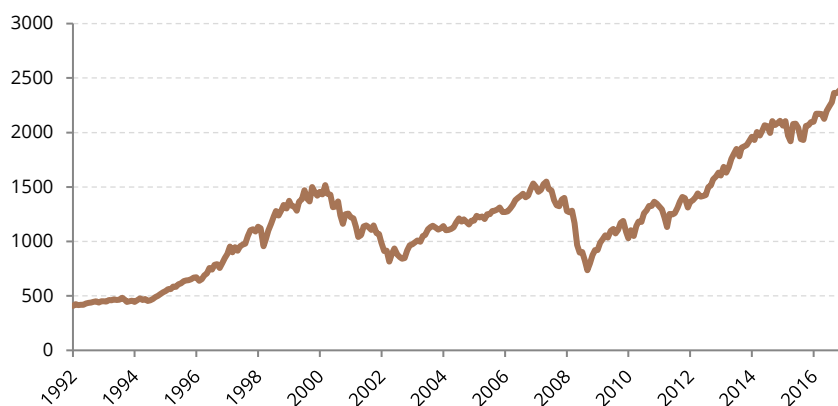
Source: Bloomberg, KGHM Polska Miedź; (*more on page 8*)

Important macroeconomic data

Release	For		
 GDP (yoy)	1Q	4.0%	▲
 Industrial prod. (yoy)	Apr	6.5%	▼
 GDP (annlzd., qoq)	1Q	1.2%	▲
 Industrial prod. (mom)	Apr	1.0%	▲
 Manufacturing PMI	May	57.0	▲

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

S&P Index on record heights



Source: Bloomberg

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Base and precious metals | Other commodities

Copper

Range-bound trading on copper without much volatility on the market has been the main theme in the recent fortnight. Market volatility is down on its knees with the trader society focused more on writing options (=selling gamma), thereby keeping options space relatively cheap. Fundamental view is concentrated on the Grasberg strike development as well as on the uncertain demand picture in China

Important information on copper market:

- *[source: Platts]* China's national copper demand in March rose 22% on the month to 822,500 mt from 676,500 mt in February, buoyed by the real estate and air conditioning sectors which are key copper consumers in China, according to Jiangxi's copper sector report. China's national real estate investment in the first quarter hit Yuan 1.93 trillion (\$289 billion), up 9% on the year, while national air conditioning output in March surged 33% on the year, the report showed. Chinese bonded warehouses added copper stocks of 50,000 mt in March, compared with 110,000 mt added in February, the data showed. China's net refined copper imports in March were 248,000 mt, up 19,000 mt from net imports of 229,000 mt in February, while China's national refined copper output in March was 642,000 mt, up 7,500mt from 634,500 mt in February, its data showed. The report said that that based on the 'One Belt, One Road Summit' that kicked off recently in Beijing, an extra Yuan 1 trillion will be poured into the Silk Road fund, with China having signed co-operation deals with more than 30 nations in infrastructure, resources, energy, production and trade investment. It therefore forecast the resultant demand for infrastructure to bolster demand for commodities. The One Belt One Road initiative is judged to be among the most far reaching Chinese foreign policy moves in decades.
- *[source: Reuters]* The copper market recorded a surplus of 148,000 tonnes in January to March of this year, following a 199,000 tonne surplus in the whole of 2016, according to the World Bureau of Metal Statistics (WBMS). World mine production in the first three months of 2017 was 4.97 million tonnes, 2.2% higher than a year ago. Meanwhile, global refined production for January-March was down 0.1% compared with the same period in 2016 at 5.76 million tonnes. Global consumption for the period was 5.61 million tonnes compared with 5.70 million tonnes in the same three months of the previous year.
- *[source: Metal Bulletin]* The global world refined copper market showed a 93,000 tonnes surplus in February, compared with a 55,000 tonnes surplus in January, the International Copper Study Group (ICSG) said in its latest monthly bulletin. For the first 2 months of the year, the market was in a

149,000 tonnes surplus compared with a 44,000 tonnes surplus in the same period a year earlier, the ICSG said. World refined copper output in February was 1.79 million tonnes, while consumption was 1.69 million tonnes. Bonded stocks of copper in China showed a 173,000 tonnes surplus in February compared with a 80,000 tonnes surplus in January.

