

Market Overview



as of: 16th January 2023

- **Copper:** Base metals face supply challenges as recession fears undercut economic growth and hurt demand. The producers anticipate this will change within a couple of years when old mines are exhausted and the global appetite grows for metals needed to electrify economies (*page 2*).
- **Precious metals:** Based on expected PV growth, in line with climate change commitments, solar manufacturers would require at least 85% of global silver reserves, according to the new study (*page 5*).
- **China:** China's gross domestic product (GDP) likely grew just 2.8% in 2022 as lockdowns weighed on activity and confidence, according to the median forecasts of 49 economists polled by Reuters, slower than a rise seen in October's forecast and braking sharply from 8.4% growth in 2021 (*page 7*).

Key market prices

	Close price	2w chng.
LME (USD/t)		
▲ Copper	9 107.00	8.6%
▼ Nickel	27 175.00	-10.7%
LBMA (USD/troz)		
▼ Silver	23.68	-1.1%
▲ Gold (PM)	1 907.15	5.2%
FX		
▲ EURUSD	1.0814	1.4%
▲ EURPLN	4.6915	0.0%
▼ USDPLN	4.3272	-1.7%
▼ USDCAD	1.3406	-1.0%
▼ USDCPL	822.32	-4.3%
Stocks		
▲ KGHM	153.80	21.3%

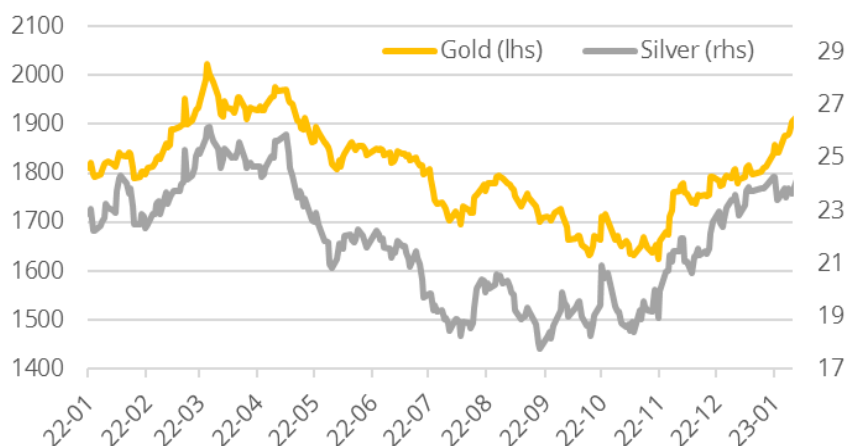
Source: Bloomberg, KGHM Polska Miedź S.A.; (*more on page 10*)

Important macroeconomic data

Release	For		
 Univ. of Michigan conf.	Jan	64.6	▲
 Caixin's manuf. PMI	Dec	49.0	▼
 Industr. prod. (sa, mom)	Nov	1.0%	▲
 Industrial prod. (yoy)	Nov	0.7%	▲
 Copper exports (\$)	Dec	4 282	▲

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

Silver vs gold price (USD/oz) from January 2022



Source: Bloomberg, KGHM Polska Miedź S.A.

Market Risk Unit

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Base and precious metals | Other commodities

Copper

North America's top mining CEOs anticipate turbulent year ahead

Base metals face supply challenges as recession fears undercut economic growth and hurt demand. The producers anticipate this will change within a couple of years when old mines are exhausted and the global appetite grows for metals needed to electrify economies.

