

Market Overview

 as of: 28th January 2019






- Copper:** Planned maintenance at major copper smelters this year is expected to reduce supply of the refined metal, which could further tighten the market and push premiums higher. The ongoing conflict over tariffs between China and the US could have a lasting impact on copper prices, according to analysts of world's biggest copper producer (*page 2*).
- Precious metals:** In the past two weeks, gold prices continued to rise on the back of lower expectations of interest rate hikes in the US. Gold price jump was followed by silver, but if looked at the change in the physically held material in ETFs, one could have a contradictory impression, because the amount of gold stored in ETF grows, unlike silver, whose resources have been falling for some time (*page 4*).
- IMF WEO:** The global expansion has weakened. Global growth for 2018 is estimated at 3.7 percent, as in the October 2018 World Economic Outlook (WEO) forecast, despite weaker performance in some economies, notably Europe and Asia. The global economy is projected to grow at 3.5 percent in 2019 and 3.6 percent in 2020, 0.2 and 0.1 percentage point below last October's projections (*page 6*).

Key market prices

	Close price	2w chng.
LME (USD/t)		
▲ Copper	5 901.00	0.7%
▲ Nickel	11 715.00	2.6%
LBMA (USD/troz)		
▼ Silver	15.38	-1.5%
▲ Gold (PM)	1 293.90	0.1%
FX		
▼ EURUSD	1.1346	-1.1%
▼ EURPLN	4.2935	0.0%
▲ USDPLN	3.7893	1.2%
▼ USDCAD	1.3256	-0.1%
▼ USDCLP	672.14	-0.4%
Stocks		
▲ KGHM	92.00	2.5%

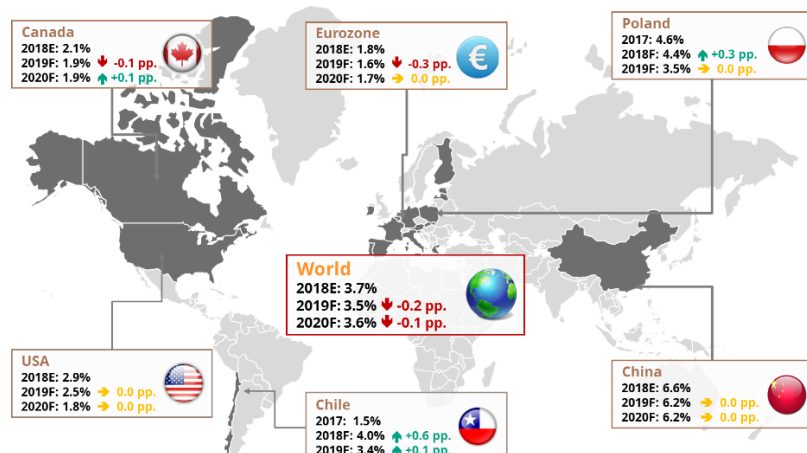
 Source: Bloomberg, KGHM Polska Miedź; (*more on page 9*)

Important macroeconomic data

Release	For	
 GDP (yoy)	4Q	6.4% ▼
 Manufacturing PMI	Jan	54.9 ▲
 Average salary (yoy)	Dec	6.1% ▼
 Industr. prod. (wda, yoy)	Nov	-3.3% ▼
 Manufacturing PMI	Jan	49.9 ▼

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

January 2019 IMF forecasts' revision



Source: KGHM Polska Miedź, IMF Outlook

Market Risk Unit

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Base and precious metals | Other commodities

Copper

Planned maintenance at major copper smelters this year is expected to reduce supply of the refined metal, which could further tighten the market and push premiums higher. The ongoing conflict over tariffs between China and the US could have a lasting impact on copper prices, according to analysts of world's biggest copper producer.

Planned maintenance at major copper smelters adds to supply worries

In November, Codelco Chief Executive Officer Nelson Pizarro said operations at the smelters in its Chuquicamata and Salvador mines would be restarted by February. Now, the company said the work required to enable the plants to comply with environmental regulation won't be completed until March. Codelco said lately that the delay won't have an impact on output over the medium term because it's selling more copper concentrate to make up for lower refined cathode production. Still, Codelco told Congress earlier this month that the stoppage will result in a production loss of about 218,000 metric tons at its Chuquicamata smelter. That's one-and-a-half times the inventories in warehouses tracked by the London Metal Exchange.