- *[source: Metal Bulletin]* Thousands of unionised workers at the world's second largest copper mine, Freeport-McMoRan's Grasberg, will go on strike for a second consecutive month in June. Miners at Grasberg downed tools at the beginning of May for a month, but this has been extended. Freeport is currently operating under a temporary export permit to ship copper concentrates out of Grasberg, which is in the Indonesian territory of West Papua, after the government lifted an export ban April. Although Freeport has since been able to ship material to key customers in Japan, South Korea, India and China, production at the mine has been affected over the past month by the strike, according to Metal Bulletin's suppositions. The news is another setback for Freeport's operations in Indonesia, after the company deferred 86,000 tonnes of contained copper and reported that copper sales from the mine were down 28% in the first quarter of this year due to the ban.

Precious Metals

In recent two weeks gold rose to near its highs buoyed as weaker dollar and geopolitical tensions boosted its safe-haven appeal. Political turmoil surrounding U.S. President Donald Trump, next week's election in Britain, the prospect of early elections in Italy and worries over Greek debt was providing safe-haven support for gold as well.

LBMA introduces new regulations for precious metals market

The London Bullion Market Association (LBMA) is launching a code of conduct aimed at boosting confidence in the \$5 trillion a year London gold market, recently, following years of heightened regulatory scrutiny of the city's financial sector. The guidelines set out best practice in ethics, governance, compliance and risk management, information sharing and business conduct, the bullion market's trade association said in a statement. "The code is an important step forward to build greater trust, consistency and transparency throughout the market," LBMA chairman Paul Fisher said in the release. The LBMA said its more than 140 members - which include banks, refiners, traders, and fabricators - will be required to sign a statement of commitment to the code, which will be mandatory from June 2018. "Members will have a 12-month period to demonstrate compliance with the code. Failure to do so could potentially result in their membership either being suspended or withdrawn," a spokesman for the LBMA said. The code is one of three developed as a result of the Fair and Effective Markets Review (FEMR) of the fixed income, forex and

commodities markets which was commissioned by the UK government in three years ago after British banks were fined billions of pounds for trying to rig benchmark interest rate Libor, and manipulate foreign exchange reference rates.

Implats looking for re-financing

South Africa's Impala Platinum (Implats) plans to sell about \$500 million of unsecured bonds that will be convertible into shares with the proceeds being used to refinance existing debt, the company said recently. The 2022 bonds will include 3.25 billion rand (\$252 million) of rand-denominated convertibles and \$250 million of dollar-denominated convertibles. The platinum producer, with mines in South Africa and Zimbabwe, said it would offer convertible bonds maturing in 2022. "Implats intends to use the net proceeds from the 2022 convertible bond offerings to refinance its outstanding \$200 million 1 percent convertible bonds due 2018 and 2.67 billion rand 5 percent convertible bonds due 2018," the company said. The 2022 rand-denominated convertible bonds will have an annual coupon of 6.375 percent and the dollar-denominated bonds will pay 3.25 percent. They can later be converted into Implats shares, or a cash amount equal to the value of the shares. The respective initial conversion prices of \$3.89 and 50.01 rand were set at a premium of 32.5 percent above a reference share price of 37.74 rand, the company said.

Global economies | Foreign exchange markets

China hit by Moody's credit rating downgrade

Moody's Investors Service cut its rating to A1 from Aa3 on China's debt for the first time since 1989.

Moody's decision underscores broader doubts over success of Chinese reforms...





Moody's Investors Service cut its rating to A1 from Aa3 on China's debt for the first time since 1989, challenging the view that the nation's leadership will be able to rein in leverage while maintaining the pace of economic growth. Moody's cited the likelihood of a "material rise" in economy-wide debt and the burden that will place on the state's finances, while also changing the outlook to stable from negative. It's "absolutely groundless" for Moody's to argue that local government financing vehicles and state-owned enterprise debt will swell the government's contingent liabilities, according to a response released by the Ministry of Finance. The ratings company has underestimated the capability of the government to deepen reform and boost demand, the ministry said. It wouldn't be the first time a rating company was behind the curve, nor is such pushback unique -- U.S. Treasury officials questioned the credibility of a 2011 downgrade from Standard & Poor's. Still, the move underscores broader doubts over whether President Xi Jinping's government can simultaneously cut excessive leverage and maintain steady growth, all with a reshuffle of top party posts looming later this year.




