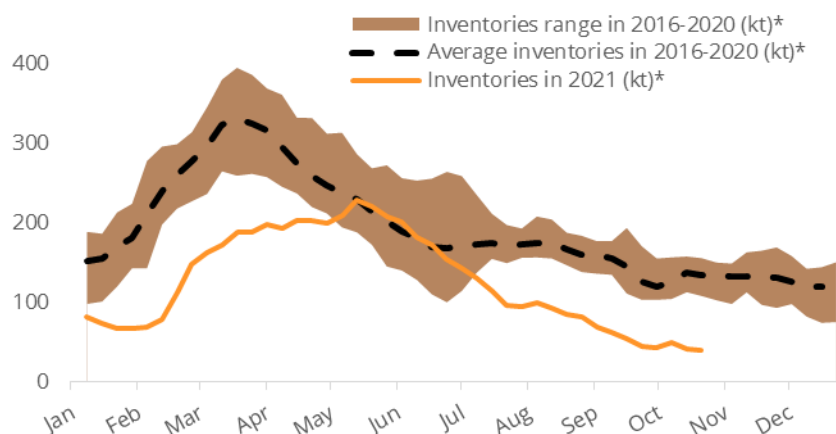


Market Overview

- **Copper:** Insufficient global availability of copper, a key metal used in wiring, electric vehicles and other electronics, will limit global climate ambitions unless regulators green light more mines (*page 2*).
- **Precious metals:** The British government-owned coinmaker has signed an agreement with the Canadian start-up Excir for the use of technology enabling the sustainable management of precious metals. The potential of this technology will reduce the negative impact of electronic waste on the environment while preserving valuable raw materials and building new skills that will help create a circular economy (*page 5*).
- **World Bank:** The surge in energy prices poses significant near-term risks to global inflation and, if sustained, could also weigh on growth in energy-importing countries (*page 6*).

Copper inventories on the Shanghai Metal Exchange at their lowest level in at least five years



Source: Bloomberg, KGHM Polska Miedź S.A.





as of: 25th October 2021

Key market prices

	Close price	2w chng.
LME (USD/t)		
▲ Copper	9 992.00	8.1%
▲ Nickel	20 355.00	7.9%
LBMA (USD/troz)		
▲ Silver	24.31	7.8%
▲ Gold (PM)	1 808.25	2.0%
FX		
▲ EURUSD	1.1630	0.5%
▲ EURPLN	4.6072	0.3%
▼ USDPLN	3.9576	-0.5%
▼ USDCAD	1.2357	-1.0%
▲ USDCLP	817.61	0.5%
Stocks		
▲ KGHM	162.15	5.5%

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

Important macroeconomic data

Release	For		
 FAI (ytd, yoy)	Sep	7.3%	▼
 Capacity utilization	Sep	75.2%	▼
 Industrial prod. (yoy)	Aug	3.7%	▼
 Trade balance (\$)	Sep	66.8	▲
 Trade balance	Aug	4.8	▼

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

Market Risk Unit

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Base and precious metals | Other commodities

Copper

Low Global Copper Supply Imperils Climate Goals

Insufficient global availability of copper, a key metal used in wiring, electric vehicles and other electronics, will limit global climate ambitions unless regulators green light more mines.

The stocks of copper available at LME's warehouses have dropped to levels unseen in more than 25 years

Low global supplies of copper - a key metal used in wiring, electric vehicles and other electronics - will crimp global climate ambitions unless regulators green light more mines, the chief executive of Freeport-McMoRan Inc said. The warning comes as global leaders plan to discuss climate mitigation efforts later this month at the COP26 conference even as some host communities and environmentalists increasingly oppose new mines for so-called strategic metals. "There's going to be a time when the world is going to be very short of copper," Freeport CEO Richard Adkerson told investors after the company posted better-than-expected quarterly results. "Supply is a real issue for this industry." In an early warning sign, stockpiles of available copper in the London Metal Exchange's global warehouse system fell to levels not seen for more than 25 years. Governments in Peru and Chile - the world's two largest copper producers - have recently threatened to increase mining taxes. U.S. President Joe Biden's administration took steps to block Minnesota copper mine from Antofagasta Plc. the latest in a string of mining projects his has moved against. Adkerson, who also chairs a global mining industry trade group, described the political situation in Washington as a "head-scratcher." Biden officials understand the importance of copper to climate goals, Adkerson said, but are not likely to lessen mine permitting standards "because that just runs against the grain of their political situation." Copper prices meanwhile are up 10% this month due to that low supply, with analysts expecting demand will increase alongside the global economy. Freeport itself is not immune to that price rise. The Phoenix-based company aims to switch its truck fleet from diesel power to either electric or hydrogen. Adkerson said the move will "involve a lot of cost." He said the switch was essential for the industry to show it is serious about fighting climate change via its own operations, which will soon include recycling operations in Spain. Freeport is also studying ways to leach copper out of waste rock piles stored at its mine sites across the globe, Adkerson said. "The world needs more copper. And yet, more copper, until technology breaks through, is going to result in more carbon emissions," he said.

