Market Overview

as of: 22nd November 2021

- **Copper:** A very dynamic growth and an equally dynamic collapsing time-spreads between the spot price and the forward price suggest much more is on its way with all eyes now on China, where the country's copper smelters have openly talked about shipping large amounts of metal to LME warehouses. The world's largest buyer turning on the export taps is a rare phenomenon and one that attests to how tight availability is in the rest of the world *(page 2)*.
- **Precious metals:** The global silver market will see demand reach 1.29 billion ounces this year. Industrial demand leading the way which will achieve a new high of 524 million ounces (Moz). The photovoltaic demand will rise by 13% to over 110 Moz, a new high and highlighting silver's key role in the green economy *(page 5)*.
- **China:** Property developers get most of their financing by selling homes before they are built. A pullback in mortgage lending, and a growing pessimism among households are causing sales to fall. Given China's status as the world's second-biggest economy, it means softer demand for commodities pumped out by countries like Australia and Indonesia and slower spending by Chinese consumers who are crucial to multinationals *(page 8)*.

After a very dynamic increase in the spread between the spot price and the forward price, there was an equally dynamic decline

* When the spot price is higher than the forward prices, the chart captures LME fixing

Source: Bloomberg, KGHM Polska Miedź S.A.

Key market prices

		Close price	2w chng.
	LME (USD/t)		
▼	Copper	9 620.50	-1.2%
▲	Nickel	19 980.00	3.7%
	LBMA (USD/troz)		
▲	Silver	24.79	4.1%
▲	Gold (PM)	1 861.10	3.3%
	FX		
▼	EURUSD	1.1271	-2.2%
▲	EURPLN	4.6844	1.7%
▲	USDPLN	4.1457	3.9%
▲	USDCAD	1.2639	1.5%
▲	USDCLP	834.57	2.3%
	Stocks		
▼	KGHM	142.85	-4.8%

Source: Bloomberg, KGHM Polska Miedź S.A.; *(more on page 12)*

Important macroeconomic data

Release	For		
CPI (yoy)	Oct	1.5%	▲
PPI (yoy)	Oct	13.5%	▲
CPI (yoy)	Oct	6.2%	▲
CPI (yoy)	Oct	4.1%	-
CPI (yoy)	Oct	6.8%	-

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

Market Risk Unit

marketrisk@kghm.com

Please see important disclosures at the end of this document (page 14)

Base and precious metals | Other commodities

Copper

All eyes on China as LME copper spreads collapse

A very dynamic growth and an equally dynamic collapsing time-spreads between the spot price and the forward price suggest much more is on its way with all eyes now on China, where the country's copper smelters have openly talked about shipping large amounts of metal to LME warehouses. The world's largest buyer turning on the export taps is a rare phenomenon and one that attests to how tight availability is in the rest of the world.

The backwardation, which rocketed to an unprecedented $1,103.50 per tonne in Oct, was valued at just $15.50 at Nov 16 close

As Reuters informs, calm has returned to the London Metal Exchange (LME) copper market after last month's storm, which forced the exchange to step in to protect those caught with a short position. The LME cash premium, which rocketed to an unprecedented $1,103.50 per tonne prior to the intervention, was valued at just $15.50 at Tuesday's (Nov 16) close. Regulatory action has been complemented by a gradual rebuild in LME on-warrant copper stocks, which fell to a multi-year low of just 14,150 tonnes in the run-up to the October chaos. The collapsing time-spreads suggest much more is on its way with all eyes now on China, where the country's copper smelters have openly talked about shipping large amounts of metal to LME warehouses. The world's largest buyer turning on the export taps is a rare phenomenon and one that attests to how tight availability is in the rest of the world. The amount of copper making its way on to LME has so far been underwhelming given the extreme level of the cash premium last month. Arrivals since the middle of October have totalled 51,125 tonnes, split across LME warehouses in Europe (19,025 tonnes), Asia (18,675) and the United States (13,425 tonnes). Thanks to a conspicuous absence of cancellations since the LME's intervention, on-warrant stocks have rebuilt to 62,100 tonnes. The headline inventory figure has still been falling as all the metal that was cancelled going into the October squeeze leaves the warehouse system. But on-warrant stocks are the physical liquidity base underlying LME settlement and the rebuild has played its part in calming market nerves. That said, the relatively sedate pace of the stocks build doesn't seem to justify the way the backwardation structure across the forward curve has imploded over the last couple of days. That, rather, speaks to the expectation that a significant volume of copper is on its way from China. China is a regular exporter of copper in refined form, although the volumes are dwarfed by what moves in the opposite direction. Outbound shipments totalled 212,000 tonnes last year, largely reflecting toll-smelting arrangements, which allow refined metal produced from imported concentrates to leave the country without paying any export tax. There have been rare occasions when China's smelters have stepped up exports. Domestic market weakness and a tight LME market in 2016 incentivised 426,000 tonnes of refined metal out of the country, which was and remains a record annual tally. Perhaps more pertinent to the current situation was another extreme LME squeeze in 2012, which saw the China Smelter Purchase Team export copper to deliver against their short positions. Exports in May of that year were 102,375 tonnes, still an all-time monthly high. It's the same group of smelters threatening to deliver large amounts of metal this time around but the problem is securing enough shipping capacity to move significant volumes to the nearest LME warehouses in either Taiwan or South Korea. The shipping sector is still experiencing its own turmoil with high freight rates and log-jammed ports, including in China. One of the reasons LME stocks fell so low in the first place is that copper has not been immune to the transportation snarl up - Fastmarkets, for example, reports multi-month back-ups in shipments of the metal from Africa. Just one week's delay in global copper shipments is equivalent to around 600,000 tonnes of metal, according to analysts at Citi. That may help explain the grab for LME-registered copper in the weeks running up to the October date. If Chinese exports do accelerate over the coming weeks, they will help plug some of the supply gaps that have opened up elsewhere and, if delivered to the LME, will provide a much-needed reboot. But the global rebalancing will be no more than stocks relocation and may well leave China itself short of metal if demand surprises on the upside. It's worth noting that Shanghai Futures Exchange stocks are also currently low at 38,037 tonnes last Friday (Nov 12). Goldman Sachs, which remains a copper super-bull, argues that global copper inventory is at record lows on a consumption-weighted basis and could fall further, putting the metal on the path to scarcity pricing. The bank is looking for the price to "balance at $12,000 per tonne into next year" with "the potential for a price spike to even higher levels". That's an increasingly minority view among analysts, who are more concerned about signs of a slowing Chinese economy, but the possibility of a stock-out is still keeping would-be short-sellers at bay. Fund managers have scaled back their long exposure on the CME copper contract since the October but have shown no inclination to express a bearish view. The outright LME copper price remains finely poised at $9,500 per tonne. Bears and bulls are waiting to see what happens next to LME stock levels, which means that right now everyone's looking at China.

