KGHM POLSKA MIEDŹ

Market Overview

as of: 4th November 2019

- **Copper:** This year's LME Week meeting, i.e. the meeting of the metals' industry participants, took place in slightly worse moods in relation to the last years' edition, mainly as a consequence of lower metal prices on the market. One of the few different themes that were previously discussed should include the characteristics of investments in new complex and requiring the inclusion of the "green" component in mining investments *(page 2)*.
- **Precious metals:** The price of gold has recently exceeded USD 1,500 / troz again. Return to the highest price levels for years is slowly beginning to translate into a slowdown on the side of physical demand and an increase in the supply of raw material from scrap, which may be holding back the price increase in the coming weeks. On the other hand, attention should be paid to the continuation of the trend of buying gold by central banks, which according to Refinitiv GFMS, added another 119 tons to the accumulated reserves in the third quarter of this year *(page 5)*.
- **China:** China's factory activity is expected to have shrunk for the sixth month in October, a Reuters poll showed, suggesting hardly any let up in pressure on the domestic and export sectors from slowing global demand and a trade war with the United States *(page 7)*.

Key market prices

		Close price	2w chng.
	LME (USD/t)		
▼	Copper	5 797.00	-0.4%
▲	Nickel	16 750.00	3.4%
	LBMA (USD/troz)		
▲	Silver	18.12	2.2%
▲	Gold (PM)	1 508.80	1.1%
	FX		
▼	EURUSD	1.1139	-0.3%
▼	EURPLN	4.2617	-0.4%
▼	USDPLN	3.8174	-0.3%
▲	USDCAD	1.3157	0.5%
▲	USDCLP	735.05	3.6%
	Stocks		
▲	KGHM	83.64	3.3%

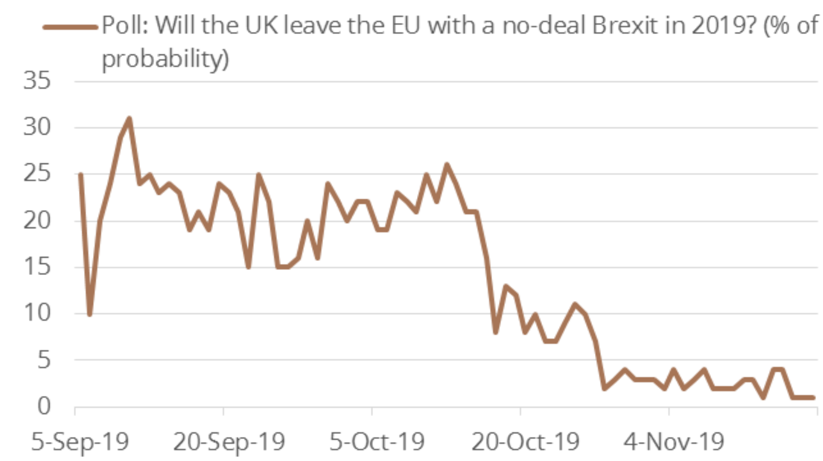
Source: Bloomberg, KGHM Polska Miedź; *(more on page 11)*

Important macroeconomic data

	Release	For		
US	Fed lower rate	Oct	1.50%	▼
EU	GDP (sa, yoy)	3Q	1.1%	▼
CN	Caixin's manuf. PMI	Oct	51.7	▲
PL	CPI (yoy)	Oct	2.5%	▼
CL	BCCh rate decision	Oct	1.75%	▼

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

The recent polls show that no-deal Brexit is not the base case scenario



Source: Bloomberg, KGHM Polska Miedź

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Please see important disclosures at the end of this document (page 13)

Base and precious metals | Other commodities

Copper

This year's LME Week meeting, i.e. the meeting of the metals' industry participants, took place in slightly worse moods in relation to the last years' edition, mainly as a consequence of lower metal prices on the market. One of the few different themes that were previously discussed should include the characteristics of investments in new complex and requiring the inclusion of the "green" component in mining investments.

LME Week trip notes

Copper market fundamentals have recently been of secondary importance; events at the macroeconomic level are the main price-generating factor

The main culprit seems to be the macroeconomic environment, which recently shows signs of a slowdown, and the situation on the US-China front, which is an additional burden. The issue of the imbalance in foreign trade, protection of intellectual property rights as well as appeals by representatives of both groups of the chamber to the national security of the United States is the spark of the political game that has been going on since the beginning of 2018. Most market participants are considering various scenarios for resolving this situation, which was reflected in the form of different price forecasts presented by analysts. Arguments could be found both for and against the increase in copper prices, however forecasting administrative decisions is not the simplest. Arguments for growth include stabilization on the side of Chinese consumption. It should be noted that the Chinese authorities are currently refraining from launching more decisive measures to stimulate the economy. It seems that the decision to intervene by the PRC authorities will depend on the further development of events in the Middle Kingdom's economy. According to the participants of LME Week, the last, the lowest growth rate of GDP growth for several years may be an argument for the authorities that may help in making a decision on stimulating the economy. Nevertheless, a lot of uncertainty is generated by the trade conflict, which in addition to increasing levels of complexity is slowly entering the election year in the US.

