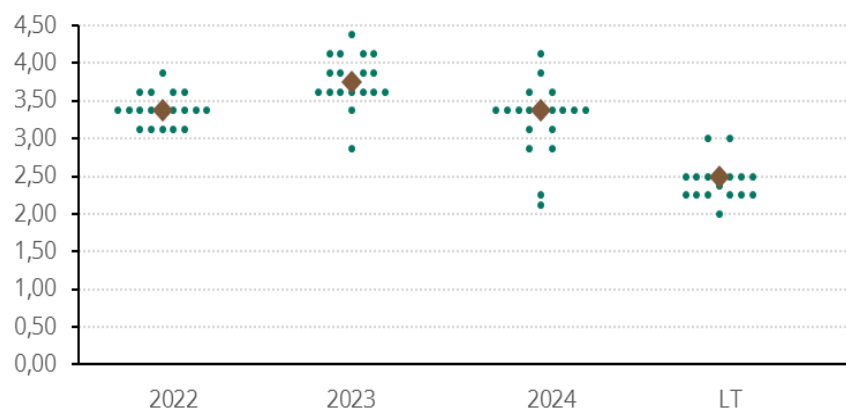


Market Overview

- **Copper:** According to the undersecretary for Mining, the changes in the taxation of the mining sector planned by the government will take into account the costs incurred by individual copper mining companies in Chile (*page 2*).
- **Precious metals:** In 2021, brazing and soldering consumed 47.7 million ounces of silver, which accounted for 9.3% of the industry's total silver demand this year. Silver Institute, it is expected that by 2030 the demand for silver used in brazing and soldering will be 58.8 million ounces, which is a 23% increase from last year (*page 4*).
- **USA:** The Fed raised its benchmark rate by 0.75 percentage point this week to a range between 1.5% and 1.75%, a larger than expected increase. All 18 officials at their policy meeting projected rates would need to rise to at least 3% by December, and most projected rates would need to rise to 3.75% next year (*page 5*).

FOMC members median in June 2022



Source: Bloomberg, KGHM Polska Miedź S.A.

as of: 20th June 2022

Key market prices

	Close price	2w chng.
LME (USD/t)		
▼ Copper	9 101.00	-3.7%
▼ Nickel	25 435.00	-8.2%
LBMA (USD/troz)		
▲ Silver	21.85	1.1%
▼ Gold (PM)	1 841.55	-0.2%
FX		
▼ EURUSD	1.0486	-2.3%
▲ EURPLN	4.6951	2.3%
▲ USDPLN	4.4630	4.5%
▲ USDCAD	1.3035	3.6%
▲ USDCLP	869.62	6.6%
Stocks		
▼ KGHM	130.80	-10.1%

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

Important macroeconomic data

Release	For	
 GDP (annlzd., qoq)	2Q	-31.7% ▲
 Industrial prod. (yoy)	Jul	1.1% ▲
 Retail sales (yoy)	Jul	2.7% ▲
 Composite PMI	Aug	51.7 ▼
 GDP (yoy)	2Q	-14.1% ▼

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

Market Risk Unit

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Base and precious metals | Other commodities

Copper

Chile Government To Consider Copper Producers' Cost Variations In New Royalty Bill

According to the undersecretary for Mining, the changes in the taxation of the mining sector planned by the government will take into account the costs incurred by individual copper mining companies in Chile.

According to Cochilco, the costs of the largest Chilean mining companies increased by 10 cents per pound in year-on-year terms in 2021

The disparity in costs faced by different copper mining companies in Chile will be taken into account in an industry-wide royalty planned by the government to help finance its ambitious social agenda, the undersecretary of Mining said. A study by the national Chilean Copper Commission (Cochilco) revealed that the cash costs for Chile's largest operators rose by 10 cents per pound in year-on-year terms in 2021, due to the lower quality of the ore as well as higher energy and transportation prices. The document also states that smaller operators, consisting of those who produce less than 150,000 tonnes annually, have been the most affected by these changes. "One of the important things that has been salvaged from everything that has been presented is the diversity in the mining sector," Undersecretary Willy Kracht said at a conference while delivering the report. "It seems to me that it is tremendously relevant to put this on the table when we are in the middle of discussions on the royalty. It seems that it is an element that must be considered," he added. In addition, Cochilco pointed out costs will likely rise again this year due to the crisis in Ukraine, and due to the persistent drought, which could lower production across some areas in Chile. The government of President Gabriel Boric has made increasing tax collection on mining activity part of its broad tax reform plan, the full details of which should be announced in the coming weeks. The project could replace or modify a controversial clause being considered in Congress, which the industry has harshly criticized for not considering the operational performance of each site. In addition to the state-owned Codelco, global mining companies such as BHP, Glencore Plc., Anglo American, and Antofagasta Plc operate in Chile.

