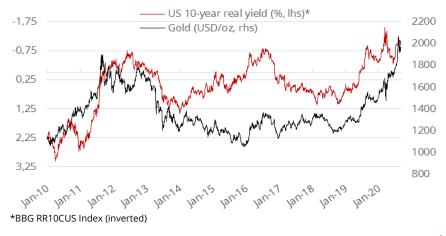


## **Market Overview**

- Copper: TC/RCs are at their low because of the mine disruptions and the rapid recovery in copper demand in top consumer China that revived smelter operating rates. While TC/RCs will see support from an expected recovery in concentrate supplies next year, with 2020's tightness loosening to a surplus, next year's smelter demand would limit gains (page 2).
- Precious metals: To make for negative yielding bonds and minimum returns requirements Pension Funds have to adjust their investment framework. With \$32tr under pension fund management in just OECD countries, a diversification of even only 1% into gold would have major repercussions in the availability and price of the Yellow Metal (page 5).
- ECB: Lagarde announced a slight upgrade in the bank's 2020 growth forecast on the back of a strong rebound in activity and signaled higher underlying inflation. It was also said that the \$1.20 level, seen in the past as a key threshold, is now close to the equilibrium exchange rate and should not be seen as trigger level for the ECB (page 7).

#### Falling real yields in the US are a clear support for the dollar gold price



Source: Bloomberg, KGHM Polska Miedź S.A.



#### Key market prices

		Close price	2w chng.
	LME (USD/t)		
	Copper	6 757.50	0.4%
$\blacksquare$	Nickel	14 935.00	-3.1%
	LBMA (USD/troz)		
$\blacksquare$	Silver	26.88	-1.7%
$\blacksquare$	Gold (PM)	1 947.40	-0.5%
	FX		
•	EURUSD	1.1854	-0.7%
	EURPLN	4.4504	1.2%
	USDPLN	3.7534	1.7%
	USDCAD	1.3186	1.1%
$\blacksquare$	USDCLP	764.99	-1.9%
	Stocks		
•	KGHM	136.45	-0.3%

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

#### Important macroeconomic data

	Release	For	
	Industr. prod. (wda, yoy)	Jul	-10.0% 🔺
	CPI estimate (yoy)	Aug	-0.2% ▼
	GDP (yoy)	2Q	-8.2% =
*1	Exports (yoy)	Aug	9.5% 🔺
	Underemployment rate (l	Aug	14.2% 🔻
Source:	Bloomherg KGHM Polska Miedź	S A · (m)	re on nage 8)

Market Risk Unit

marketrisk@kghm.com



### **Base and precious metals | Other commodities**

#### Copper

TC/RCs are at their low because of the mine disruptions and the rapid recovery in copper demand in top consumer China that revived smelter operating rates. While TC/RCs will see support from an expected recovery in concentrate supplies next year, with 2020's tightness loosening to a surplus, next year's smelter demand would limit gains.

# **Copper Treatment Benchmark Expected To Hit Lowest In A Decade Next Year**

Next year TC/RC are likely to fall to their lowest since 2011 at about \$60 a tone