... but comes as some of pressures ease, following positive data from Chinese economy.

Total outstanding credit climbed to about 260 percent of GDP by the end of 2016, up from 160 percent in 2008, according to Bloomberg Intelligence. At the same time, China's external debt is low by international standards, at around 12 percent of gross domestic product, according to the International Monetary Fund, meaning that a downgrade isn't likely to be as disruptive as it would be for nations more reliant on international funding. While China's debt risks have been swelling for years, the cut by Moody's comes as some of those pressures ease. Nominal economic growth in the first quarter rose at the fastest pace since 2012 -- 11.8 percent in current-price terms -- making the problem of excess leverage a little more manageable, while the return of factory price inflation is beefing up profits for indebted state-owned industries, helping them service and repay loans. Moody's lowered China's credit-rating outlook to negative from stable in March 2016, citing rising debt, falling currency reserves and uncertainty over authorities' ability to carry out reforms. About a month later, S&P Global Ratings also warned that rising local debt was pressuring the nation's rating. "China's leaders from President Xi Jinping down have said that structural reform and financial stability are priorities. Still, progress remains faltering and in some respects movement is in the wrong direction" according to chief Asia economist at Bloomberg Intelligence in Beijing.

Macroeconomic calendar

Important macroeconomic data releases

Weight	Date	Event	For	Reading ¹	Previous	Consensus ²
China 						
★★★★	15-May	Industrial production (yoy)	Apr	6.5% ▼	7.6%	7.0% ◡
★★	15-May	Fixed assets investments (ytd, yoy)	Apr	8.9% ▼	9.2%	9.1% ◡
★	15-May	Retail sales (yoy)	Apr	10.7% ▼	10.9%	10.8% ◡
★★	27-May	Industrial profits (yoy)	Apr	14.0% ▼	23.8%	--
Poland 						
★★★★	15-May	Core CPI (excluding food and energy, yoy)	Apr	0.9% ▲	0.6%	0.7% ◢
★★	15-May	Trade balance (EUR mn)‡	Mar	- 218 ▲	- 503	- 110 ◡
★★	15-May	Exports (EUR mn)‡	Mar	17 798 ▲	15 193	17 631 ◢
★★	15-May	Current account balance (EUR mn)‡	Mar	- 738 ▲	- 825	- 354 ◡
★★★★★	16-May	GDP (yoy) - preliminary data‡	1Q	4.0% ▲	2.5%	3.9% ◢
★★★★★	16-May	GDP (qoq) - preliminary data‡	1Q	1.0% ▼	1.7%	0.8% ◢
★★★★★	17-May	NBP base rate decision	May	1.50% -	1.50%	1.50% ○
★★	18-May	Average gross salary (yoy)	Apr	4.1% ▼	5.2%	4.4% ◡
★	18-May	Employment (yoy)	Apr	4.6% ▲	4.5%	4.5% ◢
★★★★	19-May	Sold industrial production (yoy)	Apr	-0.6% ▼	11.1%	1.9% ◡
★★	19-May	Retail sales (yoy)	Apr	8.1% ▼	9.7%	9.0% ◡
★★	19-May	Producer inflation PPI (yoy)‡	Apr	4.3% ▼	4.8%	4.5% ◡
★	24-May	Budget balance (ytd)	Apr	1.5% ▼	3.8%	--
★★	25-May	Unemployment rate	Apr	7.7% ▼	8.1%	7.7% ○
US 						
★★★★	16-May	Industrial production (mom)‡	Apr	1.0% ▲	0.4%	0.4% ◢
★	16-May	Capacity utilization	Apr	76.7% ▲	76.1%	76.3% ◢
★★	18-May	Philadelphia Fed business outlook	May	38.8 ▲	22.0	18.5 ◢
★★	23-May	Composite PMI - preliminary data	May	53.9 ▲	53.2	--
★★	23-May	Manufacturing PMI - preliminary data	May	52.5 ▼	52.8	53.0 ◡
★★	23-May	PMI services - preliminary data	May	54.0 ▲	53.1	53.3 ◢
★	23-May	Richmond Fed manufacturing index	May	1.0 ▼	20.0	15.0 ◡
★★★★★	26-May	GDP (annualized, qoq) -	1Q	1.2% ▲	0.7%	0.9% ◢
★★	26-May	Durable goods orders - preliminary data‡	Apr	-0.7% ▼	2.3%	-1.5% ◢
★★	26-May	University of Michigan confidence index - final data	May	97.1 ▼	97.7	97.5 ◡
Eurozone 						
★★★★★	16-May	GDP (sa, yoy) - preliminary data	1Q	1.7% -	1.7%	1.7% ○
★★★★★	16-May	GDP (sa, qoq) - preliminary data	1Q	0.5% -	0.5%	0.5% ○
★	16-May	Trade balance (EUR mn)	Mar	30.9 ▲	17.8	25.8 ◢
★	16-May	ZEW survey expectations	May	35.1 ▲	26.3	--
★★★★	17-May	Consumer inflation CPI (yoy) - final data‡	Apr	1.9% ▲	1.5%	1.9% ○
★★★★	17-May	Core CPI (yoy) - final data	Apr	1.2% -	1.2%	1.2% ○
★	19-May	Consumer confidence - estimation	May	- 3.3 ▲	- 3.6	- 3.0 ◡
★★	23-May	Composite PMI - preliminary data	May	56.8 -	56.8	56.7 ◢
★★	23-May	Manufacturing PMI - preliminary data	May	57.0 ▲	56.7	56.5 ◢
★★	23-May	Services PMI - preliminary data	May	56.2 ▼	56.4	56.4 ◡

