

Market Overview

- **Copper:** Peruvian mining companies resume operations in mines by introducing new hygiene protocols including mass tests, isolation periods and modified shift work patterns (*page 2*).
- **Precious metals:** One of the largest gold refineries in the world intends to start processing metal obtained by small mining companies from Peru (*page 5*).
- **Germany:** German exports fell by 31.1% y/y, which is an unprecedented event in the period reaching 1950. Imports fell the most since the financial crisis a decade ago (*page 6*).

Copper cathode premium in China (Yangshan) looks very volatile in the recent weeks



Source: SMM, Bloomberg, KGHM Polska Miedź S.A.

as of: 22nd June 2020

Key market prices

	Close price	2w chng.
LME (USD/t)		
▲ Copper	5 835.50	3.1%
▼ Nickel	12 855.00	-0.7%
LBMA (USD/troz)		
▼ Silver	17.53	-0.6%
▲ Gold (PM)	1 734.75	2.6%
FX		
▼ EURUSD	1.1210	-0.7%
▲ EURPLN	4.4573	0.6%
▲ USDPLN	3.9741	1.4%
▲ USDCAD	1.3587	1.5%
▲ USDCLP	812.19	6.2%
Stocks		
▼ KGHM	87.90	-3.2%

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

Important macroeconomic data

Release	For	
 Philadelphia Fed outlook	Jun	27.5 ▲
 Trade balance	Apr	-33.0 ▲
 Retail sales (yoy)	May	-8.6% ▲
 Industr. prod. (wda, yoy)	Apr	-25.3% ▼
 CPI (yoy)	May	2.4% ▼

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

Market Risk Unit

marketrisk@kgm.com

Base and precious metals | Other commodities

Copper

Peruvian mining companies resume operations in mines by introducing new hygiene protocols including mass tests, isolation periods and modified shift work patterns.

Peru Miners Restart Pandemic-Hit Operations With Mass Testing, Isolating Workers

Peru's miners are revving up stalled operations with mass testing, isolation periods and revamped shift patterns, setting up the world's No. 2 copper producer to hit 80% of production capacity by the end of June. The restart is key to Peru's economic engine and metals output which was devastated by the coronavirus pandemic and a nationwide lockdown. But unions for mine workers have voiced concerns that some planned shifts are too long while testing and protective measures need to be strengthened. The mining and hydrocarbons industry, the top driver of Peru's exports, fell over 40% in April, with output of copper, gold, zinc and silver down sharply. Companies are scrambling to avoid falling further behind larger neighboring producer Chile, which has maintained production through the pandemic. At least 41 large Peruvian firms have put in place government-mandated hygiene protocols as they seek to reach full production capacity in the third quarter, industry sources said. Pablo de la Flor, executive director of industry body the National Society of Mining, Petroleum and Energy, said every company was carrying out rapid tests on workers before deploying them, with around 90,000 such tests done so far. That had allowed an estimated 160,000-170,000 miners to return to operations out of 210,000 formal workers. Shift systems had been reorganized he added. Distancing rules of 1-1.5 meters was a challenge at the mines, which was something the sector was "trying to solve". Industry concern had centered on the massive Antamina mine, controlled by BHP and Glencore, which reported 210 COVID-19 infections in April. That created a suspicion around mining sanitary protocols. Mining companies defended their plans. "We have rigorous distancing protocols in transport vehicles and dining rooms. Also, all personnel who could be vulnerable due to age or illness have been removed," said Raúl Jacob, vice president of finance at Southern Copper. Peru's government in May allowed mines to resume larger-scale operation, expected to drive a recovery in output. Smaller mines have also since been given the green light. As for Antamina, the firm said in a recent internal memo later posted online that workers who tested negative for COVID-19 would be isolated before starting their shifts and distancing of 1.5-2 meters would be maintained. Peru has some 240,000 confirmed cases of coronavirus, the second highest in Latin America after Brazil, and among the top 10 globally. The Andean country was among the first in the region to impose a quarantine in March and has extended it until June 30, though it also has moved to allow the restart of several key sectors to reactivate the economy. Industry sources said

some important mines were up and running, including the Las Bambas copper project operated by MMG and Toromochu. Nexa Resources said this month it was operating its Peruvian mines at near full capacity. At some sites workers are now being housed with their families to reduce the amount of travel. Groups of 5 to 10 people have been organized and if there's any suspicion of contagion, the cell withdraws and another cell enters. That way the entire workforce is not put at risk.

