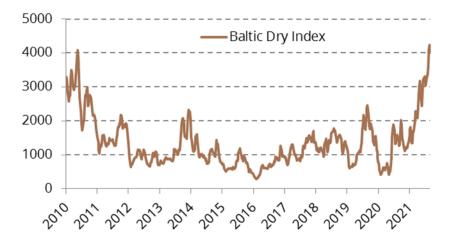


Market Overview

- Copper: The modernization project carried out at the Karabash copper smelter owned by the Russian Copper Company will translate into a 35% increase in blister copper production. From just over 170,000 mt to 230,000 mt/year. A new shop is also being built at the smelter that will produce up to 265,000-275,000 mt/year of copper anodes (page 2).
- Precious metals: Sales of gold bracelets, pendants, earrings and necklaces that draw on traditional Chinese patterns are flying among consumers, especially those in their 20s and 30s. What is known as heritage gold jewellery, which requires intricate craftsmanship, can command premiums of 20% or more over conventional gold jewellery (page 4).
- USA: At the July Federal Open Market Committee meeting, most Fed officials agreed it would probably be appropriate to begin tapering the central bank's \$120-billion-a-month bond-buying program before the end of the year (page 6).

Freight prices rose to the highest level in more than 10 years



Source: Bloomberg, KGHM Polska Miedź S.A.



Key market prices

		Close price	2w chng.
	LME (USD/t)		
•	Copper	9 352.00	-0.8%
•	Nickel	18 914.00	-3.7%
	LBMA (USD/troz)		
	Silver	23.61	1.0%
	Gold (PM)	1 798.50	1.4%
	FX		
•	EURUSD	1.1761	0.0%
	EURPLN	4.5803	0.2%
	USDPLN	3.8978	0.1%
	USDCAD	1.2635	1.0%
	USDCLP	785.06	1.6%
	Stocks		
•	KGHM	181.00	-5.7%

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

Important macroeconomic data

	Release	For	
*:	Industrial prod. (yoy)	Jul	6.4% ▼
	Industrial prod. (mom)	Jul	0.9% 🔺
	Industrial prod. (yoy)	Jul	9.8% 🔻
	Composite PMI	Aug	55.9 🔻
*	GDP (yoy)	2Q	18.1% 🔺

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

Market Risk Unit

marketrisk@kghm.com



Base and precious metals | Other commodities

Copper

Copper Anode Production Launch At Russia's Karabash Works Moved To 2022

The modernization project carried out at the Karabash copper smelter owned by the Russian Copper Company will translate into a 35% increase in blister copper production. From just over 170,000 mt to 230,000 mt/year. A new shop is also being built at the smelter that will produce up to 265,000-275,000 mt/year of copper anodes.

Russian Copper Company declares that its ability to sell copper products is 390,000 tons / year in cathode equivalent

Russian Copper Company has moved the launching of anode production at Karabash Copper Smelting Works, in the Chelyabinsk region, from 2021 to 2022 due to a delay in the new shop's completion amid the pandemic, the company's spokesman told S&P Global Platts on Aug. 26. The modernization project implies a 35% increase in blister copper output at Karabash Copper Smelting Works from just over 170,000 mt to 230,000 mt/year. A new shop is also being built at the smelter that will produce up to 265,000-275,000 mt/year of copper anodes. To carry out all this, Karabash has just built a fourth converter and is installing two anode furnaces with a casting machine. The smelter has no anode capacity at present; it is expected to make first anodes in early 2022. Karabash will supply its copper anodes to Kyshtym Copper-Electrolytic Plant in the Chelyabinsk region for further processing into cathode copper. This will eliminate its anode production to focus entirely on electrolytic refining operations and obtaining cathode copper. At present, blister copper [at Karabash] is poured into ingots, which are then cooled and shipped to Kyshtym, 45 km north of Karabash, where they are processed into anodes. Once the anode shop at Karabash is up and running, re-melting ingots into anodes will no longer be needed, according to the spokesman. "Instead of blister copper ingots, Karabash will ship to Kyshtym copper anodes for their electrolytic refining and production of cathode copper. The project will boost our copper production efficiency," he said. To process the entire volume of copper anodes from Karabash, Kyshtym is build a new electrolysis shop increasing its capacity for cathode by 65% to 230,000 mt/year. Kyshtym is the company's flagship asset for cathode copper: following the modernization, it will house 75% of the company's capacity for the product, with the latter expanding to 310,000 mt/year. Russian Copper Company also produces cathodes at The Novgorod Metallurgical Works (processes copper scrap) and at Uralgidromed in Polevskoy in the Sverdlovsk oblast. Being a private company, it does not disclose sales volumes but says its capacity for saleable copper products totals 390,000 mt/year in cathode equivalent and that it is in Russia's top three copper producers along with Nornickel and UGMK. Aside from cathode copper, its saleable copper products include copper concentrate, copper rod and electrolytic copper foil.



