

Market Overview

as of: 5th November 2018






- **Copper:** Favorable foundations of the refined copper market - the market deficit and the declining inventory level - are not reflected in the price of red metal. Mining companies are reviewing their production forecasts (*page 2*).
- **Precious metals:** In the last two weeks, the precious metals industry participated in the LBMA conference which this year was organized in Boston. The mood at the conference was far from hurraoptimistic. Among the market participants there were many questions about the further development of events, especially regarding the macroeconomic situation. Nevertheless, this uncertainty positively influenced the expected prices of precious metals, which in difficult times serve market participants as safe haven assets (*page 4*).
- **Freight market:** The cost of hiring container ships has plunged 24 percent from a multi-year peak while raw material vessel rates have slumped 10 percent from a five-year high, adding to signs of slowing global trade with dangerous implications for the economy (*page 7*).
- **USA-China:** The trade war is starting to make its mark on the Chinese economy, while growth in the US is fueled by increased infrastructure spending and tax cuts. Solid growth in the third quarter increases the likelihood of another interest rate hike by the Fed in December this year (*page 8*).

Key market prices

	Close price	2w chng.
LME (USD/t)		
▼ Copper	6 255.00	-0.5%
▼ Nickel	11 980.00	-3.8%
LBMA (USD/troz)		
▲ Silver	14.82	1.3%
▲ Gold (PM)	1 232.10	0.8%
FX		
▼ EURUSD	1.1417	-0.7%
▲ EURPLN	4.3244	0.8%
▲ USDPLN	3.7804	1.4%
- USDCAD	1.3105	0.0%
▲ USDCPL	698.56	3.2%
Stocks		
▲ KGHM	90.26	5.3%

Source: Bloomberg, KGHM Polska Miedź; (*more on page 12*)

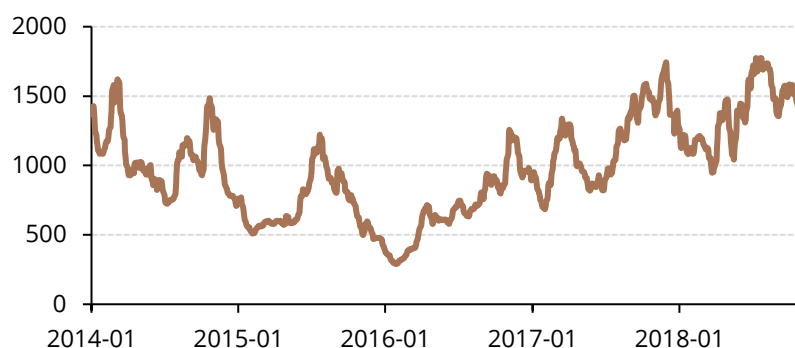
Important macroeconomic data

Release	For		
 Official manuf. PMI	Oct	50.2	▼
 GDP (sa, yoy)	3Q	1.7%	▼
 GDP (annlzd., qoq)	3Q	3.5%	▼
 Manufacturing PMI	Oct	50.4	▼
 Non-farm payrolls chng.	Oct	250	▲

Source: Bloomberg, KGHM Polska Miedź; (*more on page 10*)

The decrease in the cost of renting container ships from a long-term maximum may be a sign of slowing global trade

Baltic Exchange Dry Index (BDI)



Source: KGHM Polska Miedź

Market Risk Unit

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Base and precious metals | Other commodities

Copper

Favorable foundations of the refined copper market - the market deficit and the declining inventory level - are not reflected in the price of red metal. Mining companies, are reviewing their production forecasts.

Copper Squeeze Eases as LME Sees Big Delivery

Copper buyers who have been facing a squeeze on supply have gotten a reprieve after inventories on the London Metal Exchange surged by the most on record as metal flooded into depots in Asia and Europe. Inventories jumped by 43,700 tons to 180,375 tons on Friday, November 2., lifting exchange stocks from the lowest level in a decade and easing pressure on buyers who have seen the cost of obtaining spot metal jump over the past few weeks.

The spread between spot and futures contracts loosened following Friday's delivery, which was the largest on record in daily data going back to 1997. Cash contracts had traded at the biggest premium to three-month futures in more than three years lately, in a condition known as backwardation that's a hallmark of a supply squeeze. Copper prices briefly dipped after the delivery, but rebounded to trade 2.3 percent higher as a wave of optimism spread through financial markets after reports that U.S. President Donald Trump may be prepared to strike a trade deal with China. "At the end of the day, the trade war issue is key for copper, as far as the price outlook is concerned," Nicholas Snowdon, a metals analyst at Deutsche Bank AG, said by phone from London. "Prices didn't trade higher when stocks were falling sharply, and they shouldn't necessarily trade lower on the back of one day's delivery."

The recent slump in exchange inventories has been driven by shifts in the physical market, including smelter shutdowns in Asia and Chile that have left major suppliers short. Curbs on scrap imports in the Chinese market have also left buyers there more reliant on the refined metal sitting in exchange warehouses. Even as China's powerhouse manufacturing sector shows signs of slowing, import data suggest buyers have been stocking up aggressively in recent months, accelerating the pull on global metal inventories. Now, falling physical delivery premiums in China and a deteriorating arbitrage between LME and Shanghai Futures Exchanges prices suggests that buying appetite is waning. That may leave more metal available to replenish inventories on the LME, but supply is likely to remain constrained while major smelters in India and Chile are offline, Snowdon said.