Solar Cell Efficiency Improved As Startup Replaces Silver With Copper

Australian company claimed that using copper is more efficient in terms of cost and performance. It's the first company who wants managed to swap silver with copper in solar cells and wants to spread its idea to the wider users.

A small startup technology company in Wollongong has created what it believes is the most efficient commercial-sized solar cell ever made in Australia without relying on expensive, precious metals, but the next step is more ambitious. The global solar industry is on a collision course because the growing demand and environmental benefit of solar come with the caveat about its significant use of precious metals. Today, about 15 per cent of the world's industrial consumption of silver goes into making solar cells. "If the industry is to grow by an order of magnitude — which is predicted to happen — that presents a significant challenge," Sundrive CEO Vince Allen said. He co-founded the small company in New South Wales that is quietly working to replace silver with copper in solar cell manufacturing. "Copper is 1,000 times more abundant and 100 times cheaper per kilogram than silver," he said. "It presents its own challenges, and those challenges are the core of what we're addressing. "There's a lot of consensus in the scientific community that copper is most likely to be the most suitable alternative [to silver]." Late last year, the team used copper instead of silver to fabricate the most efficient commercial-size solar cell ever made in Australia. Efficiency is measured by how much power you can get out, relative to the amount of sunlight coming in. Mr Allen said the main problem with using copper on a silicon wafer was it did not stick well enough to the surface of the solar cell and that current methods were unreliable. Now the team has solved that problem, they are moving on to scaling up production, so those cells can be put on Australian roofs. And this work is being done in a location so discreet, the only thing on the outside of their building's wall is a street number.

Other important information on copper market:

- London Metal Exchange members and users will be able to electronically make and take delivery of metal and move away from a process that involves the physical exchange of title documents or warrants. The LME, which said electronic warranting would bring "significant operational efficiencies". Replacing the physical process with an electronic one would reduce administrative burden and eliminate operational risk in warrant

lodgement and withdrawal. The LME is aiming to launch the electronic warrant depository system by the end of October.

- The global world refined copper market showed a 1,000 tonnes surplus in March, compared with a 131,000 tonnes surplus in February, the International Copper Study Group (ICSG) said. For the first 3 months of the year, the market was in a 130,000 tonnes surplus compared with a 12,000 tonnes deficit in the same period a year earlier, the ICSG said. World refined copper output in March was 1.97 million tonnes, while consumption was 1.97 million tonnes. Bonded stocks of copper in China showed a 6,000 tonnes surplus in March compared with a 146,000 tonnes surplus in February.
- China's Solid Waste and Chemicals Management Bureau has issued its eighth batch of quotas for 2020, allowing the import of 5,840 mt of aluminum scrap and 1,570 mt of copper scrap. This brings the total volume of imports allowed under the eight batches issued to date in 2020 to 483,999 mt for aluminum scrap and 541,754 mt for copper scrap. From July scrap metal meeting the new standards would no longer require an import license. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Donec consequat lorem a nibh scelerisque blandit.]

Precious Metals

One of the largest gold refineries in the world intends to start processing metal obtained by small mining companies from Peru.