Other important information on copper market:

- Residents near MMG Ltd's Las Bambas copper mine in the Peruvian Andes have blocked a road used to transport the metal after a two-week truce. The road, known as the mining corridor, goes through several districts in the province of Chumbivilcas in Peru's Cuzco region. "The communities have decided to restart the road blockage because the company does not want to participate in dialogue to solve the conflict," Walter Molina, who represents nearby communities. Las Bambas produces 400,000 tonnes of copper a year and is one of the largest mines in Peru, which is itself the world's No. 2 producer of the metal. The conflict between indigenous agricultural communities and MMG's mine is long-standing, but it is an early test of new Peruvian President Pedro Castillo's ability to resolve social unrest. Communities in Chumbivilcas are demanding that MMG pay them to use a dirt road that goes from the Las Bambas mine and eventually arrives on Peru's coast, where minerals are loaded on ships. They also say that so many trucks cross the road every day that the mineral dust that is spread can damage their crops. The leftist Castillo, who has appointed a prime minister who hails from Chumbivilcas, has said his government will prioritize the welfare of historically marginalized communities.
- Chile's Codelco has reached a deal with supervisory staff at its Andina copper mine but the operation remained largely halted as three more worker unions remained on strike. The state-owned mining company said Aug. 24 that a deal with the Sisan union of white-collar staff had been approved by 92% of the members. The three-year deal contract includes a signing bonus of Chilean Peso 5.070 million (\$6,491) and production bonuses but no pay increase. However, almost a thousand mineworkers from the SIIL and SUL unions at the division have been on strike for almost two weeks and were joined last week by the SUPLANT union, crippling production, according to union sources. Located 80 km northeast of the capital Santiago, Andina produced 184,437 mt of copper in concentrates last year plus 2,224 mt of molybdenum. Members from the SUPLANT voted earlier in the week to reject an improved offer from the management.
- China's refined copper imports slumped 54.1% on the year to 254,515 mt in July, the country's customs data showed. July imports were down 3% on the month, on a dearth of buying interest, as import arbitrage opportunity was absent, sources said. Refined copper imports could rebound in August when an import arbitrage window reopens, with supply remaining tight in the domestic market, sources said. A slew of factors are contributing to tightening copper cathode supply in China, including narrowing price gap between copper cathode and scrap copper and declining output, as several domestic smelters face power shortages and routine maintenance. Meanwhile, the pandemic-related lockdown in Malaysia hurt scrap copper production and exports to China, and the spread between scrap and cathodes narrowed to Yuan 538/mt (\$83/mt).
- China's state reserves administration said it would sell off 30,000 tonnes of copper, 50,000 tonnes of zinc and 70,000 tonnes of aluminium via public auction



on Sept. 1. The auctions will mark the third round of metal sales by the National Food and Strategic Reserves Administration since early July in a rare release of state stockpiles aimed at cooling high prices. The administration has auctioned so far a total of 270,000 tonnes of the three metals.

Precious Metals

Dragons fly as Chinese millennials take a shine to gold

Sales of gold bracelets, pendants, earrings and necklaces that draw on traditional Chinese patterns are flying among consumers, especially those in their 20s and 30s. What is known as heritage gold jewellery, which requires intricate craftsmanship can command premiums of 20% or more over conventional gold jewellery.

In the first half of 2021, the demand for jewelry in China more than doubled year on year