Top executives from North America's biggest metals producers are bracing for a turbulent 2023 marked by recession, geopolitical risks and an uncertain investment climate that could change the face of mining. The year "is going to be seen as the start of serious change — in the way mines operate and are held accountable," Barrick Gold Corp. Chief Executive Officer Mark Bristow said in an interview. "The scenario that's playing out across the globe is a very interesting dynamic, and honestly I don't think anywhere is perfectly safe to invest right now." The industry has navigated through both challenges and opportunities in the past year, ranging from surging input costs and supply-chain snags to soaring demand for metals deemed crucial to economic growth and a global shift from fossil fuels. The heads of North American miners expect some such trends to continue through 2023, along with some new themes. The spat between First Quantum Minerals Ltd. and Panama's government over a copper mine in the Central American nation may be a sign of things to come. Countries are cracking down on foreign firms mining their resources, both to seize on the rush to secure critical minerals and boost revenue in cash-strapped jurisdictions. "There's increased demand for taxation by a lot of governments based on what they believe are mining companies making more money because of higher prices," Lundin Mining Corp. CEO Peter Rockandel said in a Jan. 5 interview. "But I don't think they're considering the inflationary pressures we face." Precious and base metal producers alike have faced pressure to fork over higher taxes and curb exports, sometimes facing the risk of expulsion. Barrick's Bristow said the precious metals sector requires "considerable consolidation" in the near term, but "no more stupid M&As." Meanwhile, copper miners are headed for a round of deal-making in advance of rising long-term demand for the wiring metal. "We've seen for the first time in a long time M&A start to pick up and personally I think that theme is going to continue," Lundin's Rockandel said. "A lot of the big companies are talking about the challenges of finding more copper and wanting to grow their production." Brazilian giant Vale SA is also looking to sell part of its base metals business, which includes a chunk of the nickel-rich Sudbury basin in Canada, in the coming months. The mining industry had \$67.5 billion in announced mergers and acquisitions last year, a 17% drop from the prior period, according to data compiled by Bloomberg. Gold producers expect bullion prices to rise this year as investors seek shelter on concerns of a global recession and challenging market conditions. Gold averaged just above \$1,800 an ounce last

year. "I'd be surprised to see gold at any less than \$2,000 per ounce a year from now," Ammar Al-Joundi, CEO of Agnico Eagle Mines Ltd., said in a Jan. 6 interview. "This environment where you've got runaway government deficits and the highest inflation in decades is really positioning gold as demonstrably the best hard currency in the world." Base metals face supply challenges as recession fears undercut economic growth and hurt demand. The producers anticipate this will change within a couple of years when old mines are exhausted and the global appetite grows for metals needed to electrify economies. "The demand created through electrification is going to be significant, and it's difficult to see today where the new supply is going to come from to fully satisfy that," Teck Resources Ltd. CEO Jonathan Price said.

Mining investments on the rise in Peru

Exploration activities received \$383 million in investments between January and November 2022, a 33.9% increase compared to the same period the year before. Accumulated mine development investments, on the other hand, added up to \$778 million by November 2022, a 49.5% hike from the previous year.

The Peruvian Ministry of Energy and Mines (Minem) issued its latest Mining Statistical Bulletin which shows that accumulated mining investments rose by 3.2% through November 2022 to \$4.6 billion compared to the \$4.4 billion accrued the year before. November was, in fact, the best-performing month last year, adding up to \$467 million, a 7.8% increase from the \$434 million reported in the previous month. According to the Bulletin, Anglo American was the top investor in 2022 with \$964 million. The London-based company's share in all mining investments was 20.9%. Next to Anglo was Minera Antamina, which is co-owned by Glencore, BHP Group, Teck Resources and Mitsubishi Corp. The joint venture invested \$394 million last year and was followed by Newmont's Minera Yanacocha whose investments reached \$332 million and Southern Peru, which invested \$238 million. Altogether, the four companies were responsible for 42.7% of the mining investments in Peru in 2022. The official report puts the spotlight on exploration activities, which received \$383 million in investments between January and November 2022, a 33.9% increase compared to the same period the year before. Accumulated mine development investments, on the other hand, added up to \$778 million by November 2022, a 49.5% hike from the previous year. Peru is the world's second-largest copper producer after Chile.

Other important information on copper market:

- Chile's total copper production fell 6.9% in November to 449,000 tonnes, government body Cochilco said. Production from state-owned giant Codelco slipped 11.7% on a yearly basis to 135,800 tonnes, Cochilco said, while output from BHP-controlled Escondida fell 0.62% to 79,800 tonnes. Collahuasi, a joint venture of Anglo American and Glencore, produced 46,700 tonnes, a 7.9% drop.
- China's imports of unwrought copper and copper products reached 514,049 mt in December, 13% lower from a year earlier and down 4.8% from a month before. The decline was in line with market expectations, in the absence of import arbitrage opportunity since early November. The import arbitrage window is expected to remain closed before the Lunar New Year holidays in view of sluggish demand and accumulated stocks in the domestic market, sources said. China's imports of unwrought copper totaled 5.87 million mt in 2022, up 6.2% from a year earlier.

Precious Metals

UNSW researchers say solar needs to slim down on silver

Based on expected PV growth, in line with climate change commitments, solar manufacturers would require at least 85% of global silver reserves, according to the new study.

