

Market Overview

 as of: 13th November 2017






- Copper:** Post LME Week sentiment on the copper market remains very positive. The price is hovering around the narrow range, just below the 7 000 USD/t handle. Supply growth is said to be sluggish whereas demand dynamics are faster than the market has initially (beginning of 2017) expected. According to the recent ICSG's report, the global refined market has posted 160k deficit in the first 7 months of 2017. Demand in China is expected to surpass 11 mn tonnes in 2018, according to Chinese state-run agency – Antaika (page 2).
- Precious metals:** Gold prices in first two weeks of November have continued a stagnation phase. The main reason behind the lack of decisive move is mixed signals coming from the Fed considering interest rate hikes. The geopolitical side still not influencing the demand (page 5).
- Metals – LME week recap:** Synchronized global growth and Electric Vehicles sector to drive commodities markets - key takeaways from one of the most important gatherings of metals' world (page 6).

Key market prices

	Close price	2w chng.
LME (USD/t)		
▼ Copper	6 797.00	-0.5%
▲ Nickel	12 285.00	8.0%
LBMA (USD/troz)		
▲ Silver	17.00	1.7%
▲ Gold (PM)	1 284.30	1.4%
FX		
▲ EURUSD	1.1654	0.4%
▼ EURPLN	4.2299	-0.5%
▼ USDPLN	3.6274	-0.8%
▼ USDCAD	1.2683	-1.5%
▲ USDCLP	631.46	0.1%
Stocks		
▲ KGHM	120.40	0.2%

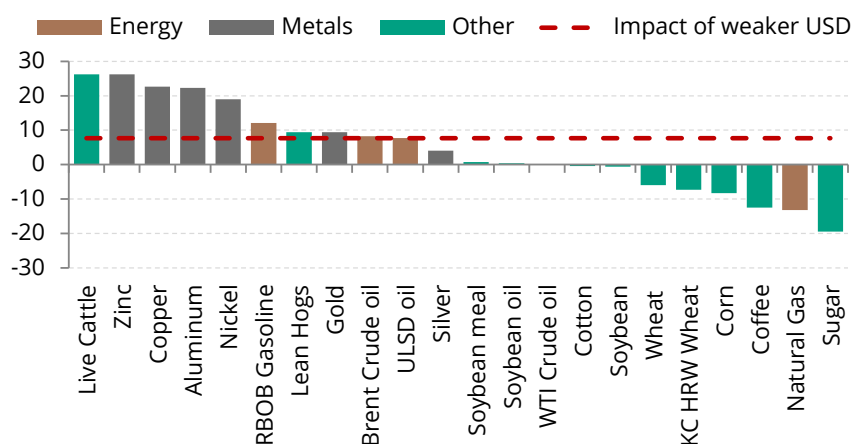
Source: Bloomberg, KGHM Polska Miedź; (more on page 9)

Important macroeconomic data

Release	For		
 GDP (sa, yoy)	3Q	2.5%	▲
 Caixin's manuf. PMI	Oct	51.0	-
 PCE inflation (yoy)	Sep	1.3%	-
 Manufacturing PMI	Oct	54.6	▲
 Econom. activity (yoy)	Sep	1.3%	▼

Source: Bloomberg, KGHM Polska Miedź; (more on page 7)

Metals (base and precious) are among the winners among different commodities' classes year-to-date



Source: Bloomberg, KGHM Polska Miedź

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Base and precious metals | Other commodities

Copper

Post LME Week sentiment on the copper market remains very positive. The price is hovering around the narrow range, just below the 7 000 USD/t handle. Supply growth is said to be sluggish whereas demand dynamics are faster than the market has initially (beginning of 2017) expected. According to the recent ICSG's report, the global refined market has posted 160k deficit in the first 7 months of 2017. Demand in China is expected to surpass 11 mn tonnes in 2018, according to Chinese state-run agency – Antaika.

The global refined copper market posted a shortfall of 160,000 tonnes through the first seven months of 2017

Copper Deficit Emerging as Year-End Approaches

Stagnant growth in world refined copper supply is keeping the global market in a deficit, which should support underlying prices on the London Metal Exchange. The global refined copper market posted a shortfall of 160,000 tonnes through the first seven months of 2017, according to the latest International Copper Study Group (ICSG) report released on October 30. Global refined copper production was largely unchanged through July; primary production fell by 1.5%, essentially offsetting a 10% increase in scrap output, the ICSG said. On the demand side, total refined copper usage was down by 0.5% through July, with Chinese apparent usage down around 2% due to net imports falling by 20%, the trade group said.