According to Reuters for many affluent young Chinese consumers, modern simplicity is out and tradition is back in when it comes to jewellery. Sales of gold bracelets, pendants, earrings and necklaces that draw on dragons, phoenixes, peonies and other traditional Chinese patterns and symbols are flying among consumers, especially those in their 20s and 30s, helping drive a rebound in gold demand in the country after a pandemic-induced slump. An e-commerce boom and national pride are fuelling the rise in demand for what is known as heritage gold jewellery, which requires intricate craftsmanship and can command premiums of 20% or more over conventional gold jewellery, industry executives say. The popularity of these new pieces began to take off in mid-2020 and helped gold jewellery demand in China - the world's top consumer of the metal - more than double in the first half of 2021 from a year earlier to pre-pandemic levels, according to the World Gold Council (WGC). A strengthening economy and improving consumer spending are helping sales. Young consumers' interest in the classic designs and often chunky gold jewellery with a matte finish marks a turnaround in their appetite for the precious metal, previously eschewed as an ostentatious sign of wealth and status symbol for older generations. It also provides a boost for gold at a time when demand from India, the world's secondlargest consumer, has been hit as the pandemic delayed weddings, where gold is traditionally included in the dowry. Major Chinese jewellery retailers like Hong Kong-listed Chow Tai Fook Jewellery Group Ltd and Luk Fook Holdings International Ltd said their heritage gold collections are doing well especially among young consumers. "The younger generation grew up when China's economy was stronger, they have more confidence in Chinese development and may have less admiration for Western culture," said Roland Wang, managing director of WGC China. Jewellers say the products are increasingly popular with millennials in Beijing, Shanghai and other big cities too and a boom in ecommerce, giving consumers access to much greater choice of jewellery products, is reinforcing the trend. In anticipation of longer-term demand, gold jewellery manufacturers are stepping up investment in heritage gold. A manager at a Shenzhen-based manufacturer, said his firm is mainly promoting heritage gold this year after receiving large orders from major brands and customers.



"Heritage gold sales were amazing this Lunar New Year holiday, surpassing that of conventional gold jewellery," he said. "After seeing this trend, our company expanded research and development on design and technology to create more new designs of heritage gold. Other gold jewellery manufacturers in Shenzhen are doing the same."



Global economies | Foreign exchange markets

Powell says taper could start in 2021, with no rush on rate hike

At the July Federal Open Market Committee meeting, most Fed officials agreed it would probably be appropriate to begin tapering the central bank's \$120-billion-a-month bond-buying program before the end of the year.

The economy has now met the test of "substantial further progress" toward the Fed's inflation objective that Powell and his colleagues said would be a precondition for tapering the bond-buying

Federal Reserve Chair Jerome Powell said the central bank could begin reducing its monthly bond purchases this year, though it won't be in a hurry to begin raising interest rates thereafter. The economy has now met the test of "substantial further progress" toward the Fed's inflation objective that Powell and his colleagues said would be a precondition for tapering the bond-buying, while the labor market has also made "clear progress," the Fed chief said in a virtual speech to the Kansas City Fed's annual Jackson Hole symposium. Investors took the news of the coming taper in their stride -- avoiding any hint of the so-called 2013 "tantrum" when the Fed surprised markets by unexpectedly announcing it would start to pare back asset purchases. The S&P 500 rose during the muchanticipated address to stand more than 0.6% higher. Ten-year Treasury yields nudged slightly lower to around 1.33% and the dollar fell.

At the July Federal Open Market Committee meeting, most Fed officials agreed it would probably be appropriate to begin tapering the central bank's \$120-billion-a-month bond-buying program before the end of the year, according to a record of the gathering. Some are pushing for a move as soon as next month. Monetary policy makers would like to conclude the purchases before they begin raising interest rates, and several in June saw a possible need for rate increases as early as 2022 amid inflation that is running above the central bank's 2% target. The Fed cut its benchmark rate to nearly zero and relaunched the crisis-era purchase program last year at the onset of the pandemic.

Many of the regional Federal Reserve presidents who spoke -- including Atlanta's Raphael Bostic, Cleveland's Loretta Mester, Dallas's Robert Kaplan and St. Louis's James Bullard -- repeated their views that they favor the taper starting soon. Quarterly projections published in June showed seven of 18 FOMC participants thought it would be appropriate to begin raising rates next year, while six more expected rate increases would become appropriate by 2023.

The Fed chief spoke as investors awaited a decision from President Joe Biden on whether to renominate him for a second term or pick someone else. Bloomberg reported that Biden advisers were considering recommending Powell for reappointment. Total U.S. employment is still about 6 million jobs below prepandemic levels. The Fed chair stuck to the central bank's message that the current bout of inflation is likely to be transitory, emphasizing that the recent rise "is so far largely the product of a relatively narrow group of goods and services that have been directly affected by the pandemic and the reopening of the



economy" and should be expected to dissipate. Powell noted that there is little evidence of a "wage-price spiral," where pay increases might threaten excessive inflation. He pointed to inflation expectations measures as a sign that consumers, businesses and investors also share that assessment, and highlighted the risk that downward pressures on inflation, of the kind observed over the last decade, could reassert themselves once the pandemic ends.

