

# Market Overview



as of: 31<sup>st</sup> July 2023

- Metal recycling:** U.S. The Inflation Reduction Act (IRA) includes a clause that automatically grants subsidies to EV battery materials recycled in the US, regardless of their origin. This qualifies manufacturers using recycled battery materials in the U.S. for the program of financial incentives in the production of electric vehicles (*page 2*).
- Precious metals:** Gold consumption in the Middle Kingdom increased to 554.88 tonnes in the first half of the year (16% yoy). Sales of gold jewellery alone increased by almost 15% yoy to 368.26 tonnes. Consumption data does not include purchases by the People's Bank of China (*page 4*).
- IMF:** The IMF projects global economic growth to fall from an annual average of 3.5% in 2022 to 3.0% in 2023 and 2024. Global inflation is projected to fall from an annual average of 8.7% in 2022 to 6.8% in 2023 and 5.2% in 2024 (*page 5*).

## Key market prices

	Close price	2w chng.
<b>LME (USD/t)</b>		
▼ Copper	8 592.00	-0.7%
▲ Nickel	21 650.00	1.6%
<b>LBMA (USD/troz)</b>		
▼ Silver	24.23	-2.2%
▲ Gold (PM)	1 954.25	0.0%
<b>FX</b>		
▼ EURUSD	1.1010	-1.9%
▼ EURPLN	4.4257	-0.5%
▲ USDPLN	4.0377	1.9%
▲ USDCAD	1.3232	0.4%
▲ USDCLP	826.01	2.2%
<b>Stocks</b>		
▼ KGHM	120.40	-0.5%

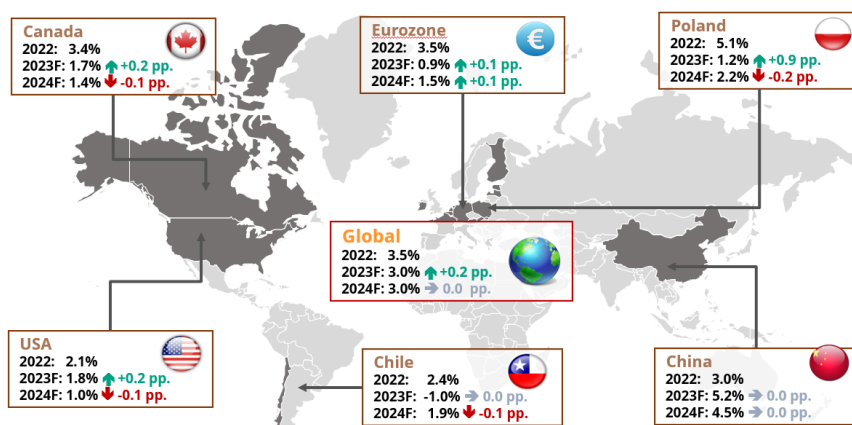
Source: Bloomberg, KGHM Polska Miedź S.A.; (*more on page 9*)

## Important macroeconomic data

Release	For	
GDP (sa, qoq)	2Q	0.8% ▼
Industrial prod. (mom)	Jun	-0.5% ▼
CPI (yoy)	Jun	5.5% ▼
Retail sales (yoy)	Jun	2.1% ▲
GDP (qoq)	2Q	0.5% ▲

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

## IMF World Economic Outlook – July 2023



Source: IMF, KGHM Polska Miedź S.A.

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## Base and precious metals | Other commodities

### Metal recycling

#### Dead EV batteries turn to gold with US incentives

**U.S. The Inflation Reduction Act (IRA) includes a clause that automatically grants subsidies to EV battery materials recycled in the US, regardless of their origin. This qualifies manufacturers using recycled battery materials in the U.S. for the program of financial incentives in the production of electric vehicles.**

