

# Market Overview



as of: 27<sup>th</sup> March 2023






- **Copper:** Adding copper and nickel to the list of strategic materials under the Critical Raw Materials Act (CRMA) to provide a faster approval path and easier access to investment capital (*page 2*).
- **Precious metals:** Official data say that China's People's Bank added 62 tonnes in 2022 while the Reserve Bank of India bought 33 tonnes. But while the PBoC has continued to buy gold so far this year – adding a further 40 tonnes across January and February to hold 2,050 tonnes in total – the RBI has held off, keeping its bullion reserves at 787 tonnes (*page 4*).
- **China:** A slew of data from China economy showed some encouraging signs of a recovery in industrial production, retail sales and fixed-asset investment. However, this is not a massive rebound in the Chinese economy, but rather a solid start on the path towards China's 5% growth target by 2023 (*page 6*).

## Key market prices

	Close price	2w chng.
<b>LME (USD/t)</b>		
▲ Copper	8 927.00	2.0%
▲ Nickel	22 795.00	0.5%
<b>LBMA (USD/troz)</b>		
▲ Silver	23.17	15.3%
▲ Gold (PM)	1 993.80	7.1%
<b>FX</b>		
▲ EURUSD	1.0745	1.5%
▲ EURPLN	4.6911	0.2%
▼ USDPLN	4.3742	-1.2%
▼ USDCAD	1.3763	-0.3%
▲ USDCLP	805.23	0.5%
<b>Stocks</b>		
▼ KGHM	114.95	-5.4%

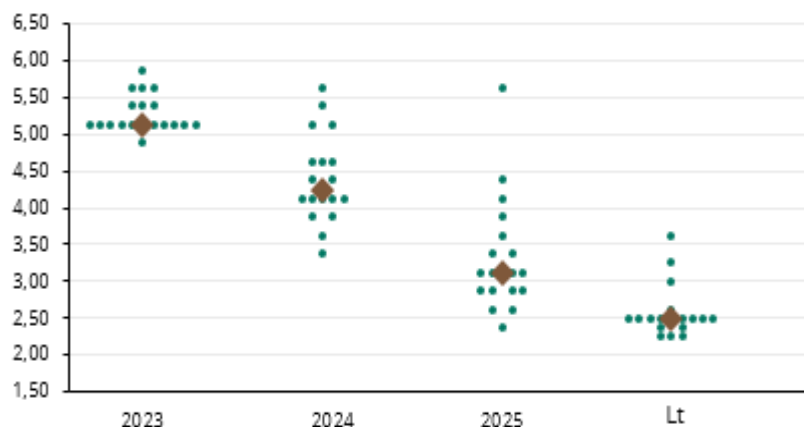
Source: Bloomberg, KGHM Polska Miedź S.A.; (*more on page 10*)

## Important macroeconomic data

Release	For		
 Fed upper rate	Mar	5.00%	▲
 Fed lower rate	Mar	4.75%	▲
 ECB deposit facility rate	Mar	3.0%	▲
 Trade balance	Jan	1 225	▲
 Industrial prod. (yoy)	Jan	-3.1%	▼

Source: Bloomberg, KGHM Polska Miedź S.A.; (*more on page 8*)

## FOMC members median in March 2023



Source: Bloomberg, KGHM Polska Miedź S.A.

## Market Risk Unit

marketrisk@kgm.com

## Base and precious metals | Other commodities

### Copper

#### EU Tags Copper And Nickel As Strategic, But Industry Wants More

**Adding copper and nickel to the list of strategic materials under the Critical Raw Materials Act (CRMA) to provide a faster approval path and easier access to investment capital.**