Zijin Opens Serbian Copper And Gold Mine

The first part of the project involves mining an ultra high-grade ore body. It is expected to produce 50,000 tonnes of copper and three tonnes of gold in 2021. With the opening of the lower zone of the Timok project, Serbia's share of Europe's total copper output could rise to 18% from 5%, which would make Serbia Europe's second-largest producer behind Poland.

China's Zijin Mining began operations at a new Serbian copper and gold mine expected to make the Balkan country Europe's second-largest copper producer. The Cukaru Peki upper zone of the Timok copper and gold project is part of Serbia's only copper mining complex, the RTB Bor operation owned by Zijin. It has invested \$474 million so far in the new underground mine, which is expected to have annual capacity of 3.3 million tonnes of ore. "The first part of the project involves mining an ultra high-grade ore body. It is expected to produce 50,000 tonnes of copper and three tonnes of gold in 2021," the company said on its website. With the opening of the lower zone of the Timok project, Serbia's share of Europe's total copper output could rise to 18% from 5%, which the energy ministry has said would make Serbia Europe's second-largest producer behind Poland. "This project ... is important for the development of Serbia's economy and also for strengthening cooperation between Serbia and China," China's ambassador to Serbia, Chen Bo, said at the mine's opening ceremony in Bor. In 2018 Zijin Mining became Serbia's strategic partner in RTB Bor, pledging to invest \$1.26 billion in return for a 63% stake. At the opening ceremony in Bor, Serbia's President Aleksandar Vucic said the Chinese investment would bring benefits to the company and impoverished eastern Serbia. China has so far invested billions of euros in Serbia, mostly in the form of soft loans to finance highway and energy projects, as part of its so-called belt and road initiative to open new foreign trade links.

Glencore Looks To Recycle Electronic Metal Waste In UK

The Glencore's unit will be dedicated to recycling used electronics from Great Britain and continental Europe. Away from Britain, Glencore is planning to rebuild an e-scrap facility in Arkansas, which it bought in 2019.

Miner and trader Glencore will find out this month whether it will be able to build an electronics recycling facility in the UK, which could be operational within 18 months. Reusing scrap metal will be vital for cutting noxious emissions and the energy transition as recycling uses significantly less energy -- 80%-90% less for copper -- than mining and smelting primary metal. Around 2 million tonnes of e-waste items such as computers, televisions and mobile phones are discarded each year in the UK, according to a British government health and safety agency. "The UK site is aiming to recycle end of life discarded electronics from the UK and continental Europe," Glencore's Head of Copper and Electronic Waste Recycling Kunal Sinha told Reuters in an interview. Sinha declined to say where the facility would be sited or give any other details of the project. "Once the permit is granted by the British government, the facility could be up and running within 12 to 18 months." The value of raw materials including iron,

copper, gold and other precious metals in global electronic waste (e-waste) reached \$57 billion in 2019, of which just \$10 billion was recovered, according to a 2020 United Nations report. Glencore recovered around 27,000 tonnes of copper, 132,000 ounces of gold, 1.3 million ounces of silver, 16,000 ounces of palladium, and 5,000 ounces of platinum from recyclable feeds including electronic scrap. It has recycled more than one million tonnes of electronic scrap since the 1990s. Away from Britain, Glencore is planning to rebuild an e-scrap facility in Arkansas, which it bought in 2019. Scrap typically accounts for about a third of the roughly 30 million tonnes of annual global copper supplies. Glencore's copper production from own sources totalled 1.26 million tonnes last year.