A little-publicized clause in the U.S. Inflation Reduction Act (IRA) has companies scrambling to recycle electric vehicle batteries in North America, putting the region at the forefront of a global race to undermine China's dominance of the field. The IRA includes a clause that automatically qualifies EV battery materials recycled in the U.S. as American-made for subsidies, regardless of their origin. That is important because it qualifies automakers using U.S.-recycled battery materials for EV production incentives. Reuters interviewed more than a dozen industry officials and experts who say that is kicking off a U.S. factory building boom, encouraging automakers to research more recyclable batteries, and could eventually make it harder for buyers in developing countries to buy old used EVs. China handles virtually all EV battery recycling in a global market projected to grow from \$11 billion in 2022 to \$18 billion by 2028, according to research firm EMR. As more EVs are introduced and age out of the vehicle fleet, that business will grow. The minerals in those batteries - primarily lithium, cobalt and nickel - are worth on average between 1,000 euros (\$1,123) to 2,000 euros per car, BMW sustainability chief Thomas Becker told Reuters. Those materials could be in short supply within a few years as automakers boost EV production, but "can be recycled infinity times and not lose their power," said Louie Diaz, vice president at Canadian battery recycling firm Li-Cycle, which received a \$375 million U.S. government loan for a New York plant slated to open later this year. JB Straubel, CEO of Redwood Materials, which was awarded a \$2 billion U.S. government loan in February to build out a battery material recycling and remanufacturing complex in Nevada, said the IRA treats recycled battery materials as locally "urban mined," or materials recovered from scrap rather than obtained from mining. That has encouraged U.S. companies to move faster on recycling efforts than their counterparts in the European Union, which has focused instead on mandates, including minimum amounts of recycled materials in future EV batteries. Recycling firms Ascend Elements, Li-Cycle and others are planning European plants in the next few years, but access to funding and the made-in-America incentive means several U.S. plants are already being built. The race is on to build "closed-loop supply chains" where recycled minerals are put into locally produced new batteries, said Christian Marston, chief technology officer at Altilium Metals, which is building a plant in Bulgaria and plans one in the UK by 2026. "Everybody wants to control their own supply chain and nobody wants

to be reliant on the Chinese," he said. However, China still leads the race, announcing increased research support for recyclers last month. After passage last year of the U.S. Inflation Reduction Act, Chinese officials described the legislation as "anti-globalization" and accused the U.S. of "unilateral bullying."

### Rapid growth of recycling companies

**Over the past 6 years, over 50 battery recycling startups have raised at least \$2.7 billion in capital from corporate investors, including automakers, battery makers and mining giants.**

Globally, there are at least 80 companies involved in EV recycling, with more than 50 startups attracting at least \$2.7 billion, virtually all in the last six years, from corporate investors including automakers, battery makers and mining giants like Glencore, according to PitchBook.com data. The volume of EV batteries available for recycling should grow over tenfold by 2030, said consultant Circular Energy Storage. Around 11.3 Gigawatt hours (GWh) of batteries reached end of life in 2022, and that should rise to 138 GWh by 2030 - equivalent to roughly 1.5 million EVs - CES said. Electric vehicle batteries can last for 10 years or more. Some industry officials anticipate rapid growth means 40% of battery materials used in new EVs could come from recycled stocks by 2040. There is little existing U.S. recycling capacity today, and virtually none in Europe. In Europe, EV batteries are currently shredded into "black mass" that is shipped to China for recycling. "The one who gets the highest yield at the lowest cost ... will win this game," said Bruno Thompson, CEO of Cambridge, England-based startup The Battery Recycling Company, which plans its first plant in 2024. Dallas, Texas-based Ecobat, which shreds batteries in Europe and the U.S. for recycling elsewhere, has improved its recovery process so around 70% of battery-cell lithium is available for recycling, said chief commercial officer Thea Soule. Eventually, Soule said, yields should reach levels close to 90% to 100%. Getting better yields matters because the EU will mandate minimum amounts of recycled lithium, cobalt and nickel in EV batteries within eight years. The EU will also impose tough conditions on recycling outside Europe. There are also industry concerns about finding old EVs for recycling. Today, anywhere up to 30% of Europe's old fossil-fuel cars disappear overseas - to new owners in developing countries or for scrap. Some automakers are trying to figure out how to keep tabs on those EVs. Nissan has turned to leasing EVs in Japan to maintain control of batteries, while Chinese EV maker Nio leases batteries to customers to retain ownership. Keeping those minerals in Europe would cut off a cheaper source of transportation for developing countries. BMW's sustainability chief Becker said the value of battery materials will hopefully make recycling more attractive than selling vehicles abroad, but Europe must focus on ensuring those EV batteries do not slip away.

## Precious Metals

### China's H1 gold consumption up over 16%

**Gold consumption in the Middle Kingdom increased to 554.88 tonnes in the first half of the year (16% yoy). Sales of gold jewellery alone increased by almost 15% yoy to 368.26 tonnes. Consumption data does not include purchases by the People's Bank of China.**

China's gold consumption rose more than 16% year-on-year to 554.88 metric tons in the first half of the year, while output climbed 2.24% to 178.598 metric tons, a report by China Gold Association showed on Tuesday. The consumption of gold jewellery in the world's largest consumer of the precious metal increased nearly 15% to 368.26 metric tons in the first half, the report said. The consumption figure excludes reserve purchases by the People's Bank of China. "The economy and society have fully resumed normal operation, the national economy has rebounded, and the national gold consumption has generally shown a rapid recovery trend," the association said in the report. The production of gold enterprises has returned to normal in the first half year of 2023, the association said in a comment in a state media report published on Tuesday, adding that large enterprises were actively promoting mergers and acquisitions, which will further concentrate on high-quality gold resources.