The European metals sector welcomed a move by the EU to include copper and nickel as strategic materials for the first time and ensure speedier permits and easier access to capital, but said more could be done to secure supplies. The Critical Raw Materials Act (CRMA) unveiled by the European Union adds the two major industrial metals to a list that had previously focused on more niche minerals such as cobalt, lithium and rare earths. Copper is used in renewable energy systems and for wiring in electric vehicles (EVs) while nickel is a major component in many EV batteries. Mining and metals companies, including Sweden's Boliden, cheered EU plans in the CRMA to provide streamlined permits and access to financing for projects pegged as strategic. However, to ensure a supply of materials needed for the green transition, other industrial metals such as aluminium should be included while fair competition with China also needs to be addressed, industry groups and firms said. The VDM Association of German Metal Traders and Recyclers was among those pushing for aluminium and zinc to be included. "These areas of the metal industry also need fast approval procedures and, above all, competitive energy prices," the group said in a statement. The EU already produces about 15% of its needs for copper, well above the overall 10% target set by the EU for strategic minerals, but the situation could deteriorate, the CEO of Aurubis, Europe's biggest refined copper producer, said. "Every mine gets depleted therefore it is time to act now to ensure that new mining projects, which will take years to develop, are being approved in time," Roland Harings told Reuters in an interview. Harings also said the EU must ensure fair competition with China and other countries so the metals recycling industry can thrive. "We have absolutely no problem in being in competition if there's a level playing field. If everybody has to respect minimum environmental, labour and other standards." Aurubis sees recycling as a huge growth area and has the intention in the longer term to also move into recycling of electric vehicle batteries.

### China Jan-Feb Refined Copper Imports Down 6.3% YoY

**Imports of refined copper to China in January-February amounted to 546.7 thousand tonnes. The decline was in line with market expectations and resulted from the lack of import arbitrage opportunities.**

China's refined copper imports totaled 546,719 mt in January-February, down 6.3% from a year earlier, data from China's customs showed March 22. The decline was in line with market expectations amid the absence of import arbitrage opportunity since early November. China's imports of refined copper from Chile -- the world's largest producer of copper -- increased by 23.3% from a year ago to 140,767 mt in the first two months of this year. Chilean imports accounted for 25.7% of China's total copper imports. Imports from Russia fell sharply by 62.2% to 25,005 mt, which accounted for 4.6% of the country's total. Meanwhile, China's refined copper exports soared 167.8% from a year earlier to 54,996 mt during January-February, customs data showed. Import arbitrage window for Chinese buyers remained closed currently, but import losses have narrowed, led by improved downstream demand in the Chinese domestic market, industry sources said. Chinese copper cathode import premiums continued to strengthen since early March, S&P Global Commodity Insights data showed. Platts, part of S&P Global, assessed Chinese copper import premiums at \$45/mt plus London Metal Exchange cash, CIF China, March 21, for LME-registered normal brands of electrolytically-refined cathode, up \$20/mt on the month. Throughout most of the quarter, the import arbitrage to China remained firmly closed. Domestic demand also did not rebound as strongly as expected after the Lunar New Year holidays, though sources observed a gradual improvement in downstream demand through March, which also propped up domestic cathode premiums. "I think domestic smelters have exported too much, so we should see a further improvement in the import arbitrage in the near term," a trader said.

### Other important information on copper market:

- The world's refined copper market had a 103,000 tonne surplus in January, compared with a 10,000 tonnes surplus the previous month, the International Copper Study Group (ICSG) said in its latest monthly bulletin. World refined copper output was 2.27 million tonnes and consumption was 2.16 million tonnes, the ICSG said on Wednesday.
- Peru's copper exports plunged in January as a surge in social unrest choked shipments even as production of the red metal remained steady. Export revenue of \$1.25 billion was 25% lower than January last year, while output slipped just 0.3%, according to data released by the mining industry chamber and the energy and mines ministry. In the biggest wave of unrest in decades, more than 100 roads were blocked by people seeking the resignation of President Dina Boluarte. Exports were most affected at Freeport-McMoran's Cerro Verde mine, where shipments fell by 32%. Others affected were MMG Ltd.'s Las Bambas and

Glencore's Antapaccay, with 23% and 17% export drops respectively. The mining industry chamber, the National Society of Mining, Oil and Energy, said most of the drop in copper exports was due to less metal being shipped, although lower prices also negatively impacted revenue.

## Precious Metals

### China Buys Gold at Record Prices But India's Demand Sinks

**Official data say that China's People's Bank added 62 tonnes in 2022 while the Reserve Bank of India bought 33 tonnes. But while the PBoC has continued to buy gold so far this year – adding a further 40 tonnes across January and February to hold 2,050 tonnes in total – the RBI has held off, keeping its bullion reserves at 787 tonnes.**

