

Market Overview



as of: 24th October 2022






- **Copper:** Chinese buyers are looking at boosting their Russian shipments, which would likely increase at the expense of the Chilean, Australian and Congolese suppliers they typically use. The increase in import from Russia is already visible. In August, Russian deliveries exceeded 33 kt increasing by 34% yoy (*page 2*).
- **Precious metals:** Many western investors – particularly at the institutional level – are dumping bullion. Meanwhile, Asian buyers are taking advantage of lower prices to snap up less expensive jewelry, coins, and bars. The demand for gold is also visible in the purchases of central banks, among which all big purchases have been in made the East (*page 4*).
- **IMF :** Our latest forecasts project global growth to remain unchanged in 2022 at 3.2 percent and to slow to 2.7 percent in 2023. More than a third of the global economy will contract this year or next, while the three largest economies—the United States, the European Union, and China—will continue to stall (*page 5*).

Key market prices

	Close price	2w chng.
LME (USD/t)		
▼ Copper	7 545.00	-0.4%
▼ Nickel	21 550.00	-3.6%
LBMA (USD/troz)		
▼ Silver	18.39	-10.9%
▼ Gold (PM)	1 643.25	-3.1%
FX		
▼ EURUSD	0.9730	-0.7%
▼ EURPLN	4.7804	-1.7%
▼ USDPLN	4.9000	-1.2%
▲ USDCAD	1.3713	0.0%
▲ USDCLP	972.08	3.0%
Stocks		
▼ KGHM	89.84	-1.3%

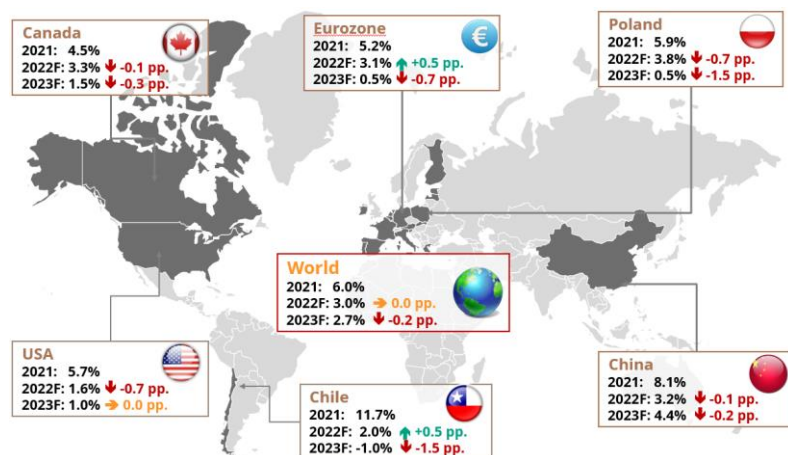
Source: Bloomberg, KGHM Polska Miedź S.A.; (*more on page 9*)

Important macroeconomic data

Release	For	
 CPI (yoy)	Sep	9.9% ▲
 CPI (yoy)	Sep	8.2% ▼
 CPI (yoy)	Sep	17.2% -
 CPI (yoy)	Sep	2.8% ▲
 BCCh rate decision	Oct	11.25% ▲

Source: Bloomberg, KGHM Polska Miedź S.A.; (*more on page 7*)

IMF World Economic Outlook – October 2022



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Source: IMF, KGHM Polska Miedź S.A.

Market Risk Unit

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Base and precious metals | Other commodities

Copper

China May Buy More Russian Copper To Blunt Expected Premium Hike

Chinese buyers are looking at boosting their Russian shipments, which would likely increase at the expense of the Chilean, Australian and Congolese suppliers they typically use. The increase in import from Russia is already visible. In August, Russian deliveries exceeded 33 kt increasing by 34% yoy.