## Global economies | Foreign exchange markets

### IMF World Economic Outlook – July 2023

**The IMF projects global economic growth to fall from an annual average of 3.5% in 2022 to 3.0% in 2023 and 2024. Global inflation is projected to fall from an annual average of 8.7% in 2022 to 6.8% in 2023 and 5.2% in 2024.**

Global growth is projected to fall from 3.5 percent in 2022 to 3.0 percent in both 2023 and 2024 on an annual average basis. Compared with projections in the April 2023 WEO, growth has been upgraded by 0.2 percentage point for 2023, with no change for 2024. The forecast for 2023–24 remains well below the historical (2000–19) annual average of 3.8 percent. Advanced economies continue to drive the decline in growth from 2022 to 2023, with weaker manufacturing, as well as idiosyncratic factors, offsetting stronger services activity. In emerging market and developing economies, the growth outlook is broadly stable for 2023 and 2024, although with notable shifts across regions. World trade growth is expected to decline from 5.2 percent in 2022 to 2.0 percent in 2023, before rising to 3.7 percent in 2024, well below the 2000–19 average of 4.9 percent. The decline in 2023 reflects not only the path of global demand, but also shifts in its composition toward domestic services, lagged effects of US dollar appreciation and rising trade barriers. These forecasts are based on a number of assumptions, including those regarding fuel and nonfuel commodity prices and interest rates. Oil prices rose by 39 percent in 2022 and are projected to fall by about 21 percent in 2023, reflecting the slowdown in global economic activity. Assumptions regarding global interest rates have been revised upward, reflecting actual and signaled policy tightening by major central banks since April. The Federal Reserve and Bank of England are now expected to raise rates by more than assumed in the April 2023 WEO—to a peak of about 5.6 percent in the case of the Federal Reserve—before reducing them in 2024. The European Central Bank is assumed to raise its policy rate to a peak of 3¾ percent in 2023 and to ease gradually in 2024. Moreover, with near-term inflation expectations falling, real interest rates are likely to stay up even after nominal rates start to fall.

Global headline inflation is set to fall from an annual average of 8.7 percent in 2022 to 6.8 percent in 2023 and 5.2 percent in 2024, broadly as projected in April, but above pre-pandemic (2017–19) levels of about 3.5 percent. About three-quarters of the world's economies are expected to see lower annual average headline inflation in 2023. Monetary policy tightening is expected to gradually dampen inflation. Differences in the pace of disinflation across countries reflect such factors as different exposures to movements in commodity prices and currencies and different degrees of economic overheating. The forecast for 2023 is revised down by 0.2 percentage point, largely on account of subdued inflation in China. The forecast for 2024 has been revised upward by 0.3 percentage point, with the upgrade reflecting higher-than-expected core inflation. Core inflation is generally declining more gradually. Globally, it is set to decline from an annual

average of 6.5 percent in 2022 to 6.0 percent in 2023 and 4.7 percent in 2024. It is proving more persistent than projected, mainly for advanced economies, for which forecasts have been revised upward by 0.3 percentage point for 2023 and by 0.4 percentage point for 2024 compared with the April 2023 WEO. Global core inflation is revised down by 0.2 percentage point in 2023, reflecting lower-than-expected core inflation in China, and up by 0.4 percentage point in 2024. Overall, inflation is projected to remain above target in 2023 in 96 percent of economies with inflation targets and in 89 percent of those economies in 2024.








The recent resolution of the US debt ceiling standoff and, earlier this year, strong action by authorities to contain turbulence in US and Swiss banking reduced the immediate risks of financial sector turmoil. However, the balance of risks to global growth remains tilted to the downside. Inflation could remain high and even rise if further shocks occur, including those from an intensification of the war in Ukraine and extreme weather-related events, triggering more restrictive monetary policy. Financial sector turbulence could resume as markets adjust to further policy tightening by central banks. China's recovery could slow, in part as a result of unresolved real estate problems, with negative cross-border spillovers. Sovereign debt distress could spread to a wider group of economies. On the upside, inflation could fall faster than expected, reducing the need for tight monetary policy.