The delay comes at a time when the supply outlook for the metal is already dimming. Chilean copper agency predicted that 2019 production will trail consumption by 227,000 metric tons -- more than three times the deficit seen last year. The combined stockpiles monitored by exchanges in London, Shanghai and New York have shrank by half over the past six months. While Codelco told Congress the stoppage will last until March 15, the union is more pessimistic. Work isn't expected to resume until the end of March, Miguel Veliz, a leader at Chuquicamata Union No. 3, said in an interview. Completing the upgrade at Chuquicamata is taking longer than expected partly because the company abandoned a planned overhaul of existing acid plants and opted instead to build new facilities.

Planned maintenance at major copper smelters this year is expected to reduce supply of the refined metal used widely in the power and construction industries, further tightening the market and pushing premiums higher. Smelter outages in 2018, including those owned by Vedanta Ltd, Mitsubishi Materials and Aurubis caused a supply bottleneck, pushing up spot treatment and refining charges and boosting premiums for cathodes. Analysts expect to see further shortages this year. "We could be heading for a second year when smelter outages are higher than mine outages which is unusual in copper," said BMO Capital Markets commodities analyst Colin Hamilton, adding that flagged outages would not take the market by surprise.

Company	Location	Processing capacity p/a	Maintenance period
Pan Pacific Copper	Saganoseki, Japan	450 th. tonnes	3-4 weeks, XI 2019
Sumitomo Metal Mining	Toyo smelter, Japan	450 th. tonnes	3 weeks, XI 2019
Mitsubishi Materials	Naoshima, Japan	234 th. tonnes	13 II - 15 III 2019
Shandong Xiangguang	Yanggu, China	400 th. tonnes	50 days, V-VI 2019
Aurubis	Pirdop, Bulgaria	230 th. tonnes	18 days, V-VI 2019
Aurubis	Lunen, Germany	190 th. tonnes	17 days, III and 25 days IX 2019
Codelco	Ventanas, Chile	470 th. tonnes	28 days, X 2019

Other important information on copper market:

- The ongoing conflict over tariffs between China and the US could have a lasting impact on copper prices, even if negotiators from the two countries strike a deal in the coming weeks, analysts from the world's leading producer of the metal have warned. In its latest market forecast, the Chilean Copper Commission, a government agency, predicted that copper prices will average \$3.05/lb this year, up from \$2.96/lb in 2018. The forecast is unchanged from its previous forecast released in November despite a continued decline in global copper stocks and an announcement by Freeport McMoRan of a major production curtailment at its Grasberg mine in Indonesia, the world's second largest copper operation. Cochilco analyst Victor Garay said that the copper price had been hit by withdrawal of financial investors from commodity market as they preferred currency, especially the US dollar, given the uncertainty caused by the China-US trade war. Copper prices have fallen sharply since US President Donald Trump announced the first tariff on imports of Chinese goods in June, ending 2018 16% lower. This has hit optimism about how soon copper could return to highs seen earlier this year, driven by a growing gap between supply and demand. "The copper price remains on an upward trend, but unlike what we thought a year ago when we expected a rapid rise, we now think it will rise more slowly," Garay said. Cochilco expects the global copper deficit to reach 227,000 mt, as a 1.6% rise in global mine output is outpaced by a 2.4% rise in world copper demand, driven principally by China. For 2020, the government body expects prices to average only slightly higher at \$3.08/lb. "This is because some effects of the trade war will be more permanent than transitory," Garay said.
- The global world refined copper market showed a 15,000 tonnes deficit in October, compared with a 161,000 tonnes deficit in September, the International Copper Study Group (ICSG) said in its latest monthly bulletin. For the first 10 months of the year, the market was in a 547,000 tonnes deficit compared with a 224,000 tonnes deficit in the same period a year earlier, the

ICSG said. World refined copper output in October was 1.98 million tonnes , while consumption was 1.99 million tonnes.