Weight	Date	Event	For	Reading ¹	Previous	Consensus ²
Germany 						
★★★★★	23-May	GDP (yoy) - final data	1Q	2.9% -	2.9%	2.9% ○
★★★★★	23-May	GDP (sa, qoq) - final data	1Q	0.6% -	0.6%	0.6% ○
★★★	23-May	Composite PMI - preliminary data	May	57.3 ▲	56.7	56.6 ▲
★★★	23-May	Manufacturing PMI - preliminary data	May	59.4 ▲	58.2	58.0 ▲
★★	23-May	IFO business climate‡	May	115 ▲	113	113 ▲
★★	23-May	Exports (qoq)‡	1Q	1.3% ▼	1.7%	1.5% ◡
★★	24-May	GfK consumer confidence	Jun	10.4 ▲	10.2	10.2 ▲
France 						
★★★★	16-May	Harmonized consumer inflation HICP (yoy) - final data	Apr	1.4% -	1.4%	1.4% ○
★★★★	16-May	Consumer inflation CPI (yoy) - final data	Apr	1.2% -	1.2%	1.2% ○
★★★	23-May	Composite PMI - preliminary data	May	57.6 ▲	56.6	56.6 ▲
★★★	23-May	Manufacturing PMI - preliminary data	May	54.0 ▼	55.1	55.2 ◡
Italy 						
★★★★	15-May	Harmonized consumer inflation HICP (yoy) - final data	Apr	2.0% -	2.0%	2.0% ○
★★★★★	16-May	GDP (wda, yoy) - preliminary data	1Q	0.8% ▼	1.0%	0.8% ○
★★★★★	16-May	GDP (wda, qoq) - preliminary data	1Q	0.2% -	0.2%	0.2% ○
UK 						
★★★★	16-May	Consumer inflation CPI (yoy)	Apr	2.7% ▲	2.3%	2.6% ▲
★★	17-May	Unemployment rate (ILO, 3-months)	Mar	4.6% ▼	4.7%	4.7% ◡
★★★★★	25-May	GDP (yoy) - preliminary data	1Q	2.0% ▼	2.1%	2.1% ◡
★★★★★	25-May	GDP (qoq) - preliminary data	1Q	0.2% ▼	0.3%	0.3% ◡
Japan 						
★★★★	17-May	Industrial production (yoy) - final data	Mar	3.5% ▲	3.3%	--
★★★★★	18-May	GDP (annualized, qoq) - preliminary data‡	1Q	2.2% ▲	1.4%	1.7% ▲
★★★★★	18-May	GDP (qoq, sa) - preliminary data	1Q	0.5% ▲	0.3%	0.5% ○
★★★	23-May	Manufacturing PMI - preliminary data	May	52.0 ▼	52.7	--
★★★★	26-May	Consumer inflation CPI (yoy)	Apr	0.4% ▲	0.2%	0.4% ○
Chile 						
★★★★★	18-May	GDP (yoy)‡	1Q	0.1% ▼	0.5%	0.2% ◡
★★★★★	19-May	BCCCh overnight rate target	May	2.50% ▼	2.75%	2.75% ◡
Canada 						
★★★★	19-May	Consumer inflation CPI (yoy)	Apr	1.6% -	1.6%	1.7% ◡
★★★★	24-May	BoC base rate decision	May	0.50% -	0.50%	0.50% ○

