KGHM POLSKA MIEDŹ

Market Overview

as of: 22nd October 2018

- **Copper:** According to most speakers during the LME Week – world's largest industrial metals' event in London – the recent negative price changes the copper market were mainly caused by investor negative sentiment and net short positioning. Copper demand perspectives still remain strong, with solid Chinese year-over-year growth *(page 2)*.
- **Precious metals:** Poland raised its gold holdings to the highest in at least 35 years. The country increased its holdings by 4.4 tonnes from August to about 117 tonnes in September, a record, according to data going back to January 1983. In terms of silver, the market analysts think that globally, a trade war likely will have limited impact on the industrial use of the metal *(page 4)*.
- **World Economic Outlook:** Global growth for 2018–19 is projected to remain steady at its 2017 level, but its pace is less vigorous than projected in April and it has become less balanced. Downside risks to global growth have risen in the past six months and the potential for upside surprises has receded. Global growth is projected at 3.7 percent for 2018–19, minus 0.2 percentage point lower for both years than forecast in April *(page 6)*.

Key market prices

		Close price	2w chng.
	LME (USD/t)		
▲	Copper	6 191.50	0.4%
▲	Nickel	12 470.00	0.6%
	LBMA (USD/troz)		
▲	Silver	14.61	1.0%
▲	Gold (PM)	1 227.85	3.4%
	FX		
▼	EURUSD	1.1470	-0.1%
▼	EURPLN	4.3049	-0.1%
▲	USDPLN	3.7601	0.1%
▲	USDCAD	1.3104	1.3%
▲	USDCLP	674.68	0.3%
	Stocks		
▼	KGHM	84.64	-2.5%

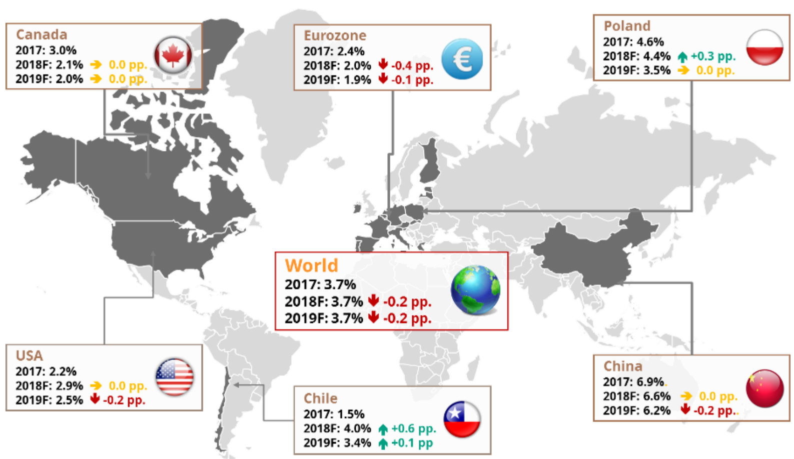
Source: Bloomberg, KGHM Polska Miedź; *(more on page 11)*

Important macroeconomic data

Release	For		
GDP (yoy)	3Q	6.5%	▼
CPI (yoy)	Sep	2.3%	▼
BCCh rate decision	Oct	2.75%	▲
Industr. prod. (wda, yoy)	Aug	-0.1%	▼
ZEW survey expectations	Oct	- 19.4	▼

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

New IMF report shows desynchronization of global growth



Source: IMF, KGHM Polska Miedź

Market Risk Unit

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Base and precious metals | Other commodities

Copper

According to most speakers during the LME Week – world's largest industrial metals' event in London – the recent negative price changes the copper market were mainly caused by investor negative sentiment and net short positioning. Copper demand perspectives still remain strong, with solid Chinese year-over-year growth.

Copper fundamentals remain strong

Chinese demand growth should be stimulated by the development of energy grid and various infrastructural investments

The recent negative price changes in the copper market were mainly caused by negative investors' sentiment and short positioning, according to the wide market consensus set during the time of 2018 edition of the LME Week. There were no major changes in the solid foundations of the market. The results of surveys conducted among participants during LME Week numerous seminars usually indicated copper and nickel prices as the metals having the greatest potential for further growth.

Copper market analysts predict dynamic increase in Chinese copper demand in 2018 at nearly 5%, which would be one of the highest levels in recent years. The main source of those changes should be the development of energy grid and various infrastructural investments (mainly construction of railway lines). The ban of the category 7 scrap import additionally translates into an increase of country's demand for refined copper. It is also probable, that the ban will be extended on other categories of scrap starting from 2020, which could have significant consequences for the copper market. The restriction of the import of scrap metal to the Middle Kingdom has considerably improved the situation on the European market - various scrap consumers were mentioning better access to metal from USA.