Codelco's China clients stall on 2022 deals amid copper backwardation -sources

It is not unusual for buyers in top copper consumer China to consider Codelco’s offer too high and take time to agree. On this occasion, however, backwardation is the main stumbling block.

According to Reuters, Codelco’s Chinese customers are reluctant to sign up for copper supply in 2022 at the highest premium in seven years because of strong backwardation in the copper market. Backwardation is a structure where prices for immediate delivery are higher than for future delivery, indicating strong near-term demand, and Chinese buyers are afraid they may lose money on the copper further down the line. Chile’s Codelco, the world’s biggest producer of mined copper, on Nov. 1 offered Chinese clients physical delivery of copper at a premium of $105 a tonne over London Metal Exchange (LME) prices next year, the highest level since 2015. It is not unusual for buyers in top copper consumer China to consider Codelco's offer too high and take time to agree. On this occasion, however, backwardation is the main stumbling block. The spread between cash and three-month LME copper prices blew out to a record of more than $1,100 a tonne on Oct. 18 as inventories dwindled to their lowest since 1974. The backwardation has since eased but buyers are still reluctant to sign up while prompt prices are higher. He Jinbi, chairman of Chinese metals trader Maike Group, a Codelco customer, said he sees the backwardation persisting for a whole year because of low copper inventories and logistical constraints. A shortage of shipping containers is causing bottlenecks in global trade. Maike is in the process of arranging logistics for possible copper exports from China, said He, in a move that could ease backwardation by delivering metal into LME warehouses.

Other important information on copper market:

- Aurubis supervisory board approves the construction of a new, multi-metal recycling plant in Augusta (Richmond County), Georgia. The supervisory board expects Aurubis Richmond to generate an annual contribution to earnings of EU80 million Ebitda at full production capacity starting in fiscal year 2025/26. Investment is to be fully financed from current cash flow. Construction will start in summer 2022. Commissioning scheduled for the first half of 2024. Aurubis says plant would be the first ever secondary smelter for multi-metal recycling in the U.S.
- Production of copper —Peru's main metal export— grew 10.9% between January and September 2021 compared to the same period last year, the Ministry of Energy and Mines (Minem) reported on Sunday. Similarly, a significant increase was observed in the production of gold (12.8%), zinc (30.5%), silver (30.3%), lead (16%), iron (63.2%), tin (45.3%), and molybdenum (6%) in said period, according to figures from Minem's Mining Statistical Bulletin (BEM). The rebound in copper production was boosted by higher production from operations of Antamina, Cerro Verde and Southern companies. Gold production was generated by Poderosa —the main gold producer in Peru— and Yanacocha —which produced 863,401 grams of fine gold in September. Silver output grew 3.7% on a year-on-year basis in September, thanks to operations of Antamina and Ares mining companies. In the case of tin, the increase was due to better results of Minsur, the only tin producer in Peru. Production of molybdenum was driven by Southern Peru —the main producer of this metal in the country— followed by Sociedad Mineras, Cerro Verde and Las Bambas.