Other important information on copper market:

- According to Platts, China's refined copper imports rose 3.8% month on month to 245,290.5 mt in September, the country's customs data showed. The month-on-month increase was in line with market expectations, as an import arbitrage window reopened from July and demand recovered in the domestic markets, industry sources said. The rise in imports follows four straight months of shipment declines until August. China's imports of unwrought copper and copper products reached 406,015.6 mt in September, up 3% from the previous month, the customs data showed. Meanwhile, its imports of copper concentrates rose 11.6% month on month to 2.11 million mt in September.
- China's September refined copper output rose 2.4% year on year to 885,000 tonnes, the highest monthly level since April, data from the National Bureau of Statistics showed. Production was up 1.3% from August, indicating little impact on copper smelters from widespread curbs on electricity usage amid a power supply crunch in China. Rising treatment and refining charges and high prices for byproduct sulphuric acid are also incentivising smelters to increase operating rates. Consultancy CRU estimates only around 11,000 tonnes of planned refined copper production was cut in September - in Jiangsu, Yunnan and Guangxi.
- The global world refined copper market showed a 31,000 tonnes deficit in July, compared with a 98,000 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 138,000 tonnes deficit compared with a 41,000 tonnes deficit in the same period a year earlier, the ICSG said. World refined copper output in July was 2.07 million tonnes, while consumption was 2.11 million tonnes.
- Chile's Codelco, the world's biggest copper miner, is offering to sell copper to European buyers at a premium of \$128 a tonne in 2022, the highest since 2015 and a rise of more than 20% from 2020. The premiums set by state-owned Codelco for physical delivery of copper, paid on top of the London Metal Exchange contract, are seen as a benchmark for global contracts, which means other producers are likely to follow suit.

Precious Metals

Royal Mint to extract gold and silver from old mobile phones

The British government-owned coinmaker has signed an agreement with the Canadian start-up Excir for the use of technology enabling the sustainable management of precious metals. The potential of this technology will reduce the negative impact of electronic waste on the environment while preserving valuable raw materials and building new skills that will help create a circular economy.

The Royal Mint is set to bring pioneering technology to the UK that will allow it to recycle discarded mobile phones and laptops to recover gold, silver and precious metals. The Government-owned coinmaker has signed a deal with Canadian start-up Excir to use the world's first sustainable precious metal technology. The Royal Mint aims to use the technology, based on chemistry, at its site in South Wales to retrieve precious metals from e-waste, such as phones and laptops. It said trials of the technology at The Royal Mint has already produced gold with a purity of 999.9, and has the potential to also recover palladium, silver and copper. The chemistry selectively targets and extracts precious metals from circuit boards in seconds, offering a sustainable solution to the more than 50 million tonnes of e-waste produced worldwide each year. Less than 20% of e-waste is currently recycled worldwide, with precious metals valued at an estimated 57 billion US dollars (£41 billion) largely discarded. Mountains of e-waste is sent to landfill or is sent abroad to be processed at high temperatures in smelters. Experts believe that as much as 7% of the world's gold may be contained in e-waste, with 100 times more gold in a tonne of e-waste than in a tonne of gold ore. Anne Jessopp, chief executive of The Royal Mint, said: "This partnership represents a significant milestone for The Royal Mint. The potential of this technology is huge, reducing the impact of electronic waste, preserving precious commodities, and forging new skills which help drive a circular economy."

Global economies | Foreign exchange markets





World Bank Sees 'Significant' Inflation Risk From High Energy Prices








The surge in energy prices poses significant near-term risks to global inflation and, if sustained, could also weigh on growth in energy-importing countries.