Benchmark treatment charges for copper concentrate next year are likely to fall a sixth straight year, to their lowest since 2011 at about \$60 a tonne, traders and analysts said, as refined metal demand returns and despite an expected recovery in supply. Miners pay treatment and refining charges (TC/RCs) to smelters to process their copper concentrate into refined metal, offsetting the cost of the ore itself. Charges typically go down when concentrate supply is tight and smelters have to accept lower fees to get feedstock. China's copper concentrate supply took a hit earlier this year because copper mine operations in key supplier Peru were curtailed by pandemic-induced lockdowns. "Next year we do have some supply growth, but not really until mid-year," said Colin Hamilton analyst at BMO Capital Markets. The supply growth, however, from the expansion of Chilean miner Antofagasta PLC's Los Pelambres mine, BHP Group's Spence mine in Chile and Ivanhoe Mines' Kakula project in the Democratic Republic of Congo is not expected to offset China's demand resurgence. Hamilton expects next year's TC/RCs at \$60 a tonne and 6 cents a pound "with a slight skew to the downside". The benchmark has fallen every year since being struck at \$107 per tonne and 10.7 cents per pound for 2015. For 2020, it was set at \$62 per tonne and 6.2 cents per pound. Spot TC/RCs have been hovering around \$51.50 a tonne since late July this year. Spot TC/RCs are at their lowest since November 2012 because of the mine disruptions and the rapid recovery in copper demand in top consumer China that revived smelter operating rates there after a pandemictriggered slump. While TC/RCs will see support from an expected recovery in concentrate supplies next year, with 2020's tightness loosening to a surplus, next year's smelter demand would limit gains. Chilean miner Antofagasta Plc has already inked concentrate supply deals for the first half of 2021 with China's Jiangxi Copper and Tongling Nonferrous Metals Group at a TC of \$60.8 per tonne.



#### Ivanhoe On Track To Build Huge DRC Copper Mine

The giant Kakula mine in the DRC will, according to Ivanhoe Mines, produce some of the world's most environmentally-responsible sourced copper. The mine will be powered by hydro power with approximately half of all tailings, or toxic waste caused by the mining process, stored underground.

Kakula is on track to begin production in around a year, with annual copper output of more than 800,000 mt

Canadian miner Ivanhoe Mines was on track to produce environmentally responsible copper in the Democratic Republic of Congo, following a bullish independent definitive feasibility study, the company said. The giant Kakula mine in the DRC will, according to Ivanhoe exec co-chairman, Robert Friedland, produce some of the world's most environmentally-responsible sourced copper, including "ultra-high" grades. Environmental, social and governance metrics are becoming central in mining and metals companies' strategy and operations, with an emphasis on supporting low carbon growth. The mine will be powered by hydro power with approximately half of all tailings, or toxic waste caused by the mining process, stored underground. As the mining industry continues at pace to dig up minerals required for the decarbonization of the world's energy needs, alongside traditional needs, the net result will be mountains of waste. Tailings are a particular focus after failures in recent years released toxic waste that killed people and destroyed local environments. In August, the International Council on Mining and Metals announced the Global Industry Standard on Tailings Management, that can be applied to existing and future tailings facilities, wherever they are and whoever operates them. "The Kakula Mine has been designed to produce the world's most environmentally-responsible copper, which is crucial for today's new generation of environmentally- and sociallyfocused investors," Friedland said. According to the miner, approximately half the mine's tailings will be mixed with cement and pumped back underground to fill mined-out voids, resulting in a surface tailings containment facility that will be "tiny" compared with other major mines. "The definitive feasibility study is an independent verification by nine of the world's top engineering firms of the robust economics generated by our starter mine at Kakula; while the updated preliminary economic assessment is further validation of Kamoa-Kakula's potential to rapidly expand to become the world's second largest copper mine, with annual copper output of more than 800,000 mt," he said. Kakula, on track to begin production in around a year, is a joint venture between Ivanhoe, the DRC government and China's Zijin Mining. Kakula's expected average ore-feed grade is 6.6% copper, with mine-site cash costs around 48 cents/lb. of copper during the first five years of operation. Brokerage Canaccord Genuity said: "We note that no mention of the transportation strategy for concentrate and cathode was made in this release. We assume the previous strategy - trucking to Zambia, followed by rail to Durban, South Africa, remains the preferred option for now."