LME Launches Reporting Of OTC Positions After Nickel Chaos

The new regulations require weekly OTC position reporting for all physically supplied metals, including aluminum, copper and nickel. This is to improve the LME ability to holistically oversee operations through increased transparency

The London Metal Exchange (LME) approved rules for members to report all over the counter (OTC) positions, a move taken after off-exchange trading was partly blamed for a wild spike in nickel prices in March. "This ... will improve the ability of the LME to oversee activity holistically through increased visibility, ensuring future market stability," the exchange said in a statement. The exchange, owned by Hong Kong Exchanges and Clearing Ltd, was forced to suspend nickel trading

and cancel all deals on March 8 because of disorderly activity caused partly by a large OTC short nickel position. The new rules, due to take effect in one month, require OTC positions reported on a weekly basis in all physically-delivered metals including aluminium, copper and nickel. The LME, the world's oldest and largest market for industrial metals, will also require holders of large OTC positions to tell the exchange the rationale for holding them. The LME received 27 submissions during its two-week consultation period, with a majority opposed to introducing the OTC rules before probes were completed into what caused chaotic nickel trading in March. British financial regulators in April launched a sweeping probe into how the LME suspended nickel trading and the LME also commissioned its own independent review. "While any relevant findings from the independent review will also be considered and factored into the LME's plans in due course, the LME will not delay taking appropriate actions," it said. U.S. hedge fund Elliott Associates and Jane Street Global Trading are suing the LME for \$456 million and \$15.3 million respectively for cancelled nickel trades.

Other important information on copper market:

- China's May copper imports rose 4.4% from the same month a year earlier as overseas purchases became profitable for Chinese traders and as COVID lockdowns began to be lifted. China imported 465,495 tonnes of unwrought copper and products last month, up from 445,725 tonnes a year ago, and slightly higher than the 465,330 tonnes in April, data from the General Administration of Customs showed. The slight rise came even after outbreaks of the coronavirus prompted lockdowns for the last two months in Shanghai, China's biggest city and business hub, as well as the north-eastern Jilin province. Imports of copper concentrate, or partially processed copper ore, rose to a record 2.19 million tonnes in May.
- Chilean exports of copper concentrates continued to fall in May as water shortages, deteriorating ore grades and absenteeism stymied production at some of the largest mines. Shipments of copper concentrates during the first five months of 2022 totaled 4.7 million mt, down 12.8% year on year. Exports in May fell 19.6% on the year to 906,211 mt.
- Peruvian production of copper, zinc, lead and precious metals all declined in April due to social conflicts and a mine closure, the country's Energy and Mines Ministry said. Copper output fell 1.7% from a year earlier to 170,2 kt from 173, kt a year ago as community protests hampered operations at mines operated by China Minmetals and Southern Copper, countering the start-up of Minsur's Mina Justa mine. Zinc production dropped by a quarter to 98,9 kt, lead was down 4% to 20,9 kt and silver fell 4.4% to 247,2 mt.

Precious Metals

Silver's Use in Brazing and Soldering Alloys Projected to Grow 23 Percent Through 2030

In 2021, brazing and soldering consumed 47.7 million ounces of silver, which accounted for 9.3% of the industry's total silver demand this year. Silver Institute, it is expected that by 2030 the demand for silver used in brazing and soldering will be 58.8 million ounces, which is a 23% increase from last year.