Metalor to process traceable gold from small mines in Peru

Metalor, one of the world's biggest gold refiners, is to start processing a small amount of traceable and responsibly sourced gold from small-scale miners in Peru as part of a scheme to improve their conditions. The initiative by Metalor is one of a growing number by refiners and non-profit organizations to help small-scale gold miners to sell their output legally and at fair prices in the mainstream market. Around 15-20 million people dig for gold using basic technology, mainly in Africa and South America. They produce about 560 tonnes a year worth \$30 billion at current prices, but the processes they use are often polluting and they can also be mixed up with organised crime. Metalor said last year it would only work with gold from large industrial mines to reduce the risk of illegality in its supply chain. The company stopped working with artisanal mines or collectors and aggregators - companies which collect and resell gold from artisanal mines - because of the difficulty of ascertaining the mines' legality and the origin of the gold. Metalor will now process gold from Peru's Minera Yanaquihua mining group, the companies said in a joint statement on Thursday. The scheme is supported by the Swiss Better Gold Association and the Better Gold Initiative for Artisanal and Small-scale Mining, non-profit groups which support artisanal miners. Yanaquihua produces 45,000 ounces — 1.4 tonnes — of gold a year worth \$75 million at current prices, the joint statement said. Around 70% of that comes from two small mining units run by Yanaquihua in southern Peru. The remainder is from artisanal miners in the surrounding area, who will be helped to improve their operations. Another Swiss refinery, Valcambi, said last year it had begun processing artisanal gold from Colombia in partnership with the Swiss Better Gold Association and others.

Global economies | Foreign exchange markets

Trade-Reliant Germany Suffers Biggest Ever Plunge in Exports

German exports fell by 31.1% y/y, which is an unprecedented event in the period reaching 1950. Imports fell the most since the financial crisis a decade ago.

German exports plunged at a record pace in April when economies around the world shut down to contain the coronavirus. Sales abroad were down 31.1% from a year earlier, an unprecedented slump in the series that reaches back to 1950. Imports fell the most since the financial crisis a decade ago. Europe's largest economy is widely seen to have weathered the fallout of the pandemic better than most in the region, and the government has already announced a major stimulus package to revive growth. But the economy's reliance on external demand for German goods adds another layer of uncertainty to how fast it can recover. German manufacturers were already suffering from weak demand before the virus outbreak forced businesses to shutter. While most companies have since returned to work, uncertainty about the evolution of the pandemic is still depressing orders. The Bundesbank predicts Germany's trade-reliant economy will shrink some 7% this year. First-quarter data already provided a taste of the virus damage. In the euro area, consumer spending dropped 4.7% in the period, while investment and exports also fell more than 4%, according to updated figures published Tuesday. The economy shrank 3.6%, slightly less than initially reported, but still the steepest drop on record. With uncertainty about the path of the pandemic damping confidence, trade will remain subdued for a long time still. In April, German shipments to China, the original epicenter of the disease, were down 12.6%. Within Europe, sales to France and Italy dropped 48% and 40% respectively.


















Fed Announces Plans To Buy Broad Basket Of Corporate Bonds

The Federal Reserve said Monday it would buy a broad basket of corporate bonds from the secondary market through its emergency lending program, based on an index the central bank had created. The move is aimed at supporting the flow of credit to large companies. The index will be composed of U.S. issuers, as long as they are not deposit-taking financial institutions. The purchases will also target bonds with maturities of 5 years or less. Issuers do not need to go through the certification process to prove they are eligible for the broad purchases, but if the Fed buys bonds of individual issuers, they will still need to certify themselves. The iShares \$ Investment Grade Corporate Bond Fund (LQD) gained 1.6% after the news.