New research from the University of New South Wales outlines the need for solar cell and module makers to reduce or eliminate the use of silver in their products. Based on expected PV growth, in line with climate change commitments, solar manufacturers would require at least 85% of global silver reserves, according to the new study. Solar cells use silver to conduct the electric charge out of the cell and into the system. Each cell produced today requires just a few milligrams of the precious metal, but this quickly adds up and plenty of recent studies have illustrated how the rapidly growing solar industry could exhaust much of the world's known silver reserves by 2050 or even earlier. Even before the alarm began to be raised about availability of silver, cell makers were keen to cut their consumption of it anyway, as it is one of the most costly materials used in solar manufacturing. Now, new research from the University of New South Wales (UNSW) shows silver reduction efforts need to ramp up significantly to avoid a supply problem, particularly with the introduction of new n-type technologies that require more silver than the PERC cells that still represent more than 80% of the market today. The UNSW group's latest paper, "The silver learning curve for photovoltaics and projected silver demand for net-zero emissions by 2050," was recently published in *Progress in Photovoltaics*. It examines the impact of different PV technology pathways on silver demand. "The results show that the current rate of reduction in silver consumption is not sufficient to avoid increasing silver demand from the PV industry and that the transition to high-efficiency technologies including TOPCon and SHJ could greatly increase silver demand, posing price and supply risks," the researchers said. The key conclusion is that increased investment is needed in research and development of "silver-lean" PV technologies, and recent achievements with copper plating are presented as particularly promising. "Although plating requires a major change from existing manufacturing practices, copper plating represents a promising opportunity to accelerate the reduction of silver usage by the PV industry, while overcoming any physical constraints imposed by printing technology," the group said. Over the longer term, the recycling of older solar modules could provide a significant source of silver. However, further investment and research is needed here, and it may still be several decades before the volume of PV waste processed each year is enough for more than a marginal contribution of new silver. The scientists further warn against relying on the possibility of increased silver production, noting that the most accessible silver resources have already been mined. They said that opening up new mines will likely mean digging deeper or processing lower quality ores – all of which leads to increased energy consumption.

China Extends Gold Buying With Fresh Flows to Central Bank

The People's Bank of China raised its holdings by 30 tons in December. This follows November's addition of 32 tons, and brings the nation's holdings to a total of 2,010 tons.

China reported an increase in its gold reserves for a second straight month, topping up holdings again after its first reported purchase in more than three years. The People's Bank of China raised its holdings by 30 tons in December, according to data on its website. This follows November's addition of 32 tons, and brings the nation's holdings to a total of 2,010 tons. Central bank purchases of bullion hit a record in the third quarter of last year at almost 400 tons, with only a quarter going to publicly identified institutions, according to the World Gold Council's demand trends report. China's disclosure of its gold buying sheds some light on the identity of these mystery buyers. Market watchers speculate Russia could be another purchaser. China had previously reported its reserves infrequently. November's 32-ton addition was the country's first reported inflow since September 2019. Prior to that, the last previous increase was in October 2016. The nation's end-December foreign currency reserves rose \$10.2 billion from the previous month, and totaled \$3.13 trillion at the end of last month, People's Bank of China data showed on Saturday. Asian nations have been replenishing their war chests amid waning dollar strength.

Global economies | Foreign exchange markets





China Growth Seen Rebounding To 4.9% In 2023








China's gross domestic product (GDP) likely grew just 2.8% in 2022 as lockdowns weighed on activity and confidence, according to the median forecasts of 49 economists polled by Reuters, slower than a rise seen in October's forecast and braking sharply from 8.4% growth in 2021.