- China imported 548,082 metric tons of copper concentrate from Chile, world's top producer, in Dec., down from Nov.'s record, according to Chinese customs data. Imports for 2018 at 5.82 million tons, up around 27% from year ago. China's total imports of the raw material for refined copper in 2018 surged 14% to 19.73 million tons. Dec. imports from Peru at 374,068 tons, down from 523,341 tons a month ago; purchases from Australia at 48,899 tons, down from 70,803 tons a month ago.

Precious Metals

In the past two weeks, gold prices continued to rise on the back of lower expectations of interest rate hikes in the US. Gold price jump was followed by silver, but if looked at the change in the physically held material in ETFs, one could have a contradictory impression, because the amount of gold stored in ETF grows, unlike silver, whose resources have been falling for some time.

Turkey's gold production increased by 20 percent in 2018

Gold production in Turkey has risen by 20 percent in 2018 year-over-year

Gold production in Turkey rose by 20 percent in 2018 compared to the previous year, according to the Energy and Natural Resources Deputy Minister Mithat Cansiz. The production increase contributed to the reduction of the current account deficit by approximately \$200 million, Cansiz said over his social media account. Turkey's current account balance showed a \$986 million surplus in November, improving from last year's deficit of \$4.2 billion, according to the Central Bank of the Republic of Turkey (CBRT). November marked the fourth straight month the current account has been showing a surplus. In November, excluding gold and energy, the current account balance posted a surplus of \$4.5 billion, improving from a deficit of \$898 million in the same month of 2017.

Gold production in Turkey was initiated in 2001. The highest level in production was reached in 2013 with 33.5 tons. It decreased to 22.5 tons in 2017. In 2018, production increased to 27.1 tons. With the ongoing projects, production is expected to hit 30 tons this year and 35 tons in 2020, Deputy Minister Cansiz noted. With the introduction of the necessary legislation and incentive mechanisms, Turkey aims to achieve 50-60 tons of gold production by 2023, Cansiz added.

Cutting costs and capping expenditures will be the main priorities in the gold sector in 2019 according to Fitch Solutions research

Gold miners to remain cautious in 2019

Gold miners are expected to remain committed to cutting costs and capping expenditures in 2019, a new report by Fitch Solutions reveals. According to the document, despite the fact that prices are predicted to average \$1,300/oz and that most major miners' cash costs of production should remain comfortably

below \$900/tonne, the largest firms in the world are likely to remain committed to spending cuts in an effort to reduce debt loads, and continue to pursue a strategy of improving both operational and cost performance. "Capital expenditure estimates for 2019 indicate that although gold companies may have turned a financial corner in 2016, spending will not return to the heights of the past decade. As such, priority will be given to reinvestment in brownfield assets rather than the development of greenfield projects," Fitch report states.

The market researcher also expects more mergers and acquisitions in the new year, given that they have become cheaper options than expanding gold reserves through exploration. "We expect more M&A activity to filter through the industry, especially following the Barrick – Randgold merger (completed in January 2019), which has changed the dynamics of the gold industry by creating the largest gold-mining company in the world with the greatest concentration (five of top 10) of tier-one gold assets in the market," the paper reads. Fitch also foresees an increase in joint ventures, used as strategies to mitigate risk, particularly in unstable countries where resource nationalism, labour strikes, extreme weather, and increased environmental regulation jeopardize the continuity of ongoing projects. "Examples of notable joint ventures in 2018 include Gold Fields & Asanko Gold's 50/50 deal in the Nkran and Esaase gold deposits in Ghana and Indiana Resources and Cradle Arc's 65/35 deal in the Kossanto West Gold project in Western Mali." Also to avoid the risk of engaging in murky activities, miners are expected to invest in blockchain technology. According to Fitch, such a system would allow them to effectively track the sourcing of minerals across the supply chain in order ensure they abide by ethical and sustainability standards.

Global economies | Foreign exchange markets

IMF: World Economic Outlook Update, January 2019

The global expansion has weakened. Global growth for 2018 is estimated at 3.7 percent, as in the October 2018 World Economic Outlook (WEO) forecast, despite weaker performance in some economies, notably Europe and Asia. The global economy is projected to grow at 3.5 percent in 2019 and 3.6 percent in 2020, 0.2 and 0.1 percentage point below last October's projections.