Energy prices are expected to inch up in 2022 after surging more than 80% in 2021, fueling significant near-term risks to global inflation in many developing countries, the World Bank said in its latest Commodity Markets Outlook. The bank said energy prices should start to decline in the second half of 2022 as supply constraints ease, with non-energy prices such as agriculture and metals also expected to ease after strong gains in 2021. "The surge in energy prices poses significant near-term risks to global inflation and, if sustained, could also weigh on growth in energy-importing countries," said Ayhan Kose, chief economist and director of the World Bank's Prospects Group, which produces the Outlook report. "The sharp rebound in commodity prices is turning out to be more pronounced than previously projected. Recent volatility in prices may complicate policy choices as countries recover from last year's global recession." The bank noted that some commodity prices rose to or exceeded levels in 2021 not seen since a spike a decade earlier. Natural gas and coal prices, for instance, reached record highs amid supply constraints and rebounding demand for electricity, although they are expected to decline in 2022 as demand eases and supply improves, the bank said. It warned that further price spikes could occur in the near-term given current low inventories and persistent supply bottlenecks. Other risk factors included extreme weather events, the uneven COVID-19 recovery and the threat of more outbreaks, along with supply-chain disruptions and environmental policies. Higher food prices were also raising questions about food security in several developing countries, it said. The bank projected crude oil prices would reach \$74/bbl in 2022, buoyed by strengthening demand from a projected \$70/bbl in 2021, before easing to \$65/bbl in 2023. The use of crude oil as a substitute for natural gas presented a major upside risk to the demand outlook, although higher energy prices may start to weigh on global growth. The bank forecast a 5% drop in metals prices in 2022 after a 48% increase in 2021. It said agricultural prices were expected to decline modestly next year after jumping 22% this year. It warned that changing weather patterns due to climate change also posed a growing risk to energy markets, potentially affecting both demand and supply. It said countries could benefit by accelerating installation of renewable energy sources and by cutting their dependency on fossil fuels.

Macroeconomic calendar

Important macroeconomic data releases

Weight	Date	Event	For	Reading ¹	Previous	Consensus ²	
China							
☆☆	13-Oct	Trade balance (USD bn)‡	Sep	66.8 ▲	58.4	45.0	▲
☆☆	13-Oct	Exports (yoy)	Sep	28.1% ▲	25.6%	21.5%	▲
☆	13-Oct	New yuan loans (CNY bn)‡	Sep	1 660 ▲	1 215	1 810	●
☆☆☆☆	14-Oct	Consumer inflation CPI (yoy)	Sep	0.7% ▼	0.8%	0.8%	●
☆☆	14-Oct	Producer inflation PPI (yoy)	Sep	10.7% ▲	9.5%	10.5%	▲
☆☆☆☆☆	18-Oct	GDP (yoy)	3Q	4.9% ▼	7.9%	5.0%	●
☆☆☆☆☆	18-Oct	GDP (sa, qoq)	3Q	0.2% ▼	1.3%	0.4%	●
☆☆☆☆	18-Oct	Industrial production (yoy)	Sep	3.1% ▼	5.3%	3.8%	●
☆☆	18-Oct	Fixed assets investments (ytd, yoy)	Sep	7.3% ▼	8.9%	7.8%	●
☆	18-Oct	Retail sales (yoy)	Sep	4.4% ▲	2.5%	3.5%	▲
Poland							
☆☆	14-Oct	Trade balance (EUR mn)‡	Aug	-1 413 ▼	- 761	- 660	●
☆☆	14-Oct	Exports (EUR mn)‡	Aug	21 775 ▼	22 466	21 524	▲
☆☆	14-Oct	Current account balance (EUR mn)‡	Aug	-1 686 ▼	-1 551	- 910	●
☆☆☆☆	15-Oct	Consumer inflation CPI (yoy) - final data	Sep	5.9% ▲	5.8%	--	●
☆☆☆☆	18-Oct	Core CPI (excluding food and energy, yoy)	Sep	4.2% ▲	3.9%	4.1%	▲
☆☆	19-Oct	Average gross salary (yoy)	Sep	8.7% ▼	9.5%	9.0%	●
☆	19-Oct	Employment (yoy)	Sep	0.6% ▼	0.9%	0.7%	●
☆☆☆☆	20-Oct	Sold industrial production (yoy)	Sep	8.8% ▼	13.2%	8.0%	▲
☆☆	20-Oct	Producer inflation PPI (yoy)‡	Sep	10.2% ▲	9.6%	10.0%	▲
☆☆☆	21-Oct	Retail sales (yoy)	Sep	11.1% ▲	10.7%	10.4%	▲
☆	22-Oct	M3 money supply (yoy)	Sep	8.6% ▼	9.1%	8.6%	●
US							
☆☆☆☆	13-Oct	Consumer inflation CPI (mom)	Sep	0.4% ▲	0.3%	0.3%	▲
☆☆☆☆	13-Oct	Consumer inflation CPI (yoy)	Sep	5.4% ▲	5.3%	5.3%	▲
☆☆	15-Oct	Retail sales (excluding autos, mom)‡	Sep	0.8% ▼	2.0%	0.5%	▲
☆☆	15-Oct	University of Michigan confidence index - preliminary data	Oct	71.4 ▼	72.8	73.1	●
☆☆☆☆	18-Oct	Industrial production (mom)‡	Sep	-1.3% ▼	-0.1%	0.1%	●
☆	18-Oct	Capacity utilization‡	Sep	75.2% ▼	76.2%	76.4%	●
☆☆	21-Oct	Philadelphia Fed business outlook	Oct	23.8 ▼	30.7	25.0	●
☆☆☆	22-Oct	Composite PMI - preliminary data	Oct	57.3 ▲	55.0	--	●
☆☆☆	22-Oct	Manufacturing PMI - preliminary data	Oct	59.2 ▼	60.7	60.5	●
☆☆☆	22-Oct	PMI services - preliminary data	Oct	58.2 ▲	54.9	55.2	▲
Eurozone							
☆	12-Oct	ZEW survey expectations	Oct	21.0 ▼	31.1	--	●
☆☆☆☆	13-Oct	Industrial production (sa, mom)‡	Aug	-1.6% ▼	1.4%	-1.7%	▲
☆☆☆☆	13-Oct	Industrial production (wda, yoy)‡	Aug	5.1% ▼	8.0%	4.7%	▲
☆	15-Oct	Trade balance (EUR mn)	Aug	4.8 ▼	20.7	--	●
☆☆☆☆	20-Oct	Consumer inflation CPI (yoy) - final data	Sep	3.4% -	3.4%	3.4%	●
☆☆☆☆	20-Oct	Core CPI (yoy) - final data	Sep	1.9% -	1.9%	1.9%	●
☆	21-Oct	Consumer confidence - estimation	Oct	- 4.8 ▼	- 4.0	- 5.0	▲
☆☆☆	22-Oct	Composite PMI - preliminary data	Oct	54.3 ▼	56.2	55.2	●
☆☆☆	22-Oct	Manufacturing PMI - preliminary data	Oct	58.5 ▼	58.6	57.1	▲
☆☆☆	22-Oct	Services PMI - preliminary data	Oct	54.7 ▼	56.4	55.4	●