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

² 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

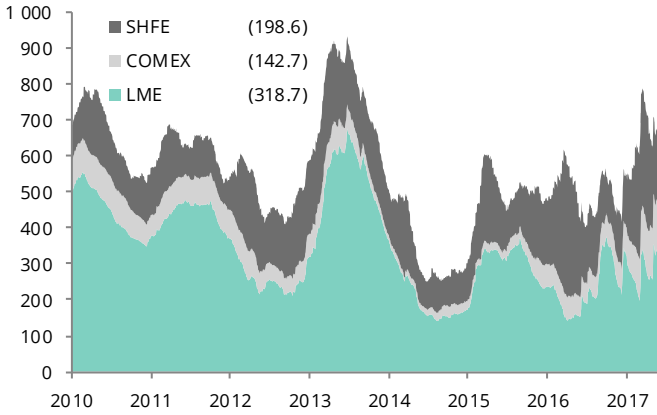
(as of: 26-May-17)

	Price	Price change ^o					From year beginning ²		
		2W	QTD	YTD	1Y	Average	Min	Max	
LME (USD/t)									
Copper	5 671.00	▲ 2.7%	▼ -3.0%	▲ 3.1%	▲ 20.5%	5 762.06	5 466.00	6 145.00	
Molybdenum	17 500.00	- 0.0%	▲ 14.8%	▲ 14.8%	▲ 14.4%	15 537.13	15 250.00	17 500.00	
Nickel	9 005.00	▼ -3.4%	▼ -8.8%	▼ -10.0%	▲ 7.5%	9 958.42	8 935.00	11 045.00	
Aluminum	1 950.00	▲ 3.7%	▲ 0.2%	▲ 13.8%	▲ 25.6%	1 876.93	1 701.00	1 962.00	
Tin	20 500.00	▲ 3.0%	▲ 2.0%	▼ -2.8%	▲ 30.4%	20 053.66	18 760.00	21 300.00	
Zinc	2 622.50	▲ 1.6%	▼ -5.8%	▲ 2.3%	▲ 39.3%	2 717.97	2 462.00	2 971.00	
Lead	2 090.00	▼ -3.5%	▼ -9.5%	▲ 5.3%	▲ 25.4%	2 242.92	2 007.00	2 442.00	
LBMA (USD/troz)									
Silver	17.29	▲ 6.1%	▼ -4.3%	▲ 6.5%	▲ 5.0%	17.40	15.95	18.56	
Gold ¹	1 265.05	▲ 2.7%	▲ 1.6%	▲ 9.1%	▲ 3.4%	1 232.13	1 151.00	1 284.15	
LPPM (USD/troz)									
Platinum ¹	961.00	▲ 4.2%	▲ 2.2%	▲ 6.0%	▼ -4.2%	966.34	897.00	1 033.00	
Palladium ¹	780.00	▼ -3.5%	▼ -2.3%	▲ 15.4%	▲ 43.1%	777.33	706.00	824.00	
FX ³									
EURUSD	1.1196	▲ 2.9%	▲ 4.7%	▲ 6.2%	▲ 0.3%	1.0736	1.0385	1.1243	
EURPLN	4.1803	▼ -0.9%	▼ -0.9%	▼ -5.5%	▼ -5.5%	4.2848	4.1796	4.4002	
USDPLN	3.7248	▼ -4.1%	▼ -5.6%	▼ -10.9%	▼ -6.1%	3.9929	3.7177	4.2271	
USDCAD	1.3456	▼ -1.9%	▲ 1.1%	-	-	1.3349	1.3016	1.3743	
USDCNY	6.8555	▼ -0.6%	▼ -0.5%	▼ -1.3%	▲ 4.5%	6.8892	6.8450	6.9640	