Relatively low copper prices also do not help in making investment decisions in mining companies. In 2019, no breakthroughs in terms of market balance of new investment projects, both greenfield and brownfield, were recorded. Apart from the gold market, there is also no information on significant mergers and acquisitions on the market. One of the arguments against price increases formulated by analysts during meetings is the possibility of implementing a recession scenario, which in most cases is not a baseline scenario, but nevertheless increasingly worries market participants. From historical analysis, the risk-off phase rarely favored the increase in industrial metal prices.

The market consensus indicates that the next year will not be easier to assess than the current one. The increased uncertainty associated with the US-China trade war and the possibility of implementing a recession scenario are the main risk factors that market participants will have to deal with.

Metals sector in costly battle to turn green

In search for cleaner mining investments

Metals producers, from miners to smelters, are grappling with increasingly tough and costly environmental demands imposed by banks seeking cleaner investments. While the transition may prove overwhelming for smaller producers, larger companies are playing a long game, casting ahead to a period where greener technology helps slash their costs. Sustainability has been a long-standing issue in metals, covering a wide range of issues including corruption, board structure, jobs, communities around mines and mine waste. But environmental concerns have moved to the top of the agenda in recent years with heightened awareness of climate change amid public protests. Metals and mining are responsible for 10% of the total impact on climate change, according to the United Nations Environment Programme. "We're turning down lots of stuff. Being green is a precondition for lending," said Laurent Charbonnier, global head of metals and mining at HSBC, speaking ahead of LME Week when the world's metal industry gathers in London. Mine operators now face extensive checklists from lenders before they release funds and listed companies are being screened by fund managers before they buy their shares. Assets in global "sustainable" funds have doubled over the past five years to $844 billion by end June, according to research firm Morningstar. "

For us, the scrutiny is all around us," said Shishir Poddar, executive chairman of Tirupati Graphite plc, which plans to list in London. The metals and mining industry will need around $240 billion of investment over the next decade to produce key base metals and gold, according to consultancy Wood Mackenzie. More funding, however, is conditional on meeting environmental, social and governance (ESG) guidelines, burdening operators with extra investment. "You may have to take another 25% to create the right societal engagements and environmental designs," said Simon Morris, global head of metals at Wood Mackenzie. "So will investors accept lower returns? I think it's probably causing a bit of head scratching around the industry in this tug-of-war of priorities," added Morris, who formerly worked for global miner Rio Tinto plc. Bigger metals groups have the financial bulk to absorb the higher investment. BHP Group, the world's biggest miner, signed four renewable energy contracts earlier this month to supply all its Chilean copper operations from 2021. But the new contracts came at a price - BHP took a provision of about $780 million related to the cancellation of existing coal contracts. Such costs are more challenging for smaller companies. "The problem for these companies is raising sufficient funds to build the mine," said analyst John Meyer at boutique investment bank SP Angel.

"To add another $50 to $100 million to put in a solar power plant is quite difficult." In many cases, bringing mines in line with environmental standards is moving hand-in-hand with new technologies that will boost efficiency and cut operating costs in the long term. Large mining groups like BHP and Anglo American are investing in solar power, automation and water-saving technologies, betting that substantial up-front investment will both burnish their green credentials and raise efficiency. "Following sustainability goals doesn't necessarily equate to an increase in costs," said Rachael Bartels, senior managing director at consultancy Accenture. Although BHP had to take a big hit to cancel its coal contracts in Chile, the group says the new renewable power contracts, beginning in 2021, will cut energy costs by 20%. Replacing diesel generators with electric motors in new underground mines could cut upfront costs by about a third because it cuts out ventilators that extract the diesel fumes, a study by EY found. Anglo American has been testing new mining processing technology in Chile that is expected to lift productivity by as much as a third and could also slash capital costs for new mines. Capital intensity, ratio of initial capital expenditure to annual production capacity, for new copper mines has tripled over the past 36 years to about $18,000 per tonne, according to Morgan Stanley. But Anglo's new technology has the potential to almost slice capital intensity in half below $10,000 a tonne, the bank said in a note. Anglo declined to release capital intensity figures, but said in an email the new technologies were "game-changers" in terms of both the environmental footprint and costs.