In most economies, the priority remains achieving sustained disinflation while ensuring financial stability. Therefore, central banks should remain focused on restoring price stability and strengthen financial supervision and risk monitoring.

# Macroeconomic calendar

## Important macroeconomic data releases

Weight	Date	Event	For	Reading <sup>1</sup>	Previous	Consensus <sup>2</sup>	
<b>China</b>							
🔴🔴🔴🔴🔴	17-Jul	GDP (yoy)	2Q	6.3% ▲	4.5%	7.1%	🔴
🔴🔴🔴🔴🔴	17-Jul	GDP (sa, qoq)	2Q	0.8% ▼	2.2%	0.8%	🟡
🔴🔴🔴🔴	17-Jul	Industrial production (yoy)	Jun	4.4% ▲	3.5%	2.5%	🟢
🔴🔴	17-Jul	Fixed assets investments (ytd, yoy)	Jun	3.8% ▼	4.0%	3.4%	🟢
🔴	17-Jul	Retail sales (yoy)	Jun	3.1% ▼	12.7%	3.3%	🔴
🔴🔴	27-Jul	Industrial profits (yoy)	Jun	-8.3% ▲	-12.6%	--	
<b>Poland</b>							
🔴🔴🔴🔴	17-Jul	Core CPI (excluding food and energy, yoy)	Jun	11.1% ▼	11.5%	11.1%	🟡
🔴🔴🔴🔴	20-Jul	Sold industrial production (yoy)‡	Jun	-1.4% ▲	-2.8%	-1.9%	🟢
🔴🔴	20-Jul	Average gross salary (yoy)	Jun	11.9% ▼	12.2%	12.1%	🔴
🔴🔴	20-Jul	Producer inflation PPI (yoy)‡	Jun	0.5% ▼	2.8%	1.0%	🔴
🔴	20-Jul	Employment (yoy)	Jun	0.2% ▼	0.4%	0.4%	🔴
🔴🔴🔴	21-Jul	Retail sales (yoy)	Jun	2.1% ▲	1.8%	2.6%	🔴
🔴	24-Jul	M3 money supply (yoy)	Jun	7.9% ▲	7.1%	7.5%	🟢
🔴🔴	25-Jul	Unemployment rate	Jun	5.0% ▼	5.1%	5.0%	🟡
<b>US</b>							
🔴🔴🔴🔴	18-Jul	Industrial production (mom)‡	Jun	-0.5% ▼	-0.4%	0.0%	🔴
🔴🔴	18-Jul	Retail sales (excluding autos, mom)‡	Jun	0.2% ▼	0.4%	0.3%	🔴
🔴	18-Jul	Capacity utilization‡	Jun	78.9% ▼	79.4%	79.5%	🔴
🔴🔴	20-Jul	Philadelphia Fed business outlook	Jul	-13.5 ▲	-13.7	-10.0	🔴
🔴🔴🔴	24-Jul	Composite PMI - preliminary data	Jul	--	53.2	53.0	
🔴🔴🔴	24-Jul	Manufacturing PMI - preliminary data	Jul	--	46.3	46.2	
🔴🔴🔴	24-Jul	PMI services - preliminary data	Jul	--	54.4	54.0	
🔴	25-Jul	Richmond Fed manufacturing index‡	Jul	-9.0 ▼	-8.0	-10.0	🟢
🔴🔴🔴🔴🔴	26-Jul	FOMC base rate decision - upper bound (Fed)	Jul	5.50% ▲	5.25%	5.50%	🟡
🔴🔴🔴🔴🔴	26-Jul	FOMC base rate decision - lower bound (Fed)	Jul	5.25% ▲	5.00%	5.25%	🟡
🔴🔴🔴🔴🔴	27-Jul	GDP (annualized, qoq) - estimation	2Q	2.4% ▲	2.0%	1.8%	🟢
🔴🔴	27-Jul	Durable goods orders - preliminary data‡	Jun	4.7% ▲	2.0%	1.3%	🟢
🔴🔴🔴🔴	28-Jul	Consumer spending inflation PCE (mom)	Jun	0.2% ▼	0.3%	0.2%	🟡
🔴🔴🔴🔴	28-Jul	Consumer spending inflation PCE (yoy)‡	Jun	4.1% ▼	4.5%	4.2%	🔴
🔴🔴	28-Jul	Personal income (sa, mom)‡	Jun	0.3% ▼	0.4%	0.5%	🔴
🔴🔴	28-Jul	Personal spending (sa, mom)‡	Jun	0.5% ▲	0.2%	0.4%	🟢
🔴🔴	28-Jul	University of Michigan confidence index - final data	Jul	71.6 ▼	72.6	72.6	🔴
<b>Eurozone</b>							
🔴🔴🔴🔴	19-Jul	Consumer inflation CPI (yoy) - final data	Jun	5.5% ▼	6.1%	5.5%	🟡
🔴🔴🔴🔴	19-Jul	Core CPI (yoy) - final data‡	Jun	5.5% -	5.5%	5.4%	🟢
🔴	20-Jul	Consumer confidence - preliminary data	Jul	-15.1 ▲	-16.1	-15.8	🟢
🔴🔴🔴	24-Jul	Composite PMI - preliminary data	Jul	--	49.9	49.6	
🔴🔴🔴	24-Jul	Manufacturing PMI - preliminary data	Jul	--	43.4	43.5	
🔴🔴🔴	24-Jul	Services PMI - preliminary data	Jul	--	52.0	51.6	
🔴	26-Jul	M3 money supply (yoy)‡	Jun	0.6% ▼	0.9%	0.9%	🔴
🔴🔴🔴🔴🔴	27-Jul	ECB main refinancing rate	Jul	4.25% ▲	4.00%	4.25%	🟡
🔴🔴🔴🔴🔴	27-Jul	ECB deposit facility rate	Jul	3.8% ▲	3.5%	3.8%	🟡
🔴	28-Jul	Economic confidence‡	Jul	94.5 ▼	95.2	95.0	🔴
🔴	28-Jul	Industrial confidence‡	Jul	-9.4 ▼	-7.3	-8.0	🔴
🔴	28-Jul	Consumer confidence - final data	Jul	-15.1 -	-15.1	--	