Mining production in 2018 exceeded expectations, mainly due to the smooth path of the labor contracts renegotiation in Chile. Most of the recently approved projects are relatively small operations, and two of the largest – Chuquicamata underground and Grasberg Block Cave – are aimed to maintain the level of current production. Acceptance of projects took place when copper price was over 7,000 USD/t, which seems to be a long-term level, an incentive price encouraging investments in new deposits. Mining companies need stabilization, and over the last two months the price has fallen by over 1000 USD/t, so according to some market participants, yet another wave of new projects is waiting for a more stable market situation. The persistence of an atmosphere of uncertainty regarding the directions and scope of changes in the global economy may stop the investments in mining projects, and production from existing mines has a downward trend due to depletion of deposits. Since the implementation of new projects usually takes from 5 to 10 years depending on the size of the project and its development stage, longer period of low prices and uncertainty in economy increases the likelihood of a longer and deeper deficit on the copper market in the next decade.

Other important information on copper market:

- China is expected to add 780,000 mt/year new copper smelting capacity in 2019, and another 600,000 mt/year capacity in 2020, Jiangxi Copper Corp said in its third quarter copper report Tuesday. The new capacity next year will consist of 200,000 mt/year and 250,000 mt/year production lines, in Chongzuo City, Guangxi region, and Chifeng City, Inner Mongolia, to be commissioned in Q1 and Q2 respectively, while 150,000 mt/year, 100,000 mt/year and 80,000 mt/year new capacity in Heilongjiang Province, Xinjiang region and Fujian Province respectively is to be commissioned in Q4 2019, its data showed. Meanwhile, the new copper capacity that is set to be commissioned in 2020 will comprise 200,000 mt/year capacity in Inner Mongolia's Chifeng City, 200,000 mt/year in Yantai City, Shandong Province and 200,000 mt/year in Ganqimao Port, Inner Mongolia respectively. Jiangxi Copper said that although China added new copper smelting capacity of 850,000 mt/year this year, it did not contribute much to national refined copper output this year, with production of the new capacity seen ramping up in Q4 this year, adding more to national output next year. Jiangxi Copper predicted China's Q4 refined copper output to be 2.22 million mt, up marginally from 2.21 million mt in Q3, with Q4 net refined copper imports seen at 800,000 mt, down from 830,000 mt in Q3.
- Chile's copper production fell by 7 percent in August compared with the same month last year due to a drop in output at state copper firm Codelco and Escondida, Cochilco, the government agency that oversees the red metal, said. Chile produced 462,000 tonnes of copper in August, compared with 496,600 in August 2017. Escondida, run by BHP Billiton Ltd, produced 84,600 tonnes, down 13.5 percent compared with August last year, while production at Codelco dropped 12 to 141,500 tonnes, with downturns at almost all its facilities. The country's second-largest mine by output Collahuasi, owned by Anglo American and Glencore Plc, ramped up production by 4.1 percent to 45,400 tonnes.
- Top copper producer Codelco will halt smelter operations at its Chuquicamata mine for 60 days starting Dec. 13 due to a delay in upgrading installations to meet new emission standards, Union No. 3 president and smelter coordinator Rolando Milla says by phone. He said that new acid plants are suffering delays of 45 to 60 days. Codelco is expected to do other maintenance and upgrading works scheduled for later in the year during these days. It's still unclear how the stoppage will impact cathode production. The smelter is expected to be running at full speed on March 1, Milla said. It's currently operating below capacity because the air blower in the thermal-electric sulfur plant that's over 50 years old broke in mid-September and is blowing air into just one of three converters. Milla called on Codelco to

employ its own workers to repair and upgrade smelter, instead of contractors.

- Spot treatment and refining charges for imported copper concentrates for Chinese smelters rose to $90-$95/mt, and 9-9.5 cents/lb in the week of Oct 6, up by $1/mt and 0.1 cents/lb, from the preceding week, amid weak demand for concentrates, Chinese industry sources said this week. Jiangxi Copper Corp in its weekly copper report said with smelters both in China and overseas shut for annual overhauls, this has resulted in weaker demand for concentrates, and possibly hiking spot fees further in the near term. However, the producer noted that higher fees did not imply smoother negotiations between overseas mines and Chinese smelters for term 2019 TC/RC contracts. State Development and Investment Corp said spot fees rose from $73-$75/mt, and 7.3-7.5 cents/lb in the first quarter of this year to $93/mt, and 9.3 cents/lb in September, in sharp contrast with the fall in annual term TC/RCs for 2018 to $82.25/mt and 8.225 cents/lb, from $92.5/mt and 9.25 cents/lb for 2017 given the anticipation at end-2017 of tight concentrate supply in 2018. Jiangxi Copper said the surge in imports of concentrates in September was due to lower copper scrap supply in the third quarter, as well as the high TC/RCs, spurring Chinese smelters to replenish concentrate stocks, with a lot of them hiking the ratio of concentrates as their feedstocks.