An often underappreciated but important component of silver's use in industry is its essential role in brazing and soldering, with nearly a half-billion ounces of silver consumed in this sector in the past decade. Brazing and soldering are methods of joining two or more metals and are commonly used in the manufacture of pipes, heating and cooling systems, electronic instruments, and jewelry. In 2021, brazing and soldering alloys used 47.7 Moz of silver, representing 9.3 percent of the total industrial demand for silver that year. By 2030, the demand for silver used in brazing and soldering is forecast to reach 58.8 Moz, a 23 percent increase over 2021, according to a new Market Trend Report released by the Silver Institute, "Silver in Brazing and Solder Alloy Materials." For centuries the two most common methods of joining metal tubes and fittings have been brazing and soldering. These methods are similar, yet several distinct differences set them apart. For example, solder often uses silver and tin filler materials and is conducted at temperatures of 600oF, while brazing frequently uses filler metals and alloys such as silver, copper, and zinc. Most brazing occurs at hotter temperatures — 800oF and 2,000oF. The report, authored by the consultancy Precious Metals Commodity Management, maintains silver will continue to play an essential role in these applications. The projected increase in demand through 2030 is due to future global infrastructure growth, including increased plumbing and pipe joining and growing vehicle demand (internal combustion engine and electric vehicles). Demand for heating and air conditioning systems is also forecast to increase. The electronics market, including light-emitting diodes and printed circuit boards, is also expected to expand, especially in automotive electronics. They have higher temperature and vibration requirements, motivating designers to use additional silver content for strength and temperature resistance performance. The report states that prospects for expansion in the silver brazing and solder alloy market remain strong, and that silver will continue to play a vital role in joining technologies, especially for electronics, through 2030.

Global economies | Foreign exchange markets

Interest Rates Are Well Below What Academic Formulas Suggest, Fed Report Says

The Fed raised its benchmark rate by 0.75 percentage point this week to a range between 1.5% and 1.75%, a larger than expected increase. All 18 officials at their policy meeting projected rates would need to rise to at least 3% by December, and most projected rates would need to rise to 3.75% next year.






The Fed's preferred inflation gauge, the personal consumption expenditures price index, rose 6.3% in April from a year earlier, near a 40-year high







Several simple mathematical formulas used to inform where interest rates should be set under current economic conditions show that high inflation would call for the Federal Reserve to set rates between 4% and 7% this year, according to a report released by the central bank on Friday. The Fed consults such policy-setting rules but doesn't unconditionally follow them when setting interest rates because they take into account a narrow set of economic data and they don't account for the central bank's difficulty stimulating growth during downturns when rates are pinned near zero. The Fed raised its benchmark rate by 0.75 percentage point this week to a range between 1.5% and 1.75%, a larger than expected increase. All 18 officials at their policy meeting projected rates would need to rise to at least 3% by December, and most projected rates would need to rise to 3.75% next year. The Fed's preferred inflation gauge, the personal-consumption-expenditures price index, rose 6.3% in April from a year earlier, near a 40-year high. With inflation running well above the Fed's 2% target and the economy growing strongly, several simple monetary policy rules "call for raising the target range for the federal-funds rate significantly," according to the Fed's semiannual monetary policy report to Congress. These same policy rules, however, called for strongly negative values for the Fed's benchmark rate during the pandemic-driven recession of 2020, and the Fed isn't able to cut rates to such levels. As a result, the Fed used other tools, including asset purchases and verbal commitments to keep interest rates lower for longer, to provide extra stimulus. Such rules, including one offered in the early 1990s by Stanford University professor John Taylor, are relatively easy to use and prescribe a tight relationship between a small number of economic data points and the setting of short-term interest rates. Fed officials say they regularly use such rules to guide their management of monetary policy but have warned against overreliance. The difficulty of providing conventional stimulus when interest rates are pinned near zero can result in situations like the current one, where interest rates remain well below levels prescribed by policy rules, particularly given a sharp turnaround in the economy and labor markets, the report said. "The usefulness of simple policy rules can be limited in unusual economic circumstances" such as the current one, the report said. Mr. Taylor's original research developing those rules has also made similar observations by noting that monetary policy will sometimes have to address economic episodes that require "more than a simple policy rule as a guide." Fed officials are raising rates at the most rapid pace since the 1980s as they seek to quickly remove stimulus and then lift borrowing costs to levels that