The new framework, established year ago, dictates Fed officials allow the economic expansion to progress further than they have in the past before raising interest rates, to drive unemployment rates down faster and allow low-income groups to share in the benefits from a strong economy. That also means allowing inflation to overshoot the central bank's 2% target for a time, to make up for periods coming out of downturns when it underruns the target.



Macroeconomic calendar

Important macroeconomic data releases

Neight	Date	Event	For Reading ¹		Previous	Consensus ²	
		China				*	
0000	16-Aug	Industrial production (yoy)	Jul	6.4%	8.3%	7.9%	
00	16-Aug	Fixed assets investments (ytd, yoy)	Jul	10.3%	12.6%	11.3%	
9	16-Aug	Retail sales (yoy)	Jul	8.5%	12.1%	10.9%	
90	27-Aug	Industrial profits (yoy)	Jul	16.4%	20.0%		
		Poland					
0000	16-Aug	Core CPI (excluding food and energy, yoy)	Jul	3.7%	3.5%	3.6%	
00	18-Aug	Average gross salary (yoy)	Jul	8.7%	9.8%	8.9%	
Ð	18-Aug	Employment (yoy)	Jul	1.8%	2.8%	2.0%	
0000	19-Aug	Sold industrial production (yoy)	Jul	9.8%	18.4%	10.3%	
90	19-Aug	Producer inflation PPI (yoy)‡	Jul	8.2%	7.2%	7.7%	
000	20-Aug	Retail sales (yoy)	Jul	8.9%	13.0%	8.1%	
Ð	23-Aug	M3 money supply (yoy)	Jul	8.8%	7.4%	8.2%	
90	24-Aug	Unemployment rate	Jul	5.8%	5.9%	5.8%	
		US					
0000	17-Aug	Industrial production (mom)‡	Jul	0.9%	0.2%	0.5%	
00	17-Aug	Retail sales (excluding autos, mom)‡	Jul	-0.4%	1.6%	0.2%	
•	17-Aug	Capacity utilization	Jul	76.1%	75.4%	75.7%	
00	19-Aug	Philadelphia Fed business outlook	Aug	19.4	21.9	23.1	
000	23-Aug	Composite PMI - preliminary data	Aug	55.4	59.9		
000	23-Aug	Manufacturing PMI - preliminary data	Aug		63.4	62.0	
900	23-Aug	PMI services - preliminary data	Aug	55.2	59.9	59.2	
,	24-Aug	Richmond Fed manufacturing index	Aug	9.0	27.0	24.0	
00	25-Aug	Durable goods orders - preliminary data‡	Jul	-0.1%	0.8%	-0.3%	
00000	26-Aug	GDP (annualized, qoq) -	2Q	6.6%	6.5%	6.7%	
0000	27-Aug	Consumer spending inflation PCE (mom)‡	Jul	0.3%	0.5%	0.3%	
0000	27-Aug	Consumer spending inflation PCE (yoy)‡	Jul	3.6% =	3.6%	3.6%	
0	27-Aug	Personal income (sa, mom)‡	Jul	1.1% 🔺	0.2%	0.3%	
0	27-Aug	Personal spending (sa, mom)‡	Jul	0.3%	1.1%	0.4%	
0	27-Aug	University of Michigan confidence index - final data	Aug	70.3	70.2	70.8	
		Eurozone					
00000	17-Aug	GDP (sa, yoy) - preliminary data‡	2Q	13.6% =	13.6%	13.7%	
0000	17-Aug	GDP (sa, qoq) - preliminary data	2Q	2.0% =	2.0%	2.0%	
0000	18-Aug	Consumer inflation CPI (yoy) - final data‡	Jul	2.2%	1.9%	2.2%	
000	18-Aug	Core CPI (yoy) - final data	Jul	0.7% =	0.7%	0.7%	
000	23-Aug	Composite PMI - preliminary data	Aug	59.5	60.2	59.6	
000	23-Aug	Manufacturing PMI - preliminary data	Aug		62.8	62.0	
00	23-Aug	Services PMI - preliminary data	Aug	59.7	59.8	59.5	
•	23-Aug	Consumer confidence - estimation	Aug	- 5.3 🔻	- 4.4	- 4.9	
,	26-Aug	M3 money supply (yoy)	Jul	7.6%	8.3%	7.6%	
		Germany					
000	23-Aug	Composite PMI - preliminary data	Aug	60.6	62.4	62.0	
000	23-Aug	Manufacturing PMI - preliminary data	Aug		65.9	65.0	
00000	24-Aug	GDP (yoy) - final data	2Q	9.8%	9.6%	9.6%	
00000	24-Aug	GDP (sa, qoq) - final data	2Q	1.6%	1.5%	1.5%	