#### Other important information on copper market:

- China is forecast to hike the blister copper and refined copper output capacity by 750,000 mt/year and 700,000 mt/year in 2021, respectively, China Nonferrous Metals Industry Association said in its copper report Sept. 4. The hike is on the top of over 9 million mt/year blister copper capacity and 13 million mt/year refined copper capacity in 2020. Since 2008, mainland's blister copper and refined copper production capacity has continually risen, the association noted. The power sector, a key copper consumer, posted a 28% year on year rise in cumulative investment in January-July period, which plus the recovering domestic home appliance, electronics, transport and construction sectors, would stimulate Chinese copper demand, CNIA said. Domestic copper stocks depleted fast in the second quarter of 2020, with inventories having fallen for 15 weeks, amid average weekly stocks' decline of 18,700 mt. With China's growing copper output capacity, its demand for imported copper ore and concentrates is on the rise. China imported 12.65 million mt copper ore and concs in January-July, up just 0.2% year on year, as the COVID-19 weighed on Chile and Peru's copper concs exports back in May-June. CNIA noted though China's July copper ore and concs imports of 1.795 million mt was down 13.5% year on year, it rose 12.6% from June level, showing the pandemic impact on China's copper concs imports from South America and other supplier nations was over.
- China's refined copper imports hit 554,979 mt in July, spiking 89.9% year on year and 14.2% month on month, data released by the General Administration of Customs on Aug. 31 showed, as several importers in the world's largest copper consumer seized opportunities to buy seaborne materials when an import arbitrage window opened in June. With the July data summed up, imports of refined copper totaled 2.5 million mt in the first seven months of 2020, up 33.7% compared to the same period last year. Copper stocks across the Shanghai Futures Exchange's warehouses rose to 170,086 mt on Aug. 28, up 10,573 mt or 6.6% compared to the level on July 31 due to the seasonal lull and rising output in the domestic market, the SHFE data showed. On the other hand, China's refined copper exports reached 10,436 mt in July, down 67.4% year on year, and 4.6% month on month. The total exports over January-July hit 133,789 mt, down 37.5% compared to the same period of 2019.
- Chile's state-owned copper miner Codelco saw a 4.4% drop in year-on-year production in July as the coronavirus hit its peak in the nation and forced the company to scale back staffing, slow projects and switch off a smelter. Codelco produced 133,300 tonnes of copper in July, up 2.3% over the first seven months of 2020 compared to the previous year, while production at Escondida mine owned by BHP rose 3.8% in July to 100,900 tonnes, and production from Collahuasi mine, majority owned by Anglo American and Glencore, rose 22.8% in July to 58,100 tonnes.



#### **Precious Metals**

To make for negative yielding bonds and minimum returns requirements Pension Funds have to adjust their investment framework. With \$32tr under pension fund management in just OECD countries, a diversification of even only 1% into gold would have major repercussions in the availability and price of the Yellow Metal.

#### Will Pension Funds Demand Overwhelm Gold Equities, Leading to Parabolic Move Higher?

Since Pension Funds have to change their investment framework to make for negative yielding bonds and minimum returns requirements, real assets (like gold) are benefiting. Analysts are already sharpening their pencils to come with numbers around this 'new' investment demand.... with \$32tr under pension fund management in OECD countries, a diversification of even only 1% into gold would have major repercussions in the availability and price of the Yellow Metal. With Large Investment Funds turning to Gold, Fosterville South enters the Spotlight with Recent Stellar Result. The \$16 billion Ohio Police & Fire Pension Fund approved a 5% allocation to gold, something that would have been unheard of a few months ago but today represents just another domino falling as generalist investors start to enter the gold space to guard against global monetary, fiscal and geopolitical uncertainty. While the recent bet by Warren Buffett on gold equities, via his purchase of Barrick Gold has attracted media attention it is the greater movement of pension and institutional fund flows that could drive mainstream gold equities such as Newmount, Franco Nevada and Barrick higher. While the world's largest gold companies have seen a nice increase in interest during recent days, smaller market capitalization gold situations are also seeing increased interest. Fosterville South Exploration, which has what is arguably the premier gold exploration land package in all of Victoria, Australia is one of those companies. Fosterville South has recently raised \$22 million to increase the pace of exploration on its land holdings. CEO of Fosterville South, Bryan Slusarchuk, notes, "In the past few months, we have seen increasing interest from generalist investors in what we are doing. We are taking advantage of our first mover status in this region and are well funded to drill hard for the foreseeable future. No doubt that more people are starting to pay attention to Fosterville South and what we are doing." Bryan Slusarchuk know a fair bit about how impactful success in the high-grade gold space can be. He is co-founder and former President of K92 Mining, a rapidly growing gold miner in Papua New Guinea which has grown from being a true micro-cap situation a few years ago to now boasting a \$1.7 billion market capitalization driven by outstanding resource growth, production growth and exploration success. While gold is well known worldwide, the actual sector is very small in comparison to other sectors. In fact, it was recently noted that the market capitalization of Apple Inc alone is 3x that of the entire precious metals sector. And, with quantitative easing infinity, unprecedented fiscal and monetary stimuli and a low to negative interest rate environment, it can be argued that gold can