In an earlier report, the ICSG forecast a total deficit of 150,000 tonnes in 2017 and 105,000 tonnes in 2018, noting anticipated demand growth following infrastructural development in China and India. Based on this largely positive fundamental picture, the three-month price on the LME rallied to a three-year high of \$7,096 per tonne on October 24, although prices have since slipped to close at \$6,831 per tonne on October 31. Still, many in the market remain hopeful on the near-term price direction.

"We are optimistic on the very short term," Metal Bulletin Research analyst Boris Mikanikrezai said. "Given copper's resilience despite tighter financial conditions in China, there seems to be meaningful buying pressure. With the rebalancing of the market seeming to continue, we expect higher highs sooner rather than later." In copper raw materials, world mine production dropped by around 2% in the first seven month of 2017, with concentrate production inching down roughly 1.5% and solvent extraction-electrowinning (SX-EW) declining by around 4.5%. The fall in world mine production was mainly the result of a 7% or 225,000-tonne drop in production in Chile, where production was negatively affected by the strike at the BHP- and Rio Tinto-owned Escondida mine and lower output from state-owned Codelco mines.

In other regions, Canadian, Mongolian and US concentrates production fell by 22%, 19% and 9%, respectively, due to lower grades. Indonesian concentrate output slipped by 10% due to a temporary ban on concentrate exports that

The fall in world mine production was mainly the result of a 7% drop in production in Chile

started in January and ended in April, the ICSG said. However, these reductions were partially offset by a 3% lift in Mexican concentrate and SX-EW output and a 5% rise in Peruvian concentrate production. Both countries benefited from new and expanded capacity, the ICSG said.

"The copper concentrates market is very tight," Paranapanema chief executive officer Marcos Camara told Metal Bulletin. "Most of the world's copper comes from mines that are on depletion cycles and the reposition [of production losses] do not come at the same speed." Year to date through October 25, the Metal Bulletin copper concentrates treatment and refining charge (TC/RC) index averaged \$82.10 per tonne/8.21 cents per pound, 11.2% lower than the annual contract price of \$92.50 per tonne/9.25 cents per lb for 2017. Annual contracts for 2018 copper concentrate supply are expected to settle around \$85-90 per tonne/8.5-9 cents per lb, industry participants told Metal Bulletin.

China's 2018 Copper Demand To Rise 3.6% To 11.15M mt

China's national refined copper demand is forecast to hit 11.15 million mt in 2018, up 3.6% from an estimated 10.76 million mt this year, state-run metals consultancy Beijing Antaika said this week. The agency said that despite an expected slowdown in China's copper demand growth in the 2017-20 period - with average annual demand growth of around 3-5% compared with double-digit growth rates seen in the past decade - China will remain the world's key copper demand driver in the next few years. The domestic power sector will continue to be the largest copper consumer in China, due to power network upgrades and rural power network renovation, Antaika said in its copper sector report, released late Tuesday. Future demand will also come from investment in clean energy, as well as new energy vehicles, Antaika said. The agency forecasts China's national refined copper output at 8.6 million mt next year, up 5.5% from an estimated 8.15 million mt this year.

China's refined copper imports will total 3 million mt in 2018, down 3.2% from an estimated 3.1 million mt this year, Antaika said. It expects China to export 400,000 mt of refined copper next year, up 14% from an estimated 350,000 mt this year. Compared with the 2000-2016 period, China's national copper smelting capacity growth under the 13th Five Year Plan period (2016-20) is seen slowing down. Antaika estimates around 2 million mt/year refined copper capacity will be brought online in 2016-20. Meanwhile, China's mined copper demand is forecast at 6.15 million in 2018, up 6% from an estimated 5.8 million mt this year, Antaika said. China's mined copper imports are expected to reach 4.8 million mt next year, up 6.7% from an estimated 4.5 million mt this year, with domestic mined copper output seen at 1.72 million mt next year, up 4.2% from estimated 1.65 million mt this year, the agency said. It expects China to have a mined copper surplus of 370,000 mt in 2018, widening from a surplus of 350,000 mt this year.

Other important information on copper market:

- Indonesia's military has recently said that it was prepared to take tough measures against rebels who have threatened to "destroy" mining operations

of Freeport-McMoRan Inc in the eastern province of Papua in their struggle for independence. Police say an armed separatist group linked to the Free Papua Movement (OPM) is preventing about 1,000 people in five villages from leaving an area near the giant Grasberg copper mine, operated by a unit of the Arizona-based company. A state of emergency has been declared and at least 300 additional security forces have been deployed to the area of the province after a string of shootings since Aug. 17 that killed one police officer and wounded six. The group, the West Papua National Liberation Army (TPN-OPM), on Friday denied occupying villages near the mine. Hendrik Wanmang, a representative of TPN-OPM, said none of its more than 2,000 fighters was stationed in the villages.