Macroeconomic calendar

Important macroeconomic data releases

Weight	Date	Event	For	Reading ¹	Previous	Consensus ²	
China							
⊕⊕⊕⊕	10-Jun	Consumer inflation CPI (yoy)	May	2.4% ▼	3.3%	2.7%	☹
⊕⊕	10-Jun	Producer inflation PPI (yoy)	May	-3.7% ▼	-3.1%	-3.3%	☹
⊕	10-Jun	New yuan loans (CNY bn)‡	May	1 480 ▼	1 698	1 600	☹
⊕⊕⊕⊕	15-Jun	Industrial production (yoy)	May	4.4% ▲	3.9%	5.0%	☹
⊕⊕	15-Jun	Fixed assets investments (ytd, yoy)	May	-6.3% ▲	-10.3%	-6.0%	☹
⊕	15-Jun	Retail sales (yoy)	May	-2.8% ▲	-7.5%	-2.3%	☹
Poland							
⊕⊕⊕⊕	15-Jun	Consumer inflation CPI (yoy) - final data	May	2.9% -	2.9%	--	○
⊕⊕	15-Jun	Trade balance (EUR mn)	Apr	- 33.0 ▲	- 69.0	- 400	☺
⊕⊕	15-Jun	Exports (EUR mn)	Apr	13 779 ▼	18 763	13 622	☺
⊕⊕	15-Jun	Current account balance (EUR mn)	Apr	1 163 ▼	2 438	1 334	☹
⊕⊕⊕⊕⊕	16-Jun	NBP base rate decision	Jun	0.10% -	0.10%	0.10%	○
⊕⊕⊕⊕	16-Jun	Core CPI (excluding food and energy, yoy)	May	3.8% ▲	3.6%	3.7%	☺
⊕⊕	18-Jun	Average gross salary (yoy)	May	1.2% ▼	1.9%	1.6%	☹
⊕	18-Jun	Employment (yoy)	May	-3.2% ▼	-2.1%	-2.7%	☹
⊕⊕⊕⊕	19-Jun	Sold industrial production (yoy)	May	-17.0% ▲	-24.6%	-18.0%	☺
⊕⊕	19-Jun	Producer inflation PPI (yoy)‡	May	-1.5% ▼	-1.4%	-1.5%	○
⊕⊕⊕	22-Jun	Retail sales (yoy)	May	-8.6% ▲	-22.6%	-13.3%	☺
US							
⊕⊕⊕⊕⊕	10-Jun	FOMC base rate decision - upper bound (Fed)	Jun	0.25% -	0.25%	0.25%	○
⊕⊕⊕⊕⊕	10-Jun	FOMC base rate decision - lower bound (Fed)	Jun	0.00% -	0.00%	0.00%	○
⊕⊕⊕⊕	10-Jun	Consumer inflation CPI (mom)	May	-0.1% ▲	-0.8%	0.0%	☹
⊕⊕⊕⊕	10-Jun	Consumer inflation CPI (yoy)	May	0.1% ▼	0.3%	0.3%	☹
⊕⊕	12-Jun	University of Michigan confidence index - preliminary data	Jun	78.9 ▲	72.3	75.0	☺
⊕⊕⊕⊕	16-Jun	Industrial production (mom)‡	May	1.4% ▲	-12.5%	3.0%	☹
⊕⊕	16-Jun	Retail sales (excluding autos, mom)‡	May	12.4% ▲	-15.2%	5.5%	☺
⊕	16-Jun	Capacity utilization‡	May	64.8% ▲	64.0%	66.9%	☹
⊕⊕	18-Jun	Philadelphia Fed business outlook	Jun	27.5 ▲	- 43.1	- 21.4	☺
Eurozone							
⊕⊕⊕⊕⊕	09-Jun	GDP (sa, yoy) - final data	1Q	-3.1% ▲	-3.2%	-3.2%	☺
⊕⊕⊕⊕⊕	09-Jun	GDP (sa, qoq) - final data	1Q	-3.6% ▲	-3.8%	-3.8%	☺
⊕⊕⊕	09-Jun	Gross fixed capital (qoq)‡	1Q	-4.3% ▼	5.0%	-4.8%	☺
⊕⊕⊕	09-Jun	Households consumption (qoq)	1Q	-4.7% ▼	0.1%	-4.8%	☺
⊕⊕⊕⊕	12-Jun	Industrial production (sa, mom)‡	Apr	-17.1% ▼	-11.9%	-18.5%	☺
⊕⊕⊕⊕	12-Jun	Industrial production (wda, yoy)‡	Apr	-28.0% ▼	-13.5%	-28.8%	☺
⊕	15-Jun	Trade balance (EUR mn)	Apr	2.9 ▼	28.2	--	
⊕⊕	16-Jun	Labour costs (yoy)‡	1Q	3.4% ▲	2.3%	--	
⊕	16-Jun	ZEW survey expectations	Jun	58.6 ▲	46.0	--	
⊕⊕⊕⊕	17-Jun	Consumer inflation CPI (yoy) - final data‡	May	0.1% ▼	0.3%	0.1%	○
⊕⊕⊕⊕	17-Jun	Core CPI (yoy) - final data	May	0.9% -	0.9%	0.9%	○
⊕	22-Jun	Consumer confidence - estimation	Jun	--	- 18.8	- 15.0	
Germany							
⊕⊕⊕⊕	08-Jun	Industrial production (wda, yoy)‡	Apr	-25.3% ▼	-11.3%	-24.8%	☹
⊕⊕⊕⊕	16-Jun	Harmonized consumer inflation HICP (yoy) - final data	May	0.5% -	0.5%	0.5%	○