USDCLP	669.42	▼ -0.3%	▲ 1.0%	▲ 0.3%	▼ -3.3%	658.52	638.35	679.05	
Money market									
3m LIBOR USD	1.202	▲ 0.02	▲ 0.05	▲ 0.20	▲ 0.53	1.108	0.999	1.202	
3m EURIBOR	-0.329	- 0.00	- 0.00	▼ -0.01	▼ -0.07	-0.329	-0.332	-0.319	
3m WIBOR	1.730	- 0.00	- 0.00	- 0.00	▲ 0.05	1.730	1.730	1.730	
5y USD interest rate swap	1.878	▼ -0.04	▼ -0.17	▼ -0.10	▲ 0.56	1.988	1.811	2.239	
5y EUR interest rate swap	0.180	▼ -0.03	▼ 0.00	▲ 0.11	▲ 0.18	0.175	0.078	0.321	
5y PLN interest rate swap	2.308	▼ -0.04	▼ -0.05	▼ -0.09	▲ 0.35	2.462	2.300	2.625	
Fuel									
WTI Cushing	49.80	▲ 4.1%	▼ -1.6%	▼ -7.3%	▲ 0.6%	50.94	45.52	54.10	
Brent	51.75	▲ 2.8%	▼ -1.8%	▼ -6.6%	▲ 3.9%	53.20	47.76	56.46	
Diesel NY (ULSD)	156.33	▲ 4.9%	▼ -0.6%	▼ -7.9%	▲ 4.2%	157.09	141.23	167.82	
Others									
VIX	9.81	▼ -0.59	▼ -2.56	▼ -4.23	▼ -3.62	11.81	9.77	15.96	
BBG Commodity Index	84.01	▲ 0.6%	▼ -1.6%	▼ -4.0%	▼ -1.6%	85.94	82.03	89.36	
S&P500	2 415.82	▲ 1.0%	▲ 2.2%	▲ 7.9%	▲ 15.6%	2 345.62	2 257.83	2 415.82	
DAX	12 602.18	▼ -1.3%	▲ 2.3%	▲ 9.8%	▲ 22.7%	12 048.86	11 509.84	12 807.04	
Shanghai Composite	3 110.06	▲ 0.9%	▼ -3.5%	▲ 0.2%	▲ 10.2%	3 181.34	3 052.79	3 288.97	
WIG 20	2 326.28	▼ -1.8%	▲ 6.9%	▲ 19.4%	▲ 25.8%	2 206.47	1 989.64	2 413.53	
KGHM	110.75	▼ -5.7%	▼ -4.4%	▲ 19.8%	▲ 71.4%	120.03	94.00	135.50	

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

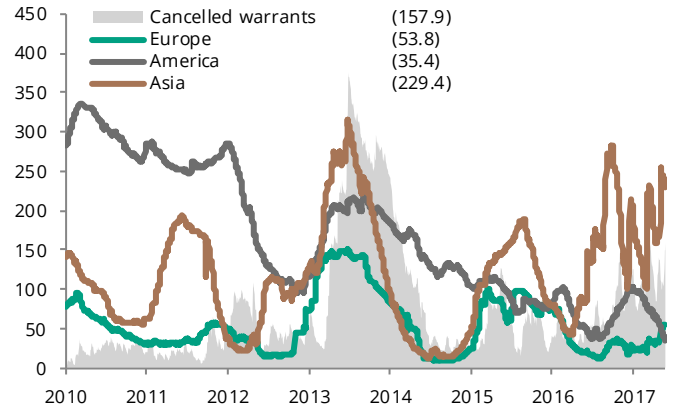
Source: Bloomberg, KGHM

Copper: official exchange stocks (thousand tonnes)