Precious Metals

Silver demand to surpass 1 billion ounces this year, hitting a 6-year high

The global silver market will see demand reach 1.29 billion ounces this year. Industrial demand leading the way which will achieve a new high of 524 million ounces (Moz). The photovoltaic demand will rise by 13% to over 110 Moz, a new high and highlighting silver's key role in the green economy.

Metals Focus forecasts that mine production is to increase by 6% to 829 million ounces

The global silver market will see demand reach 1.29 billion ounces this year, the first time it has breached 1 billion since 2015, according to the latest report from the Silver Institute. In its interim market report, the Silver Institute said that silver demand had seen broad-based growth through 2021, with industrial demand leading the way. "The recovery in silver industrial demand from the pandemic will see this segment achieve a new high of 524 million ounces (Moz). In terms of some of the key segments, we estimate that photovoltaic demand will rise by 13% to over 110 Moz, a new high and highlighting silver's key role in the green economy," said analysts at Metals Focus. The report also noted robust investment demand with interest in physical bullion expected to increase 34% or by 64 million ounces to 263 million ounces, representing a six-year high. "Growth began with the social media buying frenzy before spreading to more traditional silver investors. Indian demand reflects improved sentiment towards the silver price and a recovering economy. Overall, physical investment in India is forecast to surge almost three-fold this year, having collapsed in 2020," the analysts said. Holdings in silver-backed exchange-traded funds are projected to rise by 150 million ounces. "During 2021 and through to November 10, holdings rose by 83 Moz, taking the global total to 1.15 billion ounces, close to its record high of 1.21 billion ounces which occurred on February 2, at the height of the social media storm," the analysts said. The report said that silver jewelry and silverware fabrication is expected to see partial recoveries from the 2020 depressed levels, growing by 18% and 25%, respectively. Looking at the supply side, Metals Focus said that mine production is forecasted to increase by 6% to 829 million ounces. "This recovery is largely the result of most mines being able to operate at full production rates throughout the year following enforced stoppages in 2020 due to the pandemic. Those countries where output was most heavily impacted last year, such as Peru, Mexico and Bolivia, will have the biggest increases," the analysts said. Looking at the market's supply/demand fundamentals, Metals Focus looks for silver to see a modest supply deficit of 7 million ounces. This will mark the first deficit since 2015. Economists have noted that precious metals have seen new bullish momentum after consumer inflation rose to its highest level in 31 years.

Phillip Baker, CEO of Hecla Mining, said to Kitco News that he expects silver prices to remain in a strong uptrend as investors look for inflation hedges. "Right now, we are seeing the consequences of trying to smooth out our economic system and avoid crisis," he said. "The result is higher inflation and it is doesn't seem to be very transitory." Hecla, which represents 40% of all silver mined in the U.S. This year is celebrating its 130th anniversary. Baker added that he expects silver demand to continue to grow and sees the potential of a 2-billion ounce market in the next 30 years. "There's no doubt that with the desire to have clean energy, the demand for silver is going to continue to increase and increase probably at a much faster rate than what we've seen in the past," he said. "With all that demand, silver is more expensive." To put the demand growth into perspective, Baker said that the world would need to see seven to ten new mines the equivalent size of its Green Creek in Southeast Alaska. The mine is forecasted to produce about 10 million ounces of silver this year. It is one of the largest primary silver producers in the world.

Major Mexican silver mine faces closure due to expired permit

The possible shutdown of the San Jose mine is part of a prolonged fight that could chill investor appetite in Mexico, the world's biggest silver producer, and a top ten miner of more than a dozen other metals including gold.

In 2020, San Jose produced 6.2 million ounces of silver, along with nearly 38,000 ounces of gold

According to Reuters, a top Canadian miner in southern Mexico is trying to avoid the closure of its 10-year-old silver mine after its environmental permit expired in October. The possible shutdown of the San Jose mine, operated by a local unit of Fortuna Silver Mines, is part of a prolonged fight over the project that could chill investor appetite in Mexico, the world's biggest silver producer, and a top ten miner of more than a dozen other metals including gold. While the San Jose mine has been in operation since 2011, its main environmental authorization expired on Oct. 23, despite company efforts since May to petition the environment ministry to approve a 10-year extension. A recent court order allows the mine to keep running, but only on a temporary basis. The high-stakes standoff highlights what many industry leaders view as the government's resistance to the sector's growth and its ties to anti-mining activists. Last year, San Jose was Mexico's seventh-biggest silver producer, responsible for 6.2 million ounces, along with nearly 38,000 ounces of gold. Fortuna has invested some $350 million at the underground mine in Oaxaca state, where it employs 1,200 workers. Fortuna also operates mines in Argentina, Burkina Faso and Peru. Sources with knowledge of the matter told Reuters that despite ongoing meetings between government officials and company executives, the mine's future remains in doubt. The environment ministry issued a statement saying it would work to organize the consultation of nearby indigenous Zapotec communities as part of the mine's requested environmental authorization. That would let these communities decide "over their territory," boosting environmental protection by involving all stakeholders, it added. Fortuna said in a statement that the permit extension is a "normal and recurrent administrative procedure" for operators that are in compliance with environmental obligations, adding that the process had become "more cumbersome." In April, Environment Minister Maria Luisa Albores met with activists seeking to shutter the mine, she wrote that she met with them at the request of President Andres Manuel Lopez Obrador. The photo taken at the meeting shows Albores speaking to a crowd in front of a large banner calling for the denial of San Jose's permit.. A senior environment ministry official told Reuters in September that miners should face "strict" oversight due to the industry's major impacts, but did not single out specific projects. Lopez Obrador, a leftist resource nationalist who has repeatedly clashed with foreign mining companies, has said his government will not approve any new mining concessions, arguing past governments doled out too many.