Weight	Date	Event	For	Reading ¹	Previous	Consensus ²	
France							
★★★★	10-Jun	Industrial production (yoy)	Apr	-34.2% ▼	-17.3%	-33.1%	
★★★★	12-Jun	Harmonized consumer inflation HICP (yoy) - final data	May	0.4% ▲	0.2%	0.2%	
★★★★	12-Jun	Consumer inflation CPI (yoy) - final data	May	0.4% ▲	0.2%	0.2%	
Italy							
★★★★	11-Jun	Industrial production (wda, yoy)‡	Apr	-42.5% ▼	-29.4%	-41.1%	
★★★★	15-Jun	Harmonized consumer inflation HICP (yoy) - final data	May	-0.3% ▼	-0.2%	-0.2%	
UK							
★★★★	12-Jun	Industrial production (yoy)	Apr	-24.4% ▼	-8.2%	-19.3%	
★★	16-Jun	Unemployment rate (ILO, 3-months)	Apr	3.9% -	3.9%	4.7%	
★★★★	17-Jun	Consumer inflation CPI (yoy)	May	0.5% ▼	0.8%	0.5%	
★★★★★	18-Jun	BoE base rate decision	Jun	0.10% -	0.10%	0.10%	
Japan							
★★★★★	08-Jun	GDP (annualized, qoq) - final data	1Q	-2.2% ▲	-3.4%	-2.1%	
★★★★★	08-Jun	GDP (qoq, sa) - final data	1Q	-0.6% ▲	-0.9%	-0.5%	
★★★★	12-Jun	Industrial production (yoy) - final data	Apr	-15.0% ▼	-14.4%	--	
★★★★	19-Jun	Consumer inflation CPI (yoy)	May	0.1% -	0.1%	0.2%	
Chile							
★★★	08-Jun	Copper exports (USD mn)	May	2 567 ▲	2 389	--	
★★★★★	17-Jun	BCCh overnight rate target	Jun	0.50% -	0.50%	0.50%	
Canada							
★★★	12-Jun	Capacity utilization‡	1Q	79.8% ▼	81.4%	80.0%	
★★★★	17-Jun	Consumer inflation CPI (yoy)	May	-0.4% ▼	-0.2%	0.0%	

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

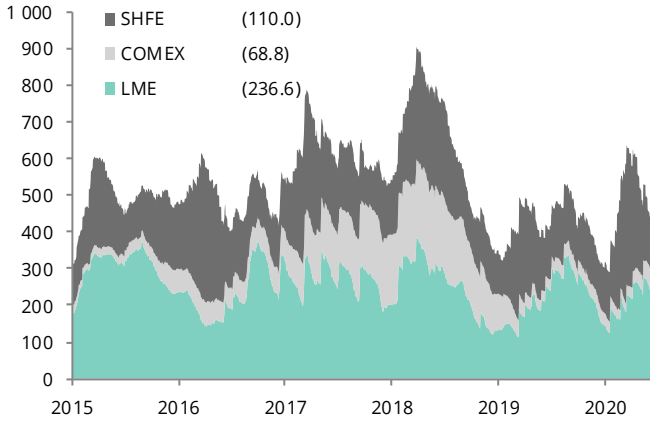
Key base & precious metal prices, exchange rates and other important market factors