Global Refined Copper Market In 155K mt Deficit In Jan-Jul

The global refined copper market was in deficit by about 155,000 mt of the first seven months of the year, the International Copper Study Group said lately. Adjusting for privately held stocks in China, the global refined balance showed a deficit of around 170,000 mt, the Lisbon-based research group said in a preliminary report. ICSG analysts estimate world mine production increased by about 4.5% in the first seven month to 11.75 million mt, with concentrate production rising by 4% and solvent extraction-electrowinning production rising by 5.5%. The production increase of about 500,000 t was mainly due to constrained output in the comparative 2017 period, especially in Chile and Indonesia, ICSG analysts said. Production in Chile, the world's top mine producer, increased by 11% primarily because production February-March 2017 output was restricted by a strike at the Escondida mine and an improvement in 2018 production levels of state-owned miner Codelco.

Indonesian output increased by 30% this year because comparative output in 2017 was negatively affected by a temporary ban on concentrate exports that started in January and ended in April. World mine production was also boosted by a 15% increase in SX-EW production in the Democratic Republic of Congo and a 11% rise in Zambian mine output due to the restart of temporarily closed capacity. Although no major supply disruptions occurred in the first half of this year, overall growth was partially offset by lower output at some mines in Canada (-6%) and the US (-7%), the ICSG said. "After a strong increase in the last few years due to new and expanded capacity, output in Peru (the world's second largest copper mine producing country) has leveled off," ICSG analysts said. Regional mine production increased by around 10% in Africa, 6% in Latin America, 5.5% in Asia and 7% in Oceania, but declined by 5% in North America and remained essentially unchanged in Europe, according to ICSG estimates

Other important information on copper market:

- Aurubis, Europe's biggest copper smelter, on Thursday said fourth-quarter operating profit fell by 28 percent, blaming unscheduled maintenance shutdowns at its sites in Hamburg and Luenen. In the fourth quarter of the group's 2017/18 financial year, preliminary operating earnings before tax (EBT) dropped to 63 million euros (\$71.8 million), the group said, while full-year EBT is seen up 10 percent at 328 million.
- China's Shandong province plans to enforce at least two months of curbs on industrial output as part of its winter anti-pollution campaign. Shandong will allow city authorities to determine their own length of output restrictions on industry for period from mid-November to mid-March but the cuts must cover at least two months and include December and January, according to a government document reviewed by Reuters. Seven cities in Shandong including Binzhou, Liaocheng, Jinnan, Zibo, Jining, Dezhou, Heze must impose output curbs on companies that produce non-ferrous metals, construction materials, chemicals, coke, and steel and metal casting, according to the document dated Oct. 26, whose authenticity was confirmed by a local

government official. Other Shandong cities will be encouraged to adopt similar measures, according to the document. The cities are strictly forbidden from imposing blanket output cuts during the winter, with restrictions to be determined on a case-by-case based on a company's emission levels. Those that meet ultra-low emission standards and adopt clean energy as power will be exempt from output restrictions. Detailed plans drawn up by city authorities must be submitted to provincial government before Oct. 29 and cannot be changed without authorisation once published.

- Chilean copper producer Antofagasta brought down the top end of its guidance range for full year copper production lately, as ongoing fears about global trade disruptions continue to impact the market. Antofagasta joins other major miners - BHP Billiton, and Rio Tinto - that have also signalled lower copper output this year. "The physical copper market continues to look tight and the outlook for next year remains positive despite ongoing fears about disruptions to global trade," Chief Executive Officer Iván Arriagada said in a statement. The London-listed company said it now expects copper production to be between 705,000 to 725,000 tonnes with strong production expected in the fourth quarter. The company had earlier forecast output at between 705,000 and 740,000 tonnes for the full year. However, copper production in the third quarter of 188,3000 tonnes was about 4.3 percent higher than last year and 15.4 percent higher than second quarter as a result of higher production in all of its mines.

Precious Metals

In the last two weeks, the precious metals industry participated in the LBMA conference which this year was organized in Boston. The mood at the conference was far from optimistic. Among the market participants there were many questions about the further development of events, especially regarding the macroeconomic situation. Nevertheless, this uncertainty positively influenced the expected prices of precious metals, which in difficult times serve market participants as safe haven assets.

LBMA Conference trip notes

The precious metal conference in Boston began with a series of short speeches by representatives of the industry, in which the *leitmotif* was the criticism of the current activities of the administration of President Donald Trump on the limitation of free trade in the world. The general tone of the speech was very disturbing, but without significantly negative impact on the precious metals market, including silver. LBMA representatives talked about the possibility of short-term imbalances and disruptions in trade flows due to the need to renegotiate trade agreements and changes in the valuation, rather than in reducing the trading volume. The President of LBMA, Paul Fischer, expressed his willingness to further develop the market and increase the awareness of business responsibility among mining companies. The President of LPPM,

Mr. Tim Pearce, mentioned mainly the use of PGMs and pointed out the high volatility of the price of palladium, which was two times lower two years ago. The participants of the conference were also Ray Testa, a representative of the New York Federal Reserve (NY Fed), who in his short speech reminded the history and evolution of money formation in the US and its important role in US history. The director of the Conference, Ruth Crowell, talked about business responsibility (CSR) in the mining of precious metals and dynamically developing technology, which in the future may contribute to a significant increase in labor productivity and a larger, but responsible for local communities, extraction. An important part of the Conference, which strongly influenced the mood of the participants, was the speech of Adam Posen (Peterson Institute for International Economics), who briefed the audience about the situation in the global economy. The picture the speaker drew up in the coming years is negative, which should favor the price of precious metals.