Premiums of physical copper sales to China in 2023 are expected to rise to between \$150 to \$210 per tonne over the benchmark LME price

A Reuters informs, buyers of refined copper in China, the world's biggest consumer of the red metal, may raise their purchases of Russian supply next year to reduce the impact of an expected increase in premiums from other global miners. Premiums of physical copper sales to China in 2023 are expected to rise to between \$150 to \$210 per tonne over the benchmark London Metal Exchange price. That would be up from \$105 this year and \$88 in 2021. Chile's Codelco, the world's top copper miner, raised their premiums for sales to Europe next year to a record \$234 a tonne for 2023, up 83% from 2022. Bracing themselves after Codelco's hike, Chinese buyers are looking at boosting their Russian shipments, which would likely increase at the expense of the Chilean, Australian and Congolese suppliers they typically use. However, Russian imports are drawing scrutiny amid its invasion of Ukraine with the LME considering a ban on Russian metal for settling contracts and the U.S. potentially banning Russian aluminium. "If prices did go up to above \$150 (a tonne), we would just buy from the spot market instead of signing an annual contract at a fixed premium," said a China-based copper tube producer. "We expect to see more copper from Russia flowing into China next year as buyers would be more attracted to cheaper materials they offer." Buyers are also hesitant to pay higher premiums amid uncertain demand in China, with ongoing measures to tackle COVID outbreaks curtailing growth and a worsening property market also impacting copper consumption. Consultants CRU Group forecast 2.2% annual demand growth for refined copper in China this year, falling to around 2% next year. That is down from the 5% growth typically seen since 2017. At the same time, Chinese refined copper production in 2023 is forecast to rise by 6% compared with 2022, after several major copper producers launched new capacity, according to CRU. With some buyers avoiding Russian metals because of the Ukraine conflict, Russia is expected to sell copper at a discount to offers from Chile and other origins. "More purchases of Russian copper are very likely if their prices are a lot cheaper and stay sanction-free," said He Tianyu, a Shanghai-based copper analyst at CRU Group. However, if the West imposes sanctions on Russian metals, Chinese importers could face barriers on making money transfers through Western banks and using the U.S. dollar to settle transactions, He said. Russia accounted for 11% of China's copper imports in 2021 but shipments from the country have

surged in recent months. Chile was the biggest supplier at 22%. Copper arrivals from Russia were 33,033 tonnes in August, 34% higher than the same month last year, China customs data showed. Prices for imported Russian copper were an average of \$7,953 per tonne in August, \$141 a tonne cheaper compared with the average price of copper imported from Chile in the same period, according to Reuters' calculations based on customs data. Physical premiums for copper have risen with the current price for cargoes imported through the Yangshan bonded warehouse zone at \$147.50 a tonne, the highest since February 2014.

Other important information on copper market:

- Europe's biggest copper smelter Aurubis will charge its European customers a premium of \$228 per tonne above the benchmark London Metal Exchange (LME) price in 2023. That is sharply up from a premium of \$123 a tonne in 2022. Montanwerke Brixlegg is offering customers a 295 euro per tonne premium for its low carbon copper for next year and a floating surcharge for high energy costs, a letter from the Austrian company to its customers showed last month.
- Antofagasta said it expects copper production to be between 670,000 tonnes and 710,000 tonnes in 2023 with the completion of its Los Pelambres desalination and concentrator plants in Chile. The Chilean miner also said it produced 181,900 tonnes of copper in the third quarter of the current year, 40.1% higher than the previous quarter, as production nearly doubled at its flagship project Los Pelambres due to improved water availability. The miner left its 2022 output outlook unchanged at the lower end of 640-660,000 tonnes.
- Copper deliveries climbed 3% to 209,500 mt from 203,500 mt a year earlier, while prices declined 18% to \$3.42/lb from \$4.17/lb, cutting export revenue 16% to \$1.58 billion, the central bank said in a statement posted on its website. Gold exports were down 5% to 469,000 oz from 493,000 oz a year ago, trimming export revenue 6% to \$828 million as prices slid 1% to \$1,765/oz from \$1,785/oz, the bank said. Silver exports fell 2.3% to 400,000 oz, cutting revenue by a quarter to \$7 million Molybdenum exports halved to 1,600 mt, slashing revenue 59% to \$50 million.

Precious Metals

Gold Migrating from West to East

Many western investors – particularly at the institutional level – are dumping bullion. Meanwhile, Asian buyers are taking advantage of lower prices to snap up less expensive jewelry, coins, and bars. The demand for gold is also visible in the purchases of central banks, among which all big purchases have been in made the East.