Precious Metals

Poland raised its gold holdings to the highest in at least 35 years. The country increased its holdings by 4.4 tonnes from August to about 117 tonnes in September, a record, according to data going back to January 1983. In terms of silver, the market analysts think that globally, a trade war likely will have limited impact on the industrial use of the metal.

Poland raises gold holdings to record high in September

Gold reserves in Poland are the highest since January 1983

Poland raised its gold holdings to the highest in at least 35 years, data from the International Monetary Fund showed. The country increased its holdings by 4.4 tonnes from August to about 117 tonnes in September, a record, according to data going back to January 1983.

While the exchange traded funds (ETFs) were losing tonnage, the central banks were buying since they had to maintain domestic currency values against a rising dollar, said George Gero, managing director at RBC Wealth Management. "I think you will see that continuing. Central banks are trying to maintain some hold on their currencies by storing gold."

Holdings of SPDR Gold, the largest gold-backed ETF, have registered declines of more than 4 million ounces (about 124 tonnes) since hitting a peak in late April as investors have preferred the safety of the U.S. dollar against a backdrop of rising interest rates and as a U.S.-China trade tussle unfolds. The trade dispute and rising dollar have in turn weighed on emerging markets, with the Polish zloty declining more than 6% this year.

Limited impact on Silver industrial demand from US-China trade war

According to Metals Focus, IMF GDP growth revisions will have limited impact on industrial demand for silver

Globally, a trade war likely will have limited impact on the industrial use of silver, said the consultancy Metals Focus. Analysts offered the assessment after the International Monetary Fund this week downwardly revised its forecast for global economic growth in 2018 and 2019 due mainly to the US-China trade war.

Generally, investors have shrugged off trade-war fears, as reflected by a strong stock market, Metals Focus says. Nevertheless, analysts cite data showing that industrial demand is important to the silver market.

They look for industrial silver demand to rise 0.2% to 514 million ounces, which would be the highest total of the decade. "In terms of overall supply/demand, industrial offtake now accounts for 54% of the global total (vs. 50% in 2010)," Metals Focus said, calling this demand a "success story" despite efforts to thrift on silver.

"Regarding the direct impact of the trade war on silver consuming industries, in most cases we believe that, at least at a global level, this will be limited," Metals Focus noted. "A globalized supply chain should allow many manufacturers to shift sourcing and production across different geographies. Naturally, there will be winners and losers, but the industry as a whole should be able to adapt to the new regime". Still, Metals Focus said it looks for a market surplus this year of 48 million silver ounces, noting that other forms of demand, such as physical investment, have declined.

Global economies | Foreign exchange markets

International Monetary Fund: World Economic Outlook (October 2018)

Global growth for 2018–19 is projected to remain steady at its 2017 level, but its pace is less vigorous than projected in April and it has become less balanced. Downside risks to global growth have risen in the past six months and the potential for upside surprises has receded. Global growth is projected at 3.7 percent for 2018–19, minus 0.2 percentage point lower for both years than forecast in April.

IMF WEO: Downside risks to global growth have risen in the past six months and the potential for upside surprises has receded

The downward revision reflects surprises that suppressed activity in early 2018 in some major advanced economies, the negative effects of the trade measures implemented or approved between April and mid-September, as well as a weaker outlook for some key emerging market and developing economies arising from country-specific factors, tighter financial conditions, geopolitical tensions, and higher oil import bills. Beyond the next couple of years, as output gaps close and monetary policy settings begin to normalize, growth in most advanced economies is expected to decline to potential rates well below the averages reached before the global financial crisis of a decade ago.

Medium-term prospects remain generally strong in emerging Asia but subpar in some emerging market and developing economies, especially for per capita growth, including in commodity exporters that continue to face substantial fiscal consolidation needs or are mired in war and conflict. The balance of risks to the global growth forecast has shifted to the downside in a context of elevated policy uncertainty. Several of the downside risks highlighted in the April 2018 World Economic Outlook (WEO)—such as rising trade barriers and a reversal of capital flows to emerging market economies with weaker fundamentals and higher political risk—have become more pronounced or have partially materialized. Meanwhile, the potential for upside surprises has receded, given the tightening of financial conditions in some parts of the world, higher trade costs, slow implementation of reforms recommended in the past, and waning growth momentum.