Weight	Date	Event	For	Reading ¹	Previous	Consensus ²	
Germany 							
🔔🔔🔔🔔	13-Oct	Harmonized consumer inflation HICP (yoy) - final data	Sep	4.1% -	4.1%	4.1%	🟩
🔔🔔🔔🔔	13-Oct	Consumer inflation CPI (yoy) - final data	Sep	4.1% -	4.1%	4.1%	🟩
🔔🔔🔔	22-Oct	Composite PMI - preliminary data	Oct	52.0 ▼	55.5	54.3	🟥
🔔🔔🔔	22-Oct	Manufacturing PMI - preliminary data	Oct	58.2 ▼	58.4	56.6	🟥
France 							
🔔🔔🔔🔔	15-Oct	Harmonized consumer inflation HICP (yoy) - final data	Sep	2.7% -	2.7%	2.7%	🟩
🔔🔔🔔🔔	15-Oct	Consumer inflation CPI (yoy) - final data‡	Sep	2.2% -	2.2%	2.1%	🟥
🔔🔔🔔	22-Oct	Composite PMI - preliminary data	Oct	54.7 ▼	55.3	54.7	🟩
🔔🔔🔔	22-Oct	Manufacturing PMI - preliminary data	Oct	53.5 ▼	55.0	54.0	🟥
Italy 							
🔔🔔🔔🔔	11-Oct	Industrial production (wda, yoy)‡	Aug	0.0% ▼	7.2%	-0.3%	🟥
🔔🔔🔔🔔	15-Oct	Harmonized consumer inflation HICP (yoy) - final data	Sep	2.9% ▼	3.0%	3.0%	🟥
UK 							
🔔🔔	12-Oct	Unemployment rate (ILO, 3-months)	Aug	4.5% ▼	4.6%	4.5%	🟩
🔔🔔🔔🔔	13-Oct	Industrial production (yoy)‡	Aug	3.7% ▼	4.4%	3.3%	🟥
🔔🔔🔔🔔	20-Oct	Consumer inflation CPI (yoy)	Sep	3.1% ▼	3.2%	3.2%	🟥
🔔🔔🔔	22-Oct	Manufacturing PMI (sa) - preliminary data	Oct	57.7 ▲	57.1	56.0	🟥
🔔🔔🔔	22-Oct	Composite PMI - preliminary data	Oct	56.8 ▲	54.9	54.0	🟥
Japan 							
🔔🔔🔔🔔	14-Oct	Industrial production (yoy) - final data	Aug	8.8% ▼	9.3%	--	
🔔🔔🔔🔔	22-Oct	Consumer inflation CPI (yoy)	Sep	0.2% ▲	-0.4%	0.2%	🟩
🔔🔔🔔	22-Oct	Composite PMI - preliminary data	Oct	50.7 ▲	47.9	--	
🔔🔔🔔	22-Oct	Manufacturing PMI - preliminary data	Oct	53.0 ▲	51.5	--	
Chile 							
🔔🔔🔔🔔🔔	13-Oct	BCCh overnight rate target	Oct	2.75% ▲	1.50%	2.50%	🟥
Canada 							
🔔🔔🔔🔔	20-Oct	Consumer inflation CPI (yoy)	Sep	4.4% ▲	4.1%	4.3%	🟥