Global growth forecasts has been revised downward





The global growth forecast for 2019 and 2020 had already been revised downward in the last WEO, partly because of the negative effects of tariff increases enacted in the United States and China earlier that year. The further downward revision since October in part reflects carry over from softer momentum in the second half of 2018—including in Germany following the introduction of new automobile fuel emission standards and in Italy where concerns about sovereign and financial risks have weighed on domestic demand—but also weakening financial market sentiment as well as a contraction in Turkey now projected to be deeper than anticipated.








Risks to global growth tilt to the downside. An escalation of trade tensions beyond those already incorporated in the forecast remains a key source of risk to the outlook. Financial conditions have already tightened since the fall. A range of triggers beyond escalating trade tensions could spark a further deterioration in risk sentiment with adverse growth implications, especially given the high levels of public and private debt. These potential triggers include a “no-deal” withdrawal of the United Kingdom from the European Union and a greater-than-envisaged slowdown in China.

The main shared policy priority is for countries to resolve cooperatively and quickly their trade disagreements and the resulting policy uncertainty, rather than raising harmful barriers further and destabilizing an already slowing global economy. Across all economies, measures to boost potential output growth, enhance inclusiveness, and strengthen fiscal and financial buffers in an environment of high debt burdens and tighter financial conditions are imperatives.

Macroeconomic calendar

Important macroeconomic data releases

Weight	Date	Event	For	Reading ¹	Previous	Consensus ²
China 						
☆☆	14-Jan	Trade balance (USD bn)‡	Dec	57.1 ▲	41.9	51.6 ▲
☆☆	14-Jan	Exports (yoy)‡	Dec	-4.4% ▼	3.9%	2.0% ▼
☆	15-Jan	New yuan loans (CNY bn)	Dec	1 080 ▼	1 250	825 ▲
☆☆☆☆☆	21-Jan	GDP (yoy)	4Q	6.4% ▼	6.5%	6.4% ○
☆☆☆☆☆	21-Jan	GDP (sa, qoq)	4Q	1.5% ▼	1.6%	1.5% ○
☆☆☆☆	21-Jan	Industrial production (yoy)	Dec	5.7% ▲	5.4%	5.3% ▲
☆☆	21-Jan	Fixed assets investments (ytd, yoy)	Dec	5.9% -	5.9%	6.0% ▼
☆	21-Jan	Retail sales (yoy)	Dec	8.2% ▲	8.1%	8.1% ▲
Poland 						
☆☆	14-Jan	Trade balance (EUR mn)‡	Nov	- 229 ▲	- 569	- 410 ▲
☆☆	14-Jan	Exports (EUR mn)‡	Nov	20 025 ▼	20 500	19 480 ▲
☆☆	14-Jan	Current account balance (EUR mn)‡	Nov	- 221 ▲	- 471	- 484 ▲
☆☆☆☆	15-Jan	Consumer inflation CPI (yoy) - final data	Dec	1.1% -	1.1%	--
☆☆☆☆	16-Jan	Core CPI (excluding food and energy, yoy)	Dec	0.6% ▼	0.7%	0.7% ▼
☆☆☆☆	18-Jan	Sold industrial production (yoy)‡	Dec	2.8% ▼	4.6%	5.0% ▼
☆☆	18-Jan	Average gross salary (yoy)	Dec	6.1% ▼	7.7%	7.3% ▼
☆☆	18-Jan	Producer inflation PPI (yoy)‡	Dec	2.2% ▼	2.8%	2.5% ▼
☆	18-Jan	Employment (yoy)	Dec	2.8% ▼	3.0%	2.8% ○
☆☆☆	22-Jan	Retail sales (yoy)	Dec	4.7% ▼	8.2%	8.1% ▼
☆	23-Jan	M3 money supply (yoy)	Dec	9.2% ▲	8.8%	8.6% ▲
☆☆	24-Jan	Unemployment rate	Dec	5.8% ▲	5.7%	5.8% ○
US 						
☆☆	17-Jan	Philadelphia Fed business outlook‡	Jan	17.0 ▲	9.1	9.0 ▲
☆☆☆☆	18-Jan	Industrial production (mom)‡	Dec	0.3% ▼	0.4%	0.2% ▲
☆☆	18-Jan	University of Michigan confidence index - preliminary data	Jan	90.7 ▼	98.3	96.8 ▼
☆	18-Jan	Capacity utilization‡	Dec	78.7% ▲	78.6%	78.5% ▲
☆	23-Jan	Richmond Fed manufacturing index	Jan	- 2.0 ▲	- 8.0	- 2.0 ○
☆☆☆	24-Jan	Composite PMI - preliminary data	Jan	54.5 ▲	54.4	--
☆☆☆	24-Jan	Manufacturing PMI - preliminary data	Jan	54.9 ▲	53.8	53.5 ▲
☆☆☆	24-Jan	PMI services - preliminary data	Jan	54.2 ▼	54.4	54.0 ▲
Eurozone 						
☆☆☆☆	14-Jan	Industrial production (sa, mom)‡	Nov	-1.7% ▼	0.1%	-1.5% ▼
☆☆☆☆	14-Jan	Industrial production (wda, yoy)	Nov	-3.3% ▼	1.2%	-2.1% ▼
☆	15-Jan	Trade balance (EUR mn)	Nov	19.0 ▲	14.0	--
☆☆☆☆	17-Jan	Consumer inflation CPI (yoy) - final data	Dec	1.6% -	1.6%	1.6% ○
☆☆☆☆	17-Jan	Core CPI (yoy) - final data	Dec	1.0% -	1.0%	1.0% ○
☆	22-Jan	ZEW survey expectations	Jan	- 20.9 ▲	- 21.0	--
☆	23-Jan	Consumer confidence - estimation‡	Jan	- 7.9 ▲	- 8.3	- 6.5 ▼
☆☆☆☆☆	24-Jan	ECB main refinancing rate	Jan	0.00% -	0.00%	0.00% ○
☆☆☆☆☆	24-Jan	ECB deposit facility rate	Jan	-0.4% -	-0.4%	-0.4% ○
☆☆☆	24-Jan	Composite PMI - preliminary data	Jan	50.7 ▼	51.1	51.4 ▼
☆☆☆	24-Jan	Manufacturing PMI - preliminary data	Jan	50.5 ▼	51.4	51.4 ▼
☆☆☆	24-Jan	Services PMI - preliminary data	Jan	50.8 ▼	51.2	51.5 ▼