While financial market conditions remain accommodative in advanced economies, they could tighten rapidly if trade tensions and policy uncertainty intensify, or unexpectedly high inflation in the United States triggers a stronger-than-anticipated monetary policy response. Tighter financial conditions in advanced economies could cause disruptive portfolio adjustments, sharp exchange rate movements, and further reductions in capital inflows to emerging markets, particularly those with greater vulnerabilities. The recovery has helped lift employment and income, has strengthened balance sheets, and has provided an opportunity to rebuild buffers.

However, with risks shifting to the downside, there is greater urgency for policies to enhance prospects for strong and inclusive growth. Avoiding protectionist reactions to structural change and finding cooperative solutions that promote continued growth in goods and services trade remain essential to preserving and extending the global expansion. At a time of above-potential growth in many economies, policymakers should aim to enact reforms that raise medium-term incomes for the benefit of all. With shrinking excess capacity and mounting downside risks, many countries need to rebuild fiscal buffers and strengthen their resilience to an environment in which financial conditions could tighten suddenly and sharply.

Global growth desynchronization?

This year's LME Week was dominated by discussions on the current macroeconomic situation - in particular much attention was paid to the trade conflict between the US and China. Opinions regarding the global GDP growth in subsequent years differed greatly among the speakers, however, more and more voices are being raised about the desynchronization of global economy.

Opinions regarding the global GDP growth rate in the following years differed greatly among the LME Week speakers, but some of them mentioned that it would not be possible to achieve even 3% yoy level of growth, which is far below Bloomberg consensus. As mentioned in the previous article, on October 8th, the IMF published a new report on the condition of the global economy, expecting a slower pace of development in 2018 and 2019 by 0.2pp compared to the forecast update from July 2018. Potential economic slowdown in the next two years – according to many LME speakers - may be preceded by rising oil prices and a further escalation of the trade war. Some analysts also pointed out first signs of overheating of the global economy. Even though there is still room for further growth, there are more and more concerns about the desynchronization. The strengthening of the American economy stimulated by the fiscal reform and supported by the promise of the infrastructure investment package is particularly visible. The key date is the 6th of November, when the Congress and Senate elections will take place. The possibility and efficiency of further economic stimulus is highly dependent on the final division of forces between Democrats and Republicans. US growth, however, is partially at the expense of developing countries, for which the normalization of monetary policy (interest rate increases and reduction of the Fed's balance sheet) raises the cost of financing, and the strengthening of the dollar is a source of inflationary pressure in many of these countries. The potential for further growth in European Union seems limited - the investment slowdown in recent years is felt. The lack of arrangements for Brexit causes an atmosphere of uncertainty. Without regulating trade issues, the functioning of many areas remains unknown. Financial institutions present a differentiated approach to this issue. Some banks have already taken actions to transfer a significant part of the operations to other European countries. This is especially evident in institutions with European roots. Institutions with headquarters in the UK or US are preparing infrastructure and legal documentation in the event of the need to transfer cooperation, but abstain from the final decision on the transfer of employees. Brexit will also have an impact on the real economy. The degree of dependence of the British economy with other EU countries is so high that disruptions in the supply chain are a threat to the functioning of this country. For example, about 70% of food consumed in Great Britain comes from EU countries. Brexit's views in the UK are now even more polarized than during the referendum.

Trade conflict on the US-China line has a completely different character than previous trade tensions and may be the inception of the new trend which will shape international relations in the coming years. It also diverges from the current D. Trump administration scheme in commercial contacts that can be described by the phrase "talk big, act small" and unlike previous disputes, it will not be easy to solve. It has a technological, investment and, to a certain extent, also military background (conflict in the South China Sea). The importance of this conflict is also indicated by one of the articles of the new NAFTA, which prevents Canada and Mexico from concluding a free trade agreement without the consent of the US. Signing this settlement on slightly different conditions may indicate internal pressures on D. Trump. In this disput China has more and more tied hands - most of the actions that it could have taken, would probably also hit the Middle Kingdom's economy. Some of the Chinese representatives pointed to the lack of clearly expressed expectations on the part of the American administration, to which China could respond and even take action if the problems were clearly identified. Further US sanctions may limit the inflow of Chinese capital to the silicon valley or prevent Chinese students from learning in the US. Americans may also try to destabilize the RMB. With the first signs of economic downturn, the American business lobby that has invested serious sums in China may press President Donald Trump to end the dispute. Until then, China will try to neutralize the impact of US sanctions by increasing spending on infrastructure, loosening fiscal policy, environmental restrictions and further weakening of the RMB. The winners of the trade conflict between China and the US may be other Asian countries, such as Vietnam – shift of some American investments to this country from China is already visible. The new tariffs, if they are sustained over a longer period, will lead to the supply chain adapting and moving some of the production facilities from China to neighboring countries or other parts of the world. In many sectors of the economy, however, this requires time to build the appropriate infrastructure and to ensure the quality of production from other sources.