Other important information on copper market:

- The global world refined copper market showed a 48,000 tonnes deficit in July, compared with a 36,000 tonnes deficit in June, the International Copper Study Group (ICSG) said in its latest monthly bulletin. For the first 7 months of the year, the market was in a 324,000 tonnes deficit compared with a 237,000 tonnes deficit in the same period a year earlier, the ICSG said. World refined copper output in July was 2.08 million tonnes , while consumption was 2.13 million tonnes. Bonded stocks of copper in China showed a 116,000 tonnes deficit in July compared with a 84,000 tonnes deficit in June.
- The copper treatment charge (TC) benchmark in 2020 is likely to fall at least 13% from this year to $60-70 a tonne due to tight ore supply, a Reuters survey of analysts, traders, miners and smelters showed, as the world's metal industry gathers in London for LME Week. The TC/RC benchmark - agreed at $80.80 a tonne and 8.08 cents a pound for 2019 - rises when copper concentrate supply is abundant and falls when the market tightens. "Our forecast is $65," BMO analyst Colin Hamilton said in an email. "We're seeing the usual gaming into negotiations, and it was interesting to see (Antofagasta) settle early," he added, referring to supply deals for the first half of 2020 done around that level with two Chinese smelters in July. "Even before the Chilean problems I would have expected the numbers to go down significantly," said a person with a major miner. Protests have swept the world's top copper producer this month, hobbling supply chains. New smelters in top consumer China, on the other hand, are "running like Rolls-Royces" and have strong demand for concentrate, the miner added, giving a range of $60-65 for the 2020 benchmark - "and much closer to the left". Chinese smelters are set to add almost 1 million tonnes of capacity this year, increasing competition for concentrate and pushing spot TCs to as low as $52 in August and September.

Any decline in the benchmark next year would be the fifth consecutive fall and even $70 – the top end of the consensus range - would be the lowest since 2013 and mean much thinner smelter margins. That's not to say smelters won't come prepared with arguments. One smelter source, who forecasts $70 for 2020, pointed out that Chile's Codelco may close its Ventanas smelter, freeing up concentrate supply for the rest of the world. Chinese smelters "will face environmental and financial pressure" next year, which could lower production rates, the smelter source added.

- Ecuador plans to ship its first large copper cargo within weeks, a milestone in its ambitions to evolve from exploration hotspot to copper exporter. The El Mirador copper mine, owned by a unit of the Chinese consortium CRCC-Tongguan, started operations in July but the the company imposed some restrictions in October as a precautionary measure to protect workers amid unrest over the government's austerity plan. They have already stockpiled 30,000 tonnes. It will be the first time we have a larger scale exportation going out," he said. Ecuador, an Andean country neighbouring the world's No. 2 copper producer Peru, has large mineral reserves but is only beginning to develop industrial-scale mining projects. The OPEC nation, which has struggled with low oil prices in recent years, has been drumming up foreign investment to tap its big copper, gold and silver deposits. It aims to more than double the value of mining to its cash-strapped economy by 2021. Among other projects are the Loma Larga gold-copper project being developed by Canada's INV Metals, which Benalcazar said has recently secured finance and Lumina Gold Corp's Cangrejos gold mine. Those actively exploring include Australia's Fortescue Metals and privately held Hancock Prospecting, which is the only foreign miner not to have met with the government, he said.

Precious Metals

The price of gold has recently exceeded USD 1,500 / troz again. Return to the highest price levels for years is slowly beginning to translate into a slowdown on the side of physical demand and an increase in the supply of raw material from scrap, which may be holding back the price increase in the coming weeks. On the other hand, attention should be paid to the continuation of the trend of buying gold by central banks, which according to Refinitiv GFMS, added another 119 tons to the accumulated reserves in the third quarter of this year.

Higher prices cool Asian demand for gold - GFMS

The increase in gold prices has a negative impact on consumer demand

Demand for gold jewellery, bars and coins fell sharply in the third quarter while investment in gold-backed exchange traded funds (ETFs) rocketed, an industry report said on Tuesday. Holdings of gold by ETFs jumped by 247 tonnes over July-September, the report compiled by consultants at Refinitiv GFMS said, helping push prices to six-year peaks above $1,500 an ounce. But higher prices dampened demand from retail buyers. Purchases of gold bars in Asia fell by one-third year-on-year, pushing overall third quarter demand down 23% to 146 tonnes, according to Refinitiv GFMS. For jewellery, meanwhile, a 60% fall in Indian consumption dragged global jewellery fabrication down 26% to 392 tonnes, it said. Central banks and other official sector institutions bought 119 tonnes over July-September, taking net purchases for the first nine months to more than 470 tonnes, it added.

Global economies | Foreign exchange markets

China: Factory activity seen contracting for 6th month on trade pressure

China's factory activity is expected to have shrunk for the sixth month in October, a Reuters poll showed, suggesting hardly any let up in pressure on the domestic and export sectors from slowing global demand and a trade war with the United States.