Global economies | Foreign exchange markets

China's Property Crackdown Is Dragging Economy to Lows of 1990

Property developers get most of their financing by selling homes before they are built. A pullback in mortgage lending, and a growing pessimism among households are causing sales to fall. Given China's status as the world's second-biggest economy, it means softer demand for commodities pumped out by countries like Australia and Indonesia and slower spending by Chinese consumers who are crucial to multinationals.

That building investments, plus the output of related sectors like steel and cement production, accounts for anything between 20% and 25% of China's GDP, economists estimate

China's economy is slowing to the lows seen way back in 1990 -- a price President Xi Jinping seems willing to pay to reduce its dependence on the property sector. Beijing's squeeze on the real estate sector will linger into next year and beyond, a development many hadn't seen coming that has now prompted banks like Goldman Sachs Group Inc., Nomura Holdings Inc. and Barclays Plc to cut their growth forecasts in 2022 to below 5%. It's a big stepdown from pre-pandemic rates closer to 7%. Given China's status as the world's second-biggest economy, it means softer demand for commodities pumped out by countries like Australia and Indonesia and slower spending by Chinese consumers who are crucial to multinationals from Apple Inc. to Volkswagen AG. Economists are coming to realize that the Communist Party's Politburo, the top decision-making body, was serious when it vowed this year not to use the property sector to stimulate the economy as they did following past downturns. Officials say excess supply of housing is a threat to economic stability, and want investment to go to prioritized sectors like hi-tech manufacturing rather than more apartments. "President Xi thinks the property sector is too big," said Chen Long, an economist at Beijing-based consultancy Plenum. "Xi is personally involved in real estate policies, so ministries don't dare to ease policies without his approval." Rob Subbaraman, Nomura's chief economist, estimates China's slowdown to 4.3% next year from 7.1% this year "can directly reduce world GDP growth by around 0.5 percentage points." Beijing is willing to "sacrifice some short-term growth for greater long-term stability," he said. Weak consumer spending is another drag on the economy, with China's zero tolerance to sporadic coronavirus outbreaks and stringent lockdown measures spooking consumers and forcing business to shut. "In the case of longer-lasting zero Covid policy in China or a much deeper property downturn, GDP growth in 2022 could drop to 4%," Tao Wang, chief China economist at UBS AG, said in a note. China's property sector is the biggest question mark over the economy because of its huge scale -- more than 900 million square meters of apartments are constructed each year, official data show. That investment, plus the output of related sectors like steel and cement production, accounts for anything between 20% and 25% of China's GDP, economists estimate. Any slowdown -- or an outright decline -- in real estate development would leave a gap in the economy that expansion in no other sector could easily fill. Real estate construction powered China's V-shaped economic recovery from the pandemic, but the sector moved into contraction this summer after Beijing orchestrated a slowdown in mortgage lending that brought property developers such as China Evergrande Group close to bankruptcy. The most spectacular decline has been in newly started housing projects, the steel-intensive part of real estate development, which fell more than 33% year-on-year in October, the biggest decline on record. Property developers get most of their financing by selling homes to households before they are built. A pullback in mortgage lending, and a growing pessimism about the property market among households are causing sales to fall. While the People's Bank of China announced a slight uptick in mortgage lending in October, "the government is not rushing to stimulus even though starts have been collapsing," said Rosealea Yao of Gavekal Dragonomics. Beijing's recent announcement of trials of a property tax to discourage the purchase of housing as an investment will damage sales sentiment further, she added As a result, multiple economists predict a 10% decline in new housing starts next year. But because Beijing is concerned about risks to social stability if developers are unable to complete pre-sold projects, officials will try to ensure existing projects are finished. That means overall investment in real estate could grow next year even if sales and housing starts decline. Morgan Stanley sees 2% growth in property investment next year, which would be down sharply from a pre-pandemic rate of 8%. Others, like UBS, are more pessimistic, predicting a 5% decline. The slowdown could last for years: Goldman Sachs expects the housing sector to reduce GDP growth by 1 percentage-point annually each year through to 2025. While Beijing has a lot of control over the housing market, it's still possible the slowdown has self-reinforcing dynamics that could be hard for authorities to control, leading to an even sharper downturn than the more pessimistic forecasts. For example, Chinese households tend to avoid property purchases when prices are falling, which can lead to lower sales and more price declines.