- The frenzy in the copper market is luring traders to take high-flying bets that prices are headed back toward a record. Call options wagering on copper climbing above \$10,000 (U.S.) a tonne by December, 2018, have started trading during the past two weeks, London Metal Exchange (LME) data show. In total, traders have spent about \$4.5-million on the contracts. Copper hasn't traded at those levels since 2011, the peak of a commodities boom mainly fuelled by a roaring economy in China, the biggest user. The bulk of the wagers came last week during the mining industry's annual gathering in London and suggests traders are becoming increasingly bullish on demand driven by electric cars. "It's like a lottery ticket," said Leon Westgate, a senior analyst for base metals and bulks at Levmet (UK) Ltd., said by phone on Tuesday. But "I can understand the rationale, because you can make a pretty strong argument for much higher prices." Chilean miner Codelco said prices could test record highs above \$10,000 a tonne as the supply-demand balance shifts to "substantial" deficits from 2018. Copper is up 23 per cent this year at \$6,820 a tonne on the LME and last month reached a three-year high. The traders will be rewarded handsomely if the options expire in the money. They bought \$2.5-million of options on Thursday that would pay out about \$10-million if copper reaches \$10,200 by December next year, data compiled by Bloomberg show. The options would be worth \$28.8-million if copper hits \$10,500. In total, 4,740 options targeting \$10,000 by the end of 2018 were sold since Oct. 23. Even if prices don't reach the \$10,000 strike price, holders of the calls could still profit if copper rallies sharply. That's because implied volatility associated with the contracts may rise, making them more valuable, Keith Wildie, head of commodity volatility at Vantage Capital Markets Ltd., said by e-mail. "If it all goes crazy, you have a very solid position," he said.
- BHP Billiton Ltd., the world's biggest miner, wants to own even more copper deposits as electric cars drive an increasingly bullish outlook for metal. "We want more copper resources in our portfolio," Daniel Malchuk, head of BHP's Minerals Americas division, said in a speech at Bloomberg Intelligence's LME Week Forum in London. The company is already the fourth-largest copper producer. Daniel Malchuk, head of BHP's Minerals Americas division, said that an electric car will use about 80 kilograms (176 pounds) of copper, quadruple the amount used in a regular petrol vehicle, and that some models could need as much as 105 kilograms. With BHP forecasting 140 million electric

vehicles on the road by 2035, that would equate to about 12 million tons of demand from the sector over the period, he said. "The value of the copper market could increase by over 50 percent by 2035 – an opportunity worth seizing," Malchuk said. "Now you see why copper is firmly on our radar." "In terms of new investment, in terms of new growth, we've made no secret that it will not come from iron ore, it will come from copper," Malchuk said in an interview after his speech. "It's difficult for us to find really good opportunities. It's why we put our focus into exploration. We have a very high threshold."

Precious Metals

Gold prices in first two weeks of November have continued a stagnation phase. The main reason behind the lack of decisive move is mixed signals coming from the Fed considering interest rate hikes. The geopolitical side still not influencing the demand.

Hong Kong and Shenzhen launched gold market tie up

Hong Kong and Shenzhen launched a gold market tie up on Nov. 3, providing a boost to cross-border bullion trading and the internationalization of the Chinese currency. The new gold tie up allows mainland Chinese investors to trade gold in Hong Kong for the first time. The new connection follows the Shanghai-Hong Kong gold connect in July 2015 that allowed Hong Kong people to invest in mainland gold markets. The new linkage would boost gold trading activity between Hong Kong and China and also aid jewellery manufacturers to lower costs. New venture can serve 2,000 to 2,500 gold and jewellery manufacturers in Shenzhen. If the warehouse is in Shenzhen, their logistics, insurance and daily trade will be more convenient and can lower their costs a great deal. Next goal is to connect with Dubai, Myanmar and Singapore, following the completion of its bonded warehouse in April 2018 in Qianhai in Shenzhen's special economic zone. The Hong Kong stock connect joined up the Shanghai and Hong Kong stock markets in November 2014 and was extended to include Shenzhen in December 2016, allowing mainland investors to buy Hong Kong stocks, and vice versa.

India gold demand seen falling to lowest in 8 years in 2017 – WGC

India's gold consumption is likely to drop to its lowest in eight years in 2017, hit by government moves to make bullion trading more transparent and by faltering demand from some rural areas, the World Gold Council (WGC) said. Evidence of weaker appetite in a country where gold is used in everything from investment to wedding gifts could drag on global prices that have been hovering near their highest in three weeks. Indian demand is likely to be around 650 tonnes in 2017, compared to a 10-year average of 845 tonnes. Demand was 666.1 tonnes in 2016. According to WGC report the newly introduced Goods and Services Tax (GST) and anti-money laundering legislation around jewellery retail transactions deterred

gold buyers. As part of a new nationwide sales tax regime introduced in July, the GST on gold jumped to 3 percent from 1.2 percent previously.