The situation in the world is difficult, which, paradoxically for the industry, favors and positively influences the potential price paths for precious metals. The Republicans' defeat in mid-term elections may have negative political consequences - although President D. Trump may not be revoked, there may be further lawsuits and interrogations. The next stimulation of the economy (in line with tax cuts from early 2018) in the US is to take place in 2019 and 2020, up to the next presidential election, although it is currently difficult to identify potential sources of financing for the next round of fiscal loosening.

The situation on the gold market remains ambiguous - in theory, geopolitical turmoil in the world should have a positive impact on price behavior. However, this is not happening - we are dealing with a tightening of monetary policy by the American Federal Reserve. The conclusion from the speakers' speeches is that a small change in the Fed's rhetoric is enough (eg an unexpected pause in subsequent rate hikes), so that the trends on the precious metal market will change.

One of the last LBMA lectures in Boston was the prospects for the silver and gold market. In the case of silver, David Holmes presented the image of the market, pointing out that its characteristics are somewhat "schizophrenic" - silver is a bit of an investment asset, and a bit of an industrial asset. In the event of a fundamental market situation, it is necessary to emphasize the largest change in the recent years on the demand side - quite a large drop in demand from photography. On the other hand, photovoltaics is a large item in demand, mainly solar panels, which will develop quite dynamically. This, however, does not change the fact that the future of this market segment is highly dependent on state subsidies. According to the speaker, the demand for silver will also be partly generated by the dynamically growing market of electric cars. The scrap market has limited its activity to a relatively large extent in response to the relatively low price of metal. The supply of silver scrap is, like the supply of copper scrap, very sensitive to changes in the gold price. From the investment point of view, the gold / silver index is the one that investors take into account in the short term. Currently, it remains at a very high level, which may imply two scenarios - an increase in silver prices (more likely considering the scale of the market's

overtaking from the technical indicators and market positioning) or a drop in gold prices.

LBMA to create standards for companies offering blockchain-based gold tracking systems

The London Bullion Market Association, which represents the gold and silver markets, wants to create a set of standards for blockchain-based gold tracking system providers.

The London Bullion Market Association (LBMA) intends to increase transparency in the gold market by opening the door for companies that leverage blockchain to track the metal through its supply chain, Reuters reports. By using blockchain, which is a type of distributed ledger technology (DLT), companies aim to ensure that the gold is not mined illegally or used to finance terrorism or conflicts.

In March 2018, LBMA required its 144 members to suggest gold tracking methods that would prevent forgery. The members, which include the world's largest miners, refiners, banks, and dealers, would benefit from a decentralized system that guarantees transparency, improves interaction within a network, and automate processes. So far, LBMA has 26 proposals coming from various entities, from startups to established tech firms, according to Sakhila Mirza, LBMA's executive board director.

Instead of picking particular firms to develop the blockchain-based infrastructure, the LBMA took a different path – the organization wants to build a standards framework for services and establish a monitoring body to approve and oversee blockchain providers that meet the stipulated standards. Mirza revealed that the LBMA hadn't emphasized the use of blockchain, but the overwhelming majority of the proposals, over 20 out of 26, focused on blockchain-based supply chain tracking systems. She stated that LBMA's first draft of standards for tracking system would be discussed in the first half of 2019, while the approval of technology providers would start later in the year.

Central banks to increase gold buying for first time since '13

Central banks are set to increase their purchases of gold in 2018 for the first time in five years as eastern European and Asian countries seek to diversify their reserves. Net purchases of gold by central banks are forecast to rise to 450 metric tons this year, up from 375 tons in 2017, according to consultancy Metals Focus Ltd. That will be the first increase since 2013, when banks boosted their holdings by 646 tons, the most for several decades. With just over two months of the year left, it's more likely that the projection will be raised than lowered because central banks generally seem interested in purchases, according to Junlu Liang, a senior analyst at London-based Metals Focus.

"Official sector purchases are likely to remain healthy, as a result of ongoing efforts to diversify reserves among emerging market countries," Liang said in a weekly note. "Indeed, in spite of purchases by a number of central banks in recent years, the share of total reserves that their gold holdings account for

remains arguably low, especially when compared to that seen across western countries.”

The central banks of Poland and Hungary have surprised the market by adding to their gold holdings for the first time in many years. Whereas Hungary’s 10-fold increase of its gold reserves looks to be a one-off strategic purchase, Poland has made incremental additions for the last three months, suggesting the policy could continue, according to Liang. The biggest driver of this year’s gain has been Russia, whose central bank has added about 20 tons on average every month. Kazakhstan and Mongolia have also been among the buyers.