China's economic growth is likely to rebound to 4.9% in 2023, before steadying in 2024, a Reuters poll showed, as policymakers pledge to step up support for the COVID-ravaged economy. Gross domestic product (GDP) likely grew just 2.8% in 2022 as lockdowns weighed on activity and confidence, according to the median forecasts of 49 economists polled by Reuters, slower than a 3.2% rise seen in October's forecast and braking sharply from 8.4% growth in 2021. Chinese leaders have pledged to spur the world's second-largest economy this year while addressing some key drags on growth - the "zero-COVID" policy and a severe property sector downturn. Strict COVID curbs were abruptly lifted in December, but surging infections are causing some near-term pains. "We expect economic activities and consumption to rebound strongly from March-April onwards, helped by post-COVID re-opening and release of excess savings," Tao Wang, chief China economist at UBS, said in a research note. "The lack of large-scale income- and consumption-stimulus will likely limit the rebound." The expected 2022 growth rate would be far below the official target of around of 5.5%. Excluding the 2.2% expansion after the initial COVID hit in 2020, it would also be the worst showing since 1976 - the final year of the decade-long Cultural Revolution that wrecked the economy. GDP in the fourth quarter of 2022 likely grew 1.8% from a year earlier as anti-virus restrictions intensified, the poll showed, slowing from the third-quarter's 3.9% pace. On a quarterly basis, the economy is forecast to contract 0.8% in the fourth quarter, compared with growth of 3.9% in July-September, the poll showed. At an agenda-setting meeting in December, top leaders pledged to focus on stabilising the \$17-trillion economy in 2023 and step up policy adjustments to ensure key targets are hit. China is likely to aim for economic growth of at least 5% in 2023 to keep a lid on unemployment, policy sources said. The central bank has promised to make its policy "precise and forceful" this year to support the economy, keeping liquidity reasonably ample and lowering funding costs for businesses. Analysts expect the central bank to cut the benchmark lending rate - the one-year loan prime rate (LPR) - by 5 basis points (bps) in the first quarter. On Dec. 20, the central bank kept benchmark lending rates unchanged for the fourth consecutive month, matching the forecasts of most market watchers who nevertheless expect further monetary easing to prop up the slowing economy. The central bank last cut banks' reserve requirement ratio by 25 bps effective from Dec. 5, its second such move last year. "Economic policy would turn more supportive in 2023. We expect 11-12% credit growth in 2023 vs 9.6% in 2022" Larry Hu, chief China economist at Macquarie, said in a note. "Fiscal policy could also turn more expansionary with a record quota for local government special bonds." Consumer inflation will likely quicken to 2.3% in 2023 from 2.0% in 2022, before steadying in 2024, the poll showed.