Record high prices are failing to deter demand to buy gold in China's wholesale market, extending a 6-month run of strong purchases and breaking the historic pattern of price-sensitivity. India, in contrast, has seen a sharp retreat in household purchases. Like India, China continues to ban exports of gold bullion, meaning that its domestic rates can vary wildly from international prices when domestic supply and demand move out of balance. Over the last decade, that has seen the Shanghai premium – meaning the gap between China's wholesale gold prices and those quoted by dealers in London – rise or fall in opposition to global gold prices 2/3rds of the time on a monthly, quarterly and 12-month basis. But with global gold prices rising sharply in US Dollar terms this month while setting new record highs in many other currencies, the Shanghai gold price in Chinese Yuan has risen faster, reaching a fresh all-time high at ¥446 per gram. Premiums in India have in contrast flipped back to a deep discount against London quotes as the local rate – inclusive of 15% import duty and GST sales tax, aimed at deterring household demand to buy gold – also sets new records, crossing the ₹60,000-mark per 10 grams for the first time. Consumer gold buying has meantime fallen 40% so far in March according to jewellers cited by the Economic Times. The last year's rising prices and high import duty – aimed at denting household demand in India, which has next-to-no domestic mine output – saw its gold imports decline by 29.7% over the 10 months to February compared with the same period of the 2021-22 tax year according to data from the country's Trade Promotion Council. Separate data from Switzerland said that February price drop – more than reversed in March amid the US banking crash at Silicon Valley and the 'shotgun' takeover of Swiss bank Credit Suisse by UBS – then saw a strong rebound, with exports to India from Europe's major refining hub leaping 8-fold from January to reach 25.6 tonnes, the most since last September. Swiss gold exports to China meantime doubled last month from January's figure to reach almost 58 tonnes, rising 63.1% from February last year. Previous spikes in global gold prices saw domestic Chinese prices fall sharply in comparison, driving what is typically a premium for bullion landed in Shanghai to a discount against London quotes. This happened most spectacularly during the Covid lockdowns and shock of 2020, when the Shanghai gold discount

reached a record \$120 per ounce on data compiled and published by the mining industry's World Gold Council. Next-door in India, this latest price spike means sales of existing consumer holdings have jumped by 25% year-on-year, helping drive domestic prices further below global quotes as supply outweighs demand. For central-bank demand, official data say that China's People's Bank added 62 tonnes in 2022 while the Reserve Bank of India bought 33 tonnes. But while the PBoC has continued to buy gold so far this year – adding a further 40 tonnes across January and February to hold 2,050 tonnes in total – the RBI has held off, keeping its bullion reserves at 787 tonnes.

## Global economies | Foreign exchange markets

### China's Uneven Economic Recovery To Be Mirrored In Commodity Imports












































**A slew of data from China economy showed some encouraging signs of a recovery in industrial production, retail sales and fixed-asset investment. However, this is not a massive rebound in the Chinese economy, but rather a solid start on the path towards China's 5% growth target by 2023.**

China's economic recovery appears to be on track, but is unevenly spread across sectors, which is likely to result in a similar pattern for its imports of major commodities. A slew of data from the world's second-biggest economy showed some encouraging signs of a recovery in industrial production, retail sales and fixed-asset investment. Industrial output rose 2.4% in the first two months of 2023 from the same period last year, retail sales jumped 3.5%, while fixed-asset investment gained 5.5%. China publishes combined January and February data to smooth out distortions caused by the Lunar New Year holiday, which fell in January this year but was in February in 2022. Also key for commodity demand was the 9.0% jump in infrastructure investment in the first two months, but this was somewhat offset by a 5.7% drop in property investment. Infrastructure and property construction are key drivers of demand for copper and steel, and its raw materials of iron ore and coking coal. The rising spending on infrastructure and signs of less weakness in property investment are already showing up in China's iron ore imports. China takes about 70% of global seaborne iron ore volumes and its imports for March are estimated by Refinitiv at around 94 million tonnes. This would put daily imports in a range between 3.03 million and 3.22 million tonnes, slightly below the official customs figure of 3.29 million for the first two months of 2023. However, it's worth noting that the January-February outcome was the strongest on a daily basis since September last year. China's steel output also rose in the first two months of 2023, gaining 5.6% from the same period last year to reach 168.7 million tonnes. Iron ore imports and steel output tend to be leading indicators of commodity demand in China, as mills tend to ramp up production ahead of anticipated demand for building and manufacturing. The iron ore imports for the first quarter and the steel output data for the January-February period do suggest increasing activity, but they aren't so strong as to point to a huge rebound in China's economy. Rather, the data seems to be broadly supportive of a solid start to achieving China's stated economic growth target of 5% for 2023. The modest recovery in China's growth has yet to show up in some other major commodities, especially crude oil, which tends to be a lagging indicator given it takes several months from when cargoes are purchased to when they are delivered and processed by refineries. Crude oil imports in the first two months of the year were 1.25% lower at 10.4 million barrels per day (bpd) than the same period in 2022, according to customs data. March imports are expected at around 11.18 million bpd, according to Refinitiv Oil Research, which represents some acceleration from the official numbers, but hardly the massive lift in demand being forecast for the