Freight market

The cost of hiring container ships has plunged 24 percent from a multi-year peak while raw material vessel rates have slumped 10 percent from a five-year high, adding to signs of slowing global trade with dangerous implications for the economy.

Red flag warnings: Global shipping freight rates slump as trade slows

While much of world is focused on the stock market losses this week, the drop in shipping rates as trade declines because of the trade dispute between the United States and China, emerging market currency weakness and tighter credit conditions is an omen of slowing global economic growth. Dry-bulk and container rates climbed to multi-year highs earlier this year, but have plunged since then as the trade war between the United States and China, in which both sides have slapped steep import tariffs hundreds of goods, has picked up pace. Cooling demand in Europe and China, emerging market woes, as well as the Sino-American trade tensions were contributing to the slowdown, although the market participants say their full effect hasn’t kicked in yet.

The Harpex Container Index, which tracks weekly container shipping rate changes, has fallen by almost a quarter from June when it was at a seven-year high to 516 points. The Freightos Baltic Index, a global container index launched in Singapore in 2017, climbed to a record in August but has fallen 5.4 percent since then to 1,583 points. Movements in the container market tend to reflect changes in developed economies while bulk shipping markets are more influenced by emerging countries, said shipping analysts.

The Baltic Dry Index, which measures freight costs for ships carrying iron ore, coal and metal ores, has dropped 13 percent after reaching its highest since January 2014 to 1,546 points.

Global economies | Foreign exchange markets

First signs of economic slowdown in China?

The trade war is starting to make its mark on the Chinese economy, while growth in the US is fuelled by increased infrastructure spending and tax cuts. Solid growth in the third quarter increases the likelihood of another interest rate hike by the Fed in December this year.

Although a global supply deficit is an underlying support for the copper market, a slowing Chinese economy is an offsetting factor that could spell further downside for prices, market analysts said lately. "China's disappointing Purchasing Managers' Index for the manufacturing sector is adding to the problems," Commerzbank analysts said in a report this morning. "October saw it fall by a surprisingly steep 0.6 points to 50.2, sliding to its lowest level since July 2016. The escalating trade conflict appears to be having a growing impact." The sub-index for new export orders was also down sharply to below 50, they noted, indicating more pronounced contraction, while Japan's Industrial production number for September also disappointed, they said, predicting that the London Metal Exchange Index would be likely to end October significantly lower. Meanwhile, China's plans for increased infrastructure spending are not taking shape fast enough to offset the weak industrial numbers, noted INTL FCStone analysts. The impact on the copper price going forward remains uncertain, Commerzbank said. "While support is being lent by the markets, which are for the most part in deficit, the future price trend will doubtless depend first and foremost on the global environment," they said." What is more, a glance at speculative positioning on the metals markets reveals that there is still further downside potential: though speculative net long positions in copper on the LME fell last week, they ultimately remain firmly positive."




The U.S. economy slowed less than expected in the third quarter as a tariff-related drop in soybean exports was partially offset by the strongest consumer spending in nearly a four years and a surge in inventory investment. Gross domestic product increased at a 3.5 percent annualized rate also supported by solid government spending, the Commerce Department said on Friday in its first estimate of third-quarter GDP growth. While that was a slowdown from a 4.2 percent pace in the second quarter, it still exceeded the economy's growth potential, which economists put at 2 percent. Compared to the third quarter of 2017, the economy grew 3.0 percent, the best performance since the second quarter of 2015, keeping it on track to hit the Trump administration's 3 percent growth target this year. The economic expansion, now in its ninth year, is the second longest on record. Economists polled by Reuters had forecast GDP expanding at a 3.3 percent pace in the third quarter. The economy is underpinned by a \$1.5 trillion tax cut and increased government spending. The fiscal stimulus is part of measures adopted by President Donald Trump's administration to boost annual growth to 3 percent on a sustainable basis.

Yet the government is also locked in a bitter trade war with China as well as trade disputes with other trade partners and the last quarter's slowdown mostly reflected the impact of Beijing's retaliatory tariffs on U.S. exports, including soybeans. Farmers front-loaded shipments to China before the tariffs took effect in early July, boosting second-quarter growth. Since then, soybean exports have declined every month, increasing the trade deficit. There were also decreases in exports of petroleum and nonautomotive capital goods. Strong domestic demand, however, sucked in imports of consumer goods and motor vehicles. The widening trade gap chopped off 1.78 percentage points from GDP growth in the third quarter. That was the most since the second quarter of 1985 and reversed the 1.22 percentage point contribution in the April-June period. Some of the rebound in imports reflected a rush by businesses to stockpile before U.S. import duties, mostly on Chinese goods, came into effect. Imports are a drag on GDP growth.

But some of the imports likely ended up in warehouses, adding to the stockpile of inventory, which adds to GDP. Inventories increased at a \$76.3 billion rate after declining at a \$36.8 billion pace in the second quarter. As a result, inventory investment added 2.07 percentage points to GDP growth, the biggest contribution since the first quarter of 2015, after slicing off 1.1 percentage points from output in the second quarter. Excluding the effects of trade and inventories, GDP grew at a 3.1 percent rate in the third quarter compared to a 4.0 percent pace in April-June. Solid third-quarter growth is expected to keep the Federal Reserve on course to raise interest rates again in December, despite a recent tightening in financial market conditions brought about by a stock market sell-off and a rise in U.S. Treasury yields. The Fed raised rates in September for the third time this year and removed a reference to monetary policy remaining "accommodative" from its policy statement.