Macroeconomic calendar

Important macroeconomic data releases

Weight	Date	Event	For	Reading ¹	Previous	Consensus ²	
China							
🔴🔴🔴	23-Mar	Caixin's manufacturing PMI	Dec	49.0 ▼	49.4	49.1	🔴
🔴	23-Jul	Foreign reserves (USD bn)	Dec	3 128 ▲	3 117	3 150	🔴
🔴	23-Oct	New yuan loans (CNY bn)‡	Dec	1 400 ▲	1 214	1 200	🟢
🔴🔴🔴🔴	23-Dec	Consumer inflation CPI (yoy)	Dec	1.8% ▲	1.6%	1.8%	🟡
🔴🔴	23-Dec	Producer inflation PPI (yoy)	Dec	-0.7% ▲	-1.3%	-0.1%	🔴
🔴🔴	13-Jan	Trade balance (USD bn)‡	Dec	78.0 ▲	69.3	76.9	🟢
🔴🔴	13-Jan	Exports (yoy)‡	Dec	-9.9% ▼	-8.9%	-11.1%	🟢
Poland							
🔴🔴🔴	23-Feb	Manufacturing PMI	Dec	45.6 ▲	43.4	44.0	🟢
🔴🔴🔴🔴🔴	23-Apr	NBP base rate decision	Jan	6.75% -	6.75%	6.75%	🟡
🔴🔴🔴🔴	23-May	Consumer inflation CPI (yoy) - preliminary data	Dec	16.6% ▼	17.5%	17.4%	🔴
🔴🔴	13-Jan	Trade balance (EUR mn)‡	Nov	-1 496 ▲	-2 284	-2 327	🟢
🔴🔴	13-Jan	Exports (EUR mn)‡	Nov	30 018 ▲	28 843	29 809	🟢
🔴🔴	13-Jan	Current account balance (EUR mn)‡	Nov	- 422 ▲	- 597	-1 014	🟢
US							
🔴🔴🔴	23-Mar	Manufacturing PMI - final data	Dec	46.2 -	46.2	46.2	🟡
🔴🔴	23-Apr	ISM Manufacturing	Dec	48.4 ▼	49.0	48.5	🔴
🔴🔴🔴	23-May	Composite PMI - final data	Dec	45.0 ▲	44.6	--	
🔴🔴🔴	23-May	PMI services - final data	Dec	44.7 ▲	44.4	44.4	🟢
🔴🔴	23-Jun	Change in non-farm payrolls (ths)‡	Dec	223 ▼	256	205	🟢
🔴🔴	23-Jun	Underemployment rate (U6)	Dec	6.5% ▼	6.7%	--	
🔴🔴	23-Jun	Unemployment rate‡	Dec	3.5% ▼	3.6%	3.7%	🔴
🔴	23-Jun	Average hourly earnings (yoy)‡	Dec	4.6% ▼	4.8%	5.0%	🔴
🔴🔴	23-Jun	Durable goods orders - final data	Nov	-2.1% -	-2.1%	-2.1%	🟡
🔴🔴🔴🔴	23-Dec	Consumer inflation CPI (mom)	Dec	-0.1% ▼	0.1%	-0.1%	🟡
🔴🔴🔴🔴	23-Dec	Consumer inflation CPI (yoy)	Dec	6.5% ▼	7.1%	6.5%	🟡
🔴🔴	13-Jan	University of Michigan confidence index - preliminary data	Jan	64.6 ▲	59.7	60.7	🟢
Eurozone							
🔴🔴🔴	23-Feb	Manufacturing PMI - final data	Dec	47.8 -	47.8	47.8	🟡
🔴🔴🔴	23-Apr	Composite PMI - final data	Dec	49.3 ▲	48.8	48.8	🟢
🔴🔴🔴	23-Apr	Services PMI - final data	Dec	49.8 ▲	49.1	49.1	🟢
🔴🔴	23-May	Producer inflation PPI (yoy)‡	Nov	27.1% ▼	30.5%	27.5%	🔴
🔴🔴🔴🔴	23-Jun	Core CPI (yoy) - preliminary data	Dec	5.2% ▲	5.0%	5.1%	🟢
🔴🔴🔴🔴	23-Jun	CPI estimate (yoy)	Dec	9.2% ▼	10.1%	9.5%	🔴
🔴🔴	23-Jun	Retail sales (yoy)‡	Nov	-2.8% ▼	-2.6%	-3.1%	🟢
🔴	23-Jun	Economic confidence‡	Dec	95.8 ▲	94.0	94.7	🟢
🔴	23-Jun	Industrial confidence‡	Dec	- 1.5 ▲	- 1.9	- 1.3	🔴
🔴	23-Jun	Consumer confidence - final data	Dec	-22.2 -	-22.2	-22.2	🟡
🔴🔴	23-Sep	Unemployment rate	Nov	6.5% -	6.5%	6.5%	🟡
🔴🔴🔴🔴	13-Jan	Industrial production (sa, mom)‡	Nov	1.0% ▲	-1.9%	0.5%	🟢
🔴🔴🔴🔴	13-Jan	Industrial production (wda, yoy)	Nov	2.0% ▼	3.4%	0.8%	🟢
🔴	13-Jan	Trade balance (EUR mn)	Nov	- 11.7 ▲	- 26.5	--	