New York and London vaults have reported an exodus of more than 527 tons of gold since the end of April, according to data from the CME Group and the LBMA

As Bloomberg described it, many western investors – particularly at the institutional level – are dumping bullion. Meanwhile, Asian buyers are taking advantage of lower prices to snap up less expensive jewelry, coins, and bars. According to the Bloomberg report, “large volumes of metal are being drawn out of vaults in financial centers like New York and heading east to meet demand in Shanghai’s gold market or Istanbul’s Grand Bazaar.” In fact, Asian suppliers are having a difficult time getting enough bullion into Asian markets. As a result, there has been a significant increase in premiums in many Asian countries. September’s average premium in China reached the highest monthly level for nearly six years. New York and London vaults have reported an exodus of more than 527 tons of gold since the end of April, according to data from the CME Group and the London Bullion Market Association. At the same time, gold imports into China hit a four-year high in August. India, Turkey, Thailand and Saudi Arabia have also reported increased imports of gold. There is also growing demand for silver in Asian markets, particularly India. The premium on silver has tripled in recent months. We also see the Asian appetite for gold in central bank purchases. Central banks globally have been net gold buyers for five straight months and all of the big purchases have been in the East. Turkey has added more gold to its reserves in 2022 to date than any other country. With an 8.9-ton purchase in August, Turkey had increased its gold reserves by 84 tons through the first eight months of the year. Turkey now holds 478 tons of gold between its central bank and treasury holdings, the highest level since Q2 2020. The Reserve Bank of India has also been a big buyer in 2022. Its total gold reserves now stand at 782.7 tons, ranking it as the ninth-largest gold-holding country in the world. Since resuming buying in late 2017, the Reserve Bank of India has purchased over 200 tons of gold. In August 2020, there were reports that the RBI was considering significantly raising its gold reserves. Other big gold buyers in 2022 include Kazakhstan, Uzbekistan, Qatar and Iraq. In the East, many people still use gold as their primary form of savings and wealth preservation. For instance, Indian households own an estimated 25,000 tons of gold and that number may be higher given the large black market in the country. Gold is not just a luxury in India. Even poor people buy gold in the Asian nation. According to an ICE 360 survey in 2018, one in every two households in India purchased gold within the last five years. Overall, 87% of households in the country own some amount of the yellow metal. So, while investors in the West are dumping gold as the price falls, investors in the East are taking advantage of the relatively low prices (even though gold is more expensive in many non-dollar fiat currencies) and gobbling up gold as inflation eats away at the value of their local currencies.

Global economies | Foreign exchange markets

IMF – World Economic Outlook

Our latest forecasts project global growth to remain unchanged in 2022 at 3.2 percent and to slow to 2.7 percent in 2023. More than a third of the global economy will contract this year or next, while the three largest economies—the United States, the European Union, and China—will continue to stall.










According to IMF global inflation to peak in late 2022 but to remain elevated for longer than previously expected, decreasing to 4.1 percent by 2024



The global economy continues to face steep challenges, shaped by the effects of three powerful forces: the Russian invasion of Ukraine, a cost-of-living crisis caused by persistent and broadening inflation pressures, and the slowdown in China. Our latest forecasts project global growth to remain unchanged in 2022 at 3.2 percent and to slow to 2.7 percent in 2023—0.2 percentage points lower than the July forecast. More than a third of the global economy will contract this year or next, while the three largest economies—the United States, the European Union, and China—will continue to stall. Russia's invasion of Ukraine continues to powerfully destabilize the global economy. Beyond the escalating and senseless destruction of lives and livelihoods, it has led to a severe energy crisis in Europe that is sharply increasing costs of living and hampering economic activity. Gas prices in Europe have increased more than four-fold since 2021, with Russia cutting deliveries to less than 20 percent of their 2021 levels, raising the prospect of energy shortages over the next winter and beyond. More broadly, the conflict has also pushed up food prices on world markets causing serious hardship for low-income households worldwide. Persistent and broadening inflation pressures have triggered a rapid and synchronized tightening of monetary conditions, alongside a powerful appreciation of the US dollar against most other currencies. Tighter global monetary and financial conditions will work their way through the economy, weighing demand down and helping to gradually subjugate inflation. So far, however, price pressures are proving quite stubborn and a major source of concern for policymakers. According to IMF global inflation to peak in late 2022 but to remain elevated for longer than previously expected, decreasing to 4.1 percent by 2024. In China, the frequent lockdowns under its zero COVID policy have taken a toll on the economy. Furthermore, the property sector, representing about one-fifth of economic activity in China, is rapidly weakening. Given the size of China's economy and its importance for global supply chains, this will weigh heavily on global trade and activity. Central banks around the world are now laser-focused on restoring price stability, and the pace of tightening has accelerated sharply. There are risks of both under and over-tightening. Under-tightening would entrench further the inflation process, erode the credibility of central banks, and de-anchor inflation expectations. Over-tightening risks pushing the global economy into an unnecessarily harsh recession. Where necessary, financial policy should ensure that markets remain stable, but central banks around the world need to keep a steady hand with monetary policy firmly focused on taming inflation. These challenges do not imply that a large downturn is inevitable. In many countries, including the United