Macroeconomic calendar

Important macroeconomic data releases

Weight	Date	Event	For	Reading ¹	Previous	Consensus ²
China 						
☹☹	27-Oct	Industrial profits (yoy)	Sep	4.1% ▼	9.2%	--
☹☹☹	31-Oct	Official manufacturing PMI	Oct	50.2 ▼	50.8	50.6 ◡
☹☹☹	01-Nov	Caixin's manufacturing PMI	Oct	50.1 ▲	50.0	50.0 ◢
Poland 						
☹	22-Oct	M3 money supply (yoy)	Sep	7.9% ▲	7.5%	7.5% ◢
☹☹	23-Oct	Unemployment rate	Sep	5.7% ▼	5.8%	5.8% ◡
☹☹☹☹	31-Oct	Consumer inflation CPI (yoy) - preliminary data	Oct	1.7% ▼	1.9%	1.8% ◡
☹☹☹	02-Nov	Manufacturing PMI	Oct	50.4 ▼	50.5	50.2 ◢
US 						
☹	23-Oct	Richmond Fed manufacturing index	Oct	15.0 ▼	29.0	24.0 ◡
☹☹☹	24-Oct	Composite PMI - preliminary data	Oct	--	53.9	--
☹☹☹	24-Oct	Manufacturing PMI - preliminary data	Oct	--	55.6	55.3
☹☹☹	24-Oct	PMI services - preliminary data	Oct	--	53.5	54.0
☹☹	25-Oct	Durable goods orders - preliminary data‡	Sep	0.8% ▼	4.6%	-1.5% ◢
☹☹☹☹☹	26-Oct	GDP (annualized, qoq) - estimation	3Q	3.5% ▼	4.2%	3.3% ◢
☹☹	26-Oct	University of Michigan confidence index - final data	Oct	98.6 ▼	99.0	99.0 ◡
☹☹☹☹	29-Oct	Consumer spending inflation PCE (mom)	Sep	0.2% ▲	0.0%	0.1% ◢
☹☹☹☹	29-Oct	Consumer spending inflation PCE (yoy)	Sep	2.0% -	2.0%	2.0% ○
☹☹	29-Oct	Personal income (sa, mom)‡	Sep	0.2% ▼	0.4%	0.4% ◡
☹☹	29-Oct	Personal spending (sa, mom)‡	Sep	0.4% ▼	0.5%	0.4% ○
☹	29-Oct	Dallas Fed manufacturing activity	Oct	29.4 ▲	28.1	28.1 ◢
☹	30-Oct	S&P/CaseShiller home price index‡	Aug	214 ▼	214	--
☹☹☹	01-Nov	Manufacturing PMI - final data	Oct	55.7 ▼	55.9	55.8 ◡
☹☹	01-Nov	ISM Manufacturing	Oct	57.7 ▼	59.8	59.0 ◡
☹☹	02-Nov	Change in non-farm payrolls (ths)‡	Oct	250 ▲	118	200 ◢
☹☹	02-Nov	Durable goods orders - final data	Sep	0.7% ▼	0.8%	--
☹☹	02-Nov	Underemployment rate (U6)	Oct	7.4% ▼	7.5%	--
☹☹	02-Nov	Unemployment rate	Oct	3.7% -	3.7%	3.7% ○
☹	02-Nov	Average hourly earnings (yoy)	Oct	3.1% ▲	2.8%	3.1% ○