Weight	Date	Event	For	Reading <sup>1</sup>	Previous	Consensus <sup>2</sup>
<b>Germany</b> 						
🌟🌟🌟	24-Jul	Composite PMI - preliminary data	Jul	--	50.6	49.8
🌟🌟🌟	24-Jul	Manufacturing PMI - preliminary data	Jul	--	40.6	41.0
🌟🌟	25-Jul	IFO business climate‡	Jul	87.3 ▼	88.6	88.0 📉
🌟🌟	27-Jul	GfK consumer confidence‡	Aug	-24.4 ▲	-25.2	-24.8 📈
🌟🌟🌟🌟	28-Jul	GDP (yoy) - preliminary data‡	2Q	-0.6% ▼	0.1%	-- 📉
🌟🌟🌟🌟	28-Jul	GDP (sa, qoq) - preliminary data‡	2Q	0.0% ▲	-0.1%	0.1% 📉
🌟🌟🌟🌟	28-Jul	Harmonized consumer inflation HICP (yoy) - preliminary data	Jul	6.5% ▼	6.8%	6.6% 📉
🌟🌟🌟🌟	28-Jul	Consumer inflation CPI (yoy) - preliminary data	Jul	6.2% ▼	6.4%	6.2% 🟡
<b>France</b> 						
🌟🌟🌟	24-Jul	Composite PMI - preliminary data	Jul	--	47.2	47.7
🌟🌟🌟	24-Jul	Manufacturing PMI - preliminary data	Jul	--	46.0	46.0
🌟🌟🌟🌟	28-Jul	GDP (yoy) - preliminary data	2Q	0.9% =	0.9%	0.4% 📈
🌟🌟🌟🌟	28-Jul	GDP (qoq) - preliminary data‡	2Q	0.5% ▲	0.1%	0.1% 📈
🌟🌟🌟🌟	28-Jul	Harmonized consumer inflation HICP (yoy) - preliminary data	Jul	5.0% ▼	5.3%	5.1% 📉
🌟🌟🌟🌟	28-Jul	Consumer inflation CPI (yoy) - preliminary data	Jul	4.3% ▼	4.5%	4.3% 🟡
<b>Italy</b> 						
🌟🌟🌟🌟	17-Jul	Harmonized consumer inflation HICP (yoy) - final data	Jun	6.7% =	6.7%	6.7% 🟡
<b>UK</b> 						
🌟🌟🌟🌟	19-Jul	Consumer inflation CPI (yoy)	Jun	7.9% ▼	8.7%	8.2% 📉
🌟🌟🌟	24-Jul	Manufacturing PMI (sa) - preliminary data	Jul	--	46.5	46.0
🌟🌟🌟	24-Jul	Composite PMI - preliminary data	Jul	--	52.8	52.3
<b>Japan</b> 						
🌟🌟🌟🌟	21-Jul	Consumer inflation CPI (yoy)	Jun	3.3% ▲	3.2%	3.2% 📈
🌟🌟🌟	24-Jul	Composite PMI - preliminary data	Jul	--	52.1	--
🌟🌟🌟	24-Jul	Manufacturing PMI - preliminary data	Jul	--	49.8	--
<b>Chile</b> 						
🌟🌟🌟🌟🌟	29-Jul	BCCh overnight rate target	Jul	10.25% ▼	11.25%	10.50% 📉
<b>Canada</b> 						
🌟🌟🌟🌟	18-Jul	Consumer inflation CPI (yoy)	Jun	2.8% ▼	3.4%	3.0% 📉
🌟🌟🌟🌟	28-Jul	GDP (yoy)	May	1.9% ▲	1.7%	1.9% 🟡