Downturn in manufacturing reinforces evidence of further weakening in the world's second-biggest economy and puts pressure on authorities to roll out more stimulus to avert a sharper slowdown and large-scale job losses

The official Purchasing Managers' Index (PMI) for October was seen at 49.8, unchanged from September, but still below the 50-point mark that separates expansion from contraction, according to the median forecasts of 35 economists. The extended downturn in manufacturing reinforces evidence of further weakening in the world's second-biggest economy and puts pressure on authorities to roll out more stimulus to avert a sharper slowdown and large-scale job losses. While U.S. and Chinese trade negotiators are working on nailing down a "Phase 1" trade deal for their presidents to sign next month, analysts and investors remain cautious given there are still a number of differences between the two sides on key issues. Many expect a durable resolution to the protracted trade war is unlikely in the near term. China still faces new U.S. tariffs set to kick in on Dec. 15, on top of the existing 25% tariffs on $250 billion of Chinese imports. That is likely to weigh on businesses and consumers. China's gross domestic product growth slowed more than expected to 6.0% year-on-year in the third quarter, its weakest pace in almost three decades.

Chinese GDP growth is expected to cool to 6.2% and then hit 5.9% in 2020, according to a Reuters poll, underlining the growing challenges faced by Beijing in its efforts to stabilise the economy

For the whole of 2019, GDP growth is expected to cool to 6.2% and then hit 5.9% in 2020, according to a Reuters poll, underlining the growing challenges faced by Beijing in its efforts to stabilise the economy. In September, a slide in China's exports picked up pace while imports contracted for a fifth straight month, official data showed. Profits at China's industrial firms fell in September for the second consecutive month as the cooling economy and trade war weighed on corporate balance sheets. For January-September, industrial firms earned profits of 4.59 trillion yuan, down 2.1% from a year earlier, and worse than the 1.7% reading in the first eight months. China unexpectedly kept unchanged its new benchmark lending rate in October after reductions in August and September, suggesting Beijing is keen to avoid overly loosening monetary policy for fear it may push up already-high debt levels across the economy. The government has been trying to spur domestic demand for over a year through higher infrastructure spending, but the measures have been slow to gain traction. A private survey - the Caixin/Markit Manufacturing Purchasing Managers' Index (PMI)- which focuses more on small- and medium-sized, export-driven Chinese firms, is expected to show factory activity expanded in October. However, it is still forecast to show subdued growth with the headline gauge edging lower to 51.0 from 51.4 in September.

Britain sets December date for an election in which brexit will dominate

Early elections in UK are going to take place on the 12th of December 2019

Prime Minister Boris Johnson's bid for a pre-Christmas election got a major boost Tuesday when the main opposition Labour Party said it would back a December ballot, almost guaranteeing an early election that will be dominated by Brexit, Brexit and more Brexit. Jeremy Corbyn, leader of the Labour Party, said a decision by European leaders on Monday to delay Brexit until Jan. 31 met his condition that, at least for the next three months, the threat of a no-deal Brexit is off the table and Britain could not suddenly "crash" out of the trading bloc. "Labour backs a general election, because we want this country to be rid of this reckless and destructive Conservative government," Corbyn said Tuesday in the House of Commons. "We will launch the most ambitious, radical campaign for real change." If elections come in December, voters will be offered some stark choices over Brexit — alongside the usual muddle, misrepresentations and foggy numbers. The Conservative Party under Johnson will run as the 100 percent for Brexit party, under the banner, "Let's get it done."

"There is only one way to get Brexit done in the face of this unrelenting parliamentary obstructionism, this endless willful fingers crossed 'not me, guv' refusal to deliver on the mandate of the people," Johnson said on Tuesday, "and that is to refresh this Parliament." Can Boris Johnson win the support of Labour voters who want Brexit? The new Brexit Party, led by talk show host Nigel Farage, will be 200 percent for Brexit, arguing: Why even talk to the Europeans anymore? Let's crash out. The Liberal Democrats will campaign to stop Brexit. And have a second referendum. The Scottish National Party will push to remain in the European Union — and, by the way, promote Scottish independence. And then there's Corbyn's Labour. That one is a puzzler. The center-left party's manifesto will be: Let's win the election; then let's negotiate a very soft, very closely aligned "Labour Brexit" with Europe; then let's have a Labour Party conference to decide whether to support the deal; and finally let's have a second referendum to see if the people support it.