Macroeconomic calendar

Important macroeconomic data releases

Weight	Date	Event	For	Reading ¹		Previous	Consensus ²
		China					
✪✪	12-Oct	Trade balance (USD bn)‡	Sep	31.7	▲	26.7	19.2
✪✪	12-Oct	Exports (yoy)‡	Sep	14.5%	▲	9.1%	8.2%
✪✪✪✪	16-Oct	Consumer inflation CPI (yoy)	Sep	2.5%	▲	2.3%	2.5%
✪✪	16-Oct	Producer inflation PPI (yoy)	Sep	3.6%	▼	4.1%	3.5%
✪	17-Oct	New yuan loans (CNY bn)	Sep	1 380	▲	1 280	1 359
✪✪✪✪✪	19-Oct	GDP (yoy)	3Q	6.5%	▼	6.7%	6.6%
✪✪✪✪✪	19-Oct	GDP (sa, qoq)‡	3Q	1.6%	▼	1.7%	1.6%
✪✪✪✪	19-Oct	Industrial production (yoy)	Sep	5.8%	▼	6.1%	6.0%
✪✪	19-Oct	Fixed assets investments (ytd, yoy)	Sep	5.4%	▲	5.3%	5.3%
✪	19-Oct	Retail sales (yoy)	Sep	9.2%	▲	9.0%	9.0%
		Poland					
✪✪✪✪	15-Oct	Consumer inflation CPI (yoy) - final data	Sep	1.9%	▲	1.8%	--
✪✪	15-Oct	Trade balance (EUR mn)‡	Aug	- 329	▲	- 344	- 321
✪✪	15-Oct	Exports (EUR mn)‡	Aug	17 195	▼	17 228	16 951
✪✪	15-Oct	Current account balance (EUR mn)‡	Aug	- 549	▲	- 750	- 442
✪✪✪✪	16-Oct	Core CPI (excluding food and energy, yoy)	Sep	0.8%	▼	0.9%	0.9%
✪✪	16-Oct	Average gross salary (yoy)	Sep	6.7%	▼	6.8%	7.1%
✪	16-Oct	Employment (yoy)	Sep	3.2%	▼	3.4%	3.4%
✪✪✪✪	17-Oct	Sold industrial production (yoy)	Sep	2.8%	▼	5.0%	4.1%
✪✪	17-Oct	Producer inflation PPI (yoy)	Sep	2.9%	▼	3.0%	2.9%
✪✪✪	19-Oct	Retail sales (yoy)	Sep	5.6%	▼	9.0%	8.1%
		US					
✪✪✪✪	11-Oct	Consumer inflation CPI (mom)	Sep	0.1%	▼	0.2%	0.2%
✪✪✪✪	11-Oct	Consumer inflation CPI (yoy)	Sep	2.3%	▼	2.7%	2.4%
✪✪	12-Oct	University of Michigan confidence index - preliminary data	Oct	99.0	▼	100	101
✪✪	15-Oct	Retail sales (excluding autos, mom)‡	Sep	-0.1%	▼	0.2%	0.4%
✪✪✪✪	16-Oct	Industrial production (mom)	Sep	0.3%	▼	0.4%	0.2%
✪	16-Oct	Capacity utilization	Sep	78.1%	-	78.1%	78.2%
✪✪	18-Oct	Philadelphia Fed business outlook	Oct	22.2	▼	22.9	20.0
		Eurozone					
✪✪✪✪	12-Oct	Industrial production (sa, mom)‡	Aug	1.0%	▲	-0.7%	0.5%
✪✪✪✪	12-Oct	Industrial production (wda, yoy)‡	Aug	0.9%	▲	0.3%	-0.2%
✪	16-Oct	Trade balance (EUR mn)	Aug	11.7	▼	17.6	--
✪	16-Oct	ZEW survey expectations	Oct	- 19.4	▼	- 7.2	--
✪✪✪✪	17-Oct	Consumer inflation CPI (yoy) - final data	Sep	2.1%	▲	2.0%	2.1%
✪✪✪✪	17-Oct	Core CPI (yoy) - final data	Sep	0.9%	-	0.9%	0.9%
		Germany					
✪✪✪✪	08-Oct	Industrial production (wda, yoy)‡	Aug	-0.1%	▼	1.5%	-0.1%
✪✪✪✪	12-Oct	Harmonized consumer inflation HICP (yoy) - final data	Sep	2.2%	-	2.2%	2.2%
✪✪✪✪	12-Oct	Consumer inflation CPI (yoy) - final data	Sep	2.3%	-	2.3%	2.3%
		France					
✪✪✪✪	10-Oct	Industrial production (yoy)‡	Aug	1.6%	▼	1.9%	1.5%
✪✪✪✪	11-Oct	Harmonized consumer inflation HICP (yoy) - final data	Sep	2.5%	-	2.5%	2.5%
✪✪✪✪	11-Oct	Consumer inflation CPI (yoy) - final data	Sep	2.2%	-	2.2%	2.2%