whole of 2023 by a range of analysts and organisations, including the International Energy Agency and the Organization of the Petroleum Exporting Countries. It's likely that China's crude imports will accelerate from the second quarter onwards as the country continues to reopen after abandoning its strict zero-COVID policy. But there are other factors to consider, such as whether Beijing will continue to provide refiners with quotas to export refined products, as these tend to boost crude imports to provide the feedstock for the refined fuel exports. Price is also an important driver of China's energy imports, with high prices tending to lead to lower crude imports as refiners use up some of the large inventories they have accumulated in recent years. The impact of price can be seen in imports of liquefied natural gas (LNG), which dropped sharply in 2022 amid record high spot prices for the super-chilled fuel. However, lower prices this year have tempted buyers back into the market, and China is on track to import 5.39 million tonnes of LNG in March, according to data compiled by commodity analysts Kpler. This would be up from February's 4.96 million tonnes and also above the 4.77 million from March last year.

# Macroeconomic calendar

## Important macroeconomic data releases

Weight	Date	Event	For	Reading <sup>1</sup>	Previous	Consensus <sup>2</sup>	
<b>China</b>							
☹☹	15-Mar	Fixed assets investments (ytd, yoy)	Feb	5.5%	--	4.5%	
☹☹☹☹☹	17-Mar	Reserve requirement ratio	Mar	10.8% ▼	11.0%	--	
<b>Poland</b>							
☹☹☹☹	15-Mar	Consumer inflation CPI (yoy)‡	Feb	18.4% ▲	16.6%	18.5%	
☹☹☹☹	16-Mar	Core CPI (excluding food and energy, yoy)	Feb	12.0% ▲	11.7%	11.9%	
☹☹	16-Mar	Trade balance (EUR mn)	Jan	1 225 ▲	-2 716	-1 175	
☹☹	16-Mar	Exports (EUR mn)	Jan	26 809 ▲	26 040	27 268	
☹☹	16-Mar	Current account balance (EUR mn)	Jan	1 429 ▲	-2 526	- 993	
☹☹☹☹	20-Mar	Sold industrial production (yoy)‡	Feb	-1.2% ▼	1.8%	0.8%	
☹☹	20-Mar	Average gross salary (yoy)‡	Feb	13.6% ▼	113.5%	11.9%	
☹☹	20-Mar	Producer inflation PPI (yoy)‡	Feb	18.4% ▼	20.1%	17.7%	
☹	20-Mar	Employment (yoy)‡	Feb	0.8% ▼	101.1%	1.0%	
☹☹☹	21-Mar	Retail sales (yoy)	Feb	10.8% ▼	15.1%	13.9%	
☹	22-Mar	M3 money supply (yoy)	Feb	7.4% ▲	6.9%	6.5%	
☹☹	23-Mar	Unemployment rate	Feb	5.5% -	5.5%	5.5%	
<b>US</b>							
☹☹☹☹	14-Mar	Consumer inflation CPI (mom)	Feb	0.4% ▼	0.5%	0.4%	
☹☹☹☹	14-Mar	Consumer inflation CPI (yoy)	Feb	6.0% ▼	6.4%	6.0%	
☹☹	15-Mar	Retail sales (excluding autos, mom)‡	Feb	-0.1% ▼	2.4%	-0.1%	
☹☹	16-Mar	Philadelphia Fed business outlook	Mar	- 23.2 ▲	- 24.3	- 15.0	
☹☹☹☹	17-Mar	Industrial production (mom)‡	Feb	0.0% ▼	0.4%	0.2%	
☹	17-Mar	Capacity utilization‡	Feb	78.0% ▼	79.2%	78.4%	
☹☹	17-Mar	University of Michigan confidence index - preliminary data	Mar	63.4 ▼	67.0	67.0	