Macroeconomic calendar

Important macroeconomic data releases

Weight	Date	Event	For	Reading [1]		Previous	Consensus [2]	
		China						
✪✪✪✪	10-Nov	Consumer inflation CPI (yoy)	Oct	1.5%	▲	0.7%	1.4%	◓
✪✪	10-Nov	Producer inflation PPI (yoy)	Oct	13.5%	▲	10.7%	12.3%	◓
✪	10-Nov	New yuan loans (CNY bn)‡	Oct	826	▼	1 663	800	◓
✪✪✪✪	15-Nov	Industrial production (yoy)	Oct	3.5%	▲	3.1%	3.0%	◓
✪✪	15-Nov	Fixed assets investments (ytd, yoy)	Oct	6.1%	▼	7.3%	6.2%	◒
✪	15-Nov	Retail sales (yoy)	Oct	4.9%	▲	4.4%	3.7%	◓
		Poland						
✪✪✪✪✪	12-Nov	GDP (yoy) - preliminary data‡	3Q	5.1%	▼	11.2%	4.8%	◓
✪✪✪✪✪	12-Nov	GDP (qoq) - preliminary data‡	3Q	2.1%	▲	1.8%	1.8%	◓
✪✪✪✪	15-Nov	Consumer inflation CPI (yoy) - final data	Oct	6.8%	▪	6.8%	--	
✪✪	15-Nov	Trade balance (EUR mn)‡	Sep	- 111	▲	-1 279	- 526	◓
✪✪	15-Nov	Exports (EUR mn)‡	Sep	24 537	▲	21 680	24 379	◓
✪✪	15-Nov	Current account balance (EUR mn)‡	Sep	-1 339	▲	-1 441	-1 330	◒
✪✪✪✪	16-Nov	Core CPI (excluding food and energy, yoy)	Oct	4.5%	▲	4.2%	4.5%	○
✪✪	19-Nov	Average gross salary (yoy)	Oct	8.4%	▼	8.7%	8.9%	◒
✪	19-Nov	Employment (yoy)	Oct	0.5%	▼	0.6%	0.4%	◓
		US						
✪✪✪✪	10-Nov	Consumer inflation CPI (mom)	Oct	0.9%	▲	0.4%	0.6%	◓
✪✪✪✪	10-Nov	Consumer inflation CPI (yoy)	Oct	6.2%	▲	5.4%	5.9%	◓
✪✪	12-Nov	University of Michigan confidence index - preliminary data	Nov	66.8	▼	71.7	72.5	◒
✪✪✪✪	16-Nov	Industrial production (mom)	Oct	1.6%	▲	-1.3%	0.9%	◓
✪✪	16-Nov	Retail sales (excluding autos, mom)‡	Oct	1.7%	▲	0.7%	1.0%	◓
✪	16-Nov	Capacity utilization	Oct	76.4%	▲	75.2%	75.9%	◓
✪✪	18-Nov	Philadelphia Fed business outlook	Nov	39.0	▲	23.8	24.0	◓
		Eurozone						
✪	09-Nov	ZEW survey expectations	Nov	25.9	▲	21.0	--	
✪✪✪✪	12-Nov	Industrial production (sa, mom)‡	Sep	-0.2%	▲	-1.7%	-0.5%	◓
✪✪✪✪	12-Nov	Industrial production (wda, yoy)‡	Sep	5.2%	▲	4.9%	4.1%	◓
✪	15-Nov	Trade balance (EUR mn)	Sep	7.3	▲	4.8	--	
✪✪✪✪✪	16-Nov	GDP (sa, yoy) - preliminary data	3Q	3.7%	▪	3.7%	3.7%	○
✪✪✪✪✪	16-Nov	GDP (sa, qoq) - preliminary data	3Q	2.2%	▪	2.2%	2.2%	○
✪✪✪✪	17-Nov	Consumer inflation CPI (yoy) - final data	Oct	4.1%	▪	4.1%	4.1%	○
✪✪✪✪	17-Nov	Core CPI (yoy) - final data	Oct	2.0%	▼	2.1%	2.1%	◒
		Germany						
✪✪✪✪	10-Nov	Harmonized consumer inflation HICP (yoy) - final data	Oct	4.6%	▪	4.6%	4.6%	○
✪✪✪✪	10-Nov	Consumer inflation CPI (yoy) - final data	Oct	4.5%	▪	4.5%	4.5%	○
		France						
✪✪✪✪	16-Nov	Harmonized consumer inflation HICP (yoy) - final data	Oct	3.2%	▪	3.2%	3.2%	○
✪✪✪✪	16-Nov	Consumer inflation CPI (yoy) - final data	Oct	2.6%	▪	2.6%	2.6%	○
		Italy						
✪✪✪✪	10-Nov	Industrial production (wda, yoy)‡	Sep	4.4%	▲	-0.1%	4.0%	◓
✪✪✪✪	16-Nov	Harmonized consumer inflation HICP (yoy) - final data	Oct	3.2%	▲	3.1%	3.1%	◓