States, the United Kingdom, and the euro area, labour markets remain tight, with historically low unemployment rates. Formulating the appropriate fiscal policy given the juxtaposed cost-of-living, energy, and food crises has become an acute challenge for many countries. For countries where the pandemic is now firmly receding, it is time to rebuild fiscal buffers. As the pandemic vividly illustrated, fiscal space is essential for dealing with crises. Fiscal policy should not work at cross purposes with monetary authorities' efforts to quell inflation. Doing otherwise will only prolong the fight to bring inflation down, risk de-anchoring inflation expectations, increase funding costs, and stoke further financial instability, complicating the task of fiscal as well as monetary and financial authorities, as recent events illustrated. The energy crisis, especially in Europe, is not a transitory shock. The geopolitical re-alignment of energy supplies in the wake of Russia's war against Ukraine is broad and permanent. Winter 2022 will be challenging for Europe, but winter 2023 will likely be worse. Fiscal policy should aim to protect the most vulnerable through targeted and temporary transfers. If some aggregate fiscal support cannot be avoided, especially in countries hardest hit by the energy crisis, it is important to embed policy in a credible medium-term fiscal framework. Fiscal policy can help economies adapt to a more volatile environment and bounce back from adversity by investing in expanding productive capacity: human capital, digitalization, green energy, and supply chain diversification. For many emerging markets, the strength of the dollar is causing acute challenges, tightening financial conditions, and increasing the cost of imported goods. The dollar is now at its highest level since the early 2000s. So far, this appreciation appears mostly driven by fundamental forces, such as the tightening of monetary policy in the United States and the energy crisis. The appropriate response in most countries is to calibrate monetary policy to maintain price stability, while letting exchange rates adjust, conserving valuable foreign exchange reserves for when financial conditions really worsen. Eligible countries with sound policies should urgently consider improving their liquidity buffers by requesting access to precautionary instruments from the Fund. Too many low-income countries are in or close to debt distress. Progress toward orderly debt restructurings through the Group of Twenty's Common Framework for the most affected is urgently needed to avert a wave of sovereign debt crisis. Finally, the energy and food crises, coupled with extreme summer temperatures, starkly remind us of what an uncontrolled climate transition would look like. The message is clear: a timely and credible transition, in addition to being critical for our planet's future, also helps macroeconomic stability.