Macroeconomic calendar

Important macroeconomic data releases

Weight	Date	Event	For	Reading [1]	Previous	Consensus [2]
		China				
✪✪	27-Oct	Industrial profits (yoy)	Sep	-5.3% ▼	-2.0%	--
✪✪✪	31-Oct	Official manufacturing PMI	Oct	49.3 ▼	49.8	49.8
✪✪✪	01-Nov	Caixin's manufacturing PMI	Oct	51.7 ▲	51.4	51.0
		Poland				
✪✪✪	21-Oct	Retail sales (yoy)	Sep	5.3% ▼	6.0%	8.1%
✪	22-Oct	M3 money supply (yoy)	Sep	9.4% ▼	9.9%	9.8%
✪✪	23-Oct	Unemployment rate	Sep	5.1% ▼	5.2%	5.1%
✪✪✪✪	31-Oct	Consumer inflation CPI (yoy) - preliminary data	Oct	2.5% ▼	2.6%	2.5%
		US				
✪	22-Oct	Richmond Fed manufacturing index	Oct	8.0 ▲	- 9.0	- 7.0
✪✪✪	24-Oct	Composite PMI - preliminary data	Oct	--	51.0	--
✪✪✪	24-Oct	Manufacturing PMI - preliminary data	Oct	--	51.1	50.9
✪✪✪	24-Oct	PMI services - preliminary data	Oct	--	50.9	51.0
✪✪	24-Oct	Durable goods orders - preliminary data‡	Sep	-1.1% ▼	0.3%	-0.7%
✪✪	25-Oct	University of Michigan confidence index - final data	Oct	95.5 ▼	96.0	96.0
✪	28-Oct	Dallas Fed manufacturing activity	Oct	- 5.1 ▼	1.5	1.0
✪	29-Oct	S&P/CaseShiller home price index‡	Aug	218 ▲	218	--
✪✪✪✪✪	30-Oct	FOMC base rate decision - upper bound (Fed)	Oct	1.75% ▼	2.00%	1.75%
✪✪✪✪✪	30-Oct	FOMC base rate decision - lower bound (Fed)	Oct	1.50% ▼	1.75%	1.50%
✪✪✪✪✪	30-Oct	GDP (annualized, qoq) - estimation	3Q	1.9% ▼	2.0%	1.6%
✪✪✪✪	31-Oct	Consumer spending inflation PCE (mom)	Sep	0.0% ▼	0.1%	0.1%
✪✪✪✪	31-Oct	Consumer spending inflation PCE (yoy)	Sep	1.7% ▼	1.8%	1.7%
✪✪	31-Oct	Personal income (sa, mom)‡	Sep	0.3% ▼	0.5%	0.3%
✪✪	31-Oct	Personal spending (sa, mom)‡	Sep	0.2% ▪	0.2%	0.3%
✪✪✪	01-Nov	Manufacturing PMI - final data	Oct	51.3 ▼	51.5	51.5
✪✪	01-Nov	Change in non-farm payrolls (ths)‡	Oct	128 ▼	180	85.0
✪✪	01-Nov	ISM Manufacturing	Oct	48.3 ▲	47.8	48.9
✪✪	01-Nov	Underemployment rate (U6)	Oct	7.0% ▲	6.9%	--
✪✪	01-Nov	Unemployment rate	Oct	3.6% ▲	3.5%	3.6%
✪	01-Nov	Average hourly earnings (yoy)‡	Oct	3.0% ▪	3.0%	3.0%