go much higher from here. Slusarchuk notes, "The setup has never been better for gold. And, traditionally in bull markets for gold bullion, gold equities outperform gold itself."

Peru, a top global metals exporter, saw its output of copper, gold and zinc nosedive in the first half of 2020 due to coronavirus restrictions

# Hochschild sees lower output on lockdowns in Peru, Argentina

Precious metals miner Hochschild Mining said on Monday it expects lower annual production than forecast earlier this year as COVID-19-related disruptions hampered mining activity at its assets in Peru and Argentina. The company, which operates two mines in Peru and one in Argentina, said it was targeting 2020 overall attributable production of 280,000-290,000 gold equivalent ounces or 24-25 million silver equivalent ounces. The miner in April withdrew its earlier output forecast of 422,000 gold equivalent ounces or 36 million silver equivalent ounces, after it was forced to temporarily shut all of its mines due to lockdowns. London-listed Hochschild said it had successfully ramped-up operations at its flagship Inmaculada in Peru, with the mine now running at full capacity. Peru, a top global metals exporter, saw its output of copper, gold and zinc nosedive in the first half of 2020 due to coronavirus restrictions. Hochschild said it expects operating costs to inch higher because of reduced production, lower grades and government-imposed transport restrictions.



### **Global economies | Foreign exchange markets**

#### ECB's Lagarde takes benign view on growth, euro strength

Lagarde announced a slight upgrade in the bank's 2020 growth forecast on the back of a strong rebound in activity and signaled higher underlying inflation. It was also said that the \$1.20 level, seen in the past as a key threshold, is now close to the equilibrium exchange rate and should not be seen as trigger level for the ECB.

ECB still expects output across the 19 countries that use the euro to shrink by 8% this year before expanding 5% next year

European Central Bank President Christine Lagarde took a modestly upbeat view on Europe's recovery from a historic recession on Thursday (10.09) and played down concerns about the euro's strength, disappointing hopes she would signal more stimulus. While warning that a second wave of coronavirus infections represented "headwinds", Lagarde announced a slight upgrade in the bank's 2020 growth forecast on the back of a strong rebound in activity and signaled higher underlying inflation. She also a took a benign view on the currency, simply saying the bank would "monitor carefully" exchange rate movements. This was seen by some analysts as the weakest possible expression of concern after the euro rose 8% against the dollar this year, weakening both growth and inflation. Investors had expected tougher language, so the euro actually firmed by half a percent on her comments as the ECB appeared keen to avoid a currency war. While the strong euro is indeed a drag, some argued that the \$1.20 level, seen in the past as a key threshold, is now close to the equilibrium exchange rate and should not be seen as trigger level for the ECB, said sources on the ECB's ratesetting Governing Council. The measured view on the exchange rate and the upgrade to growth also tempered hopes about a further expansion of its 1.35 trillion euro emergency bond buying scheme. Asked about a possible change in policy, Lagarde said council members believed that existing measures were both "efficient and effective" and likely to be used in full. But she refrained from any hints that could be taken as a signal the ECB would eventually expand stimulus. "Under current circumstances it is certainly very likely that the full envelope of PEPP will be used," she said of the 1.35 trillion euro Pandemic Emergency Purchase programme. She added later that no change to PEPP had been discussed. Markets nevertheless continue to expect the ECB to add to its bond buys, not least because euro zone governments will need to borrow heavily next year to keep their economies afloat. That will increase bond issuance, so any suggestion the ECB is stepping back from the market could push borrowing costs higher. And even if the bloc's coronavirus recession is not as deep as feared, it will still take until the end of 2022 for economic activity to fully recover. Indeed, despite the improved outlook, the ECB still expects output across the 19 countries that use the euro to shrink by 8% this year before expanding 5% next year. "Make no mistake: around the turn of the year, the ECB is likely to relax its monetary policy further -- and all the more so if the euro continues to appreciate," Commerzbank economist Joerg Kraemer said.