will deliberately slow the economy's growth rate. Officials have signaled this could push up the unemployment rate over the coming years, which raises the risk of a recession. Officials are particularly focused on ensuring that high inflation doesn't lead households and businesses to expect price growth to remain elevated over the next few years. While market-based measures of inflation expectations have stopped rising in recent months, one survey showed consumers' longer-term inflation expectations have ticked up to their highest levels in 14 years. The Fed said an index it maintains of inflation expectations that synthesizes a large range of such measures had edged up this year "and now stands at the high end of the range from the past 20 years. Separately, an economic model maintained by the New York Fed forecast that the economy could slow down faster than previously anticipated to levels consistent with a recession next year. The model, which isn't an official bank forecast, projects economic growth in the fourth quarter contracting by 0.6% from a year earlier, and it foresees another 0.5% at the end of next year. According to the model, a so-called soft landing in which growth in annual gross domestic product slows but stays positive over the next 2 years has just a 10% probability. Meanwhile, the probability of a hard landing, in which annual GDP growth falls below 1% in at least one quarter over the next 2 1 2 years, is about 80%, the model estimated.

Macroeconomic calendar

Important macroeconomic data releases

Weight	Date	Event	For	Reading ¹	Previous	Consensus ²	
China							
⊛	07-Jun	Foreign reserves (USD bn)	May	3 128 ▲	3 120	3 115	▲
⊛⊛	09-Jun	Trade balance (USD bn)‡	May	78.8 ▲	51.1	57.7	▲
⊛⊛	09-Jun	Exports (yoy)	May	16.9% ▲	3.9%	8.0%	▲
⊛⊛⊛⊛	10-Jun	Consumer inflation CPI (yoy)	May	2.1% -	2.1%	2.2%	◡
⊛⊛	10-Jun	Producer inflation PPI (yoy)	May	6.4% ▼	8.0%	6.4%	○
⊛	10-Jun	New yuan loans (CNY bn)	May	1 890 ▲	645	1 223	▲
⊛⊛⊛⊛	15-Jun	Industrial production (yoy)	May	0.7% ▲	-2.9%	-0.9%	▲
⊛⊛	15-Jun	Fixed assets investments (ytd, yoy)	May	6.2% ▼	6.8%	6.0%	▲
⊛	15-Jun	Retail sales (yoy)	May	-6.7% ▲	-11.1%	-7.1%	▲
Poland							
⊛⊛⊛⊛⊛	08-Jun	NBP base rate decision	Jun	6.00% ▲	5.25%	6.00%	○
⊛⊛	13-Jun	Trade balance (EUR mn)	Apr	-2 466 ▲	-3 253	-2 973	▲
⊛⊛	13-Jun	Exports (EUR mn)	Apr	26 559 ▲	25 831	26 325	▲
⊛⊛	13-Jun	Current account balance (EUR mn)	Apr	-3 924 ▼	-2 972	-2 588	◡
⊛⊛⊛⊛	15-Jun	Consumer inflation CPI (yoy) - final data	May	13.9% -	13.9%	--	
⊛⊛⊛⊛	17-Jun	Core CPI (excluding food and energy, yoy)	May	8.5% ▲	7.7%	8.5%	○
US							
⊛⊛⊛⊛	10-Jun	Consumer inflation CPI (mom)	May	1.0% ▲	0.3%	0.7%	▲
⊛⊛⊛⊛	10-Jun	Consumer inflation CPI (yoy)	May	8.6% ▲	8.3%	8.3%	▲
⊛⊛	10-Jun	University of Michigan confidence index - preliminary data	Jun	50.2 ▼	58.4	58.1	◡
⊛⊛⊛⊛⊛	15-Jun	FOMC base rate decision - upper bound (Fed)	Jun	1.75% ▲	1.00%	1.50%	▲
⊛⊛⊛⊛⊛	15-Jun	FOMC base rate decision - lower bound (Fed)	Jun	1.50% ▲	0.75%	1.25%	▲
⊛⊛	15-Jun	Retail sales (excluding autos, mom)‡	May	0.5% ▲	0.4%	0.7%	◡
⊛⊛	16-Jun	Philadelphia Fed business outlook	Jun	- 3.3 ▼	2.6	5.0	◡
⊛⊛⊛⊛	17-Jun	Industrial production (mom)‡	May	0.2% ▼	1.4%	0.4%	◡
⊛	17-Jun	Capacity utilization‡	May	79.0% ▲	78.9%	79.2%	◡
Eurozone							
⊛⊛⊛⊛⊛	08-Jun	GDP (sa, yoy) - final data	1Q	5.4% ▲	5.1%	5.1%	▲
⊛⊛⊛⊛⊛	08-Jun	GDP (sa, qoq) - final data	1Q	0.6% ▲	0.3%	0.3%	▲
⊛⊛⊛	08-Jun	Gross fixed capital (qoq)‡	1Q	0.1% ▼	3.1%	1.1%	◡
⊛⊛⊛	08-Jun	Households consumption (qoq)‡	1Q	-0.7% ▼	-0.3%	-0.8%	▲
⊛⊛⊛⊛⊛	09-Jun	ECB main refinancing rate	Jun	0.00% -	0.00%	0.00%	○
⊛⊛⊛⊛⊛	09-Jun	ECB deposit facility rate	Jun	-0.5% -	-0.5%	-0.5%	○
⊛	14-Jun	ZEW survey expectations	Jun	- 28.0 ▲	- 29.5	--	
⊛⊛⊛⊛	15-Jun	Industrial production (sa, mom)‡	Apr	0.4% ▲	-1.4%	0.5%	◡
⊛⊛⊛⊛	15-Jun	Industrial production (wda, yoy)‡	Apr	-2.0% ▼	-0.5%	-1.1%	◡
⊛	15-Jun	Trade balance (EUR mn)	Apr	- 32.4 ▼	- 16.4	--	
⊛⊛	16-Jun	Labour costs (yoy)	1Q	3.2% ▲	1.9%	--	
⊛⊛⊛⊛	17-Jun	Consumer inflation CPI (yoy) - final data	May	8.1% ▲	7.4%	8.1%	○
⊛⊛⊛⊛	17-Jun	Core CPI (yoy) - final data	May	3.8% -	3.8%	3.8%	○
Germany							
⊛⊛⊛	07-Jun	Factory orders (wda, yoy)‡	Apr	-6.2% ▼	-2.9%	-4.1%	◡
⊛⊛⊛⊛	08-Jun	Industrial production (wda, yoy)‡	Apr	-2.2% ▲	-3.1%	-2.4%	▲
⊛⊛⊛⊛	14-Jun	Harmonized consumer inflation HICP (yoy) - final data	May	8.7% -	8.7%	8.7%	○