Weight	Date	Event	For	Reading [1]		Previous	Consensus [2]	
		Eurozone						
✪	23-Oct	Consumer confidence - estimation	Oct	- 7.6	▼	- 6.5	- 6.8	◒
✪✪✪✪✪	24-Oct	ECB main refinancing rate	Oct	0.00%	=	0.00%	0.00%	○
✪✪✪✪✪	24-Oct	ECB deposit facility rate	Oct	-0.5%	=	-0.5%	-0.5%	○
✪✪✪	24-Oct	Composite PMI - preliminary data	Oct	--		50.1	50.3	
✪✪✪	24-Oct	Manufacturing PMI - preliminary data	Oct	--		45.7	46.0	
✪✪✪	24-Oct	Services PMI - preliminary data	Oct	--		51.6	51.9	
✪	28-Oct	M3 money supply (yoy)‡	Sep	5.5%	▼	5.8%	5.7%	◒
✪	30-Oct	Economic confidence	Oct	101	▼	102	101	◒
✪	30-Oct	Industrial confidence‡	Oct	- 9.5	▼	- 8.9	- 8.8	◒
✪	30-Oct	Consumer confidence - final data	Oct	- 7.6	=	- 7.6	- 7.6	○
✪	30-Oct	Business climate indicator‡	Oct	- 0.2	▲	- 0.2	- 0.2	◓
✪✪✪✪✪	31-Oct	GDP (sa, yoy) - estimation	3Q	1.1%	▼	1.2%	1.1%	○
✪✪✪✪✪	31-Oct	GDP (sa, qoq) - estimation	3Q	0.2%	=	0.2%	0.1%	◓
✪✪✪✪	31-Oct	Core CPI (yoy) - preliminary data	Oct	1.1%	▲	1.0%	1.0%	◓
✪✪✪✪	31-Oct	CPI estimate (yoy)‡	Oct	0.7%	▼	0.8%	0.7%	○
✪✪	31-Oct	Unemployment rate‡	Sep	7.5%	=	7.5%	7.4%	◓
		Germany						
✪✪✪	24-Oct	Composite PMI - preliminary data	Oct	--		48.5	48.8	
✪✪✪	24-Oct	Manufacturing PMI - preliminary data	Oct	--		41.7	42.0	
✪✪	25-Oct	IFO business climate	Oct	94.6	=	94.6	94.5	◓
✪✪	25-Oct	GfK consumer confidence‡	Nov	9.6	▼	9.8	9.8	◒
✪✪✪✪	30-Oct	Harmonized consumer inflation HICP (yoy) - preliminary data	Oct	0.9%	=	0.9%	0.8%	◓
✪✪✪✪	30-Oct	Consumer inflation CPI (yoy) - preliminary data	Oct	1.1%	▼	1.2%	1.0%	◓
✪✪	30-Oct	Unemployment rate	Oct	5.0%	=	5.0%	5.0%	○
✪✪✪	31-Oct	Retail sales (yoy)‡	Sep	3.4%	▲	3.1%	3.3%	◓
		France						
✪✪✪	24-Oct	Composite PMI - preliminary data	Oct	--		50.8	51.0	
✪✪✪	24-Oct	Manufacturing PMI - preliminary data	Oct	--		50.1	50.2	
✪✪✪✪✪	30-Oct	GDP (yoy) - preliminary data	3Q	1.3%	▼	1.4%	1.3%	○
✪✪✪✪✪	30-Oct	GDP (qoq) - preliminary data	3Q	0.3%	=	0.3%	0.2%	◓
✪✪✪✪	31-Oct	Harmonized consumer inflation HICP (yoy) - preliminary data	Oct	0.9%	▼	1.1%	1.1%	◒
✪✪✪✪	31-Oct	Consumer inflation CPI (yoy) - preliminary data	Oct	0.7%	▼	0.9%	0.9%	◒
		Italy						
✪✪✪✪✪	31-Oct	GDP (wda, yoy) - preliminary data‡	3Q	0.3%	▲	0.1%	0.2%	◓
✪✪✪✪✪	31-Oct	GDP (wda, qoq) - preliminary data‡	3Q	0.1%	=	0.1%	0.0%	◓
✪✪✪✪	31-Oct	Harmonized consumer inflation HICP (yoy) - preliminary data	Oct	0.2%	=	0.2%	0.2%	○
✪✪	31-Oct	Unemployment rate - preliminary data‡	Sep	9.9%	▲	9.6%	9.6%	◓
		UK						
✪✪✪	01-Nov	Manufacturing PMI (sa)	Oct	49.6	▲	48.3	48.2	◓
		Japan						
✪✪✪	24-Oct	Composite PMI - preliminary data	Oct	--		51.5	--	
✪✪✪	24-Oct	Manufacturing PMI - preliminary data	Oct	--		48.9	--	
✪✪✪✪	31-Oct	Industrial production (yoy) - preliminary data	Sep	1.1%	▲	-4.7%	-0.1%	◓
✪✪✪	01-Nov	Manufacturing PMI - final data‡	Oct	48.4	=	48.4	--	