Weight	Date	Event	For	Reading [1]		Previous	Consensus [2]	
		UK						
✪✪✪✪✪	11-Nov	GDP (yoy) - preliminary data	3Q	6.6%	▼	23.6%	6.8%	◡
✪✪✪✪✪	11-Nov	GDP (qoq) - preliminary data	3Q	1.3%	▼	5.5%	1.5%	◡
✪✪✪✪	11-Nov	Industrial production (yoy)‡	Sep	2.9%	▼	4.0%	3.1%	◡
✪✪	16-Nov	Unemployment rate (ILO, 3-months)	Sep	4.3%	▼	4.5%	4.4%	◡
✪✪✪✪	17-Nov	Consumer inflation CPI (yoy)	Oct	4.2%	▲	3.1%	3.9%	◠
		Japan						
✪✪✪✪✪	15-Nov	GDP (annualized, qoq) - preliminary data‡	3Q	-3.0%	▼	1.5%	-0.7%	◡
✪✪✪✪✪	15-Nov	GDP (qoq, sa) - preliminary data‡	3Q	-0.8%	▼	0.4%	-0.2%	◡
✪✪✪✪	15-Nov	Industrial production (yoy) - final data	Sep	-2.3%	▪	-2.3%	--	
✪✪✪✪	19-Nov	Consumer inflation CPI (yoy)	Oct	0.1%	▼	0.2%	0.2%	◡
		Chile						
✪✪✪	08-Nov	Copper exports (USD mn)‡	Oct	4 481	▲	4 400	--	
✪✪✪✪✪	18-Nov	GDP (yoy)	3Q	17.2%	▼	18.1%	17.6%	◡
		Canada						
✪✪✪✪	17-Nov	Consumer inflation CPI (yoy)	Oct	4.7%	▲	4.4%	4.7%	○

[1] Reading difference to previous release: ▲ = higher than previous; ▼ = lower than previous; ▪= equal to previous.
[2] Reading difference to consensus: ◠ = higher than consensus; ◡ = lower than consensus; ○= equal to consensus.
mom = month-on-month; yoy = year-on-year; qoq = quarter on quarter; ytd year-to-date; sa = seasonally adjusted; wda = working days adjusted; ‡ = previous data after revision.
Source: Bloomberg, KGHM Polska Miedź