Metals | LME week recap





LME week 2017 (30.10. – 03.11.)







Synchronised global growth and electric vehicles sector to drive commodities markets - key takeaways from one of the most important gatherings of metals' world.

- Sentiment on the commodities market has been definitely better recently, comparing to one year ago. Financial sector is slowly changing its attitude towards commodities, particularly base metals, to more positive. Commodities regain interest especially among macro and CTA funds capital, which analyze perspective of world GDP growth and technical signals, rather than fundamental data from particular metal's market.
- Copper price growth has been fueled by macro, CTA's and Chinese hedge fund community, which are said to have built a significant long position in Q2 and Q3. So called discretionally hedge funds from US/EU, which are more concentrated on deeper analysis of the market fundamentals, were too late to gain on this movement.
- All market participants are trying to predict 1H 2018 macroeconomic data in China – very important information weighing on market sentiment. The consensus is that, despite some concerns, no one is expecting significant downturn.
- Mining companies are reviewing their portfolios of projects but without final decisions yet. With higher base metals prices, financial ratios of companies improved what is creating a room for new project developments, justified assuming materialization of lack of supply story in longer term. More certainty about sustainability of current price levels seems to be needed for investment decisions.
- Electro vehicles development is treated as a long term story by market participants, which should create additional consumption of Nickel, Cobalt, rare earth and to some extent Copper as well but at the time being it is really hard to evaluate reasonable figures, although forecasts are optimistic.

Macroeconomic calendar

Important macroeconomic data releases

Weight	Date	Event	For	Reading ¹	Previous	Consensus ²	
China							
🔴🔴🔴	31-Oct	Official manufacturing PMI	Oct	51.6 ▼	52.4	52.0	🔴
🔴🔴🔴	01-Nov	Caixin's manufacturing PMI	Oct	51.0 -	51.0	51.0	🟡
🔴	07-Nov	Foreign reserves (USD bn)	Oct	3 109 ▲	3 109	3 110	🔴
🔴🔴	08-Nov	Trade balance (USD bn)‡	Oct	38.2 ▲	28.6	39.1	🔴
🔴🔴	08-Nov	Exports (yoy)‡	Oct	6.9% ▼	8.0%	7.1%	🔴
🔴🔴🔴🔴	09-Nov	Consumer inflation CPI (yoy)	Oct	1.9% ▲	1.6%	1.8%	🟢
🔴🔴	09-Nov	Producer inflation PPI (yoy)	Oct	6.9% -	6.9%	6.6%	🟢
Poland							
🔴🔴🔴🔴	31-Oct	Consumer inflation CPI (yoy) - preliminary data	Oct	2.1% ▼	2.2%	2.1%	🟡
🔴🔴🔴	02-Nov	Manufacturing PMI	Oct	53.4 ▼	53.7	54.0	🔴
🔴🔴🔴🔴	08-Nov	NBP base rate decision	Nov	1.50% -	1.50%	1.50%	🟡
US							
🔴🔴🔴🔴	30-Oct	Consumer spending inflation PCE (mom)	Sep	0.1% -	0.1%	0.1%	🟡
🔴🔴🔴🔴	30-Oct	Consumer spending inflation PCE (yoy)	Sep	1.3% -	1.3%	1.3%	🟡
🔴🔴	30-Oct	Personal income (sa, mom)	Sep	0.4% ▲	0.2%	0.4%	🟡
🔴🔴	30-Oct	Personal spending (sa, mom)	Sep	1.0% ▲	0.1%	0.9%	🟢
🔴	30-Oct	Dallas Fed manufacturing activity	Oct	27.6 ▲	21.3	21.0	🟢
🔴	31-Oct	S&P/CaseShiller home price index‡	Aug	203 ▲	202	--	
🔴🔴🔴🔴🔴	01-Nov	FOMC base rate decision - upper bound (Fed)	Nov	1.25% -	1.25%	1.25%	🟡
🔴🔴🔴🔴🔴	01-Nov	FOMC base rate decision - lower bound (Fed)	Nov	1.00% -	1.00%	1.00%	🟡
🔴🔴🔴	01-Nov	Manufacturing PMI - final data	Oct	54.6 ▲	54.5	54.5	🟢
🔴🔴	01-Nov	ISM Manufacturing	Oct	58.7 ▼	60.8	59.5	🔴
🔴🔴🔴	03-Nov	Composite PMI - final data	Oct	55.2 ▼	55.7	--	
🔴🔴🔴	03-Nov	PMI services - final data	Oct	55.3 ▼	55.9	55.9	🔴
🔴🔴	03-Nov	Change in non-farm payrolls (ths)‡	Oct	261 ▲	18.0	313	🔴
🔴🔴	03-Nov	Durable goods orders - final data	Sep	2.0% ▼	2.2%	2.0%	🟡
🔴🔴	03-Nov	Underemployment rate (U6)	Oct	7.9% ▼	8.3%	--	
🔴🔴	03-Nov	Unemployment rate	Oct	4.1% ▼	4.2%	4.2%	🔴
🔴	03-Nov	Average hourly earnings (yoy)‡	Oct	2.4% ▼	2.8%	2.7%	🔴
🔴🔴	10-Nov	University of Michigan confidence index - preliminary data	Nov	97.8 ▼	101	101	🔴
Eurozone							
🔴	30-Oct	Economic confidence‡	Oct	114 ▲	113	113	🟢
🔴	30-Oct	Industrial confidence‡	Oct	7.9 ▲	6.7	7.1	🟢
🔴	30-Oct	Consumer confidence - final data	Oct	- 1.0 -	- 1.0	- 1.0	🟡
🔴	30-Oct	Business climate indicator	Oct	1.4 ▲	1.3	1.4	🟢
🔴🔴🔴🔴🔴	31-Oct	GDP (sa, yoy) - estimation	3Q	2.5% ▲	2.3%	2.4%	🟢
🔴🔴🔴🔴🔴	31-Oct	GDP (sa, qoq) - estimation‡	3Q	0.6% ▼	0.7%	0.5%	🟢
🔴🔴🔴🔴	31-Oct	Core CPI (yoy) - estimation	Oct	0.9% ▼	1.1%	1.1%	🔴
🔴🔴🔴🔴	31-Oct	CPI estimate (yoy)	Oct	1.4% ▼	1.5%	1.5%	🔴
🔴🔴	31-Oct	Unemployment rate‡	Sep	8.9% ▼	9.0%	9.0%	🔴
🔴🔴🔴	02-Nov	Manufacturing PMI - final data	Oct	58.5 ▼	58.6	58.6	🔴
🔴🔴🔴	06-Nov	Composite PMI - final data	Oct	56.0 ▲	55.9	55.9	🟢
🔴🔴🔴	06-Nov	Services PMI - final data	Oct	55.0 ▲	54.9	54.9	🟢
🔴🔴	06-Nov	Producer inflation PPI (yoy)	Sep	2.9% ▲	2.5%	2.7%	🟢
🔴🔴	07-Nov	Retail sales (yoy)‡	Sep	3.7% ▲	2.3%	2.8%	🟢