			_				
Weight	Date	Event	For	Reading ¹		Previous	Consensus ²
		France					
000	23-Aug	Composite PMI - preliminary data	Aug	55.9	•	56.6	56.1 🕳
000	23-Aug	Manufacturing PMI - preliminary data	Aug			58.0	57.2
		Italy					
		No major data in the period					
		UK					
00	17-Aug	Unemployment rate (ILO, 3-months)	Jun	4.7%	•	4.8%	4.8%
0000	18-Aug	Consumer inflation CPI (yoy)	Jul	2.0%	•	2.5%	2.3%
000	23-Aug	Manufacturing PMI (sa) - preliminary data	Aug			60.4	59.5
000	23-Aug	Composite PMI - preliminary data	Aug	55.3	•	59.2	58.7
		Japan					
00000	16-Aug	GDP (annualized, qoq) - preliminary data‡	2Q	1.3%	A	-3.7%	0.5%
00000	16-Aug	GDP (qoq, sa) - preliminary data‡	2Q	0.3%		-0.9%	0.1%
0000	16-Aug	Industrial production (yoy) - final data	Jun	23.0%		22.6%	
0000	20-Aug	Consumer inflation CPI (yoy)‡	Jul	-0.3%		-0.5%	-0.4%
000	23-Aug	Composite PMI - preliminary data	Aug	45.9	•	48.8	
000	23-Aug	Manufacturing PMI - preliminary data	Aug			53.0	
		Chile					*
00000	18-Aug	GDP(yoy)‡	2Q	18.1%	A	0.5%	17.4%
		Canada					÷
0000	18-Aug	Consumer inflation CPI (yoy)	Jul	3.7%		3.1%	3.4%

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; O= 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

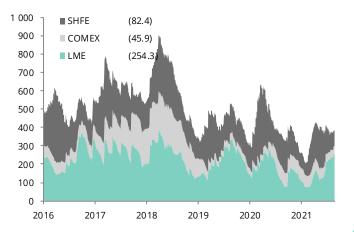
Key base & precious metal prices, exchange rates and other important market factors