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

<sup>2</sup> 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

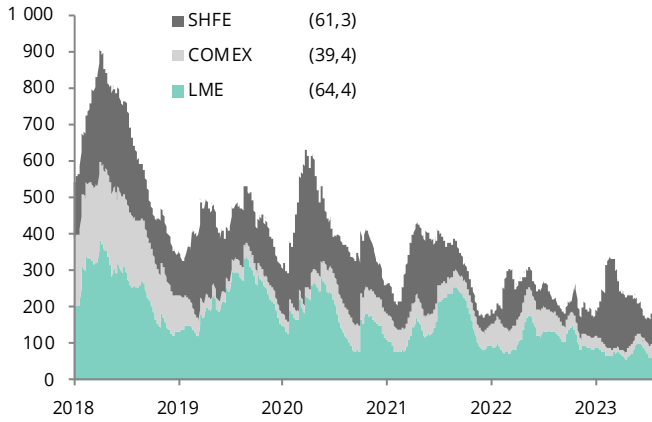
### Key base & precious metal prices, exchange rates and other important market factors

(as of: 28-Jul-23)		Price change <sup>1</sup>					From year beginning <sup>2</sup>		
	Price	2W	QTD	YTD	1Y	Average	Min	Max	
<b>LME (USD/t; Mo in USD/lbs)</b>									
Copper	8 592.00	▼ -0.7%	▲ 4.7%	▲ 2.4%	▲ 11.4%	8 665.77	7 910.00	9 436.00	
Molybdenum	22.58	▲ 0.2%	▲ 1.4%	▼ -13.6%	▲	26.82	17.86	38.28	
Nickel	21 650.00	▲ 1.6%	▲ 7.6%	▼ -28.8%	▲ 0.7%	23 740.31	19 745.00	31 200.00	
Aluminum	2 161.50	▼ -2.9%	▲ 3.1%	▼ -8.4%	▼ -12.1%	2 303.93	2 086.00	2 636.00	
Tin	28 755.00	▼ -0.9%	▲ 3.8%	▲ 15.9%	▲ 18.5%	26 640.42	22 225.00	32 050.00	
Zinc	2 485.00	▲ 3.0%	▲ 5.2%	▼ -17.9%	▼ -23.4%	2 772.83	2 224.00	3 509.00	
Lead	2 157.00	▲ 2.0%	▲ 2.5%	▼ -7.6%	▲ 7.2%	2 125.85	1 989.00	2 331.00	
<b>LBMA (USD/troz)</b>									
Silver	24.23	▼ -2.2%	▲ 7.8%	▲ 1.2%	▲ 25.4%	23.41	20.09	26.03	
Gold <sup>2</sup>	1 954.25	▲ 0.0%	▲ 2.2%	▲ 7.8%	▲ 11.4%	1 933.79	1 810.95	2 048.45	
<b>LPPM (USD/troz)</b>									
Platinum <sup>2</sup>	933.00	▼ -4.5%	▲ 4.0%	▼ -12.4%	▲ 4.8%	1 000.69	897.00	1 128.00	
Palladium <sup>2</sup>	1 241.00	▼ -2.1%	▼ -1.0%	▼ -30.6%	▼ -40.0%	1 472.01	1 200.00	1 802.00	
<b>FX<sup>3</sup></b>									
EURUSD	1.1010	▼ -1.9%	▲ 1.3%	▲ 3.2%	▲ 8.8%	1.0842	1.0500	1.1255	
EURPLN	4.4257	▼ -0.5%	▼ -0.6%	▼ -5.6%	▼ -7.7%	4.6021	4.4224	4.7895	
USDPLN	4.0377	▲ 1.9%	▼ -1.7%	▼ -8.3%	▼ -14.0%	4.2456	3.9451	4.4888	
USDCAD	1.3232	▲ 0.4%	▼ -0.1%	▼ -2.3%	▲ 3.1%	1.3443	1.3128	1.3807	