Weight	Date	Event	For	Reading ¹	Previous	Consensus ²	
Germany							
⊕⊕⊕⊕	30-Oct	Harmonized consumer inflation HICP (yoy) - preliminary data	Oct	1.5% ▼	1.8%	1.7%	☹
⊕⊕⊕⊕	30-Oct	Consumer inflation CPI (yoy) - preliminary data	Oct	1.6% ▼	1.8%	1.7%	☹
⊕⊕⊕	30-Oct	Retail sales (yoy)‡	Sep	4.1% ▲	3.0%	3.0%	☺
⊕⊕⊕	02-Nov	Manufacturing PMI - final data	Oct	60.6 ▲	60.5	60.5	☺
⊕⊕	02-Nov	Unemployment rate	Oct	5.6% -	5.6%	5.6%	⊖
⊕⊕⊕	06-Nov	Composite PMI - final data	Oct	56.6 ▼	56.9	56.9	☹
⊕⊕⊕	06-Nov	Factory orders (wda, yoy)‡	Sep	9.5% ▲	8.3%	7.1%	☺
⊕⊕⊕⊕	07-Nov	Industrial production (wda, yoy)‡	Sep	3.6% ▼	4.6%	4.5%	☹
France							
⊕⊕⊕⊕⊕	31-Oct	GDP (yoy) - estimation	3Q	2.2% ▲	1.8%	2.1%	☺
⊕⊕⊕⊕⊕	31-Oct	GDP (qoq) - estimation‡	3Q	0.5% ▼	0.6%	0.5%	⊖
⊕⊕⊕⊕	31-Oct	Harmonized consumer inflation HICP (yoy) - preliminary data	Oct	1.2% ▲	1.1%	1.2%	⊖
⊕⊕⊕⊕	31-Oct	Consumer inflation CPI (yoy) - preliminary data	Oct	1.1% ▲	1.0%	1.0%	☺
⊕⊕⊕	02-Nov	Manufacturing PMI - final data	Oct	56.1 ▼	56.7	56.7	☹
⊕⊕⊕	06-Nov	Composite PMI - final data	Oct	57.4 ▼	57.5	57.5	☹
⊕⊕⊕⊕	10-Nov	Industrial production (yoy)‡	Sep	3.2% ▲	1.0%	3.1%	☺
Italy							
⊕⊕⊕⊕	31-Oct	Harmonized consumer inflation HICP (yoy) - preliminary data	Oct	1.1% ▼	1.3%	1.3%	☹
⊕⊕	31-Oct	Unemployment rate - preliminary data‡	Sep	11.1% -	11.1%	11.1%	⊖
⊕⊕⊕	02-Nov	Manufacturing PMI	Oct	57.8 ▲	56.3	56.5	☺
⊕⊕⊕	06-Nov	Composite PMI	Oct	53.9 ▼	54.3	54.3	☹
⊕⊕⊕⊕	10-Nov	Industrial production (wda, yoy)‡	Sep	2.4% ▼	5.8%	4.8%	☹
UK							
⊕⊕⊕	01-Nov	Manufacturing PMI (sa)‡	Oct	56.3 ▲	56.0	55.9	☺
⊕⊕⊕⊕⊕	02-Nov	BoE base rate decision	Nov	0.50% ▲	0.25%	0.50%	⊖
⊕⊕⊕⊕	02-Nov	BoE asset purchase target (GBP bn)	Nov	435 -	435	435	⊖
⊕⊕⊕	03-Nov	Composite PMI	Oct	55.8 ▲	54.1	53.8	☺
⊕⊕⊕⊕	10-Nov	Industrial production (yoy)‡	Sep	2.5% ▲	1.8%	1.9%	☺
Japan							
⊕⊕⊕⊕	31-Oct	Industrial production (yoy) - preliminary data	Sep	2.5% ▼	5.3%	2.0%	☺
⊕⊕⊕	01-Nov	Manufacturing PMI - final data	Oct	52.8 ▲	52.5	--	
⊕⊕⊕	06-Nov	Composite PMI	Oct	53.4 ▲	51.7	--	
Chile							
⊕⊕⊕	30-Oct	Total copper production (metric tons)	Sep	485 929 ▼	508 598	--	
⊕⊕⊕	30-Oct	Manufacturing (yoy)‡	Sep	-1.4% ▼	1.5%	-1.5%	☺