Macroeconomic calendar

Important macroeconomic data releases

Weight	Date	Event	For	Reading ¹	Previous	Consensus ²	
China							
⊛	11-Oct	New yuan loans (CNY bn)‡	Sep	2 470 ▲	1 254	1 800	▲
⊛⊛⊛⊛	14-Oct	Consumer inflation CPI (yoy)	Sep	2.8% ▲	2.5%	2.9%	◡
⊛⊛	14-Oct	Producer inflation PPI (yoy)	Sep	0.9% ▼	2.3%	1.0%	◡
Poland							
⊛⊛⊛⊛	14-Oct	Consumer inflation CPI (yoy) - final data	Sep	17.2% -	17.2%	--	
⊛⊛	14-Oct	Trade balance (EUR mn)‡	Aug	-2 927 ▼	-1 865	-1 375	◡
⊛⊛	14-Oct	Exports (EUR mn)‡	Aug	25 358 ▲	25 159	26 251	◡
⊛⊛	14-Oct	Current account balance (EUR mn)‡	Aug	-3 967 ▼	-1 887	-1 573	◡
⊛⊛⊛⊛	17-Oct	Core CPI (excluding food and energy, yoy)	Sep	10.7% ▲	9.9%	10.7%	○
⊛⊛⊛⊛	20-Oct	Sold industrial production (yoy)	Sep	9.8% ▼	10.9%	8.8%	▲
⊛⊛	20-Oct	Average gross salary (yoy)	Sep	14.5% ▲	12.7%	13.4%	▲
⊛⊛	20-Oct	Producer inflation PPI (yoy)	Sep	24.6% ▼	25.5%	25.5%	◡
⊛	20-Oct	Employment (yoy)	Sep	2.3% ▼	2.4%	2.4%	◡
⊛⊛⊛	21-Oct	Retail sales (yoy)	Sep	21.9% ▲	21.5%	21.5%	▲
US							
⊛⊛⊛⊛	13-Oct	Consumer inflation CPI (mom)	Sep	0.4% ▲	0.1%	0.2%	▲
⊛⊛⊛⊛	13-Oct	Consumer inflation CPI (yoy)	Sep	8.2% ▼	8.3%	8.1%	▲
⊛⊛	14-Oct	Retail sales (excluding autos, mom)‡	Sep	0.1% ▲	-0.1%	-0.1%	▲
⊛⊛	14-Oct	University of Michigan confidence index - preliminary data	Oct	59.8 ▲	58.6	58.8	▲
⊛⊛⊛⊛	18-Oct	Industrial production (mom)‡	Sep	0.4% ▲	-0.1%	0.1%	▲
⊛	18-Oct	Capacity utilization‡	Sep	80.3% ▲	80.1%	80.0%	▲
⊛⊛	20-Oct	Philadelphia Fed business outlook	Oct	-8.7 ▲	-9.9	-5.0	◡
Eurozone							
⊛⊛⊛⊛	12-Oct	Industrial production (sa, mom)	Aug	1.5% ▲	-2.3%	0.7%	▲
⊛⊛⊛⊛	12-Oct	Industrial production (wda, yoy)‡	Aug	2.5% ▲	-2.5%	1.5%	▲
⊛	14-Oct	Trade balance (EUR mn)	Aug	-50.9 ▼	-34.0	--	
⊛	18-Oct	ZEW survey expectations	Oct	-59.7 ▲	-60.7	--	
⊛⊛⊛⊛	19-Oct	Consumer inflation CPI (yoy) - final data‡	Sep	9.9% ▲	9.1%	10.0%	◡
⊛⊛⊛⊛	19-Oct	Core CPI (yoy) - final data	Sep	4.8% -	4.8%	4.8%	○
⊛	21-Oct	Consumer confidence - preliminary data	Oct	-27.6 ▲	-28.8	-30.0	▲
Germany							
⊛⊛⊛⊛	13-Oct	Harmonized consumer inflation HICP (yoy) - final data	Sep	10.9% -	10.9%	10.9%	○
⊛⊛⊛⊛	13-Oct	Consumer inflation CPI (yoy) - final data	Sep	10.0% -	10.0%	10.0%	○
France							
⊛⊛⊛⊛	14-Oct	Harmonized consumer inflation HICP (yoy) - final data	Sep	6.2% -	6.2%	6.2%	○
⊛⊛⊛⊛	14-Oct	Consumer inflation CPI (yoy) - final data	Sep	5.6% -	5.6%	5.6%	○
Italy							
⊛⊛⊛⊛	11-Oct	Industrial production (wda, yoy)‡	Aug	2.9% ▲	-1.3%	--	
⊛⊛⊛⊛	17-Oct	Harmonized consumer inflation HICP (yoy) - final data	Sep	9.4% ▼	9.5%	9.5%	◡
UK							
⊛⊛	11-Oct	Unemployment rate (ILO, 3-months)	Aug	3.5% ▼	3.6%	3.6%	◡
⊛⊛⊛⊛	12-Oct	Industrial production (yoy)‡	Aug	-5.2% ▼	-3.2%	0.6%	◡
⊛⊛⊛⊛	19-Oct	Consumer inflation CPI (yoy)	Sep	10.1% ▲	9.9%	10.0%	▲
Japan							

Weight	Date	Event	For	Reading ¹	Previous	Consensus ²
Chile 						
★★★★★	12-Oct	BCCh overnight rate target	Oct	11.25% ▲	10.75%	11.25% ○
Canada 						
★★★★	19-Oct	Consumer inflation CPI (yoy)	Sep	6.9% ▼	7.0%	6.7% ▲

¹ Reading difference to previous release: ▲ = higher than previous; ▼ = lower than previous; = = equal to previous.