(as of: 27-Aug-21)		Price change ¹							From year beginning ²			
	Price		2W		QTD		YTD		1Y	Average	Min	Max
LME (USD/t; Mo in USD/lbs)	_											
Copper	9 352.00	_	-0.8%	•	-0.4%		20.8%		41.6%	9 168.60	7 755.50	10 724.50
Molybdenum	19.88		3.9%		3.1%		98.2%			14.29	9.95	20.03
Nickel	18 914.00	•	-3.7%		2.5%		14.4%		25.1%	17 847.08	15 907.00	19 892.00
Aluminum	2 673.50		2.7%		6.0%		35.2%		53.8%	2 321.60	1 951.50	2 673.50
Tin	34 452.00	•	-4.6%		3.0%		67.7%		94.8%	29 928.63	20 965.00	36 594.00
Zinc	2 983.50	_	-0.8%		1.3%		9.5%		21.5%	2 865.21	2 539.00	3 063.50
Lead	2 459.50		0.4%		6.0%		24.7%		25.9%	2 150.03	1 896.00	2 504.00
LBMA (USD/troz)	_											
Silver	23.61		1.0%	•	-8.4%	\blacksquare	-10.9%	\blacksquare	-13.3%	26.08	23.21	29.59
Gold ²	1 798.50		1.4%		2.0%	\blacksquare	-4.9%	\blacksquare	-6.5%	1 802.60	1 683.95	1 943.20
LPPM (USD/troz)	_											
Platinum ²	991.00	•	-3.3%	\blacksquare	-6.4%	\blacksquare	-7.8%		6.6%	1 139.63	972.00	1 294.00
Palladium ²	2 421.00	_	-8.5%	•	-10.6%		2.2%		11.7%	2 606.48	2 258.00	3 000.00
FX ³	_											
EURUSD	1.1761	•	0.0%	\blacksquare	-1.0%	\blacksquare	-4.2%	\blacksquare	-0.4%	1.1989	1.1671	1.2338
EURPLN	4.5803		0.2%		1.3%	\blacksquare	-0.7%		3.8%	4.5466	4.4541	4.6603
USDPLN	3.8978		0.1%		2.5%		3.7%		4.5%	3.7944	3.6545	3.9676
USDCAD	1.2635		1.0%		1.9%	\blacksquare	-0.8%	\blacksquare	-3.8%	1.2492	1.2040	1.2856
USDCNY	6.4720	•	-0.1%		0.2%	\blacksquare	-0.8%	\blacksquare	-6.1%	6.4724	6.3685	6.5718
USDCLP	785.06		1.6%		6.8%		10.4%	\blacksquare	-0.2%	731.18	693.74	789.98
Money market	_											
3m LIBOR USD	0.120	•	0.00	\blacksquare	-0.03	\blacksquare	-0.12	\blacksquare	-0.13	0.166	0.118	0.241
3m EURIBOR	-0.550		0.00	\blacksquare	-0.01	\blacksquare	-0.01	\blacksquare	-0.07	-0.543	-0.556	-0.529
3m WIBOR	0.210	-	0.00	-	0.00	-	0.00	\blacksquare	-0.02	0.210	0.210	0.210
5y USD interest rate swap	0.888		0.03	\blacksquare	-0.08		0.46		0.52	0.824	0.416	1.093
5y EUR interest rate swap	-0.350		0.02	\blacksquare	-0.09		0.11		0.01	-0.331	-0.485	-0.209
5y PLN interest rate swap	1.460	•	-0.01		0.03		0.85		0.74	1.222	0.583	1.623
Fuel	_											
WTI Cushing	68.74		0.4%	\blacksquare	-6.4%		41.7%		59.7%	64.18	47.62	75.25
Brent	71.29		1.7%	\blacksquare	-5.1%		39.3%		59.7%	66.64	50.02	77.79
Diesel NY (ULSD)	211.04		1.7%	\blacksquare	-1.5%		42.8%		72.9%	193.22	146.07	219.94
Others	_											
VIX	16.39		0.94		0.56	\blacksquare	-6.36	\blacksquare	-8.08	19.82	15.07	37.21
BBG Commodity Index	96.35		1.2%		1.9%		23.4%		32.7%	88.87	78.64	97.51
S&P500	4 509.37		0.9%		4.9%		20.1%		29.4%	4 120.94	3 700.65	4 509.37
DAX	15 851.75	•	-0.8%		2.1%		15.5%		21.0%	14 984.94	13 432.87	15 977.44
Shanghai Composite	3 522.16		0.2%	•	-1.9%		1.4%		5.1%	3 512.90	3 357.74	3 696.17
WIG 20	2 323.77		0.9%		4.7%		17.1%		25.8%	2 100.49	1 876.85	2 325.19
KGHM	181.00	•	-5.7%	•	-3.5%	\blacksquare	-1.1%		33.4%	193.53	166.70	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

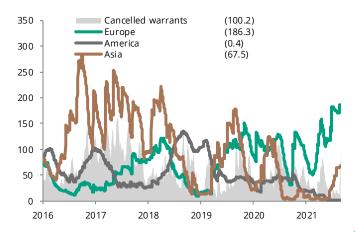


Copper: official exchange stocks (thousand tonnes)



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

Copper: official LME stocks (thousand tonnes)



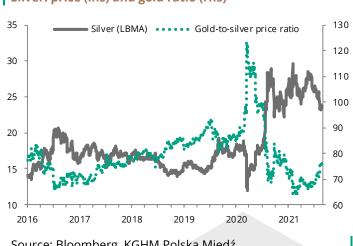
Note: Latest values in brackets. Source: Bloomberg, KGHM

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



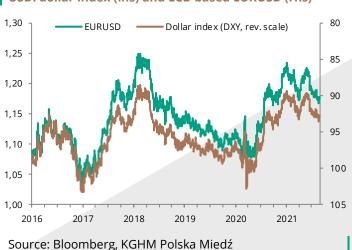
Source: Bloomberg, KGHM Polska Miedź

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

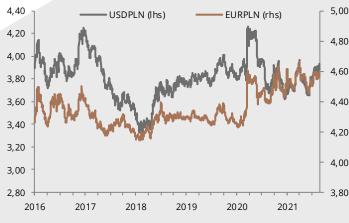


Source: Bloomberg, KGHM Polska Miedź

USD: dollar index (lhs) and ECB-based EURUSD (rhs)



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: **16-29 August 2021.**

- 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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