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

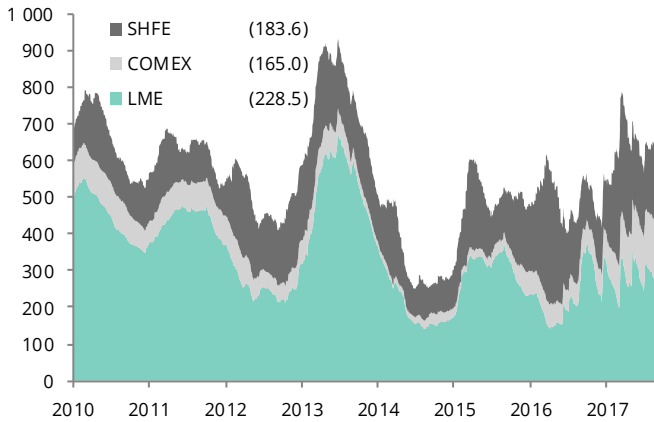
Key base & precious metal prices, exchange rates and other important market factors

<i>(as of: 10-Nov-17)</i>		Price change ¹					From year beginning ²		
	Price	2W	QTD	YTD	1Y	Average	Min	Max	
LME (USD/t)									
Copper	6 797.00	▼ -0.5%	▲ 4.8%	▲ 23.6%	▲ 21.0%	6 069.77	5 466.00	7 073.50	
Molybdenum	16 000.00	- 0.0%	- 0.0%	▲ 4.9%	▲ 4.9%	15 889.27	15 250.00	17 500.00	
Nickel	12 285.00	▲ 8.0%	▲ 16.1%	▲ 22.7%	▲ 4.9%	10 244.95	8 715.00	12 830.00	
Aluminum	2 090.00	▼ -1.4%	▼ -1.0%	▲ 22.0%	▲ 17.9%	1 952.58	1 701.00	2 188.00	
Tin	19 700.00	▼ -0.5%	▼ -6.2%	▼ -6.6%	▼ -10.1%	20 197.21	18 760.00	21 300.00	
Zinc	3 289.50	▲ 2.8%	▲ 2.3%	▲ 28.3%	▲ 29.9%	2 849.77	2 434.50	3 370.00	
Lead	2 547.00	▲ 4.8%	▲ 1.1%	▲ 28.3%	▲ 18.2%	2 292.38	2 007.00	2 585.00	
LBMA (USD/troz)									
Silver	17.00	▲ 1.7%	▲ 0.8%	▲ 4.7%	▼ -9.3%	17.13	15.22	18.56	
Gold ²	1 284.30	▲ 1.4%	▲ 0.1%	▲ 10.8%	▲ 1.3%	1 255.06	1 151.00	1 346.25	
LPPM (USD/troz)									
Platinum ²	937.00	▲ 2.2%	▲ 1.8%	▲ 3.3%	▼ -4.8%	952.61	891.00	1 033.00	
Palladium ²	1 000.00	▲ 2.9%	▲ 7.0%	▲ 47.9%	▲ 44.9%	849.05	706.00	1 016.00	
FX ³									
EURUSD	1.1654	▲ 0.4%	▼ -1.3%	▲ 10.6%	▲ 7.0%	1.1222	1.0385	1.2060	
EURPLN	4.2299	▼ -0.5%	▼ -1.8%	▼ -4.4%	▼ -2.6%	4.2646	4.1737	4.4002	
USDPLN	3.6274	▼ -0.8%	▼ -0.7%	▼ -13.2%	▼ -9.0%	3.8090	3.5239	4.2271	
USDCAD	1.2683	▼ -1.5%	▲ 1.6%	-	-	1.3017	1.2128	1.3743	