² Reading difference to consensus: ▲ = higher than consensus; ▼ = lower than consensus; ○ = equal to consensus.

mom = month-on-month; yoy = year-on-year; qoq = quarter on quarter; ytd year-to-date; sa = seasonally adjusted; wda = working days adjusted; ‡ = previous data after revision.

Source: Bloomberg, KGHM Polska Miedź

Key market data

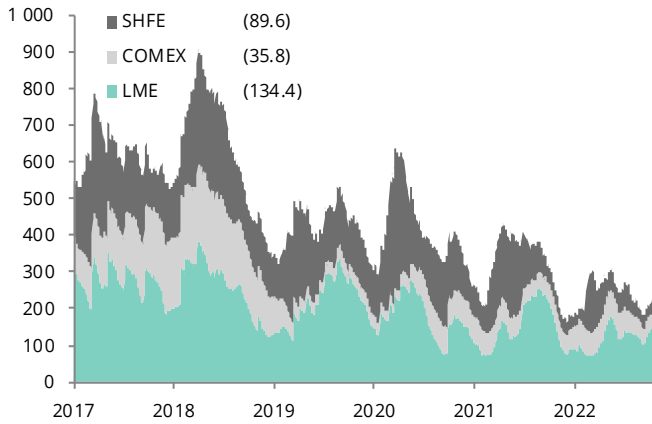
Key base & precious metal prices, exchange rates and other important market factors