[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

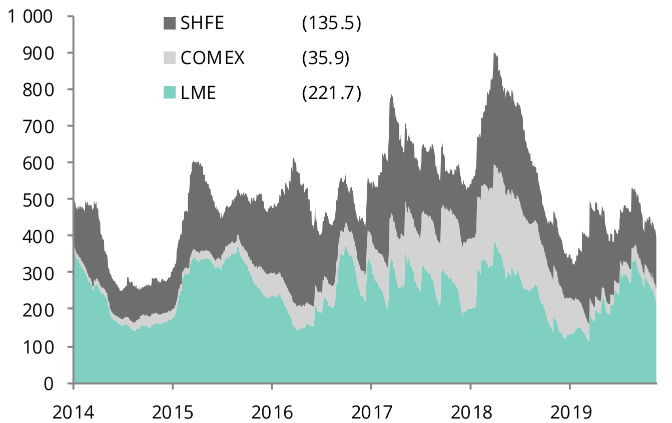
Key market data

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

(as of: 01-Nov-19)		Price change[1]				From year beginning[2]		
	Price	2W	QTD	YTD	1Y	Average	Min	Max
LME (USD/t; Mo in USD/lbs)								
Copper	5 797.00	▼ -0.4%	▲ 1.2%	▼ -2.8%	▼ -4.5%	6 006.70	5 537.00	6 572.00
Molybdenum	9.35	▼ -10.1%	▼ -20.6%	-	-	11.84	9.35	12.70
Nickel	16 750.00	▲ 3.4%	▼ -4.7%	▲ 58.1%	▲ 45.0%	13 837.89	10 440.00	18 625.00
Aluminum	1 766.00	▲ 1.8%	▲ 3.7%	▼ -5.5%	▼ -9.9%	1 794.81	1 697.00	1 923.00
Tin	16 575.00	▼ -1.5%	▲ 3.2%	▼ -15.0%	▼ -13.2%	19 002.84	15 710.00	21 925.00
Zinc	2 541.00	▲ 1.6%	▲ 6.9%	▲ 1.2%	▼ -1.7%	2 583.06	2 211.00	3 018.00
Lead	2 176.00	▼ -1.2%	▲ 4.4%	▲ 8.3%	▲ 12.6%	2 006.76	1 768.00	2 267.00
LBMA (USD/troz)								
Silver	18.12	▲ 2.2%	▲ 5.0%	▲ 17.2%	▲ 25.4%	16.04	14.38	19.31
Gold[2]	1 508.80	▲ 1.1%	▲ 1.6%	▲ 17.7%	▲ 22.6%	1 378.46	1 269.50	1 546.10
LPPM (USD/troz)								
Platinum[2]	935.00	▲ 4.5%	▲ 3.9%	▲ 17.8%	▲ 9.7%	854.54	782.00	977.00
Palladium[2]	1 801.00	▲ 1.7%	▲ 7.6%	▲ 42.6%	▲ 65.1%	1 484.20	1 267.00	1 801.00
FX [3]								
EURUSD	1.1139	▼ -0.3%	▲ 2.3%	▼ -2.7%	▼ -2.2%	1.1216	1.0889	1.1535
EURPLN	4.2617	▼ -0.4%	▼ -2.6%	▼ -0.9%	▼ -1.6%	4.3023	4.2406	4.3891
USDPLN	3.8174	▼ -0.3%	▼ -4.6%	▲ 1.5%	▼ -0.1%	3.8359	3.7243	4.0154
USDCAD	1.3157	▲ 0.5%	▼ -0.6%	▼ -3.6%	▲ 0.5%	1.3281	1.3038	1.3600
USDCNY	7.0342	▼ -0.5%	▼ -1.6%	▲ 2.3%	▲ 1.6%	6.8858	6.6872	7.1789
USDCLP	735.05	▲ 3.6%	▲ 1.3%	▲ 5.8%	▲ 5.2%	689.71	649.22	735.05
Money market								
3m LIBOR USD	1.891	▼ -0.04	▼ -0.19	▼ -0.92	▼ -0.69	2.406	1.891	2.804
3m EURIBOR	-0.399	▲ 0.01	▲ 0.02	▼ -0.09	▼ -0.08	-0.349	-0.448	-0.306
3m WIBOR	1.710	- 0.00	▼ -0.01	▼ -0.01	▼ -0.01	1.720	1.710	1.720
5y USD interest rate swap	1.517	▼ -0.09	▲ 0.02	▼ -1.05	▼ -1.60	2.017	1.254	2.715
5y EUR interest rate swap	-0.254	▼ -0.01	▲ 0.15	▼ -0.45	▼ -0.61	-0.130	-0.553	0.222
5y PLN interest rate swap	1.750	▼ -0.01	▲ 0.10	▼ -0.37	▼ -0.77	1.886	1.440	2.240
Fuel								
WTI Cushing	56.20	▲ 5.4%	▲ 3.9%	▲ 23.8%	▼ -11.8%	56.74	46.54	66.40
Brent	61.69	▲ 5.4%	▲ 3.1%	▲ 16.0%	▼ -14.4%	64.01	53.83	73.89
Diesel NY (ULSD)	194.43	▼ -0.6%	▲ 2.0%	▲ 15.6%	▼ -11.8%	193.55	170.01	212.40
Others								
VIX	12.30	▼ -1.70	▼ -3.94	▼ -13.12	▼ -7.04	15.81	12.01	25.45
BBG Commodity Index	80.26	▲ 2.6%	▲ 3.2%	▲ 4.6%	▼ -4.0%	79.46	75.97	83.06
S&P500	3 066.91	▲ 2.0%	▲ 3.0%	▲ 22.3%	▲ 11.9%	2 869.92	2 447.89	3 066.91
DAX	12 961.05	▲ 1.7%	▲ 4.3%	▲ 22.7%	▲ 13.0%	11 913.34	10 416.66	12 961.05
Shanghai Composite	2 958.20	▲ 0.6%	▲ 1.8%	▲ 18.6%	▲ 13.5%	2 914.66	2 464.36	3 270.80
WIG 20	2 194.10	▲ 0.5%	▲ 1.0%	▼ -3.6%	▲ 2.0%	2 266.05	2 051.44	2 414.41
KGHM	83.64	▲ 3.3%	▲ 4.6%	▼ -5.9%	▼ -3.7%	92.79	73.76	112.00

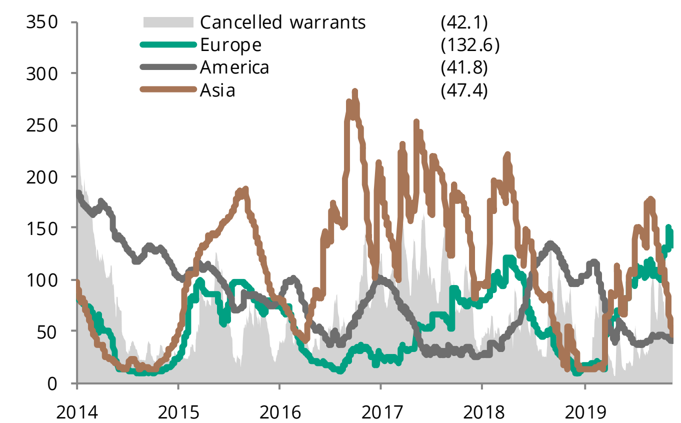
° change over: 2W = two weeks; QTD = quarter-to-day; YTD = year-to-date; 1Y = one year. [1] based on daily closing prices. [2] latest quoted price. [3] central banks' fixing rates (Bank of China HK for USD/CNY). [4].
Source: Bloomberg, KGHM Polska Miedź