USDCNY	6.6409	▼ -0.1%	▼ -0.2%	▼ -4.4%	▼ -2.4%	6.7805	6.4870	6.9640	
USDCLP	631.46	▲ 0.1%	▼ -0.8%	▼ -5.4%	▼ -3.0%	651.29	615.58	679.05	
Money market									
3m LIBOR USD	1.413	▲ 0.03	▲ 0.08	▲ 0.42	▲ 0.51	1.221	0.999	1.413	
3m EURIBOR	-0.329	▲ 0.00	- 0.00	▼ -0.01	▼ -0.02	-0.329	-0.332	-0.319	
3m WIBOR	1.730	- 0.00	- 0.00	- 0.00	- 0.00	1.730	1.730	1.730	
5y USD interest rate swap	2.119	▲ 0.00	▲ 0.11	▲ 0.14	▲ 0.51	1.951	1.711	2.239	
5y EUR interest rate swap	0.216	▲ 0.00	▼ -0.04	▲ 0.14	▲ 0.10	0.196	0.078	0.326	
5y PLN interest rate swap	2.480	▼ -0.04	▲ 0.04	▲ 0.08	▲ 0.21	2.407	2.165	2.625	
Fuel									
WTI Cushing	56.74	▲ 5.3%	▲ 9.8%	▲ 5.6%	▲ 27.0%	49.79	42.31	57.35	
Brent	63.49	▲ 5.2%	▲ 12.3%	▲ 14.6%	▲ 41.0%	52.90	44.21	64.13	
Diesel NY (ULSD)	193.12	▲ 3.5%	▲ 7.0%	▲ 13.7%	▲ 35.2%	161.34	135.85	194.19	
Others									
VIX	11.29	▲ 1.49	▲ 1.78	▼ -2.75	▼ -3.45	11.18	9.14	16.04	
BBG Commodity Index	87.28	▲ 1.6%	▲ 3.3%	▼ -0.3%	▲ 4.1%	84.79	79.36	89.36	
S&P500	2 582.30	▲ 0.0%	▲ 2.5%	▲ 15.3%	▲ 19.1%	2 420.44	2 257.83	2 594.38	
DAX	13 127.47	▼ -0.7%	▲ 2.3%	▲ 14.3%	▲ 23.5%	12 343.21	11 509.84	13 478.86	
Shanghai Composite	3 432.67	▲ 0.5%	▲ 2.5%	▲ 10.6%	▲ 8.2%	3 236.58	3 052.79	3 432.67	
WIG 20	2 457.62	▼ -1.2%	▲ 0.2%	▲ 26.2%	▲ 36.8%	2 317.67	1 989.64	2 551.78	
KGHM	120.40	▲ 0.2%	▲ 2.6%	▲ 30.2%	▲ 37.6%	119.05	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

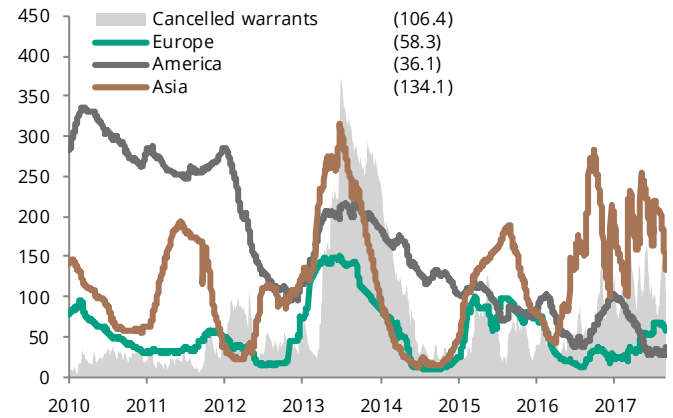
Source: Bloomberg, KGHM

Copper: official exchange stocks (thousand tonnes)