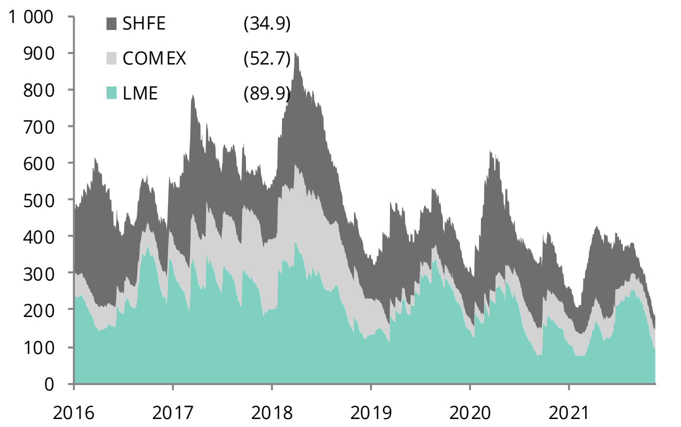
Key market data

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

(as of: 19-Nov-21)		Price change[1]				From year beginning[2]		
	Price	2W	QTD	YTD	1Y	Average	Min	Max
LME (USD/t; Mo in USD/lbs)								
Copper	9 620.50	▼ -1.2%	▲ 6.4%	▲ 24.3%	▲ 36.9%	9 281.97	7 755.50	10 724.50
Molybdenum	18.93	▼ -1.0%	▲ 1.0%	▲ 88.7%	▲	15.60	9.95	20.05
Nickel	19 980.00	▲ 3.7%	▲ 9.9%	▲ 20.8%	▲ 27.3%	18 275.95	15 907.00	20 530.00
Aluminum	2 661.00	▲ 6.8%	▼ -6.7%	▲ 34.5%	▲ 34.2%	2 453.57	1 951.50	3 180.00
Tin	39 750.00	▲ 3.5%	▲ 8.6%	▲ 93.5%	▲ 112.3%	31 796.91	20 965.00	39 750.00
Zinc	3 215.00	▼ -0.4%	▲ 6.6%	▲ 18.0%	▲ 18.2%	2 958.82	2 539.00	3 815.00
Lead	2 230.00	▼ -6.9%	▲ 5.5%	▲ 13.1%	▲ 14.3%	2 193.83	1 896.00	2 504.00
LBMA (USD/troz)								
Silver	24.79	▲ 4.1%	▲ 15.1%	▼ -6.4%	▲ 3.4%	25.43	21.53	29.59
Gold[2]	1 861.10	▲ 3.3%	▲ 6.8%	▼ -1.6%	▲ 0.2%	1 799.73	1 683.95	1 943.20
LPPM (USD/troz)								
Platinum[2]	1 036.00	▲ 0.8%	▲ 7.6%	▼ -3.6%	▲ 9.7%	1 106.24	931.00	1 294.00
Palladium[2]	2 079.00	▲ 2.5%	▲ 9.5%	▼ -12.3%	▼ -10.0%	2 466.25	1 871.00	3 000.00
FX [3]								
EURUSD	1.1271	▼ -2.2%	▼ -2.7%	▼ -8.1%	▼ -4.7%	1.1897	1.1271	1.2338
EURPLN	4.6844	▲ 1.7%	▲ 1.1%	▲ 1.5%	▲ 4.6%	4.5579	4.4541	4.6844
USDPLN	4.1457	▲ 3.9%	▲ 3.8%	▲ 10.3%	▲ 9.5%	3.8326	3.6545	4.1457
USDCAD	1.2639	▲ 1.5%	▼ -0.8%	▼ -0.7%	▼ -3.4%	1.2505	1.2040	1.2856
USDCNY	6.3871	▼ -0.2%	▼ -0.9%	▼ -2.1%	▼ -3.0%	6.4605	6.3685	6.5718
USDCLP	834.57	▲ 2.3%	▲ 3.9%	▲ 17.3%	▲ 10.1%	749.26	693.74	834.57
Money market								
3m LIBOR USD	0.164	▲ 0.02	▲ 0.03	▼ -0.07	▼ -0.05	0.157	0.114	0.241
3m EURIBOR	-0.559	▲ 0.01	▼ -0.01	▼ -0.01	▼ -0.03	-0.545	-0.573	-0.529
3m WIBOR	1.690	▲ 0.13	▲ 1.46	▲ 1.48	▲ 1.47	0.323	0.210	1.690
5y USD interest rate swap	1.331	▲ 0.18	▲ 0.28	▲ 0.90	▲ 0.89	0.898	0.416	1.369
5y EUR interest rate swap	-0.142	▲ 0.01	▲ 0.05	▲ 0.32	▲ 0.32	-0.287	-0.485	0.043
5y PLN interest rate swap	3.110	▲ 0.23	▲ 1.23	▲ 2.50	▲ 2.49	1.494	0.583	3.210
Fuel								
WTI Cushing	76.10	▼ -6.4%	▲ 1.4%	▲ 56.8%	▲ 82.3%	67.64	47.62	84.65
Brent	79.24	▼ -4.0%	▲ 0.6%	▲ 54.9%	▲ 83.0%	70.03	50.02	85.70
Diesel NY (ULSD)	229.84	▼ -6.6%	▼ -1.9%	▲ 55.5%	▲ 80.5%	204.84	146.07	259.61
Others								
VIX	17.91	▲ 1.43	▼ -5.23	▼ -4.84	▼ -5.20	19.41	15.01	37.21
BBG Commodity Index	102.31	▼ -0.4%	▲ 1.5%	▲ 31.1%	▲ 39.1%	92.10	78.64	105.84
S&P500	4 697.96	▲ 0.0%	▲ 9.1%	▲ 25.1%	▲ 31.2%	4 223.94	3 700.65	4 704.54
DAX	16 159.97	▲ 0.7%	▲ 5.9%	▲ 17.8%	▲ 23.5%	15 161.55	13 432.87	16 251.13
Shanghai Composite	3 560.37	▲ 2.0%	▼ -0.2%	▲ 2.5%	▲ 5.9%	3 528.99	3 357.74	3 715.37
WIG 20	2 248.18	▼ -7.8%	▼ -2.7%	▲ 13.3%	▲ 25.6%	2 171.47	1 876.85	2 472.33
KGHM	142.85	▼ -4.8%	▼ -9.4%	▼ -21.9%	▲ 5.1%	185.33	141.45	223.80

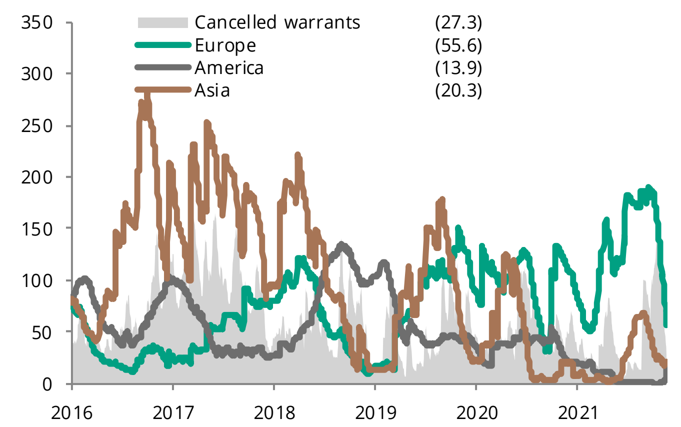
° change over: 2W = two weeks; QTD = quarter-to-day; YTD = year-to-date; 1Y = one year. [1] based on daily closing prices. [2] latest quoted price. [3] central banks' fixing rates (Bank of China HK for USD/CNY). [4].
Source: Bloomberg, KGHM Polska Miedź