<i>(as of: 19-Jun-20)</i>		Price change ¹					From year beginning ²		
	Price	2W	QTD	YTD	1Y	Average	Min	Max	
LME (USD/t; Mo in USD/lbs)									
Copper	5 835.50	▲ 3.1%	▲ 21.6%	▼ -5.2%	▼ -2.1%	5 474.83	4 617.50	6 300.50	
Molybdenum	8.19	▲ 0.4%	▼ -2.8%	▼ -11.0%	▼	9.11	7.90	10.90	
Nickel	12 855.00	▼ -0.7%	▲ 14.4%	▼ -8.2%	▲ 5.0%	12 466.97	11 055.00	14 290.00	
Aluminum	1 578.00	▲ 0.5%	▲ 6.0%	▼ -12.3%	▼ -11.2%	1 596.58	1 421.50	1 810.50	
Tin	16 858.00	▲ 0.6%	▲ 17.1%	▲ 0.0%	▼ -13.1%	15 988.66	13 400.00	17 775.00	
Zinc	2 073.00	▲ 3.2%	▲ 11.0%	▼ -9.6%	▼ -19.8%	2 046.87	1 773.50	2 466.50	
Lead	1 777.50	▲ 2.3%	▲ 3.8%	▼ -7.6%	▼ -7.2%	1 761.52	1 576.50	2 027.00	
LBMA (USD/troz)									
Silver	17.53	▼ -0.6%	▲ 25.8%	▼ -2.9%	▲ 14.3%	16.58	12.01	18.78	
Gold ²	1 734.75	▲ 2.6%	▲ 7.8%	▲ 13.9%	▲ 25.8%	1 638.45	1 474.25	1 748.30	
LPPM (USD/troz)									
Platinum ²	820.00	▼ -2.1%	▲ 12.8%	▼ -15.6%	▲ 0.6%	849.03	593.00	1 017.00	
Palladium ²	1 888.00	▼ -5.4%	▼ -18.2%	▼ -1.7%	▲ 24.0%	2 142.45	1 557.00	2 781.00	
FX ³									
EURUSD	1.1210	▼ -0.7%	▲ 2.3%	▼ -0.2%	▼ -0.9%	1.1007	1.0707	1.1456	
EURPLN	4.4573	▲ 0.6%	▼ -2.1%	▲ 4.7%	▲ 4.5%	4.4119	4.2279	4.6044	
USDPLN	3.9741	▲ 1.4%	▼ -4.2%	▲ 4.6%	▲ 4.3%	4.0114	3.7861	4.2654	
USDCAD	1.3587	▲ 1.5%	▼ -4.2%	▲ 4.6%	▲ 3.0%	1.3653	1.2970	1.4496	
USDCNY	7.0710	▼ 0.0%	▼ -0.2%	▲ 1.5%	▲ 3.2%	7.0338	6.8598	7.1671	
USDCLP	812.19	▲ 6.2%	▼ -4.0%	▲ 9.1%	▲ 17.0%	812.99	748.74	867.83	
Money market									
3m LIBOR USD	0.305	▼ 0.00	▼ -1.15	▼ -1.60	▼ -2.04	1.120	0.299	1.900	
3m EURIBOR	-0.407	▼ -0.04	▼ -0.04	▼ -0.02	▼ -0.07	-0.352	-0.489	-0.161	
3m WIBOR	0.270	- 0.00	▼ -0.90	▼ -1.44	▼ -1.45	1.156	0.270	1.710	
5y USD interest rate swap	0.365	▼ -0.13	▼ -0.16	▼ -1.36	▼ -1.40	0.828	0.333	1.693	
5y EUR interest rate swap	-0.325	▼ -0.06	▼ -0.09	▼ -0.21	▼ -0.11	-0.260	-0.453	-0.090	
5y PLN interest rate swap	0.528	▼ -0.17	▼ -0.34	▼ -1.25	▼ -1.31	1.125	0.485	2.050	
Fuel									
WTI Cushing	39.75	▲ 4.1%	▲ 94.1%	▼ -34.9%	▼ -29.8%	36.54	-37.63	63.27	
Brent	41.45	▲ 3.8%	▲ 93.1%	▼ -37.6%	▼ -36.0%	40.82	17.32	69.02	
Diesel NY (ULSD)	121.51	▲ 11.1%	▲ 17.7%	▼ -40.1%	▼ -35.2%	125.41	60.67	206.01	
Others									
VIX	35.12	▲ 9.31	▼ -18.42	▲ 21.34	▲ 20.37	32.91	12.10	82.69	
BBG Commodity Index	64.57	▼ -0.1%	▲ 4.4%	▼ -20.2%	▼ -18.4%	67.99	59.48	81.64	
S&P500	3 097.74	▼ -4.2%	▲ 19.9%	▼ -4.1%	▲ 4.9%	2 988.26	2 237.40	3 386.15	
DAX	12 330.76	▼ -3.8%	▲ 24.1%	▼ -6.9%	▼ -0.2%	11 709.97	8 441.71	13 789.00	
Shanghai Composite	2 967.63	▲ 1.0%	▲ 7.9%	▼ -2.7%	▼ -0.7%	2 903.67	2 660.17	3 115.57	
WIG 20	1 807.85	▼ -1.8%	▲ 19.5%	▼ -15.9%	▼ -22.1%	1 792.76	1 305.73	2 200.10	
KGHM	87.90	▼ -3.2%	▲ 46.9%	▼ -8.0%	▼ -14.6%	80.26	49.40	101.00	