Weight	Date	Event	For	Reading ¹	Previous	Consensus ²
France 						
🔔🔔🔔	15-Jun	Harmonized consumer inflation HICP (yoy) - final data	May	5.8% -	5.8%	5.8% ○
🔔🔔🔔	15-Jun	Consumer inflation CPI (yoy) - final data	May	5.2% -	5.2%	5.2% ○
Italy 						
🔔🔔🔔	10-Jun	Industrial production (wda, yoy)‡	Apr	4.2% ▲	3.2%	0.1% ▲
🔔🔔🔔	16-Jun	Harmonized consumer inflation HICP (yoy) - final data	May	7.3% -	7.3%	7.3% ○
UK 						
🔔🔔	07-Jun	Composite PMI - final data‡	May	53.1 -	53.1	51.8 ▲
🔔🔔🔔	13-Jun	Industrial production (yoy)	Apr	0.7% -	0.7%	1.7% ▼
🔔🔔	14-Jun	Unemployment rate (ILO, 3-months)	Apr	3.8% ▲	3.7%	3.6% ▲
🔔🔔🔔🔔	16-Jun	BoE base rate decision	Jun	12.5 ▲	10.0	12.5 ○
Japan 						
🔔🔔🔔🔔	08-Jun	GDP (annualized, qoq) - final data	1Q	-0.5% ▲	-1.0%	-1.1% ▲
🔔🔔🔔🔔	08-Jun	GDP (qoq, sa) - final data	1Q	-0.1% ▲	-0.2%	-0.3% ▲
🔔🔔🔔	14-Jun	Industrial production (yoy) - final data	Apr	-4.9% ▼	-4.8%	--
Chile 						
🔔🔔	07-Jun	Copper exports (USD mn)	May	3 757 ▼	4 037	--
🔔🔔	07-Jun	Nominal wages (yoy)	Apr	8.0% ▲	7.4%	--
🔔🔔🔔🔔	08-Jun	BCCh overnight rate target	Jun	9.00% ▲	8.25%	9.00% ○
Canada 						
🔔🔔	10-Jun	Capacity utilization‡	1Q	82.0% -	82.0%	83.1% ▼
🔔🔔	10-Jun	Net change in employment (ths)	May	39.8 ▲	15.3	27.5 ▲