Weight	Date	Event	For	Reading ¹	Previous	Consensus ²
Germany 						
★★★★	16-Jan	Harmonized consumer inflation HICP (yoy) - final data	Dec	1.7% -	1.7%	1.7% ○
★★★★	16-Jan	Consumer inflation CPI (yoy) - final data	Dec	1.7% -	1.7%	1.7% ○
★★★	24-Jan	Composite PMI - preliminary data	Jan	52.1 ▲	51.6	51.9 ●
★★★	24-Jan	Manufacturing PMI - preliminary data	Jan	49.9 ▼	51.5	51.5 ●
★★	25-Jan	IFO business climate	Jan	99.1 ▼	101	101 ●
France 						
★★★★	15-Jan	Harmonized consumer inflation HICP (yoy) - final data	Dec	1.9% -	1.9%	1.9% ○
★★★★	15-Jan	Consumer inflation CPI (yoy) - final data	Dec	1.6% -	1.6%	1.6% ○
★★★	24-Jan	Composite PMI - preliminary data	Jan	47.9 ▼	48.7	51.0 ●
★★★	24-Jan	Manufacturing PMI - preliminary data	Jan	51.2 ▲	49.7	50.0 ●
Italy 						
★★★★	16-Jan	Harmonized consumer inflation HICP (yoy) - final data	Dec	1.2% -	1.2%	1.2% ○
UK 						
★★★★	16-Jan	Consumer inflation CPI (yoy)	Dec	2.1% ▼	2.3%	2.1% ○
★★	22-Jan	Unemployment rate (ILO, 3-months)	Nov	4.0% ▼	4.1%	4.1% ●
Japan 						
★★★★	18-Jan	Consumer inflation CPI (yoy)	Dec	0.3% ▼	0.8%	0.3% ○
★★★★	18-Jan	Industrial production (yoy) - final data	Nov	1.5% ▲	1.4%	--
★★★	24-Jan	Manufacturing PMI - preliminary data	Jan	50.0 ▼	52.6	--
Chile 						
<i>No major data in the period</i>						
Canada 						
★★★★	18-Jan	Consumer inflation CPI (yoy)	Dec	2.0% ▲	1.7%	1.7% ●