° 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

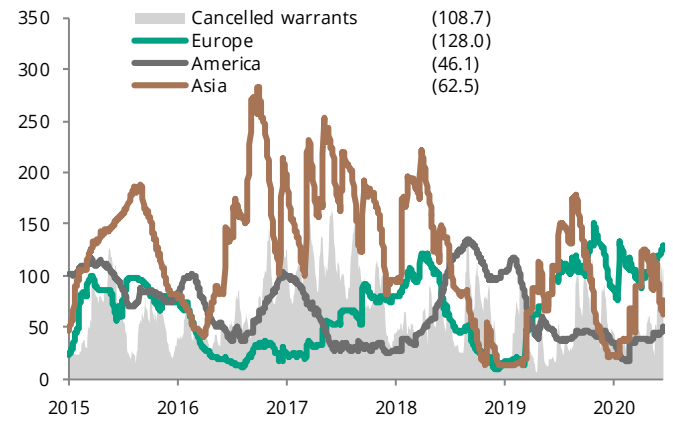
Source: Bloomberg, KGHM Polska Miedź

Copper: official exchange stocks (thousand tonnes)



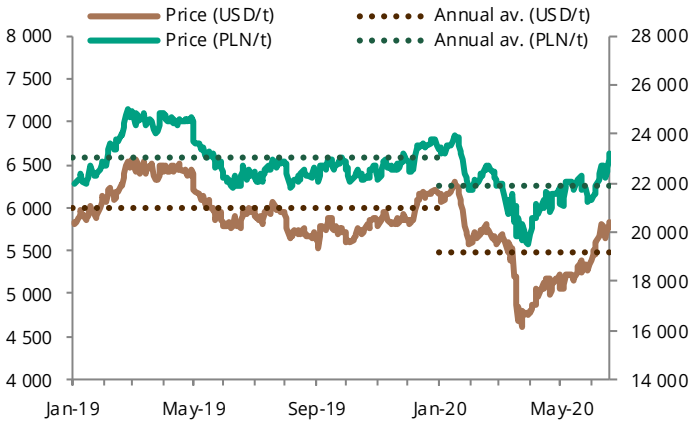
Note: Latest values in brackets. Source: Bloomberg, KGHM

Copper: official LME stocks (thousand tonnes)