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

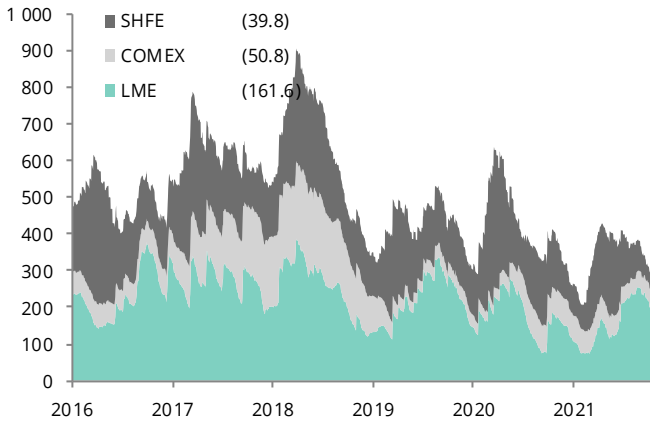
Key base & precious metal prices, exchange rates and other important market factors

<i>(as of: 22-Oct-21)</i>		Price change ¹					From year beginning ²		
	Price	2W	QTD	YTD	1Y	Average	Min	Max	
LME (USD/t; Mo in USD/lbs)									
Copper	9 992.00	▲ 8.1%	▲ 10.5%	▲ 29.1%	▲ 45.1%	9 230.37	7 755.50	10 724.50	
Molybdenum	19.15	▲ 1.3%	▲ 2.2%	▲ 90.9%	▲	15.26	9.95	20.05	
Nickel	20 355.00	▲ 7.9%	▲ 12.0%	▲ 23.1%	▲ 29.6%	18 131.38	15 907.00	20 530.00	
Aluminum	2 946.00	▲ 1.5%	▲ 3.3%	▲ 48.9%	▲ 61.2%	2 432.99	1 951.50	3 180.00	
Tin	38 850.00	▲ 5.2%	▲ 6.1%	▲ 89.1%	▲ 110.0%	31 110.76	20 965.00	39 650.00	
Zinc	3 495.00	▲ 12.8%	▲ 15.9%	▲ 28.3%	▲ 37.6%	2 922.43	2 539.00	3 815.00	
Lead	2 439.00	▲ 8.2%	▲ 15.4%	▲ 23.7%	▲ 36.1%	2 175.03	1 896.00	2 504.00	
LBMA (USD/troz)									
Silver	24.31	▲ 7.8%	▲ 12.9%	▼ -8.2%	▼ -2.4%	25.53	21.53	29.59	
Gold ²	1 808.25	▲ 2.0%	▲ 3.8%	▼ -4.4%	▼ -4.9%	1 797.57	1 683.95	1 943.20	
LPPM (USD/troz)									
Platinum ²	1 062.00	▲ 3.2%	▲ 10.3%	▼ -1.2%	▲ 22.1%	1 111.45	931.00	1 294.00	
Palladium ²	2 015.00	▼ -1.4%	▲ 6.1%	▼ -15.0%	▼ -14.7%	2 506.54	1 871.00	3 000.00	
FX ³									
EURUSD	1.1630	▲ 0.5%	▲ 0.4%	▼ -5.2%	▼ -1.6%	1.1934	1.1542	1.2338	
EURPLN	4.6072	▲ 0.3%	▼ -0.6%	▼ -0.2%	▲ 0.4%	4.5521	4.4541	4.6603	
USDPLN	3.9576	▼ -0.5%	▼ -0.9%	▲ 5.3%	▲ 2.2%	3.8166	3.6545	3.9992	
USDCAD	1.2357	▼ -1.0%	▼ -3.0%	▼ -2.9%	▼ -6.0%	1.2509	1.2040	1.2856	
USDCNY	6.3850	▼ -0.9%	▼ -0.9%	▼ -2.2%	▼ -4.5%	6.4677	6.3685	6.5718	