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

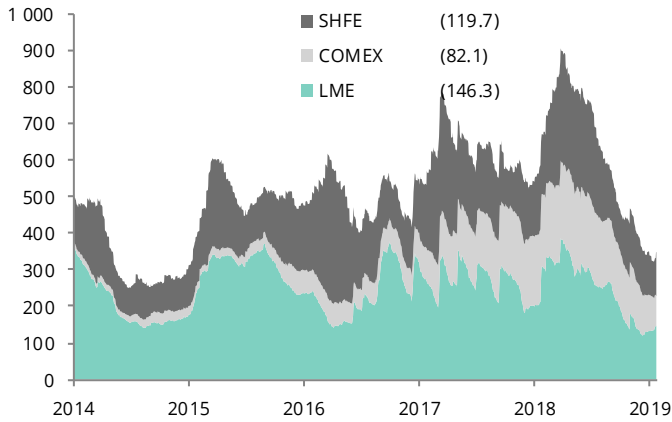
Key base & precious metal prices, exchange rates and other important market factors

(as of: 25-Jan-19)		Price change ¹					From year beginning ²		
	Price	2W	QTD	YTD	1Y	Average	Min	Max	
LME (USD/t)									
Copper	5 901.00	▲ 0.7%	▼ -1.1%	▼ -1.1%	▼ -17.0%	5 904.25	5 811.00	6 022.00	
Molybdenum	26 000.00	- 0.0%	- 0.0%	- 0.0%	▲ 62.5%	26 000.00	26 000.00	26 000.00	
Nickel	11 715.00	▲ 2.6%	▲ 10.6%	▲ 10.6%	▼ -14.5%	11 313.61	10 440.00	11 715.00	
Aluminum	1 866.50	▲ 5.1%	▼ -0.2%	▼ -0.2%	▼ -16.6%	1 841.39	1 775.50	1 879.00	
Tin	20 750.00	▲ 0.5%	▲ 6.4%	▲ 6.4%	▼ -2.8%	20 399.72	19 500.00	21 055.00	
Zinc	2 635.50	▲ 6.8%	▲ 5.0%	▲ 5.0%	▼ -24.3%	2 529.44	2 462.00	2 635.50	
Lead	2 085.00	▲ 6.3%	▲ 3.8%	▲ 3.8%	▼ -20.5%	1 974.03	1 934.50	2 085.00	
LBMA (USD/troz)									
Silver	15.38	▼ -1.5%	▼ -0.6%	▼ -0.6%	▼ -12.2%	15.53	15.26	15.75	
Gold ²	1 293.90	▲ 0.1%	▲ 1.0%	▲ 1.0%	▼ -4.5%	1 287.49	1 279.55	1 294.40	
LPPM (USD/troz)									
Platinum ²	812.00	▲ 0.6%	▲ 2.3%	▲ 2.3%	▼ -20.4%	804.94	785.00	823.00	
Palladium ²	1 331.00	▼ -0.4%	▲ 5.4%	▲ 5.4%	▲ 21.0%	1 326.72	1 267.00	1 392.00	
FX³									
EURUSD	1.1346	▼ -1.1%	▼ -0.9%	▼ -0.9%	▼ -8.6%	1.1411	1.1341	1.1535	
EURPLN	4.2935	▼ 0.0%	▼ -0.2%	▼ -0.2%	▲ 3.5%	4.2957	4.2862	4.3055	
USDPLN	3.7893	▲ 1.2%	▲ 0.8%	▲ 0.8%	▲ 13.5%	3.7630	3.7289	3.7893	