☹☹☹☹☹	22-Mar	FOMC base rate decision - upper bound (Fed)	Mar	5.00% ▲	4.75%	5.00%	
☹☹☹☹☹	22-Mar	FOMC base rate decision - lower bound (Fed)	Mar	4.75% ▲	4.50%	4.75%	
☹☹	24-Mar	Durable goods orders - preliminary data‡	Feb	-1.0% ▲	-5.0%	0.2%	
☹☹☹	24-Mar	Composite PMI - preliminary data	Mar	53.3 ▲	50.1	49.5	
☹☹☹	24-Mar	Manufacturing PMI - preliminary data	Mar	49.3 ▲	47.3	47.0	
☹☹☹	24-Mar	PMI services - preliminary data	Mar	53.8 ▲	50.6	50.3	
<b>Eurozone</b>							
☹☹☹☹	15-Mar	Industrial production (sa, mom)‡	Jan	0.7% ▲	-1.3%	0.3%	
☹☹☹☹	15-Mar	Industrial production (wda, yoy)‡	Jan	0.9% ▲	-2.1%	0.3%	
☹☹☹☹☹	16-Mar	ECB main refinancing rate	Mar	3.50% ▲	3.00%	3.50%	
☹☹☹☹☹	16-Mar	ECB deposit facility rate	Mar	3.0% ▲	2.5%	3.0%	
☹☹☹☹	17-Mar	Consumer inflation CPI (yoy) - final data	Feb	8.5% ▼	8.6%	8.5%	
☹☹☹☹	17-Mar	Core CPI (yoy) - final data	Feb	5.6% -	5.6%	5.6%	
☹☹	17-Mar	Labour costs (yoy)‡	4Q	5.7% ▲	3.7%	--	
☹	20-Mar	Trade balance (EUR mn)	Jan	- 30.6 ▼	- 8.8	--	
☹	21-Mar	ZEW survey expectations	Mar	10.0 ▼	29.7	--	
☹	23-Mar	Consumer confidence - preliminary data‡	Mar	- 19.2 ▼	- 19.1	- 18.2	
☹☹☹	24-Mar	Composite PMI - preliminary data	Mar	54.1 ▲	52.0	52.0	
☹☹☹	24-Mar	Manufacturing PMI - preliminary data	Mar	47.1 ▼	48.5	49.0	
☹☹☹	24-Mar	Services PMI - preliminary data	Mar	55.6 ▲	52.7	52.5	
<b>Germany</b>							
☹☹☹	24-Mar	Composite PMI - preliminary data	Mar	52.6 ▲	50.7	51.0	
☹☹☹	24-Mar	Manufacturing PMI - preliminary data	Mar	44.4 ▼	46.3	47.0	



Weight	Date	Event	For	Reading <sup>1</sup>	Previous	Consensus <sup>2</sup>
<b>France</b> 						
🔔🔔🔔🔔	15-Mar	Harmonized consumer inflation HICP (yoy) - final data	Feb	7.3% ▲	7.2%	7.2% ▲
🔔🔔🔔🔔	15-Mar	Consumer inflation CPI (yoy) - final data‡	Feb	6.3% -	6.3%	6.2% ▲
🔔🔔🔔	24-Mar	Composite PMI - preliminary data	Mar	54.0 ▲	51.7	51.5 ▲
🔔🔔🔔	24-Mar	Manufacturing PMI - preliminary data	Mar	47.7 ▲	47.4	48.0 ◡
<b>Italy</b> 						
🔔🔔🔔🔔	14-Mar	Industrial production (wda, yoy)‡	Jan	1.4% ▲	-0.9%	2.9% ◡
🔔🔔🔔🔔	16-Mar	Harmonized consumer inflation HICP (yoy) - final data	Feb	9.8% ▼	9.9%	9.9%
<b>UK</b> 						
🔔🔔	14-Mar	Unemployment rate (ILO, 3-months)	Jan	3.7% -	3.7%	3.8% ◡
🔔🔔🔔🔔	22-Mar	Consumer inflation CPI (yoy)	Feb	10.4% ▲	10.1%	9.9% ▲
🔔🔔🔔🔔🔔	23-Mar	BoE base rate decision	Mar	42.5 ▲	40.0	42.5 ○
🔔🔔🔔	24-Mar	Manufacturing PMI (sa) - preliminary data	Mar	48.0 ▼	49.3	49.7 ◡
🔔🔔🔔	24-Mar	Composite PMI - preliminary data	Mar	52.2 ▼	53.1	52.7 ◡
<b>Japan</b> 						
🔔🔔🔔🔔	16-Mar	Industrial production (yoy) - final data	Jan	-3.1% ▼	-2.3%	--
🔔🔔🔔🔔	24-Mar	Consumer inflation CPI (yoy)	Feb	3.3% ▼	4.3%	3.3% ○
🔔🔔🔔	24-Mar	Composite PMI - preliminary data	Mar	51.9 ▲	51.1	--
🔔🔔🔔	24-Mar	Manufacturing PMI - preliminary data	Mar	48.6 ▲	47.7	--
<b>Chile</b> 						
🔔🔔🔔🔔🔔	20-Mar	GDP (yoy)‡	4Q	-2.3% ▼	0.2%	-1.6% ◡
<b>Canada</b> 						
🔔🔔🔔🔔	21-Mar	Consumer inflation CPI (yoy)	Feb	5.2% ▼	5.9%	5.4% ◡