USDCNY	7.1485	▲ 0.1%	▼ -1.5%	▲ 3.6%	▲ 5.9%	6.9709	6.7010	7.2537	
USDCLP	826.01	▲ 2.2%	▲ 2.9%	▼ -3.9%	▼ -10.3%	807.11	781.49	856.31	
<b>Money market</b>									
3m LIBOR USD	5.634	▲ 0.06	▲ 0.09	▲ 0.87	▲ 2.85	5.211	4.782	5.634	
3m EURIBOR	3.725	▲ 0.06	▲ 0.15	▲ 1.59	▲ 3.46	3.094	2.170	3.725	
3m WIBOR	6.720	▼ -0.11	▼ -0.18	▼ -0.30	▼ -0.29	6.902	6.720	7.010	
5y USD interest rate swap	4.219	- 0.00	- 0.00	▲ 0.20	▲ 1.48	3.821	3.418	4.408	
5y EUR interest rate swap	3.218	▼ -0.09	▼ -0.04	▼ -0.02	▲ 1.88	3.104	2.672	3.479	
5y PLN interest rate swap	4.680	▲ 0.08	▼ -0.32	▼ -1.48	▼ -1.12	5.340	4.370	6.125	
<b>Fuel</b>									
WTI Cushing	80.42	▲ 6.6%	▲ 13.8%	▲ 0.2%	▼ -16.6%	74.92	66.74	83.26	
Brent	110.93	▼ -3.2%	▼ -8.7%	▲ 11.8%	▲ 33.4%	114.42	97.69	137.67	
Diesel NY (ULSD)	3.61	▼ -6.2%	▼ -10.8%	▲ 28.0%	▲ 38.2%	4.01	2.85	5.08	
<b>Others</b>									
VIX	13.33	▼ -0.01	▼ -0.26	▼ -8.34	▼ -9.00	17.94	12.91	26.52	
BBG Commodity Index	107.23	▲ 2.5%	▲ 5.7%	▼ -4.9%	▼ -10.9%	105.09	97.96	112.52	
S&P500	4 582.23	▲ 1.7%	▲ 3.0%	▲ 19.3%	▲ 12.5%	4 156.32	3 808.10	4 582.23	
DAX	16 469.75	▲ 2.3%	▲ 2.0%	▲ 18.3%	▲ 24.0%	15 622.71	14 181.67	16 469.75	
Shanghai Composite	3 275.93	▲ 1.2%	▲ 2.3%	▲ 6.0%	▼ -0.2%	3 253.68	3 116.51	3 395.00	
WIG 20	2 189.24	▲ 2.9%	▲ 6.3%	▲ 22.2%	▲ 31.3%	1 924.59	1 670.18	2 189.58	
KGHM	120.40	▼ -0.5%	▲ 7.1%	▼ -5.0%	▲ 10.4%	123.60	104.60	153.80	

<sup>1</sup> change over: 2W = two weeks; QTD = quarter-to-day; YTD = year-to-date; 1Y = one year. <sup>1</sup> based on daily closing prices. <sup>2</sup> latest quoted price. <sup>3</sup> central banks' fixing rates (Bank of China HK for USD/CNY). <sup>4</sup>