USDCAD	1.3256	▼ -0.1%	▼ -2.8%	▼ -2.8%	▲ 7.6%	1.3320	1.3221	1.3600	
USDCNY	6.7483	▼ -0.3%	▼ -1.9%	▼ -1.9%	▲ 6.7%	6.8027	6.7483	6.8721	
USDCLP	672.14	▼ -0.4%	▼ -3.3%	▼ -3.3%	▲ 11.3%	678.93	670.10	697.64	
Money market									
3m LIBOR USD	2.752	▼ -0.03	▼ -0.06	▼ -0.06	▲ 0.99	2.781	2.752	2.804	
3m EURIBOR	-0.307	▲ 0.00	▲ 0.00	▲ 0.00	▲ 0.02	-0.308	-0.310	-0.306	
3m WIBOR	1.720	- 0.00	- 0.00	- 0.00	- 0.00	1.720	1.720	1.720	
5y USD interest rate swap	2.681	▲ 0.07	▲ 0.11	▲ 0.11	▲ 0.19	2.625	2.419	2.714	
5y EUR interest rate swap	0.171	▼ -0.01	▼ -0.03	▼ -0.03	▼ -0.25	0.185	0.136	0.220	
5y PLN interest rate swap	2.080	▲ 0.11	▼ -0.05	▼ -0.05	▼ -0.53	2.072	1.965	2.140	
Fuel									
WTI Cushing	53.49	▲ 5.9%	▲ 17.8%	▲ 17.8%	▼ -18.5%	51.10	46.54	53.80	
Brent	61.16	▲ 4.6%	▲ 15.0%	▲ 15.0%	▼ -12.5%	59.33	53.83	62.37	
Diesel NY (ULSD)	188.99	▲ 2.3%	▲ 12.4%	▲ 12.4%	▼ -10.6%	184.78	170.01	191.23	
Others									
VIX	17.42	▼ -1.65	▼ -8.00	▼ -8.00	▲ 5.84	19.93	17.42	25.45	
BBG Commodity Index	81.07	▲ 1.5%	▲ 5.7%	▲ 5.7%	▼ -10.4%	79.58	76.99	81.38	
S&P500	2 664.76	▲ 3.2%	▲ 6.3%	▲ 6.3%	▼ -6.1%	2 593.31	2 447.89	2 670.71	
DAX	11 281.79	▲ 3.9%	▲ 6.8%	▲ 6.8%	▼ -15.2%	10 918.42	10 416.66	11 281.79	
Shanghai Composite	2 601.72	▲ 2.6%	▲ 4.3%	▲ 4.3%	▼ -26.7%	2 551.90	2 464.36	2 610.51	
WIG 20	2 398.74	▲ 3.1%	▲ 5.4%	▲ 5.4%	▼ -7.4%	2 344.76	2 247.22	2 407.09	
KGHM	92.00	▲ 2.5%	▲ 3.5%	▲ 3.5%	▼ -18.1%	90.64	86.12	92.48	