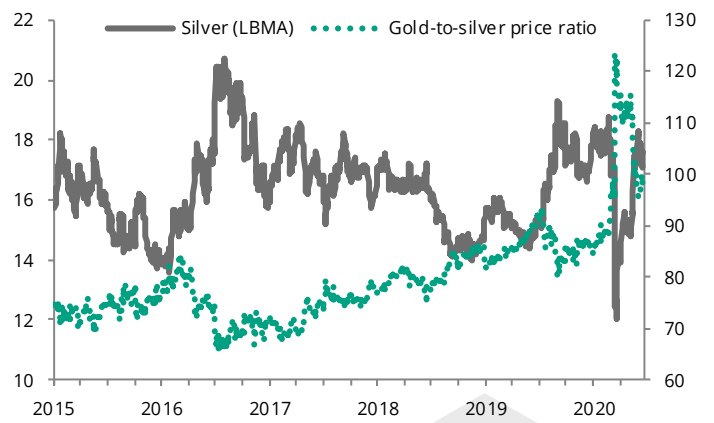
Note: Latest values in brackets. Source: Bloomberg, KGHM

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



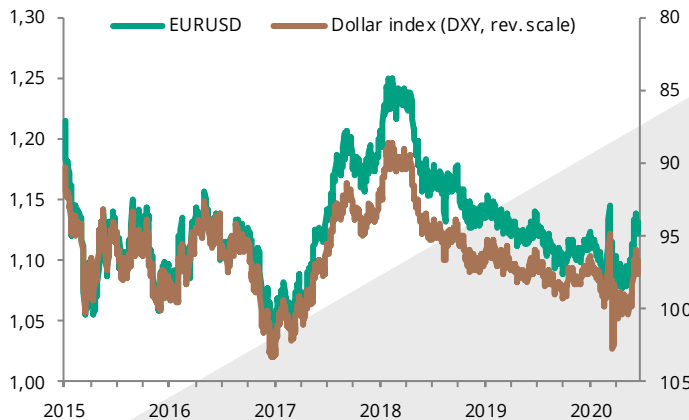
Source: Bloomberg, KGHM Polska Miedź

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



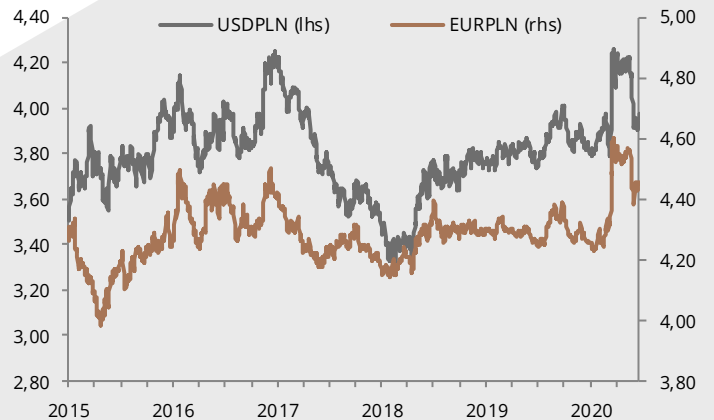
Source: Bloomberg, KGHM Polska Miedź

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 June 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

DISCLAIMER

This document reflects the market view of the staff of KGHM Polska Miedz (Polish Copper)'s Market Risk Unit employees on the economy, commodity as well as financial markets. Although, according to the our best of our knowledge, all the facts presented in this publication come from or are based on reliable sources, we do not guarantee their correctness. Moreover, they may be incomplete or shortened. All the opinions and forecasts are backed by diligently-performed analyses valid as of the publishing date and may be subject to change. KGHM Polska Miedz (Polish Copper) S.A. is not obligated to announce any subsequent change of these opinions or forecasts. This document's purpose is solely informative and must not be interpreted as an offer or advice with regards to the purchase/sale of any mentioned financial instrument, nor it is part of such offer or advice.

Re-printing or using this publication or its in whole or part requires prior written consent from KGHM. To acquire that such consent please contact the Communication Department KGHM Polska Miedz SA.

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)
Wydział Ryzyka Rynkowego (Market Risk Unit)
ul. M. Skłodowskiej-Curie 48
59-301 Lubin, Poland