Copper: official exchange stocks (thousand tonnes)



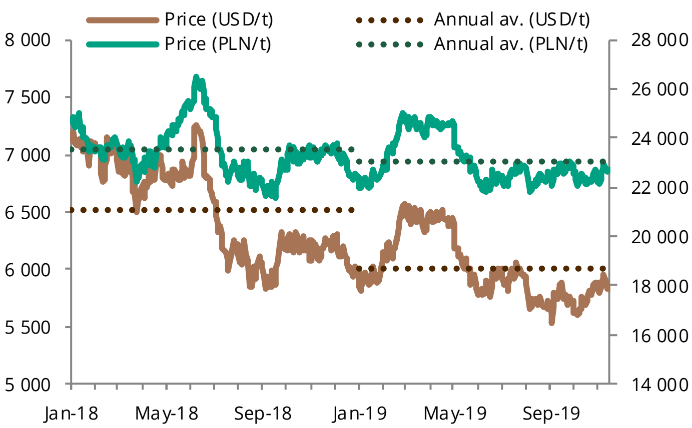
Note: Latest values in brackets. Source: Bloomberg, KGHM

Copper: official LME stocks (thousand tonnes)



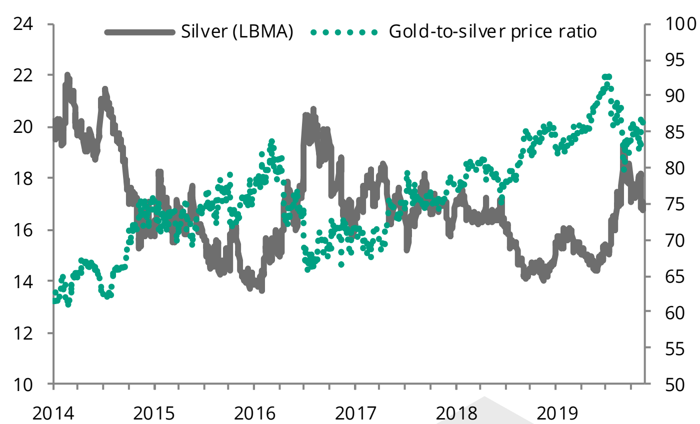
Note: Latest values in brackets. Source: Bloomberg, KGHM

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



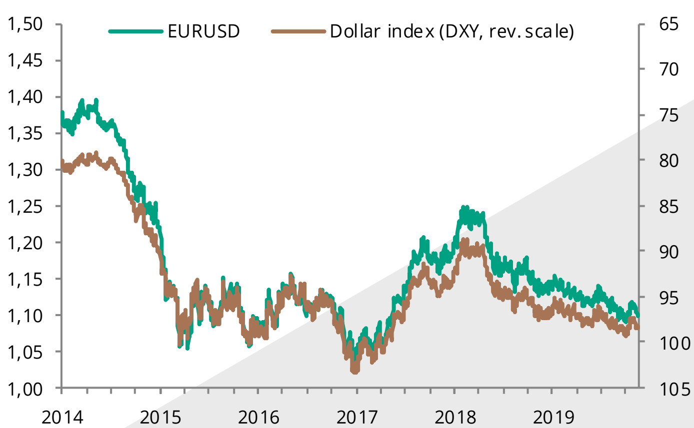
Source: Bloomberg, KGHM Polska Miedź

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



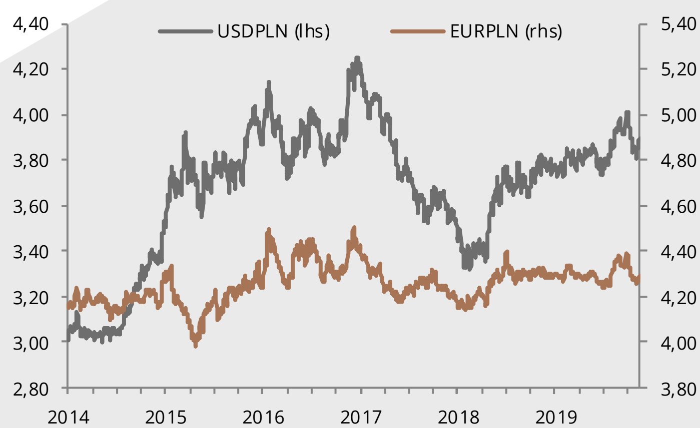
Source: Bloomberg, KGHM Polska Miedź

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: **21st October – 3rd November 2019.**

▪ 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

In case of questions or comments please contact us:

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