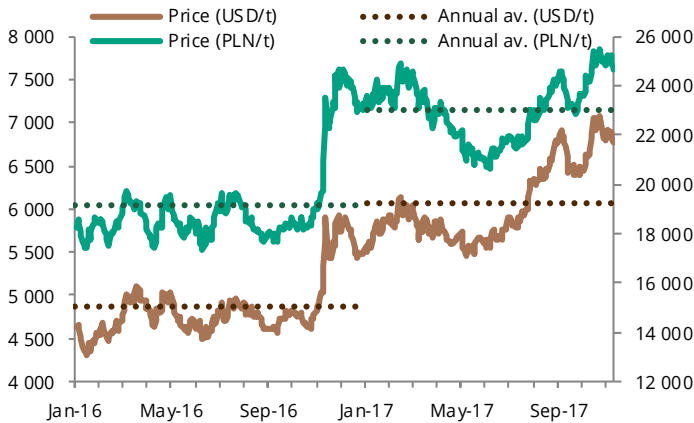
Note: Latest values in brackets. Source: Bloomberg, KGHM

Copper: official LME stocks (thousand tonnes)



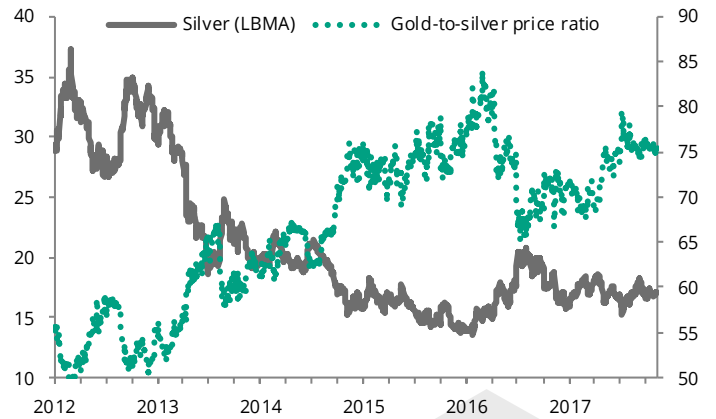
Note: Latest values in brackets. Source: Bloomberg, KGHM

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



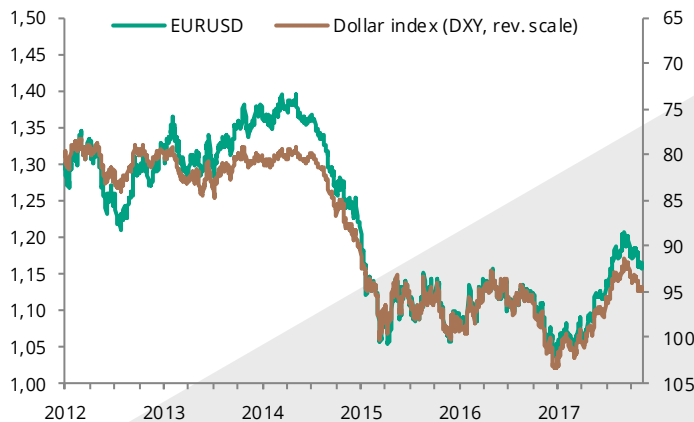
Source: Bloomberg, KGHM Polska Miedź

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



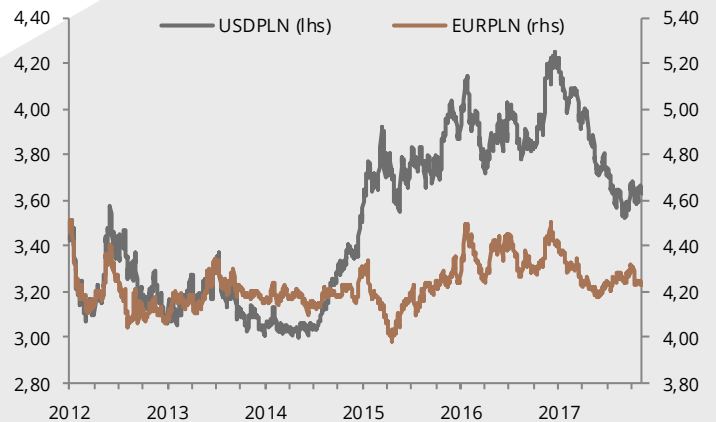
Source: Bloomberg, KGHM Polska Miedź

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:
30th October – 12th November 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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