<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

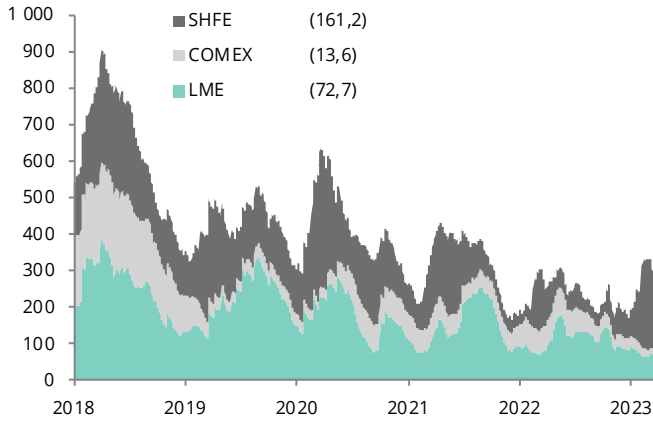
### Key base & precious metal prices, exchange rates and other important market factors

(as of: 24-Mar-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	8 927.00	▲ 2.0%	▲ 6.4%	▲ 6.4%	▼ -14.3%	8 923.48	8 209.00	9 436.00	
Molybdenum	30.25	▼ -8.6%	▲ 15.8%	▲ 15.8%	▲	33.69	29.76	38.28	
Nickel	22 795.00	▲ 0.5%	▼ -25.1%	▼ -25.1%	▼ -38.7%	26 185.59	21 895.00	31 200.00	
Aluminum	2 265.00	▲ 0.7%	▼ -4.0%	▼ -4.0%	▼ -38.2%	2 400.47	2 232.00	2 636.00	
Tin	24 375.00	▲ 8.3%	▼ -1.7%	▼ -1.7%	▼ -42.5%	26 333.31	22 225.00	32 050.00	
Zinc	2 900.00	▼ -1.4%	▼ -4.1%	▼ -4.1%	▼ -30.0%	3 138.53	2 864.00	3 509.00	
Lead	2 135.00	▲ 2.8%	▼ -8.6%	▼ -8.6%	▼ -9.1%	2 139.11	2 034.00	2 331.00	
<b>LBMA (USD/troz)</b>									
Silver	23.17	▲ 15.3%	▼ -3.2%	▼ -3.2%	▼ -8.5%	22.48	20.09	24.44	
Gold <sup>2</sup>	1 993.80	▲ 7.1%	▲ 10.0%	▲ 10.0%	▲ 1.5%	1 883.65	1 810.95	1 993.80	
<b>LPPM (USD/troz)</b>									
Platinum <sup>2</sup>	976.00	▲ 2.4%	▼ -8.4%	▼ -8.4%	▼ -4.3%	995.98	912.00	1 100.00	
Palladium <sup>2</sup>	1 418.00	▲ 2.1%	▼ -20.7%	▼ -20.7%	▼ -43.5%	1 573.17	1 361.00	1 802.00	
<b>FX<sup>3</sup></b>									
EURUSD	1.0745	▲ 1.5%	▲ 0.7%	▲ 0.7%	▼ -2.1%	1.0721	1.0500	1.0988	
EURPLN	4.6911	▲ 0.2%	▲ 0.0%	▲ 0.0%	▼ -1.4%	4.7130	4.6688	4.7895	
USDPLN	4.3742	▼ -1.2%	▼ -0.6%	▼ -0.6%	▲ 1.0%	4.3939	4.2803	4.4888	