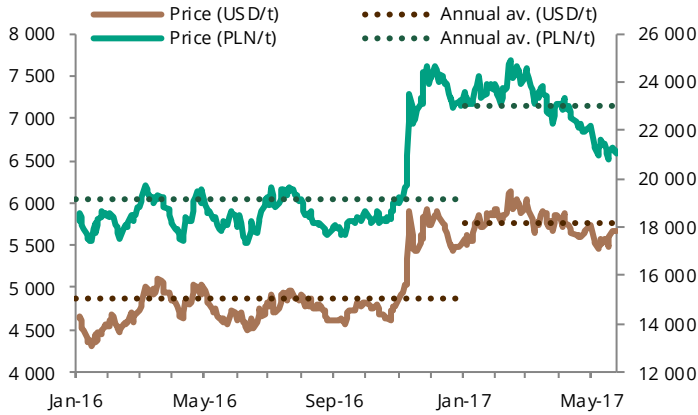
Note: Latest values in brackets. Source: Bloomberg, KGHM

Copper: official LME stocks (thousand tonnes)



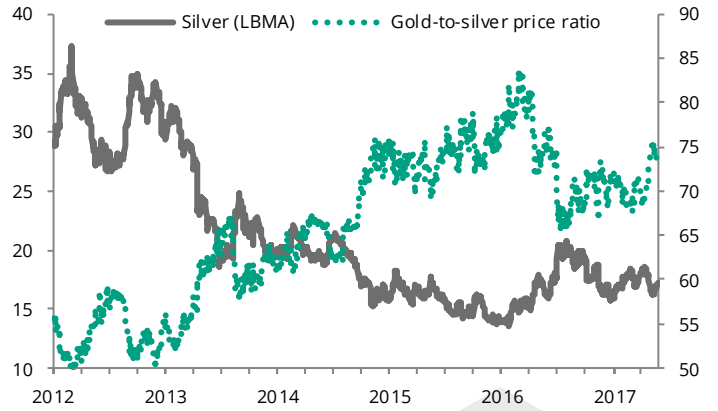
Note: Latest values in brackets. Source: Bloomberg, KGHM

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



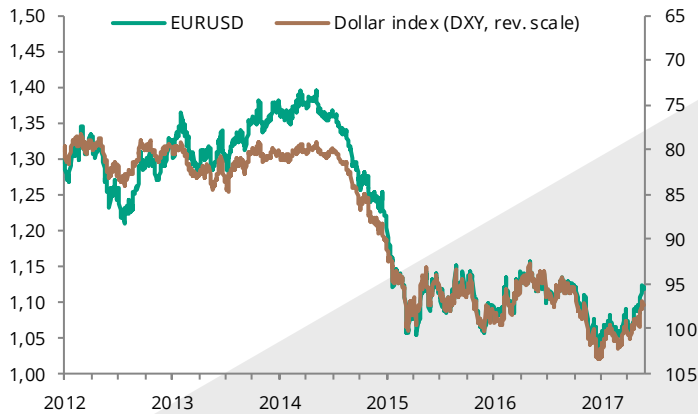
Source: Bloomberg, KGHM Polska Miedź

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



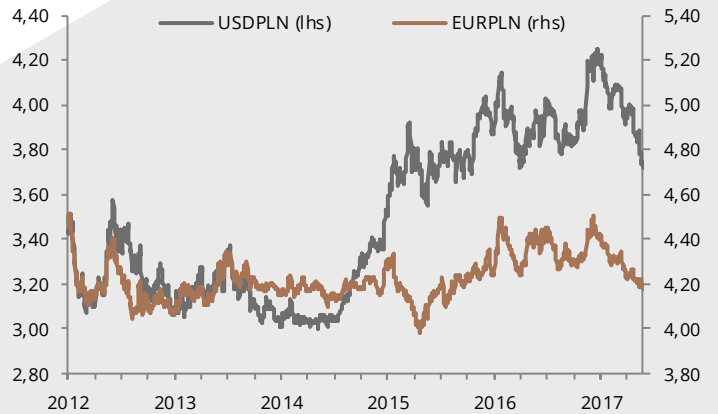
Source: Bloomberg, KGHM Polska Miedź

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:
15th – 28th May 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, ▪ 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 (charge-free logging)
- silver and gold: www.lbma.org.uk/pricing-and-statistics
- platinum and palladium: www.lppm.com/statistics.aspx

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