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

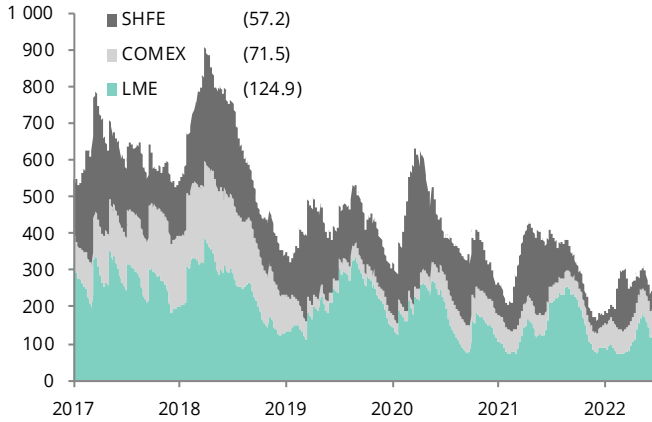
Key base & precious metal prices, exchange rates and other important market factors

<i>(as of: 17-Jun-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	9 101.00	▼ -3.7%	▼ -12.0%	▼ -6.1%	▼ -3.5%	9 855.81	9 018.50	10 730.00	
Molybdenum	17.34	▼ -0.9%	▼ -10.2%	▼ -7.2%	▼	18.87	17.13	19.33	
Nickel	25 435.00	▼ -8.2%	▼ -23.8%	▲ 21.6%	▲ 47.1%	28 042.92	20 480.00	45 795.00	
Aluminum	2 474.00	▼ -8.4%	▼ -29.4%	▼ -11.8%	▲ 1.9%	3 131.41	2 474.00	3 984.50	
Tin	32 600.00	▼ -7.5%	▼ -26.2%	▼ -17.7%	▼ -0.3%	41 156.75	31 000.00	50 050.00	
Zinc	3 580.00	▼ -8.1%	▼ -16.0%	▼ -1.4%	▲ 20.9%	3 856.13	3 500.00	4 530.00	
Lead	2 073.00	▼ -3.3%	▼ -14.8%	▼ -11.0%	▼ -3.3%	2 290.99	2 033.00	2 513.00	
LBMA (USD/troz)									
Silver	21.85	▲ 1.1%	▼ -12.0%	▼ -5.4%	▼ -17.9%	23.49	20.84	26.18	
Gold ²	1 841.55	▼ -0.2%	▼ -5.2%	▲ 1.2%	▲ 3.5%	1 877.46	1 788.15	2 039.05	
LPPM (USD/troz)									
Platinum ²	943.00	▼ -4.7%	▼ -4.1%	▼ -2.0%	▼ -13.8%	1 000.21	915.00	1 151.00	
Palladium ²	1 860.00	▼ -7.6%	▼ -17.7%	▼ -3.5%	▼ -30.8%	2 239.43	1 810.00	3 015.00	
FX ³									
EURUSD	1.0486	▼ -2.3%	▼ -5.5%	▼ -7.4%	▼ -12.2%	1.0962	1.0385	1.1464	
EURPLN	4.6951	▲ 2.3%	▲ 0.9%	▲ 2.1%	▲ 3.6%	4.6328	4.4879	4.9647	
USDPLN	4.4630	▲ 4.5%	▲ 6.8%	▲ 9.9%	▲ 17.7%	4.2275	3.9218	4.5722	
USDCAD	1.3035	▲ 3.6%	▲ 4.3%	▲ 2.8%	▲ 5.6%	1.2699	1.2451	1.3039	
USDCNY	6.7167	▲ 0.8%	▲ 5.9%	▲ 5.7%	▲ 4.2%	6.4666	6.3093	6.7893	