Weight	Date	Event	For	Reading ¹	Previous	Consensus ²
Germany 						
👤👤👤	23-Feb	Manufacturing PMI - final data	Dec	47.1 ▼	47.4	47.4 🟡
👤👤	23-Mar	Unemployment rate‡	Dec	5.5% -	5.5%	5.6% 🟡
👤👤👤👤	23-Mar	Harmonized consumer inflation HICP (yoy) - preliminary data	Dec	9.6% ▼	11.3%	10.2% 🟡
👤👤👤👤	23-Mar	Consumer inflation CPI (yoy) - preliminary data	Dec	8.6% ▼	10.0%	9.0% 🟡
👤👤👤	23-Apr	Composite PMI - final data	Dec	49.0 ▲	48.9	48.9 🟢
👤👤👤	23-Jun	Factory orders (wda, yoy)‡	Nov	-11.0% ▼	-3.3%	-5.8% 🟡
👤👤👤	23-Jun	Retail sales (yoy)‡	Nov	-5.7% ▲	-6.5%	-5.9% 🟢
👤👤👤👤	23-Sep	Industrial production (wda, yoy)‡	Nov	-0.4% ▼	-0.2%	0.1% 🟡
France 						
👤👤👤	23-Feb	Manufacturing PMI - final data	Dec	49.2 ▲	48.9	48.9 🟢
👤👤👤👤	23-Apr	Harmonized consumer inflation HICP (yoy) - preliminary data	Dec	6.7% ▼	7.1%	7.3% 🟡
👤👤👤👤	23-Apr	Consumer inflation CPI (yoy) - preliminary data	Dec	5.9% ▼	6.2%	6.4% 🟡
👤👤👤	23-Apr	Composite PMI - final data	Dec	49.1 ▲	48.0	48.0 🟢
👤👤👤👤	23-Oct	Industrial production (yoy)	Nov	0.7% ▲	-2.7%	-1.0% 🟢
Italy 						
👤👤👤	23-Feb	Manufacturing PMI	Dec	48.5 ▲	48.4	48.6 🟡
👤👤👤	23-Apr	Composite PMI	Dec	49.6 ▲	48.9	--
👤👤👤👤	23-May	Harmonized consumer inflation HICP (yoy) - preliminary data	Dec	12.3% ▼	12.6%	12.3% 🟡
👤👤	23-Sep	Unemployment rate‡	Nov	7.8% ▼	7.9%	7.8% 🟡
👤👤👤👤	13-Jan	Industrial production (wda, yoy)	Nov	-3.7% ▼	-1.6%	--
UK 						
👤👤👤	23-Mar	Manufacturing PMI (sa) - final data	Dec	45.3 ▲	44.7	44.7 🟢
👤👤👤	23-May	Composite PMI - final data	Dec	49.0 -	49.0	49.0 🟡
👤👤👤👤	13-Jan	Industrial production (yoy)‡	Nov	-5.1% ▼	-4.7%	-2.8% 🟡
Japan 						
👤👤👤	23-Apr	Manufacturing PMI - final data	Dec	48.9 ▲	48.8	--
👤👤👤	23-Jun	Composite PMI - final data	Dec	49.7 ▼	50.0	--
Chile 						
👤👤👤👤	23-Mar	Economic activity (yoy)	Nov	-2.5% ▼	-1.2%	-2.8% 🟡
👤👤	23-May	Nominal wages (yoy)	Nov	10.7% ▼	10.9%	--
👤👤👤	23-Sep	Copper exports (USD mn)	Dec	4 282 ▲	3 618	--
Canada 						
👤👤👤	23-Jun	Net change in employment (ths)	Dec	104 ▲	10.1	5.0 🟢