Copper: official exchange stocks (thousand tonnes)



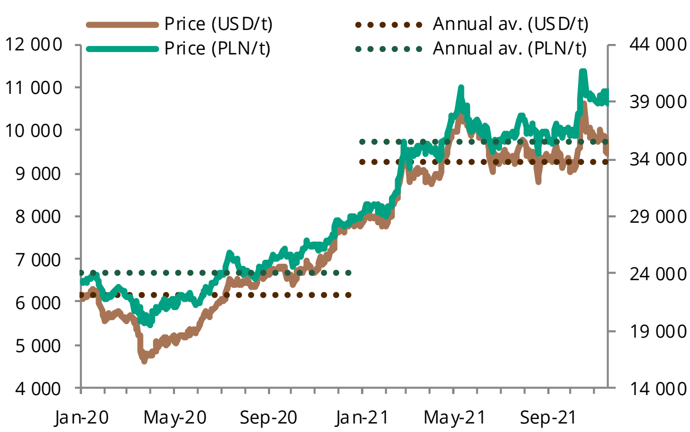
Note: Latest values in brackets. Source: Bloomberg, KGHM

Copper: official LME stocks (thousand tonnes)



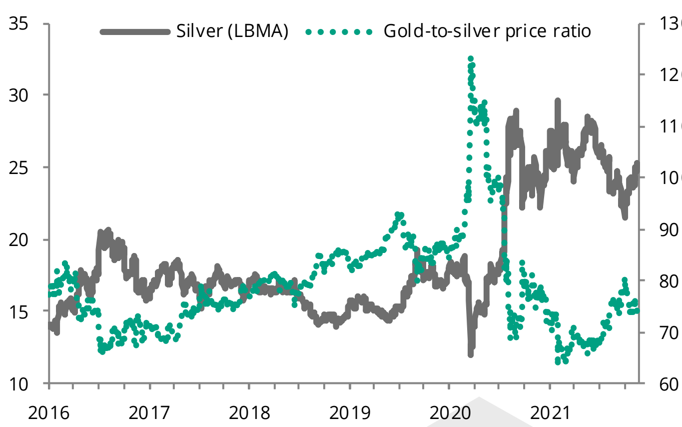
Note: Latest values in brackets. Source: Bloomberg, KGHM

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



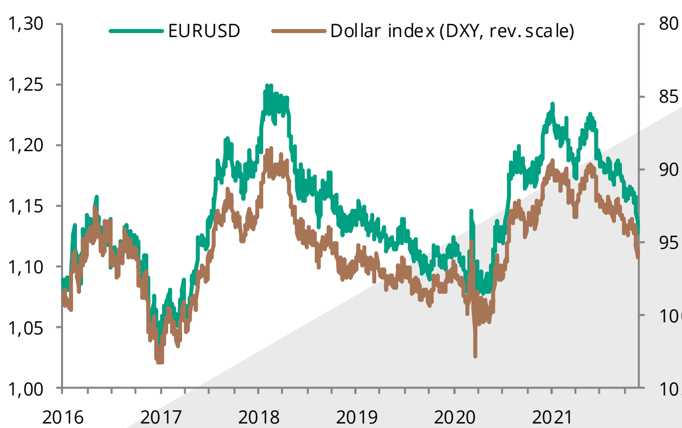
Source: Bloomberg, KGHM Polska Miedź

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



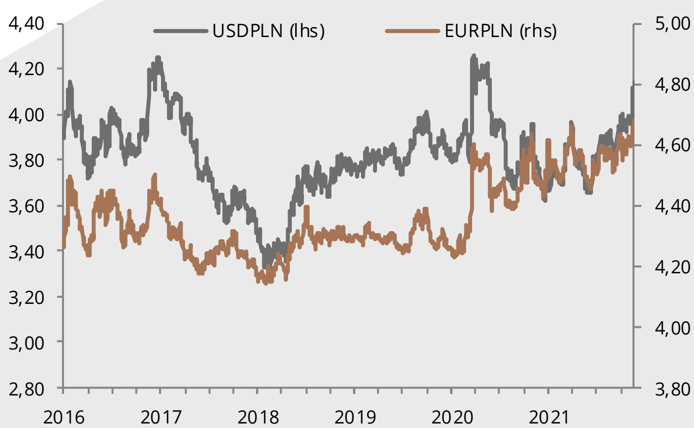
Source: Bloomberg, KGHM Polska Miedź

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: **8 - 21 November 2020.**

▪ 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

In case of questions or comments please contact us:

KGHM Polska Miedz (Polish Copper) S.A.
Departament Ryzyka Finansowego i Rynkowego (Financial and Market Risk Department)
Wydzial Ryzyka Rynkowego (Market Risk Unit)
ul. M. Sklodowskiej-Curie 48
59-301 Lubin, Poland