<i>(as of: 21-Oct-22)</i>		Price change ¹					From year beginning ²		
	Price	2W	QTD	YTD	1Y	Average	Min	Max	
LME (USD/t; Mo in USD/lbs)									
Copper	7 545.00	▼ -0.4%	▼ -1.3%	▼ -22.2%	▼ -24.9%	8 956.27	7 000.00	10 730.00	
Molybdenum	18.90	▲ 5.2%	▲ 2.9%	▲ 1.2%	▼	17.89	14.10	19.34	
Nickel	21 550.00	▼ -3.6%	▼ -3.3%	▲ 3.0%	▲ 5.0%	25 423.07	19 100.00	45 795.00	
Aluminum	2 155.50	▼ -8.0%	▼ -1.1%	▼ -23.2%	▼ -28.5%	2 787.73	2 080.00	3 984.50	
Tin	18 435.00	▼ -7.8%	▼ -11.2%	▼ -53.5%	▼ -52.7%	33 394.90	18 435.00	50 050.00	
Zinc	2 990.50	▼ -2.3%	▲ 0.2%	▼ -17.6%	▼ -16.6%	3 589.21	2 830.00	4 530.00	
Lead	1 930.00	▼ -7.1%	▲ 2.2%	▼ -17.1%	▼ -20.1%	2 156.33	1 754.00	2 513.00	
LBMA (USD/troz)									
Silver	18.39	▼ -10.9%	▼ -3.3%	▼ -20.4%	▼ -24.1%	21.73	17.77	26.18	
Gold ²	1 643.25	▼ -3.1%	▼ -1.7%	▼ -9.7%	▼ -7.6%	1 812.76	1 631.70	2 039.05	
LPPM (USD/troz)									
Platinum ²	905.00	▼ -2.7%	▲ 4.7%	▼ -5.9%	▼ -13.2%	953.84	831.00	1 151.00	
Palladium ²	1 998.00	▼ -11.4%	▼ -9.8%	▲ 3.6%	▼ -1.4%	2 164.63	1 810.00	3 015.00	
FX ³									
EURUSD	0.9730	▼ -0.7%	▼ -0.2%	▼ -14.1%	▼ -16.4%	1.0573	0.9565	1.1464	
EURPLN	4.7804	▼ -1.7%	▼ -1.8%	▲ 3.9%	▲ 4.1%	4.6858	4.4879	4.9647	
USDPLN	4.9000	▼ -1.2%	▼ -1.1%	▲ 20.7%	▲ 24.2%	4.4441	3.9218	5.0381	
USDCAD	1.3713	▲ 0.0%	▲ 0.0%	▲ 8.2%	▲ 11.0%	1.2891	1.2451	1.3856	
USDCNY	7.2306	▲ 1.6%	▲ 1.6%	▲ 13.8%	▲ 13.1%	6.6454	6.3093	7.2306	
USDCLP	972.08	▲ 3.0%	▲ 0.6%	▲ 15.1%	▲ 19.8%	865.90	777.10	1 042.97	
Money market									
3m LIBOR USD	4.358	▲ 0.45	▲ 0.60	▲ 4.15	▲ 4.23	1.870	0.216	4.358	
3m EURIBOR	1.543	▲ 0.26	▲ 0.37	▲ 2.12	▲ 2.09	-0.015	-0.576	1.543	
3m WIBOR	7.430	▲ 0.24	▲ 0.22	▲ 4.89	▲ 6.73	5.763	2.590	7.430	
5y USD interest rate swap	4.379	▲ 0.21	▲ 0.24	▲ 3.01	▲ 3.06	2.847	1.445	4.488	
5y EUR interest rate swap	3.120	▲ 0.02	▲ 0.15	▲ 3.10	▲ 3.16	1.472	0.031	3.196	
5y PLN interest rate swap	7.911	▲ 0.91	▲ 0.87	▲ 4.17	▲ 5.39	5.825	3.780	7.911	
Fuel									
WTI Cushing	86.65	▼ -6.5%	▲ 9.0%	▲ 12.5%	▲ 4.1%	97.73	76.71	123.70	
Brent	91.79	▼ -6.9%	▲ 6.5%	▲ 18.5%	▲ 9.0%	103.15	79.83	133.89	
Diesel NY (ULSD)	422.23	▼ -2.3%	▲ 25.6%	▲ 76.2%	▲ 65.5%	372.75	241.70	534.54	
Others									
VIX	29.69	▼ -1.67	▼ -1.93	▲ 12.47	▲ 14.68	26.27	16.91	36.45	
BBG Commodity Index	111.27	▼ -5.0%	▼ -0.2%	▲ 12.2%	▲ 7.8%	120.07	100.58	136.61	
S&P500	3 752.75	▲ 3.1%	▲ 4.7%	▼ -21.3%	▼ -17.5%	4 140.77	3 577.03	4 793.54	
DAX	12 730.90	▲ 3.7%	▲ 5.1%	▼ -19.9%	▼ -17.7%	13 834.97	11 975.55	16 271.75	
Shanghai Composite	3 038.93	▲ 0.5%	▲ 0.5%	▼ -16.5%	▼ -15.5%	3 261.00	2 886.43	3 632.33	
WIG 20	1 411.62	▲ 0.5%	▲ 2.4%	▼ -37.7%	▼ -41.8%	1 831.43	1 358.50	2 411.11	
KGHM	89.84	▼ -1.3%	▲ 2.5%	▼ -35.6%	▼ -43.9%	129.53	84.22	182.20	

^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

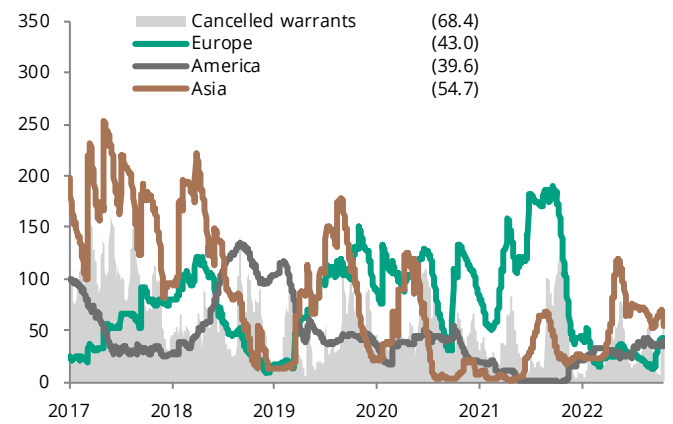
Source: Bloomberg, KGHM Polska Miedź

Copper: official exchange stocks (thousand tonnes)