USDCLP	817.61	▲ 0.5%	▲ 1.7%	▲ 15.0%	▲ 4.3%	743.48	693.74	827.56	
Money market									
3m LIBOR USD	0.125	▲ 0.00	▼ -0.01	▼ -0.11	▼ -0.09	0.158	0.114	0.241	
3m EURIBOR	-0.549	▼ 0.00	▼ 0.00	▼ 0.00	▼ -0.04	-0.543	-0.556	-0.529	
3m WIBOR	0.700	▲ 0.05	▲ 0.47	▲ 0.49	▲ 0.48	0.241	0.210	0.700	
5y USD interest rate swap	1.277	▲ 0.13	▲ 0.22	▲ 0.85	▲ 0.83	0.863	0.416	1.314	
5y EUR interest rate swap	-0.024	▲ 0.12	▲ 0.17	▲ 0.44	▲ 0.43	-0.308	-0.485	-0.024	
5y PLN interest rate swap	2.560	▲ 0.23	▲ 0.68	▲ 1.95	▲ 2.04	1.359	0.583	2.560	
Fuel									
WTI Cushing	84.61	▲ 6.6%	▲ 12.8%	▲ 74.4%	▲ 109.1%	66.28	47.62	84.61	
Brent	84.99	▲ 2.5%	▲ 7.9%	▲ 66.1%	▲ 103.4%	68.79	50.02	85.37	
Diesel NY (ULSD)	254.32	▲ 2.4%	▲ 8.6%	▲ 72.1%	▲ 118.4%	200.79	146.07	259.61	
Others									
VIX	15.43	▼ -3.34	▼ -7.71	▼ -7.32	▼ -12.68	19.68	15.01	37.21	
BBG Commodity Index	103.75	▲ 1.1%	▲ 3.0%	▲ 32.9%	▲ 40.5%	90.99	78.64	105.14	
S&P500	4 544.90	▲ 3.5%	▲ 5.5%	▲ 21.0%	▲ 31.6%	4 182.08	3 700.65	4 549.78	
DAX	15 542.98	▲ 2.2%	▲ 1.8%	▲ 13.3%	▲ 23.9%	15 082.40	13 432.87	15 977.44	
Shanghai Composite	3 582.60	▼ -0.3%	▲ 0.4%	▲ 3.2%	▲ 8.2%	3 528.65	3 357.74	3 715.37	
WIG 20	2 417.09	▲ 0.2%	▲ 4.6%	▲ 21.8%	▲ 47.1%	2 153.47	1 876.85	2 472.33	
KGHM	162.15	▲ 5.5%	▲ 2.9%	▼ -11.4%	▲ 27.6%	188.23	150.15	223.80	

° 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

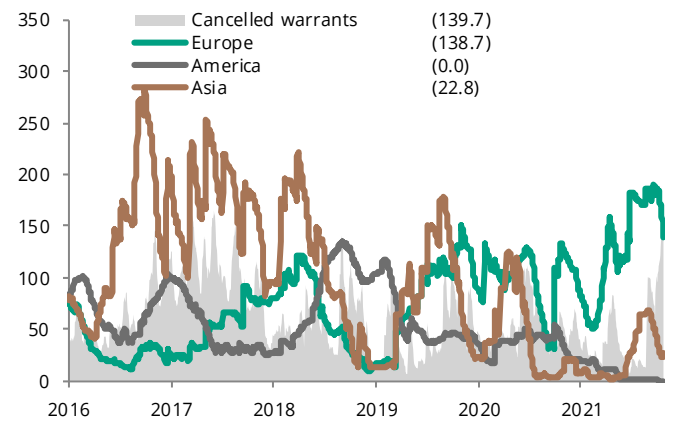
Source: Bloomberg, KGHM Polska Miedź

Copper: official exchange stocks (thousand tonnes)