USDCLP	869.62	▲ 6.6%	▲ 10.5%	▲ 3.0%	▲ 19.7%	820.40	777.10	869.62	
Money market									
3m LIBOR USD	2.096	▲ 0.47	▲ 1.13	▲ 1.89	▲ 1.96	0.923	0.216	2.096	
3m EURIBOR	-0.169	▲ 0.16	▲ 0.29	▲ 0.40	▲ 0.37	-0.459	-0.576	-0.169	
3m WIBOR	6.880	▲ 0.22	▲ 2.11	▲ 4.34	▲ 6.67	4.725	2.590	6.880	
5y USD interest rate swap	3.386	▲ 0.40	▲ 0.86	▲ 2.02	▲ 2.44	2.411	1.445	3.637	
5y EUR interest rate swap	2.186	▲ 0.49	▲ 1.20	▲ 2.17	▲ 2.46	0.941	0.031	2.377	
5y PLN interest rate swap	7.700	▲ 0.90	▲ 2.54	▲ 3.96	▲ 6.26	5.320	3.780	7.700	
Fuel									
WTI Cushing	109.56	▼ -7.8%	▲ 9.3%	▲ 42.3%	▲ 54.2%	101.72	76.99	123.70	
Brent	117.03	▼ -6.0%	▲ 9.8%	▲ 51.1%	▲ 60.2%	105.82	79.83	133.89	
Diesel NY (ULSD)	442.98	▲ 1.2%	▲ 20.0%	▲ 84.9%	▲ 114.5%	370.43	241.70	534.54	
Others									
VIX	31.13	▲ 6.34	▲ 10.57	▲ 13.91	▲ 13.38	26.31	16.91	36.45	
BBG Commodity Index	126.78	▼ -5.3%	▲ 1.9%	▲ 27.8%	▲ 40.7%	121.81	100.58	136.61	
S&P500	3 674.84	▼ -10.6%	▼ -18.9%	▼ -22.9%	▼ -13.0%	4 312.66	3 666.77	4 793.54	
DAX	13 126.26	▼ -9.2%	▼ -8.9%	▼ -17.4%	▼ -16.5%	14 508.22	12 831.51	16 271.75	
Shanghai Composite	3 316.79	▲ 3.8%	▲ 2.0%	▼ -8.9%	▼ -5.9%	3 291.20	2 886.43	3 632.33	
WIG 20	1 676.67	▼ -7.9%	▼ -21.4%	▼ -26.0%	▼ -24.2%	2 026.40	1 676.67	2 411.11	
KGHM	130.80	▼ -10.1%	▼ -24.3%	▼ -6.2%	▼ -26.9%	152.01	115.60	182.20	

° 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

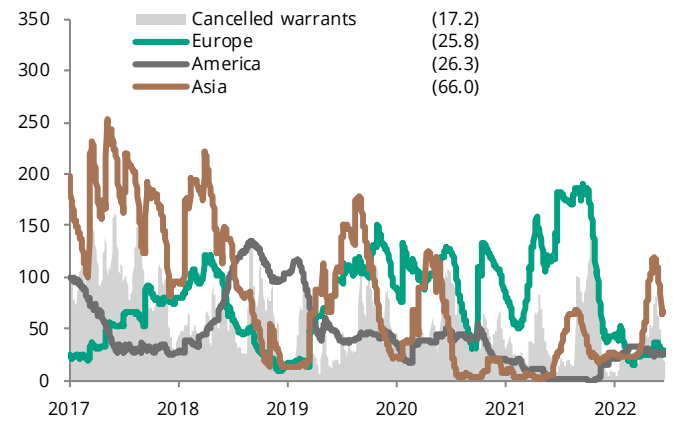
Source: Bloomberg, KGHM Polska Miedź

Copper: official exchange stocks (thousand tonnes)