Weight	Date	Event	For	Reading [1]		Previous	Consensus [2]	
		Italy						
✪✪✪✪	10-Oct	Industrial production (wda, yoy)	Aug	-0.8%	▲	-1.3%	-1.5%	◓
✪✪✪✪	16-Oct	Harmonized consumer inflation HICP (yoy) - final data	Sep	1.5%	▼	1.6%	1.6%	◒
		UK						
✪✪✪✪	10-Oct	Industrial production (yoy)‡	Aug	1.3%	▲	1.0%	1.0%	◓
✪✪	16-Oct	Unemployment rate (ILO, 3-months)	Aug	4.0%	-	4.0%	4.0%	○
✪✪✪✪	17-Oct	Consumer inflation CPI (yoy)	Sep	2.4%	▼	2.7%	2.6%	◒
		Japan						
✪✪✪✪	15-Oct	Industrial production (yoy) - final data	Aug	0.2%	▼	0.6%	--	
✪✪✪✪	19-Oct	Consumer inflation CPI (yoy)	Sep	1.2%	▼	1.3%	1.3%	◒
		Chile						
✪✪✪✪	08-Oct	Consumer inflation CPI (yoy)	Sep	3.1%	▲	2.6%	3.2%	◒
✪✪✪	08-Oct	Copper exports (USD mn)	Sep	2 808	▲	2 742	--	
✪✪✪✪✪	18-Oct	BCCh overnight rate target	Oct	2.75%	▲	2.50%	2.75%	○
		Canada						
✪✪✪✪	19-Oct	Consumer inflation CPI (yoy)	Sep	2.2%	▼	2.8%	2.7%	◒