USDCAD	1.3763	▼ -0.3%	▲ 1.6%	▲ 1.6%	▲ 9.7%	1.3520	1.3312	1.3807	
USDCNY	6.8673	▼ -0.7%	▼ -0.5%	▼ -0.5%	▲ 7.8%	6.8450	6.7010	6.9662	
USDCLP	805.23	▲ 0.5%	▼ -6.3%	▼ -6.3%	▲ 1.4%	812.50	781.49	856.31	
<b>Money market</b>									
3m LIBOR USD	5.101	▼ -0.04	▲ 0.33	▲ 0.33	▲ 4.14	4.900	4.782	5.154	
3m EURIBOR	3.025	▲ 0.05	▲ 0.89	▲ 0.89	▲ 3.51	2.611	2.170	3.025	
3m WIBOR	6.900	▼ -0.03	▼ -0.12	▼ -0.12	▲ 2.38	6.935	6.900	7.010	
5y USD interest rate swap	3.495	▼ -0.52	▼ -0.53	▼ -0.53	▲ 1.02	3.883	3.495	4.408	
5y EUR interest rate swap	2.906	▼ -0.34	▼ -0.33	▼ -0.33	▲ 2.02	3.033	2.672	3.479	
5y PLN interest rate swap	5.340	▼ -0.25	▼ -0.82	▼ -0.82	▼ -0.07	5.517	5.040	6.125	
<b>Fuel</b>									
WTI Cushing	69.31	▼ -9.6%	▼ -13.6%	▼ -13.6%	▼ -39.4%	76.15	66.74	81.31	
Brent	74.05	▼ -10.1%	▼ -12.9%	▼ -12.9%	▼ -37.4%	81.60	71.87	87.23	
Diesel NY (ULSD)	270.40	▼ -3.1%	▼ -19.7%	▼ -19.7%	▼ -36.8%	295.87	262.99	358.84	
<b>Others</b>									
VIX	21.74	▼ -3.06	▲ 0.07	▲ 0.07	▲ 0.07	20.79	17.87	26.52	
BBG Commodity Index	103.02	▼ -1.5%	▼ -8.7%	▼ -8.7%	▼ -20.2%	107.64	102.15	112.52	
S&P500	3 970.99	▲ 2.8%	▲ 3.4%	▲ 3.4%	▼ -12.1%	3 997.67	3 808.10	4 179.76	
DAX	14 957.23	▼ -3.1%	▲ 7.4%	▲ 7.4%	▲ 4.8%	15 186.90	14 181.67	15 653.58	
Shanghai Composite	3 265.65	▲ 1.1%	▲ 5.7%	▲ 5.7%	▲ 0.5%	3 248.74	3 116.51	3 328.39	
WIG 20	1 670.18	▼ -7.2%	▼ -6.8%	▼ -6.8%	▼ -21.9%	1 844.53	1 670.18	1 937.98	
KGHM	114.95	▼ -5.4%	▼ -9.3%	▼ -9.3%	▼ -36.9%	134.18	113.30	153.80	