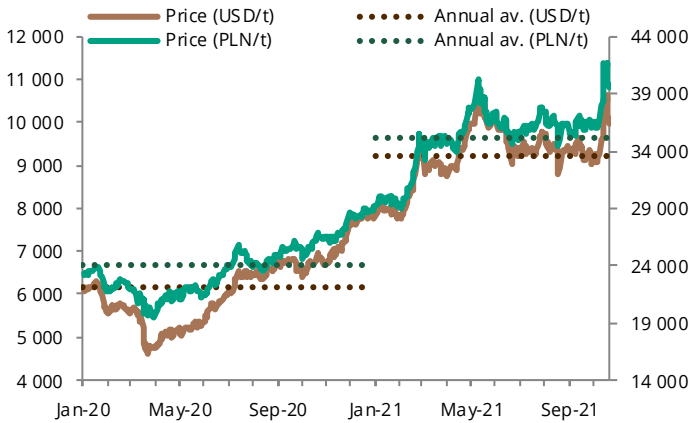
Note: Latest values in brackets. Source: Bloomberg, KGHM

Copper: official LME stocks (thousand tonnes)



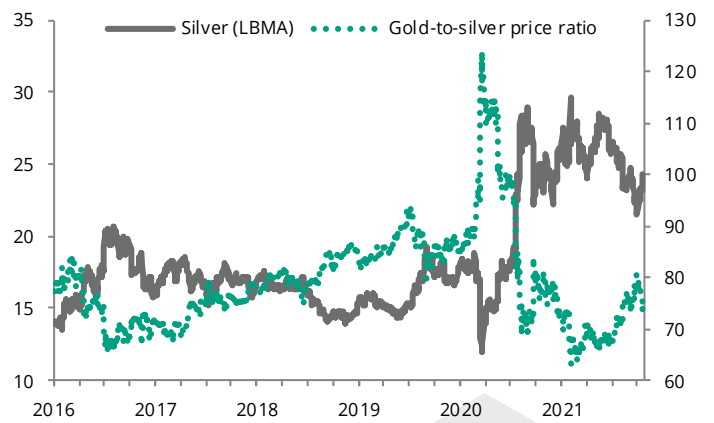
Note: Latest values in brackets. Source: Bloomberg, KGHM

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



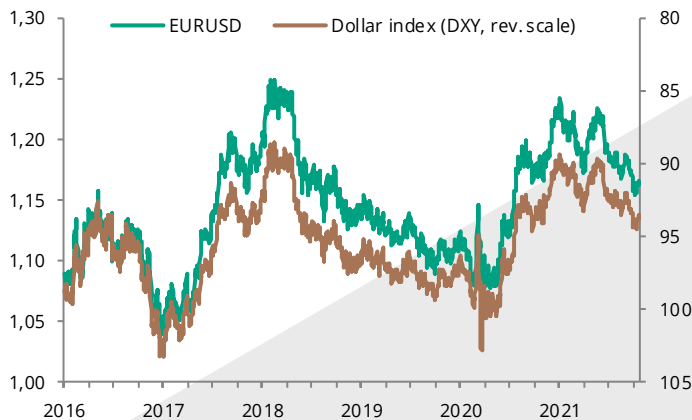
Source: Bloomberg, KGHM Polska Miedź

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



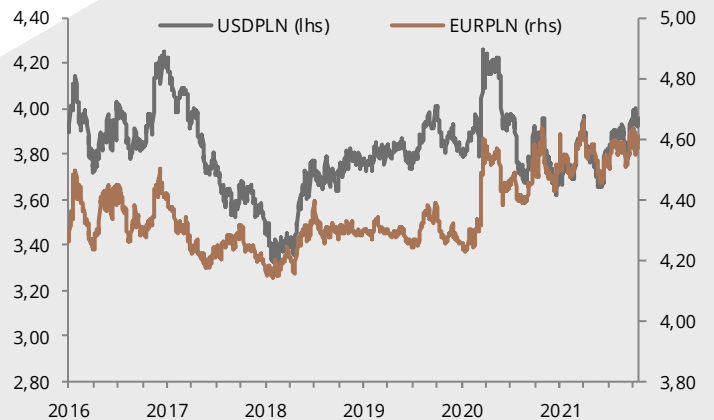
Source: Bloomberg, KGHM Polska Miedź

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:
11 - 24 October 2021.

- 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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