[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

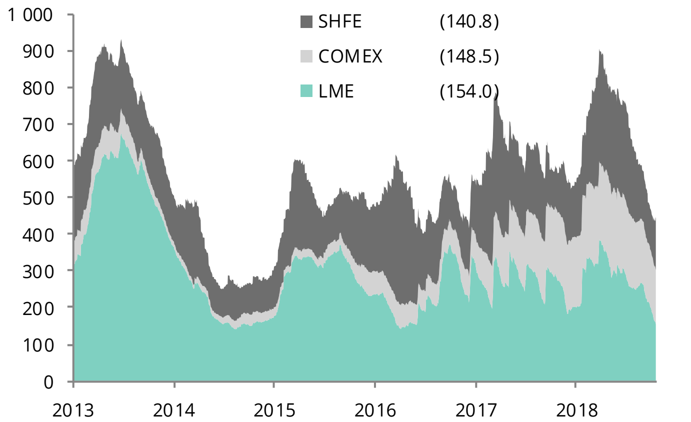
Key market data

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

(as of: 19-Oct-18)	Price	Price change[1] 2W	QTD	YTD	1Y	From year beginning[2] Average	Min	Max
LME (USD/t)								
Copper	6 191.50	▲ 0.4%	▲ 0.2%	▼ -13.5%	▼ -10.5%	6 611.71	5 823.00	7 262.50
Molybdenum	26 000.00	- 0.0%	- 0.0%	▲ 62.5%	▲ 62.5%	23 453.43	16 000.00	26 000.00
Nickel	12 470.00	▲ 0.6%	▼ -0.1%	▲ 1.7%	▲ 6.8%	13 580.20	12 140.00	15 750.00
Aluminum	2 022.50	▼ -2.5%	▲ 0.5%	▼ -9.8%	▼ -5.0%	2 150.57	1 967.00	2 602.50
Tin	19 160.00	▲ 0.9%	▲ 1.1%	▼ -3.6%	▼ -4.7%	20 381.23	18 675.00	22 105.00
Zinc	2 696.00	▲ 1.8%	▲ 4.8%	▼ -18.5%	▼ -15.0%	2 994.31	2 287.00	3 618.00
Lead	1 966.00	▼ -0.8%	▼ -1.8%	▼ -21.2%	▼ -21.1%	2 311.70	1 909.00	2 683.00
LBMA (USD/troz)								
Silver	14.61	▲ 1.0%	▲ 2.1%	▼ -13.4%	▼ -14.2%	15.99	14.13	17.52
Gold[2]	1 227.85	▲ 3.4%	▲ 3.4%	▼ -5.3%	▼ -4.6%	1 276.91	1 178.40	1 354.95
LPPM (USD/troz)								
Platinum[2]	835.00	▲ 2.6%	▲ 2.5%	▼ -9.9%	▼ -9.3%	893.08	772.00	1 020.00
Palladium[2]	1 086.00	▲ 1.9%	▼ -0.7%	▲ 2.8%	▲ 14.2%	994.87	849.00	1 129.00
FX [3]								
EURUSD	1.1470	▼ -0.1%	▼ -0.9%	▼ -4.4%	▼ -3.1%	1.1912	1.1321	1.2493
EURPLN	4.3049	▼ -0.1%	▲ 0.8%	▲ 3.2%	▲ 1.6%	4.2530	4.1423	4.3978
USDPLN	3.7601	▲ 0.1%	▲ 2.3%	▲ 8.0%	▲ 4.7%	3.5725	3.3173	3.7871
USDCAD	1.3104	▲ 1.3%	▲ 1.2%	▲ 4.5%	▲ 5.0%	1.2882	1.2288	1.3310
USDCNY	6.9290	▼ 0.0%	▲ 0.9%	▲ 6.5%	▲ 4.8%	6.5427	6.2690	6.9376
USDCLP	674.68	▲ 0.3%	▲ 2.0%	▲ 9.7%	▲ 7.9%	632.01	588.28	698.43
Money market								
3m LIBOR USD	2.477	▲ 0.06	▲ 0.08	▲ 0.78	▲ 1.11	2.217	1.696	2.477
3m EURIBOR	-0.317	▲ 0.00	▲ 0.00	▲ 0.01	▲ 0.01	-0.324	-0.329	-0.317
3m WIBOR	1.720	- 0.00	- 0.00	- 0.00	▼ -0.01	1.708	1.700	1.720
5y USD interest rate swap	3.192	▲ 0.02	▲ 0.12	▲ 0.95	▲ 1.15	2.845	2.283	3.192
5y EUR interest rate swap	0.388	▼ -0.06	▼ 0.00	▲ 0.08	▲ 0.17	0.365	0.224	0.509
5y PLN interest rate swap	2.620	▲ 0.04	▲ 0.10	▲ 0.12	▲ 0.18	2.478	2.280	2.740
Fuel								
WTI Cushing	69.12	▼ -7.0%	▼ -5.6%	▲ 14.4%	▲ 34.8%	67.31	59.19	76.41
Brent	80.12	▼ -4.4%	▼ -3.4%	▲ 19.9%	▲ 39.2%	73.08	62.33	86.09
Diesel NY (ULSD)	230.13	▼ -3.8%	▼ -2.0%	▲ 11.5%	▲ 29.5%	212.23	183.32	243.40
Others								
VIX	19.89	▲ 4.20	▲ 7.77	▲ 8.85	▲ 9.84	15.33	9.15	37.32
BBG Commodity Index	85.95	▼ -1.1%	▲ 0.9%	▼ -2.5%	▲ 0.6%	87.09	82.14	91.57
S&P500	2 767.78	▼ -4.0%	▼ -5.0%	▲ 3.5%	▲ 8.0%	2 767.39	2 581.00	2 930.75
DAX	11 553.83	▼ -3.3%	▼ -5.7%	▼ -10.6%	▼ -11.1%	12 524.51	11 523.81	13 559.60
Shanghai Composite	2 550.47	▼ -6.1%	▼ -9.6%	▼ -22.9%	▼ -24.3%	3 031.41	2 486.42	3 559.47
WIG 20	2 196.99	▼ -1.2%	▼ -3.9%	▼ -10.7%	▼ -11.0%	2 302.31	2 098.75	2 630.37
KGHM	84.64	▼ -2.5%	▼ -5.0%	▼ -23.9%	▼ -31.5%	95.18	82.56	115.00

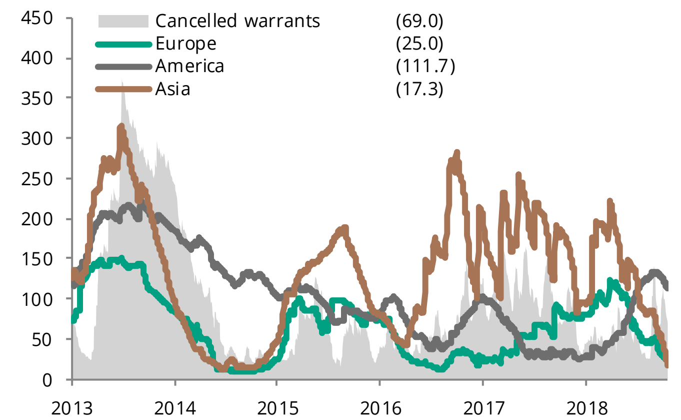
° change over: 2W = two weeks; QTD = quarter-to-day; YTD = year-to-date; 1Y = one year. [1] based on daily closing prices. [2] latest quoted price. [3] central banks' fixing rates (Bank of China HK for USD/CNY). [4].
Source: Bloomberg, KGHM