^o 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

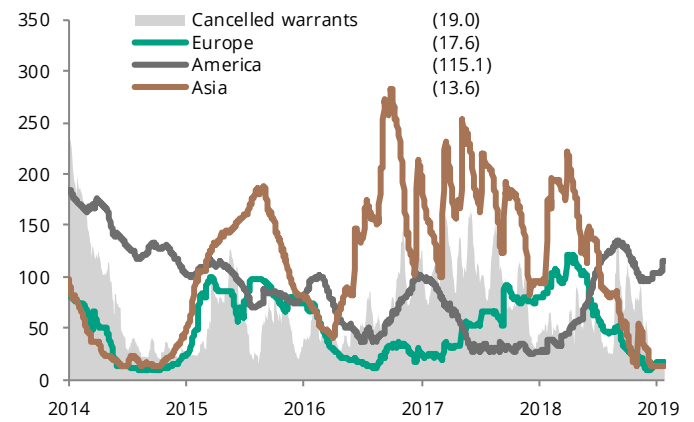
Source: Bloomberg, KGHM Polska Miedź

Copper: official exchange stocks (thousand tonnes)



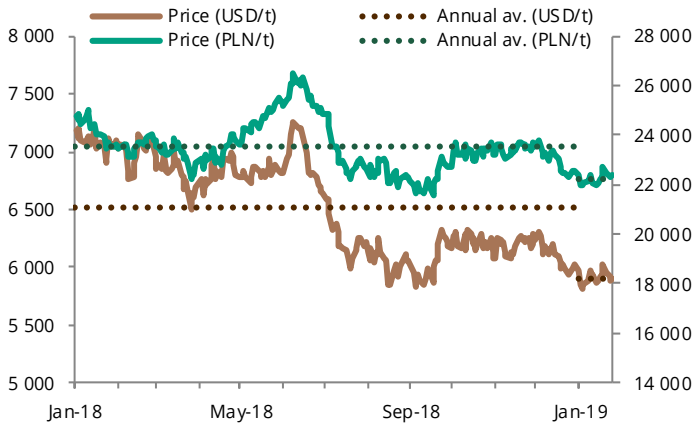
Note: Latest values in brackets. Source: Bloomberg, KGHM

Copper: official LME stocks (thousand tonnes)



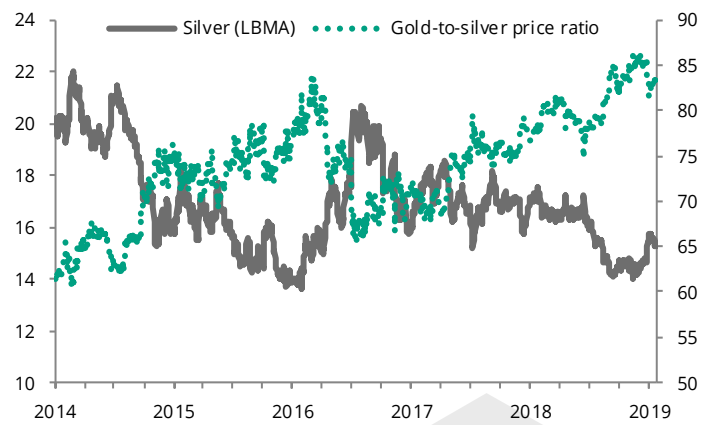
Note: Latest values in brackets. Source: Bloomberg, KGHM

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



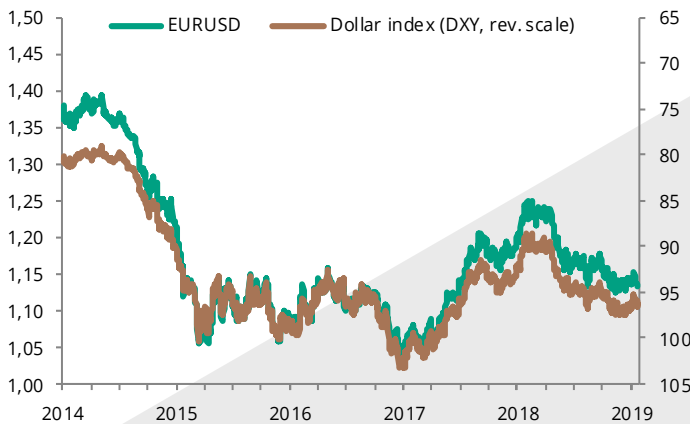
Source: Bloomberg, KGHM Polska Miedź

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



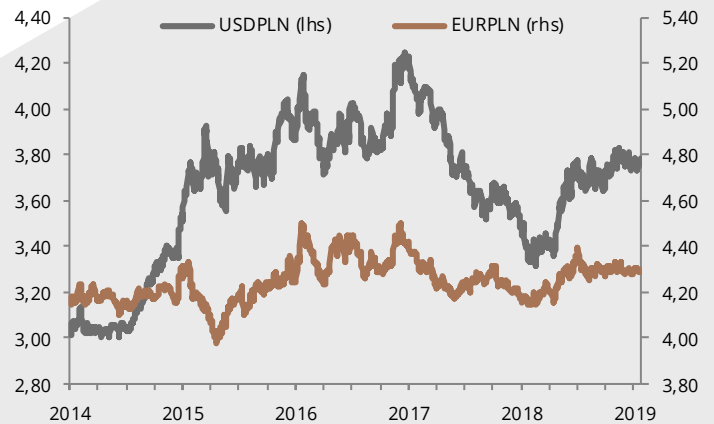
Source: Bloomberg, KGHM Polska Miedź

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:
14th – 27th January 2019.

- 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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