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

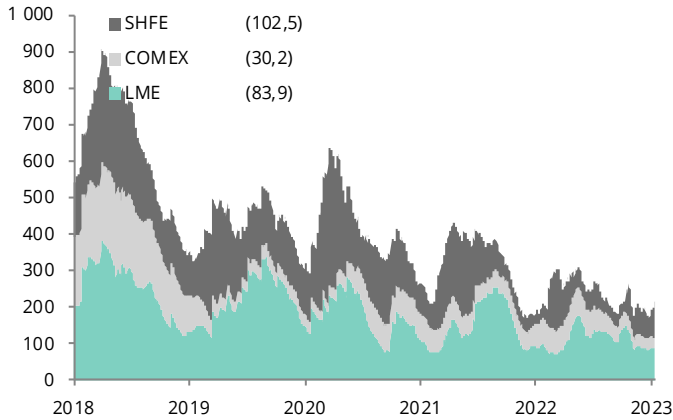
Key market data

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

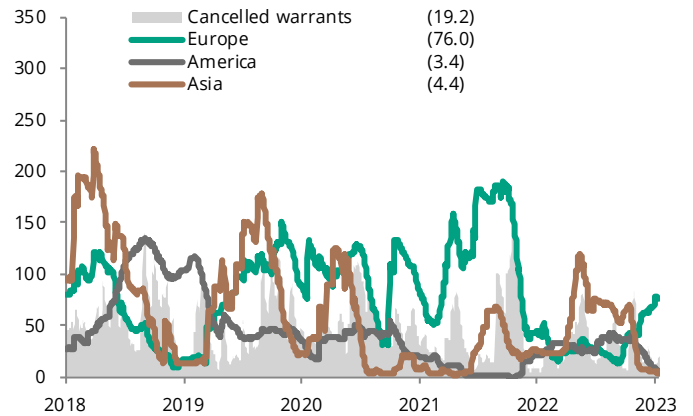
<i>(as of: 13-Jan-23)</i>		Price change ¹				From year beginning ²		
	Price	2W	QTD	YTD	1Y	Average	Min	Max
LME (USD/t; Mo in USD/lbs)								
Copper	9 107.00	▲ 8.6%	▲ 8.6%	▲ 8.6%	▼ -8.7%	8 670.61	8 209.00	9 107.00
Molybdenum	29.83	▲ 14.2%	▲ 14.2%	▲ 14.2%	▲	31.09	29.76	32.25
Nickel	27 175.00	▼ -10.7%	▼ -10.7%	▼ -10.7%	▲ 22.8%	28 177.78	26 475.00	31 200.00
Aluminum	2 511.00	▲ 6.4%	▲ 6.4%	▲ 6.4%	▼ -15.2%	2 360.28	2 242.50	2 511.00
Tin	28 530.00	▲ 15.0%	▲ 15.0%	▲ 15.0%	▼ -31.8%	26 050.56	25 050.00	28 530.00
Zinc	3 301.50	▲ 9.1%	▲ 9.1%	▲ 9.1%	▼ -7.7%	3 117.11	2 977.00	3 301.50
Lead	2 215.00	▼ -5.1%	▼ -5.1%	▼ -5.1%	▼ -6.4%	2 253.83	2 155.00	2 331.00
LBMA (USD/troz)								
Silver	23.68	▼ -1.1%	▼ -1.1%	▼ -1.1%	▲ 1.8%	23.78	23.41	24.30
Gold ²	1 907.15	▲ 5.2%	▲ 5.2%	▲ 5.2%	▲ 4.8%	1 867.37	1 834.00	1 907.15
LPPM (USD/troz)								
Platinum ²	1 057.00	▼ -0.8%	▼ -0.8%	▼ -0.8%	▲ 8.3%	1 079.11	1 057.00	1 100.00
Palladium ²	1 739.00	▼ -2.7%	▼ -2.7%	▼ -2.7%	▼ -8.5%	1 774.78	1 736.00	1 802.00
FX³								
EURUSD	1.0814	▲ 1.4%	▲ 1.4%	▲ 1.4%	▼ -5.7%	1.0666	1.0500	1.0814
EURPLN	4.6915	▲ 0.0%	▲ 0.0%	▲ 0.0%	▲ 3.6%	4.6853	4.6688	4.6981
USDPLN	4.3272	▼ -1.7%	▼ -1.7%	▼ -1.7%	▲ 9.7%	4.3817	4.3272	4.4373
USDCAD	1.3406	▼ -1.0%	▼ -1.0%	▼ -1.0%	▲ 7.4%	1.3469	1.3376	1.3658
USDCNY	6.7010	▼ -2.9%	▼ -2.9%	▼ -2.9%	▲ 5.4%	6.8075	6.7010	6.9150
USDCLP	822.32	▼ -4.3%	▼ -4.3%	▼ -4.3%	▼ -0.5%	842.74	822.32	856.31
Money market								
3m LIBOR USD	4.792	▲ 0.03	▲ 0.03	▲ 0.03	▲ 4.55	4.802	4.782	4.830
3m EURIBOR	2.328	▲ 0.20	▲ 0.20	▲ 0.20	▲ 2.89	2.249	2.170	2.328
3m WIBOR	6.920	▼ -0.10	▼ -0.10	▼ -0.10	▲ 4.17	6.971	6.920	7.010
5y USD interest rate swap	3.653	▼ -0.37	▼ -0.37	▼ -0.37	▲ 2.09	3.746	3.577	3.922
5y EUR interest rate swap	2.783	▼ -0.46	▼ -0.46	▼ -0.46	▲ 2.73	2.901	2.769	3.045
5y PLN interest rate swap	5.255	▼ -0.91	▼ -0.91	▼ -0.91	▲ 1.45	5.407	5.105	5.988
Fuel								
WTI Cushing	79.86	▼ -0.5%	▼ -0.5%	▼ -0.5%	▼ -2.8%	75.85	72.84	79.86
Brent	84.38	▼ -0.7%	▼ -0.7%	▼ -0.7%	▼ 0.0%	79.84	76.41	84.38
Diesel NY (ULSD)	330.59	▼ -1.8%	▼ -1.8%	▼ -1.8%	▲ 26.3%	315.58	301.19	330.59
Others								
VIX	18.35	▼ -3.32	▼ -3.32	▼ -3.32	▼ -1.96	21.04	18.35	22.90
BBG Commodity Index	111.58	▼ -1.1%	▼ -1.1%	▼ -1.1%	▲ 8.3%	109.38	107.36	111.58
S&P500	3 999.09	▲ 4.2%	▲ 4.2%	▲ 4.2%	▼ -14.2%	3 904.83	3 808.10	3 999.09
DAX	15 086.52	▲ 8.4%	▲ 8.4%	▲ 8.4%	▼ -5.9%	14 708.77	14 181.67	15 086.52
Shanghai Composite	3 195.31	▲ 3.4%	▲ 3.4%	▲ 3.4%	▼ -10.1%	3 157.67	3 116.51	3 195.31
WIG 20	1 923.44	▲ 7.3%	▲ 7.3%	▲ 7.3%	▼ -20.1%	1 894.42	1 824.82	1 937.98
KGHM	153.80	▲ 21.3%	▲ 21.3%	▲ 21.3%	▲ 0.9%	144.24	130.50	153.80