Copper: official exchange stocks (thousand tonnes)



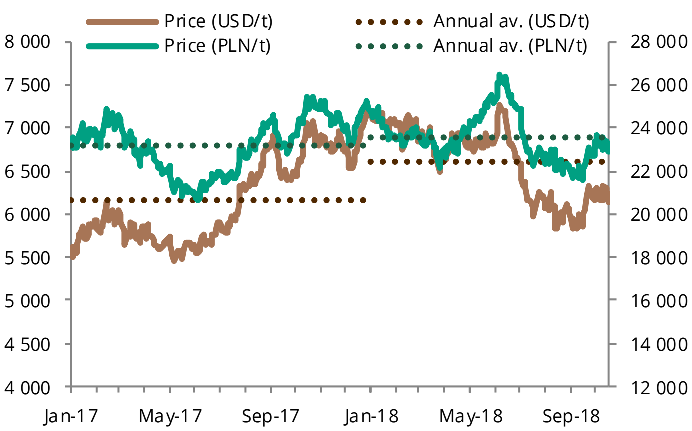
Note: Latest values in brackets. Source: Bloomberg, KGHM

Copper: official LME stocks (thousand tonnes)



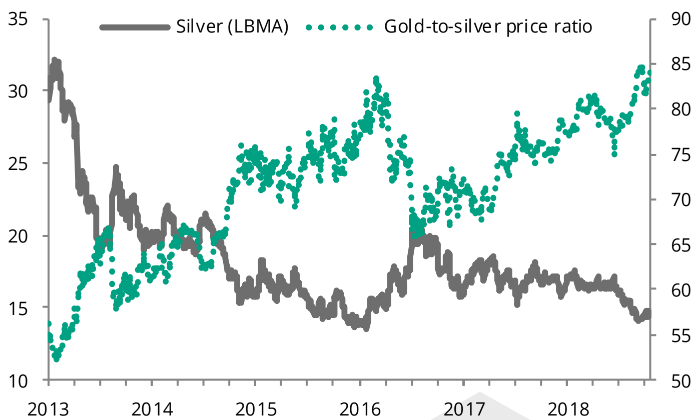
Note: Latest values in brackets. Source: Bloomberg, KGHM

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



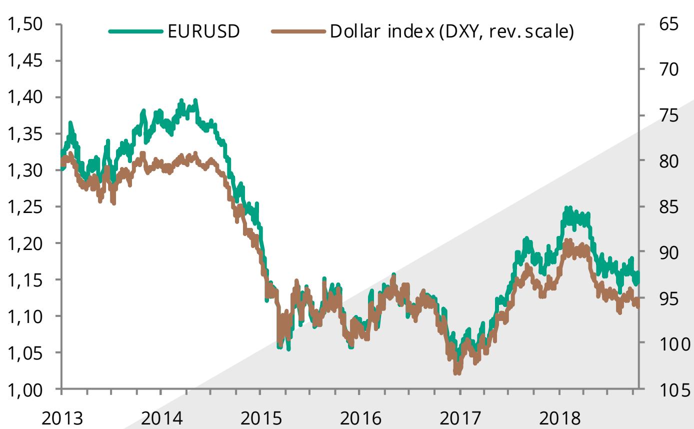
Source: Bloomberg, KGHM Polska Miedź

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



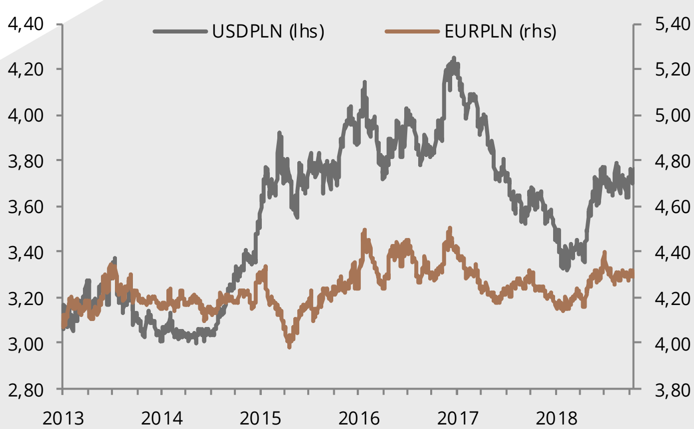
Source: Bloomberg, KGHM Polska Miedź

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: **8th October – 21st October 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 (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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