° 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>

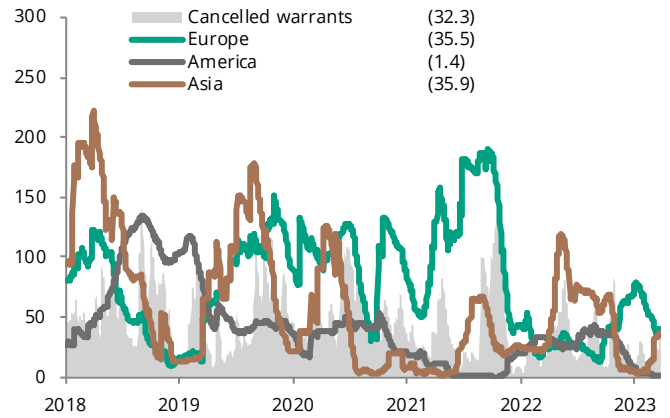
Source: Bloomberg, KGHM Polska Miedź

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



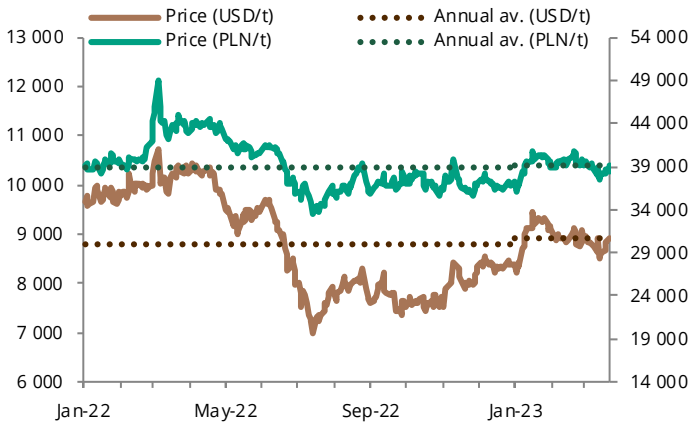
Note: Latest values in brackets. Source: Bloomberg, KGHM

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



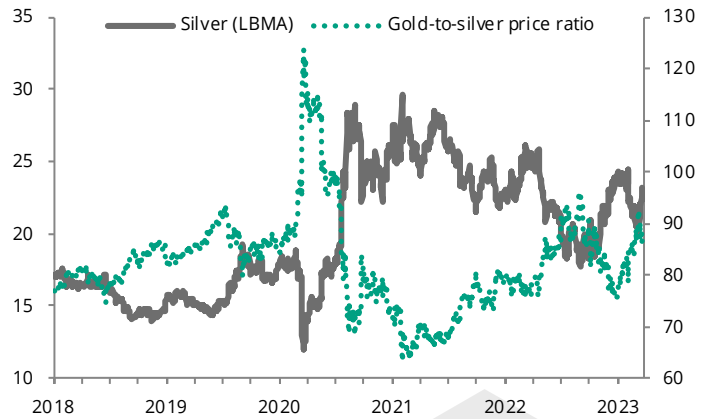
Note: Latest values in brackets. Source: Bloomberg, KGHM

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



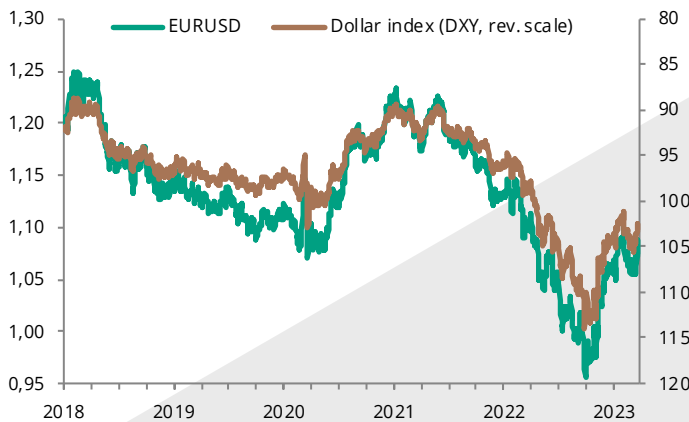
Source: Bloomberg, KGHM Polska Miedź

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



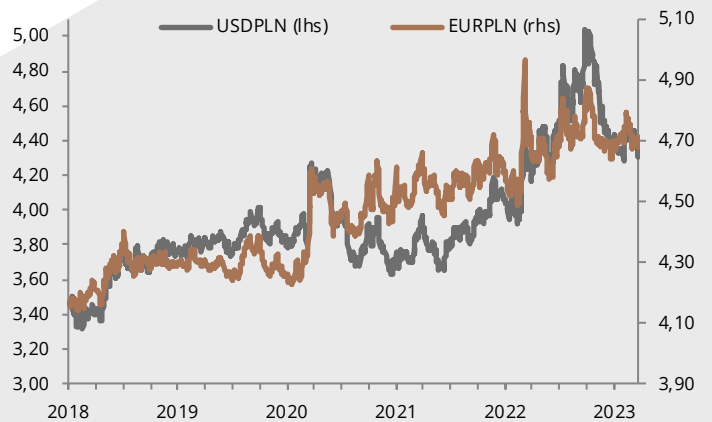
Source: Bloomberg, KGHM Polska Miedź

**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:  
**13 - 26 March 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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