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

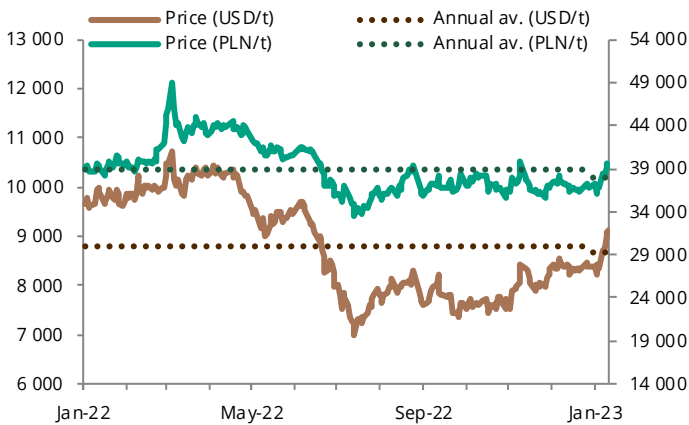
Source: Bloomberg, KGHM Polska Miedź

Copper: official exchange stocks (thousand tonnes)


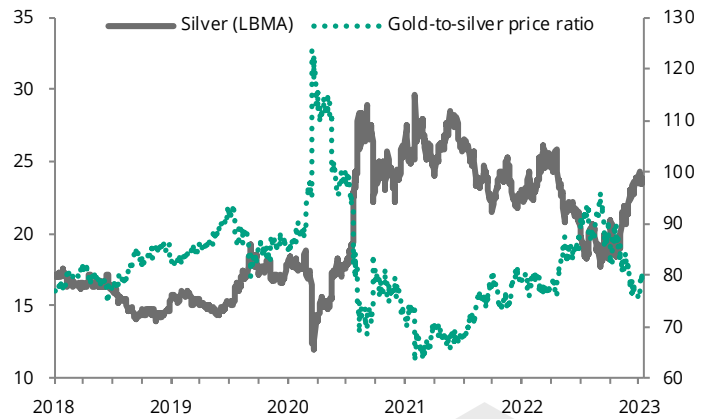
Note: Latest values in brackets. Source: Bloomberg, KGHM

Copper: official LME stocks (thousand tonnes)


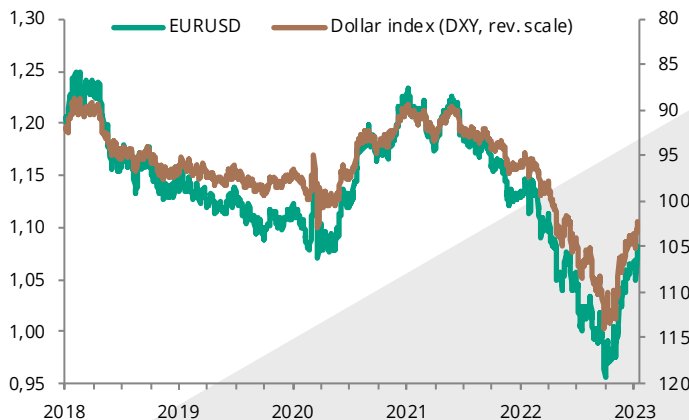
Note: Latest values in brackets. Source: Bloomberg, KGHM

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


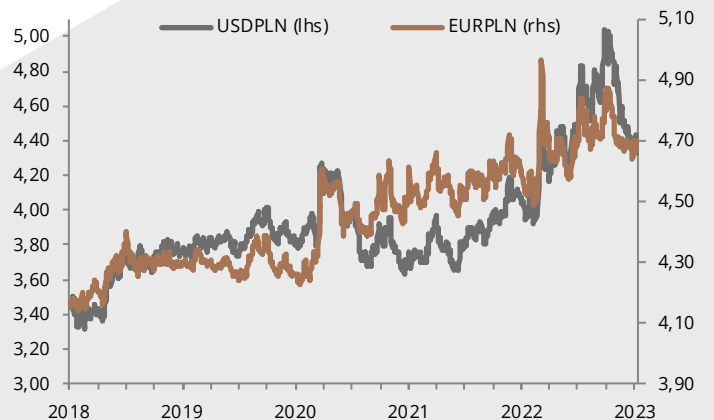
Source: Bloomberg, KGHM Polska Miedź

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:
2 - 15 January 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 (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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