## **Macroeconomic calendar**

#### Important macroeconomic data releases

Weight	Date	Event	For	Reading <sup>1</sup>	Previous	Consensus <sup>2</sup>
		China				*):
000	31-Aug	Official manufacturing PMI	Aug	51.0	51.1	51.2
000	01-Sep	Caixin's manufacturing PMI	Aug	53.1	52.8	52.5
00	07-Sep	Trade balance (USD bn)	Aug	58.9	62.3	49.7
00	07-Sep	Exports (yoy)	Aug	9.5%	7.2%	7.5%
٥	07-Sep	Foreign reserves (USD bn)	Aug	3 165	3 154	3 171 👅
0000	09-Sep	Consumer inflation CPI (yoy)	Aug	2.4%	2.7%	2.4%
00	09-Sep	Producer inflation PPI (yoy)	Aug	-2.0%	-2.4%	-1.9%
٥	11-Sep	New yuan loans (CNY bn)	Aug	1 280 🔺	993	1 250
		Poland				
00000	31-Aug	GDP (yoy) - final data	2Q	-8.2% =	-8.2%	
00000	31-Aug	GDP (qoq) - final data	2Q	-8.9% =	-8.9%	
0000	01-Sep	Consumer inflation CPI (yoy) - preliminary data	Aug	2.9%	3.0%	3.0%
000	01-Sep	Manufacturing PMI	Aug	50.6	52.8	52.9
		US				
0	31-Aug	Dallas Fed manufacturing activity	Aug	8.0	- 3.0	0.0
000	01-Sep	Manufacturing PMI - final data	Aug	53.1	53.6	53.6
00	01-Sep	ISM Manufacturing	Aug	56.0	54.2	54.8
00	02-Sep	Durable goods orders - final data	Jul	11.4%	11.2%	11.2%
000	03-Sep	Composite PMI - final data	Aug	54.6	54.7	
000	03-Sep	PMI services - final data	Aug	55.0	54.8	54.7
00	04-Sep	Change in non-farm payrolls (ths)‡	Aug	1 371	1 734	1 350
00	04-Sep	Underemployment rate (U6)	Aug	14.2%	16.5%	
00	04-Sep	Unemployment rate	Aug	8.4%	10.2%	9.8%
٥	04-Sep	Average hourly earnings (yoy)‡	Aug	4.7% =	4.7%	4.5%
0000	11-Sep	Consumer inflation CPI (mom)	Aug	0.4%	0.6%	0.3%
0000	11-Sep	Consumer inflation CPI (yoy)	Aug	1.3%	1.0%	1.2%
		Eurozone				
0000	01-Sep	Core CPI (yoy) - preliminary data	Aug	0.4%	1.2%	0.8%
0000	01-Sep	CPI estimate (yoy)	Aug	-0.2%	0.4%	0.2%
000	01-Sep	Manufacturing PMI - final data	Aug	51.7 =	51.7	51.7 🔾
00	01-Sep	Unemployment rate‡	Jul	7.9% 🔺	7.7%	8.0%
00	02-Sep	Producer inflation PPI (yoy)	Jul	-3.3%	-3.7%	-3.3%
000	03-Sep	Composite PMI - final data	Aug	51.9 🔺	51.6	51.6
000	03-Sep	Services PMI - final data	Aug	50.5	50.1	50.1
00	03-Sep	Retail sales (yoy)	Jul	0.4%	1.3%	1.9%
00000	08-Sep	GDP (sa, yoy) - final data	2Q	-14.7% 🔺	-15.0%	-15.0%
00000	08-Sep	GDP (sa, qoq) - final data	2Q	-11.8%	-12.1%	-12.1%
000	08-Sep	Gross fixed capital (qoq)‡	2Q	-17.0%	-5.2%	-12.5%
000	08-Sep	Households consumption (qoq)‡	2Q	-12.4%	-4.5%	-12.2%
00000	10-Sep	ECB main refinancing rate	Sep	0.00% =	0.00%	0.00%
00000	10-Sep	ECB deposit facility rate	Sep	-0.5% =	-0.5%	-0.5%