Weight	Date	Event	For	Reading ¹	Previous	Consensus ²	
Eurozone							
⊛	23-Oct	Consumer confidence - estimation	Oct	-2.7 ▲	-2.9	-3.2	▲
⊛⊛⊛	24-Oct	Composite PMI - preliminary data	Oct	--	54.1	53.9	
⊛⊛⊛	24-Oct	Manufacturing PMI - preliminary data	Oct	--	53.2	53.0	
⊛⊛⊛	24-Oct	Services PMI - preliminary data	Oct	--	54.7	54.5	
⊛	24-Oct	M3 money supply (yoy)‡	Sep	3.5% ▲	3.4%	3.5%	○
⊛⊛⊛⊛⊛	25-Oct	ECB main refinancing rate	Oct	0.00% -	0.00%	0.00%	○
⊛⊛⊛⊛⊛	25-Oct	ECB deposit facility rate	Oct	-0.4% -	-0.4%	-0.4%	○
⊛⊛⊛⊛⊛	30-Oct	GDP (sa, yoy) - estimation‡	3Q	1.7% ▼	2.2%	1.8%	◡
⊛⊛⊛⊛⊛	30-Oct	GDP (sa, qoq) - estimation	3Q	0.2% ▼	0.4%	0.4%	◡
⊛	30-Oct	Economic confidence	Oct	110 ▼	111	110	◡
⊛	30-Oct	Industrial confidence	Oct	3.0 ▼	4.7	3.9	◡
⊛	30-Oct	Consumer confidence - final data	Oct	-2.7 -	-2.7	-2.7	○
⊛	30-Oct	Business climate indicator	Oct	1.0 ▼	1.2	1.2	◡
⊛⊛⊛⊛	31-Oct	Core CPI (yoy) - estimation	Oct	1.1% ▲	0.9%	1.1%	○
⊛⊛⊛⊛	31-Oct	CPI estimate (yoy)	Oct	2.2% ▲	2.1%	2.2%	○
⊛⊛	31-Oct	Unemployment rate	Sep	8.1% -	8.1%	8.1%	○
⊛⊛⊛	02-Nov	Manufacturing PMI - final data	Oct	52.0 ▼	52.1	52.1	◡
Germany							
⊛⊛⊛	24-Oct	Composite PMI - preliminary data	Oct	--	55.0	54.8	
⊛⊛⊛	24-Oct	Manufacturing PMI - preliminary data	Oct	--	53.7	53.4	
⊛⊛	25-Oct	IFO business climate	Oct	103 ▼	104	103	◡
⊛⊛	26-Oct	GfK consumer confidence	Nov	10.6 -	10.6	10.5	▲
⊛⊛⊛⊛	30-Oct	Harmonized consumer inflation HICP (yoy) - preliminary data	Oct	2.4% ▲	2.2%	2.4%	○
⊛⊛⊛⊛	30-Oct	Consumer inflation CPI (yoy) - preliminary data	Oct	2.5% ▲	2.3%	2.4%	▲
⊛⊛	30-Oct	Unemployment rate	Oct	5.1% -	5.1%	5.1%	○
⊛⊛⊛	31-Oct	Retail sales (yoy)‡	Sep	-2.6% ▼	1.5%	1.0%	◡
⊛⊛⊛	02-Nov	Manufacturing PMI - final data	Oct	52.2 ▼	52.3	52.3	◡
France							
⊛⊛⊛	24-Oct	Composite PMI - preliminary data	Oct	--	54.0	53.9	
⊛⊛⊛	24-Oct	Manufacturing PMI - preliminary data	Oct	--	52.5	52.4	
⊛⊛⊛⊛⊛	30-Oct	GDP (yoy) - estimation	3Q	1.5% ▼	1.7%	1.5%	○
⊛⊛⊛⊛⊛	30-Oct	GDP (qoq) - estimation	3Q	0.4% ▲	0.2%	0.5%	◡
⊛⊛⊛⊛	31-Oct	Harmonized consumer inflation HICP (yoy) - preliminary data	Oct	2.5% -	2.5%	2.6%	◡
⊛⊛⊛⊛	31-Oct	Consumer inflation CPI (yoy) - preliminary data	Oct	2.2% -	2.2%	2.3%	◡
⊛⊛⊛	02-Nov	Manufacturing PMI - final data	Oct	51.2 -	51.2	51.2	○
Italy							
⊛⊛⊛⊛⊛	30-Oct	GDP (wda, yoy) - preliminary data‡	3Q	0.8% ▼	1.2%	1.0%	◡
⊛⊛⊛⊛⊛	30-Oct	GDP (wda, qoq) - preliminary data	3Q	0.0% ▼	0.2%	0.2%	◡
⊛⊛⊛⊛	31-Oct	Harmonized consumer inflation HICP (yoy) - preliminary data	Oct	1.7% ▲	1.5%	1.8%	◡
⊛⊛	31-Oct	Unemployment rate - preliminary data‡	Sep	10.1% ▲	9.8%	9.9%	▲
⊛⊛⊛	02-Nov	Manufacturing PMI	Oct	49.2 ▼	50.0	49.7	◡
UK							
⊛⊛⊛⊛⊛	01-Nov	BoE base rate decision	Nov	0.75% -	0.75%	0.75%	○
⊛⊛⊛⊛	01-Nov	BoE asset purchase target (GBP bn)	Nov	435 -	435	435	○

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 Polska Miedź

Key market data

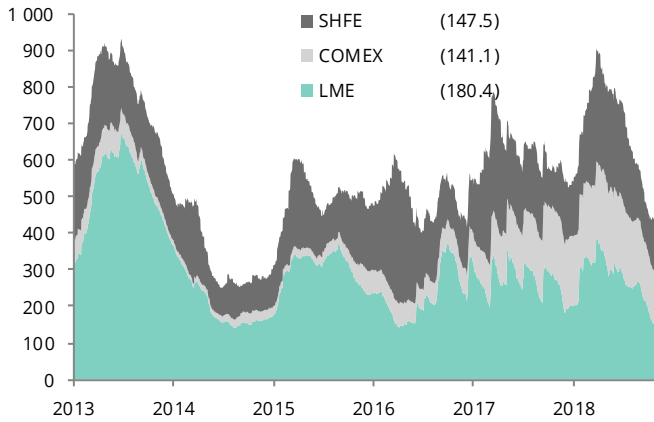
Key base & precious metal prices, exchange rates and other important market factors