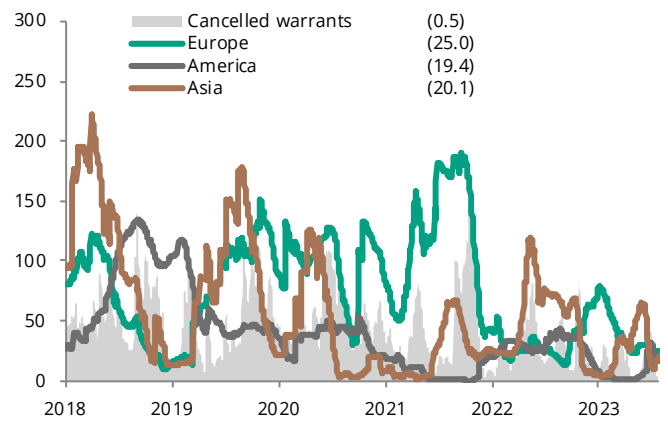
Source: Bloomberg, KGHM Polska Miedź

**Copper: official exchange stocks (thousand tonnes)**



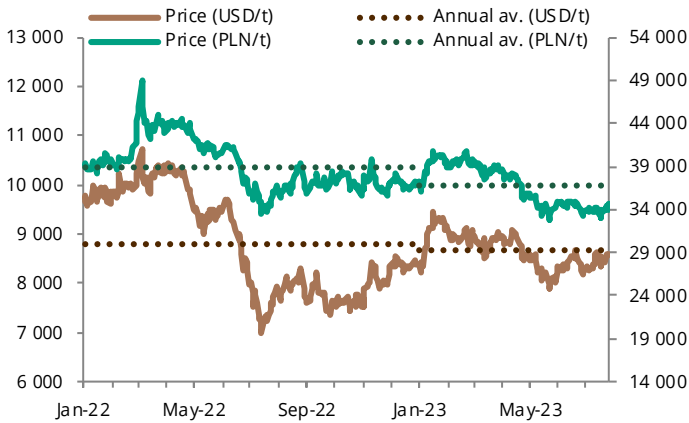
Note: Latest values in brackets. Source: Bloomberg, KGHM

**Copper: official LME stocks (thousand tonnes)**



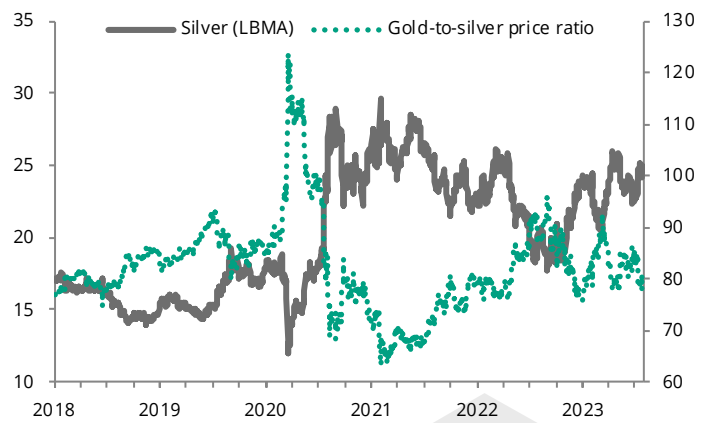
Note: Latest values in brackets. Source: Bloomberg, KGHM

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



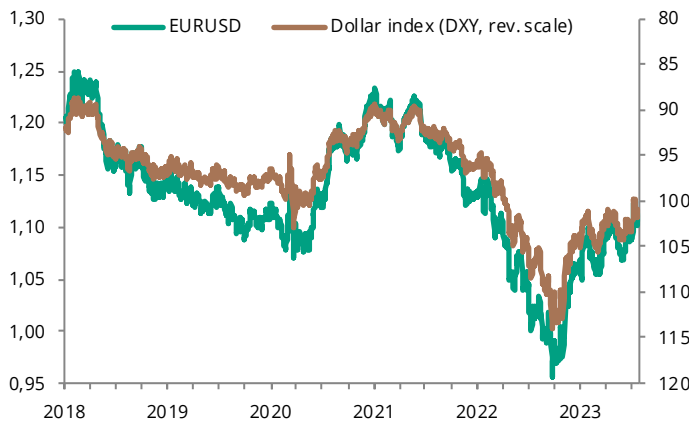
Source: Bloomberg, KGHM Polska Miedź

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



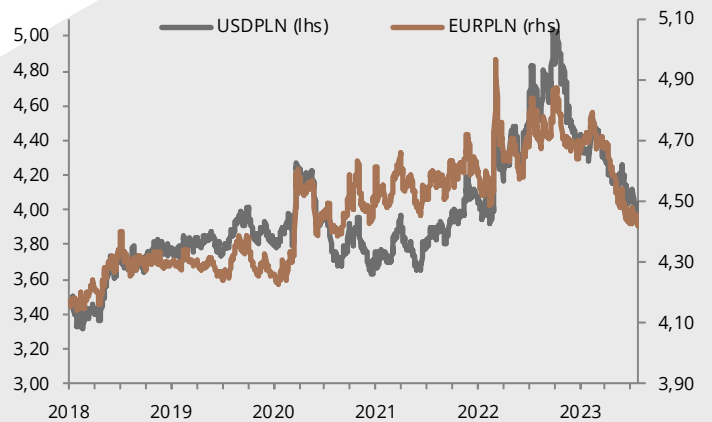
Source: Bloomberg, KGHM Polska Miedź

**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:  
**17 – 30 July 2023.**

- 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](http://www.lme.com/dataprices_products.asp) (charge-free logging)
- silver and gold: [www.lbma.org.uk/pricing-and-statistics](http://www.lbma.org.uk/pricing-and-statistics)
- platinum and palladium: [www.lppm.com/statistics.aspx](http://www.lppm.com/statistics.aspx)

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