Weight	Date	Event	For	Reading	<sup>1</sup> Previous		Consensus <sup>2</sup>	
		Germany						
0000	31-Aug	Harmonized consumer inflation HICP (yoy) - preliminary data	Aug	-0.1%	▼	0.0%	0.1%	_
0000	31-Aug	Consumer inflation CPI (yoy) - preliminary data	Aug	0.0%		-0.1%	0.1%	_
000	01-Sep	Manufacturing PMI - final data	Aug	52.2	$\blacksquare$	53.0	53.0	_
00	01-Sep	Unemployment rate	Aug	6.4%	-	6.4%	6.4%	0
000	02-Sep	Retail sales (yoy)‡	Jul	4.2%	$\blacksquare$	6.7%	4.1%	
000	03-Sep	Composite PMI - final data	Aug	54.4		53.7	53.7	
000	04-Sep	Factory orders (wda, yoy)‡	Jul	-7.3%		-10.6%	-6.0%	_
0000	07-Sep	Industrial production (wda, yoy)‡	Jul	-10.0%		-11.4%	-7.4%	_
0000	11-Sep	Harmonized consumer inflation HICP (yoy) - final data	Aug	-0.1%	-	-0.1%	-0.1%	0
0000	11-Sep	Consumer inflation CPI (yoy) - final data	Aug	0.0%	-	0.0%	0.0%	0
		France						
000	01-Sep	Manufacturing PMI - final data	Aug	49.8		49.0	49.0	
000	03-Sep	Composite PMI - final data	Aug	51.6	$\blacksquare$	51.7	51.7	_
0000	10-Sep	Industrial production (yoy)‡	Jul	-8.3%		-11.3%	-8.0%	_
		Italy						
00000	31-Aug	GDP (wda, yoy) - final data	2Q	-17.7%	$\blacksquare$	-17.3%	-17.3%	_
00000	31-Aug	GDP (wda, qoq) - final data	2Q	-12.8%	$\blacksquare$	-12.4%	-12.4%	•
0000	31-Aug	Harmonized consumer inflation HICP (yoy) - preliminary data	Aug	-0.5%	$\blacksquare$	0.8%	-0.3%	_
000	01-Sep	Manufacturing PMI	Aug	53.1		51.9	52.0	
00	01-Sep	Unemployment rate - preliminary data‡	Jul	9.7%		9.3%	9.1%	
000	03-Sep	Composite PMI	Aug	49.5	$\blacksquare$	52.5	50.0	_
0000	10-Sep	Industrial production (wda, yoy)‡	Jul	-8.0%		-13.9%	-9.8%	
		UK						
000	01-Sep	Manufacturing PMI (sa) - final data	Aug	55.2	$\blacksquare$	55.3	55.3	•
000	03-Sep	Composite PMI - final data	Aug	59.1	$\blacksquare$	60.3	60.3	•
0000	11-Sep	Industrial production (yoy)	Jul	-7.8%		-12.5%	-8.7%	
		Japan						
0000	31-Aug	Industrial production (yoy) - preliminary data	Jul	-16.1%		-18.2%	-17.5%	
000	01-Sep	Manufacturing PMI - final data	Aug	47.2		46.6		
000	03-Sep	Composite PMI - final data	Aug	45.2		44.9		
00000	08-Sep	GDP (annualized, qoq) - final data	2Q	-28.1%	$\blacksquare$	-27.8%	-28.5%	
00000	08-Sep	GDP (qoq, sa) - final data	2Q	-7.9%	▼	-7.8%	-8.0%	
		Chile					*	
000	31-Aug	Total copper production (metric tons)	Jul	467 913	$\blacksquare$	472 172		
000	31-Aug	Manufacturing (yoy)	Jul	-7.2%		-8.3%	-10.5%	
0000	01-Sep	Economic activity (yoy)	Jul	-10.7%		-12.4%	-12.0%	
00000	02-Sep	BCCh overnight rate target	Sep	0.50%	-	0.50%	0.50%	0
00	04-Sep	Nominal wages (yoy)	Jul	2.8%		2.7%		
000	07-Sep	Copper exports (USD mn)	Aug	2 761	▼	3 116		
		Canada						ψĮ
000	04-Sep	Net change in employment (ths)	Aug	246	•	419	250	•
00000	09-Sep	BoC base rate decision	Sep	0.25%	-	0.25%	0.25%	0
000	11-Sep	Capacity utilization	2Q	70.3%	▼	79.8%	70.7%	