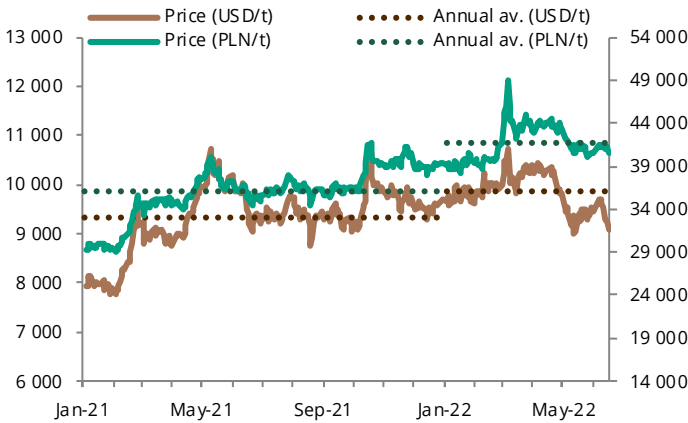
Note: Latest values in brackets. Source: Bloomberg, KGHM

Copper: official LME stocks (thousand tonnes)



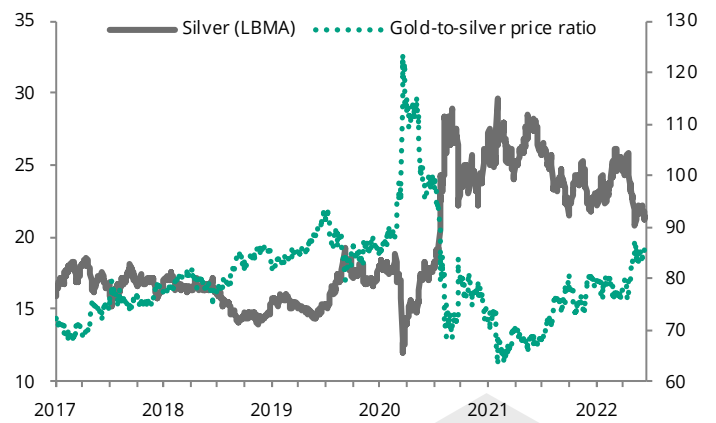
Note: Latest values in brackets. Source: Bloomberg, KGHM

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



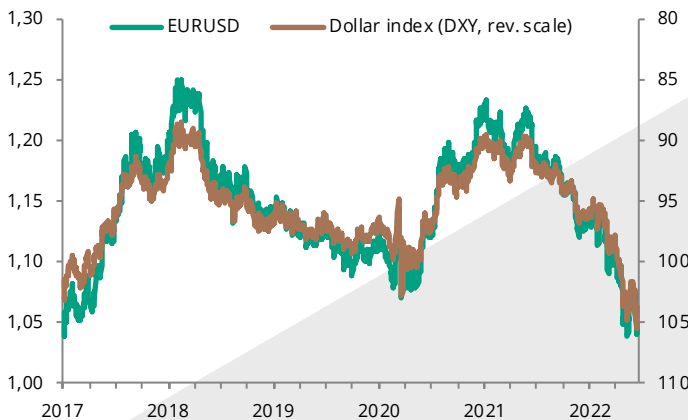
Source: Bloomberg, KGHM Polska Miedź

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



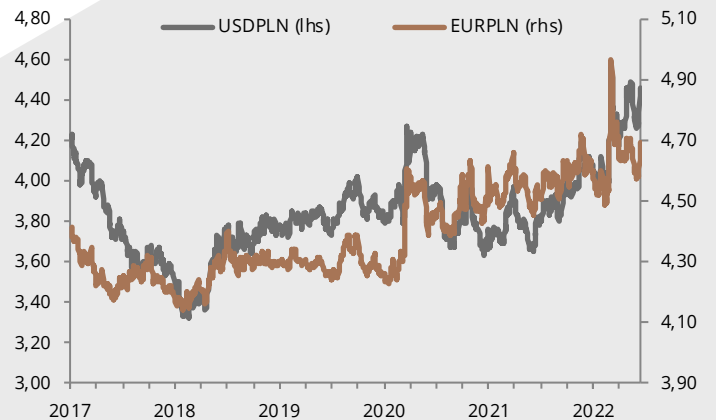
Source: Bloomberg, KGHM Polska Miedź

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:
6 - 19 June 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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