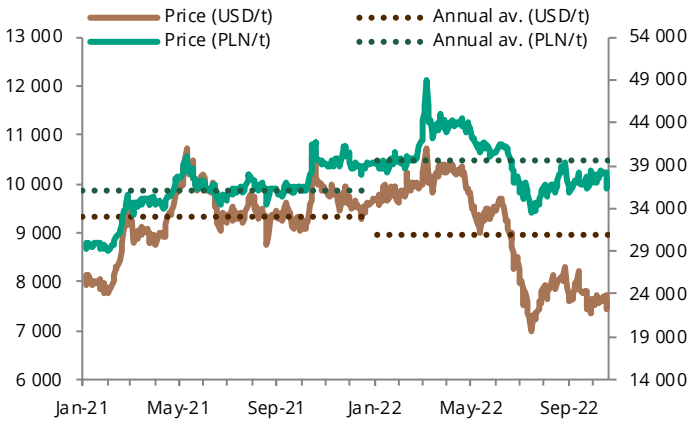
Note: Latest values in brackets. Source: Bloomberg, KGHM

Copper: official LME stocks (thousand tonnes)



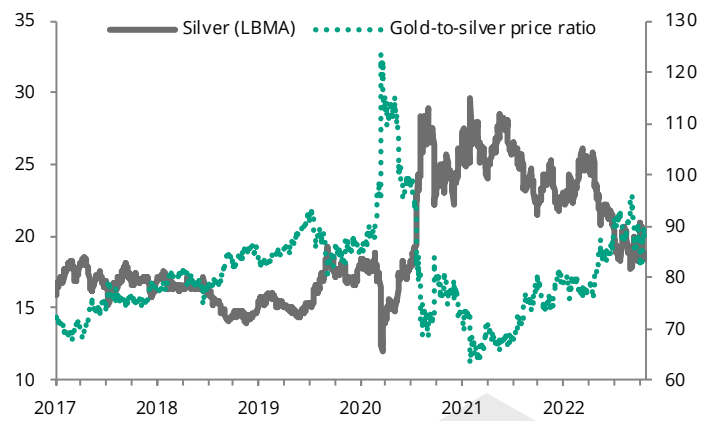
Note: Latest values in brackets. Source: Bloomberg, KGHM

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



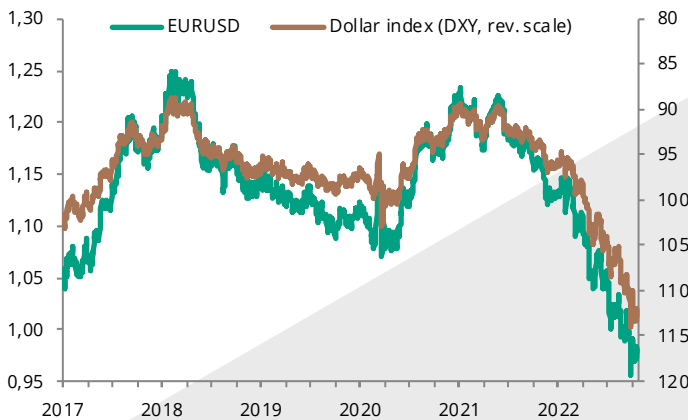
Source: Bloomberg, KGHM Polska Miedź

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



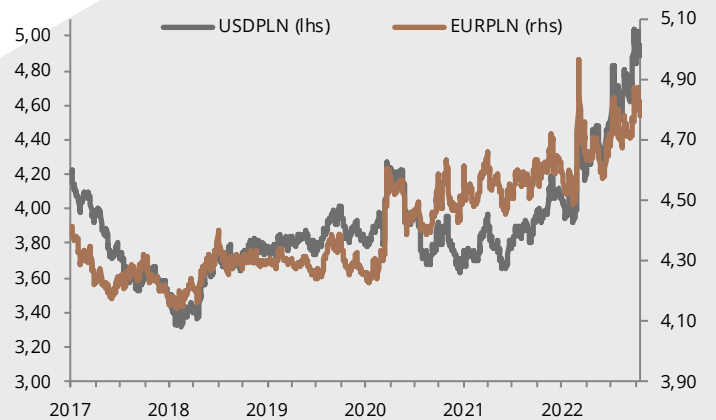
Source: Bloomberg, KGHM Polska Miedź

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:
10-23 October 2022.

- 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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