<sup>&</sup>lt;sup>1</sup> Reading difference to previous release: ▲ = higher than previous; ▼ = lower than previous; == equal to previous.

<sup>&</sup>lt;sup>2</sup> 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

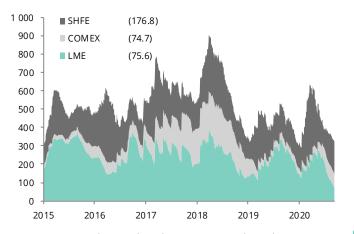
(as of: 11-Sep-20)		Price change <sup>1</sup>							From year beginning <sup>2</sup>			
	Price		2W		QTD		YTD		1Y	Average	Min	Max
LME (USD/t; Mo in USD/lbs)												
Copper	6 757.50		0.4%		11.9%		9.8%		15.7%	5 785.80	4 617.50	6 790.50
Molybdenum	8.38		8.8%		13.6%	•	-8.9%	•		8.58	7.00	10.90
Nickel	14 935.00	_	-3.1%		16.8%		6.7%	•	-17.9%	12 951.29	11 055.00	15 660.00
Aluminum	1 746.50	_	-0.9%		9.0%	•	-3.0%	•	-1.6%	1 624.88	1 421.50	1 810.50
Tin	17 885.00		0.5%		6.2%		6.1%		2.4%	16 515.40	13 400.00	18 420.00
Zinc	2 428.50	_	-4.0%		18.1%		5.9%		3.0%	2 123.30	1 773.50	2 554.00
Lead	1 869.00	_	-5.4%		4.5%	•	-2.8%	•	-10.4%	1 796.08	1 576.50	2 027.00
LBMA (USD/troz)												
Silver	26.88	_	-1.7%		50.6%		48.9%		47.7%	18.83	12.01	28.89
Gold <sup>2</sup>	1 947.40	_	-0.5%		10.1%		27.9%		28.5%	1 722.78	1 474.25	2 067.15
LPPM (USD/troz)	_											
Platinum <sup>2</sup>	929.00	_	-0.1%		14.1%	$\blacksquare$	-4.3%	$\blacksquare$	-2.0%	863.03	593.00	1 017.00
Palladium <sup>2</sup>	2 301.00		5.7%		20.8%		19.8%		43.8%	2 130.36	1 557.00	2 781.00
FX <sup>3</sup>	_											
EURUSD	1.1854	_	-0.7%		5.9%		5.5%		8.1%	1.1213	1.0707	1.1987
EURPLN	4.4504		1.2%	•	-0.3%		4.5%		2.5%	4.4187	4.2279	4.6044
USDPLN	3.7534		1.7%	•	-5.7%	•	-1.2%	•	-4.6%	3.9453	3.6707	4.2654
USDCAD	1.3186		1.1%	•	-3.2%		1.5%	•	-0.1%	1.3559	1.2970	1.4496
USDCNY	6.8344	_	-0.2%	•	-3.3%	•	-1.8%	•	-3.5%	7.0081	6.8282	7.1671
USDCLP	764.99	_	-1.9%	•	-6.3%		2.7%		7.1%	804.27	748.74	867.83
Money market	_											
3m LIBOR USD	0.250		0.01	$\blacksquare$	-0.05	$\blacksquare$	-1.66	$\blacksquare$	-1.87	0.834	0.234	1.900
3m EURIBOR	-0.484	•	-0.01	•	-0.06	•	-0.10	•	-0.05	-0.388	-0.493	-0.161
3m WIBOR	0.230	-	0.00	•	-0.03	•	-1.48	•	-1.49	0.848	0.230	1.710
5y USD interest rate swap	0.315	•	-0.02	•	-0.01	•	-1.41	•	-1.25	0.662	0.243	1.693
5y EUR interest rate swap	-0.418	•	-0.06	•	-0.07	•	-0.31	•	-0.04	-0.298	-0.453	-0.090
5y PLN interest rate swap	0.635	•	-0.09		0.10	•	-1.15	•	-1.06	0.947	0.480	2.050
Fuel	_											
WTI Cushing	37.33	•	-12.4%	•	-4.9%		-38.9%	•	-32.2%	37.99	-37.63	63.27
Brent	39.00	•	-12.1%	•	-4.6%	•	-41.3%	•	-35.8%	41.48	17.32	69.02
Diesel NY (ULSD)	108.71	•	-10.0%	•	-8.1%	•	-46.4%	•	-42.2%	124.07	60.67	206.01
Others												
VIX	26.87		0.46	•	-3.56		13.09		12.65	30.76	12.10	82.69
BBG Commodity Index	71.56	•	-2.4%		10.1%	•	-11.5%	•	-8.9%	68.33	59.48	81.64
S&P500	3 340.97	•	-4.6%		7.8%		3.4%		11.0%	3 087.24	2 237.40	3 580.84
DAX	13 202.84		2.0%		7.2%	•	-0.3%		6.4%	12 072.34	8 441.71	13 789.00
Shanghai Composite	3 260.35	•	-4.0%		9.2%		6.9%		7.6%	3 038.17	2 660.17	3 451.09
WIG 20	1 772.89	•	-1.5%		0.8%	•	-17.5%	•	-19.0%	1 797.31	1 305.73	2 200.10
KGHM	136.45	•	-0.3%		50.1%		42.8%		67.0%	93.81	49.40	139.35