(as of: 02-Nov-18)		Price change ¹					From year beginning ²		
	Price	2W	QTD	YTD	1Y	Average	Min	Max	
LME (USD/t)									
Copper	6 255.00	▼ -0.5%	▲ 1.2%	▼ -12.6%	▼ -8.8%	6 591.67	5 823.00	7 262.50	
Molybdenum	26 000.00	- 0.0%	- 0.0%	▲ 62.5%	▲ 62.5%	23 572.43	16 000.00	26 000.00	
Nickel	11 980.00	▼ -3.8%	▼ -4.0%	▼ -2.3%	▼ -5.1%	13 504.65	11 555.00	15 750.00	
Aluminum	1 967.00	▼ -1.8%	▼ -2.2%	▼ -12.2%	▼ -8.6%	2 142.30	1 946.00	2 602.50	
Tin	19 175.00	▼ -0.4%	▲ 1.2%	▼ -3.5%	▼ -1.7%	20 328.83	18 675.00	22 105.00	
Zinc	2 653.50	▼ -2.6%	▲ 3.1%	▼ -19.8%	▼ -18.9%	2 979.27	2 287.00	3 618.00	
Lead	1 995.00	▼ -0.1%	▼ -0.3%	▼ -20.0%	▼ -19.1%	2 295.49	1 867.00	2 683.00	
LBMA (USD/troz)									
Silver	14.82	▲ 1.3%	▲ 3.6%	▼ -12.1%	▼ -13.2%	15.92	14.13	17.52	
Gold ²	1 232.10	▲ 0.8%	▲ 3.8%	▼ -5.0%	▼ -3.7%	1 274.66	1 178.40	1 354.95	
LPPM (USD/troz)									
Platinum ²	866.00	▲ 4.3%	▲ 6.3%	▼ -6.6%	▼ -7.0%	890.46	772.00	1 020.00	
Palladium ²	1 114.00	▲ 0.8%	▲ 1.8%	▲ 5.5%	▲ 11.2%	1 000.03	849.00	1 141.00	
FX³									
EURUSD	1.1417	▼ -0.7%	▼ -1.4%	▼ -4.8%	▼ -2.0%	1.1888	1.1318	1.2493	
EURPLN	4.3244	▲ 0.8%	▲ 1.2%	▲ 3.7%	▲ 2.1%	4.2555	4.1423	4.3978	
USDPLN	3.7804	▲ 1.4%	▲ 2.9%	▲ 8.6%	▲ 4.0%	3.5812	3.3173	3.8203	
USDCAD	1.3105	- 0.0%	▲ 1.2%	▲ 4.5%	▲ 2.2%	1.2892	1.2288	1.3310	
USDCNY	6.8907	▼ -0.8%	▲ 0.3%	▲ 5.9%	▲ 4.3%	6.5623	6.2690	6.9757	
USDCLP	698.56	▲ 3.2%	▲ 5.6%	▲ 13.5%	▲ 9.7%	634.60	588.28	698.56	
Money market									
3m LIBOR USD	2.592	▲ 0.11	▲ 0.19	▲ 0.90	▲ 1.20	2.232	1.696	2.592	
3m EURIBOR	-0.318	▼ 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	1.709	1.700	1.720	
5y USD interest rate swap	3.179	▼ -0.01	▲ 0.11	▲ 0.94	▲ 1.10	2.858	2.283	3.192	
5y EUR interest rate swap	0.373	▼ -0.03	▼ -0.02	▲ 0.06	▲ 0.17	0.364	0.224	0.509	
5y PLN interest rate swap	2.545	▼ -0.09	▲ 0.02	▲ 0.04	▼ 0.00	2.481	2.280	2.740	
Fuel									
WTI Cushing	63.14	▼ -8.7%	▼ -13.8%	▲ 4.5%	▲ 15.8%	67.26	59.19	76.41	
Brent	71.97	▼ -9.5%	▼ -13.2%	▲ 7.7%	▲ 18.7%	73.19	62.33	86.09	
Diesel NY (ULSD)	217.40	▼ -6.2%	▼ -7.5%	▲ 5.3%	▲ 17.3%	212.87	183.32	243.40	
Others									
VIX	19.51	▼ -0.13	▲ 7.39	▲ 8.47	▲ 9.58	15.65	9.15	37.32	
BBG Commodity Index	83.88	▼ -2.2%	▼ -1.5%	▼ -4.9%	▼ -3.2%	86.96	82.14	91.57	
S&P500	2 723.06	▼ -1.2%	▼ -6.6%	▲ 1.8%	▲ 5.6%	2 764.30	2 581.00	2 930.75	
DAX	11 518.99	▼ 0.0%	▼ -5.9%	▼ -10.8%	▼ -14.3%	12 469.89	11 191.63	13 559.60	
Shanghai Composite	2 676.48	▲ 0.8%	▼ -5.1%	▼ -19.1%	▼ -20.9%	3 010.41	2 486.42	3 559.47	
WIG 20	2 197.68	▲ 0.2%	▼ -3.8%	▼ -10.7%	▼ -12.1%	2 295.51	2 082.77	2 630.37	
KGHM	90.26	▲ 5.3%	▲ 1.3%	▼ -18.8%	▼ -26.6%	94.74	82.56	115.00	