<sup>°</sup>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. <sup>3</sup> central banks' fixing rates (Bank of China HK for USD/CNY). <sup>4</sup>.

Source: Bloomberg, KGHM Polska Miedź

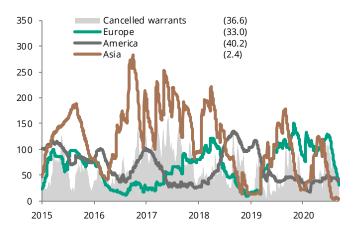


#### **Copper: official exchange stocks (thousand tonnes)**



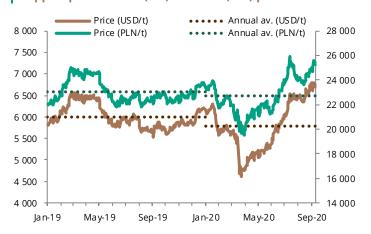
Note: Latest values in brackets. Source: Bloomberg, KGHM

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



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

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



Source: Bloomberg, KGHM Polska Miedź

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

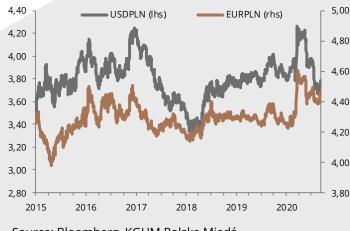


Source: Bloomberg, KGHM Polska Miedź

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



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: **31 August - 13 September 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

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