^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

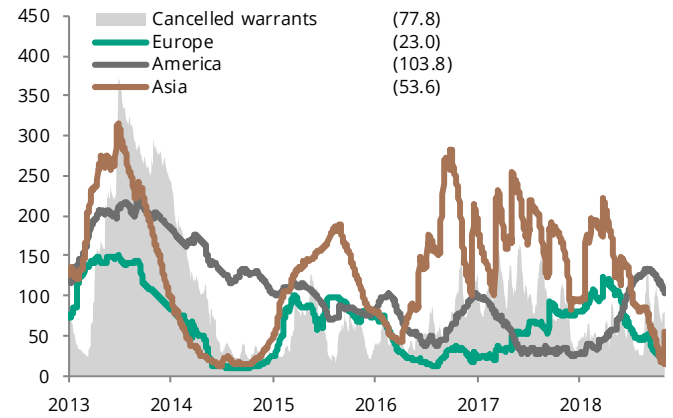
Source: Bloomberg, KGHM Polska Miedź

Copper: official exchange stocks (thousand tonnes)



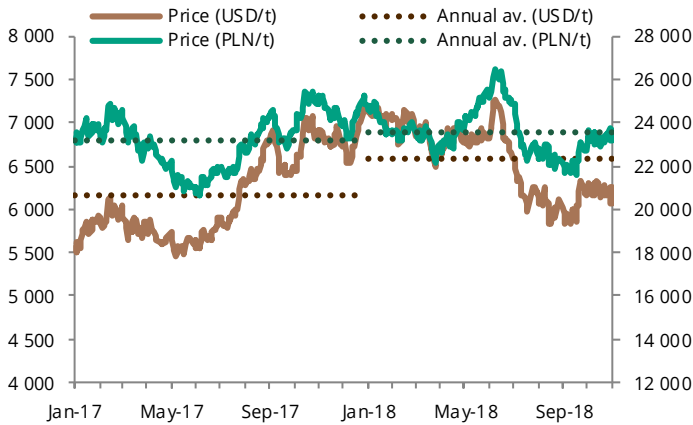
Note: Latest values in brackets. Source: Bloomberg, KGHM

Copper: official LME stocks (thousand tonnes)



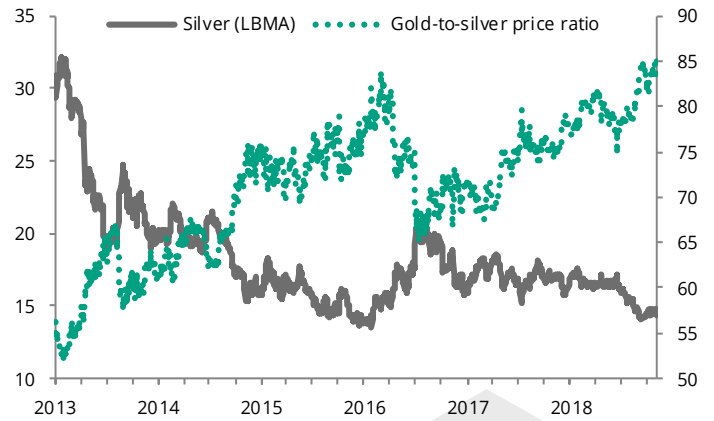
Note: Latest values in brackets. Source: Bloomberg, KGHM

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



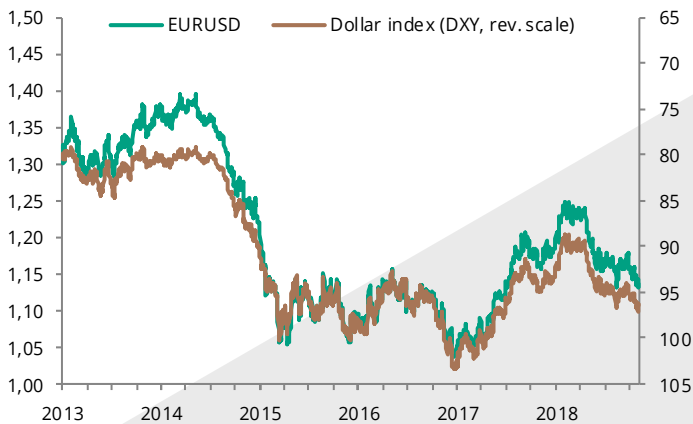
Source: Bloomberg, KGHM Polska Miedź

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



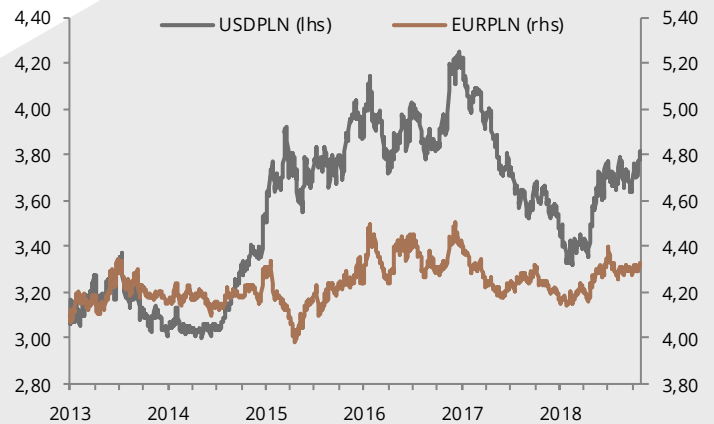
Source: Bloomberg, KGHM Polska Miedź

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:
22nd October – 4th November 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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