

Market Overview

 as of: 6th May 2019


- Copper:** Latin America's second-largest copper miner sees demand for the metal outstripping supply for several years, encouraging the company to continue ratcheting up investments in new output. Codelco has begun extracting ore from beneath the giant Chuquicamata copper mine in northern Chile (*page 2*).
- Precious metals:** Silver total physical demand rose 4% in 2018 to 1,033.5 Moz (32,146 t), driven higher by a recovery in retail investment (bars and coins), plus further gains from jewelry and silverware (*page 4*).
- USA:** Subsequent data from the US provoke a mixed reaction of analysts, bolstering views that the economy is rebounding from a soft patch but not by enough to revive inflation (*page 6*).

Key market prices

	Close price	2w chng.
LME (USD/t)		
▼ Copper	6 180.00	-4.2%
▼ Nickel	12 170.00	-3.6%
LBMA (USD/troz)		
▼ Silver	14.66	-2.0%
▲ Gold (PM)	1 278.55	0.2%
FX		
▼ EURUSD	1.1155	-0.8%
▼ EURPLN	4.2795	0.0%
▲ USDPLN	3.8177	0.3%
▲ USDCAD	1.3429	0.6%
▲ USDCLP	683.31	3.2%
Stocks		
▼ KGHM	99.54	-7.1%

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

Important macroeconomic data

Release	For		
 GDP (annlzd., qoq)	1Q	3.2%	▲
 Official manuf. PMI	Apr	50.1	▼
 Industrial prod. (yoy)	Mar	-4.6%	▼
 Manufacturing PMI	Apr	49.0	▲
 GDP (yoy)	Feb	1.1%	▼

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

Top 10 silver producing companies

Rank	Rank		Output	
	2017	2018	2017	2018
1	1	Fresnillo plc	54.2	58.1
2	2	Glencore plc	37.7	34.9
3	3	KGHM Polska Miedz S.A. Group	36.5	33.9
6	4	Cia. De Minas Buenaventura S.A.A.	26.4	26.2
5	5	Polymetal International plc	26.8	25.3
7	6	Pan American Silver Corp.	25.0	24.8
4	7	Goldcorp Inc.	28.6	24.5
9	8	Hochschild Mining plc	19.1	19.7
11	9	Hindustan Zinc Ltd.	16.9	19.6
13	10	Southern Copper Corp.	15.9	17.3

Source: World Silver Survey, KGHM Polska Miedź

Market Risk Unit

marketrisk@kg hm.com

Base and precious metals | Other commodities

Copper

Latin America's second-largest copper miner sees demand for the metal outstripping supply for several years, encouraging the company to continue ratcheting up investments in new output. Codelco has begun extracting ore from beneath the giant Chuquibambilla copper mine in northern Chile.

Copper Giant Sees 'Structural' Deficit for Years as Demand Grows

Southern Copper Corp. plans to boost production 70 percent by 2025

Latin America's second-largest copper miner sees demand for the metal outstripping supply for several years, encouraging the company to continue ratcheting up investments in new output.

Lima-based Southern Copper Corp. is set to benefit from a global structural shortage of copper as it pushes ahead with plans to boost production 70 percent to 1.5 million tons by 2025, Chief Financial Officer Raul Jacob told analysts on the first-quarter earnings call. "We are very positive about where the copper market is going to be in the next few years -- we have indications of a structural deficit in the next few years," Jacob said. "That's something that encourages us to move on with these projects."

Lower copper prices in the last few months reflected market concerns over a possible global economic slowdown, Jacob said, but prices should recover as the prospects for the physical market remain positive. The company, a unit of Grupo Mexico SAB, expects global demand to increase 2.5%, while Chinese consumption climbs 3.5%. The market will end the year in deficit following supply disruptions in Peru and Chile due to heavy rains earlier in the year, he said.

Southern Copper will invest \$1.8 billion this year, with \$300 million destined for the first phase of construction of the Tia Maria greenfield project, which is dependent on a government license. The company says it expects to receive the go-ahead during the first half of this year, but awarding of the license has been delayed in the past amid opposition from local communities to the \$1.4 billion mine.

While Tia Maria is first on Southern Copper's pipeline of projects, it expects the Pilares and Buenavista Zinc projects in Sonora, Mexico, will start producing in 2020 and 2021, respectively. Together, they will add 55,000 tons of copper to the company's production. Other projects in the pipeline include El Pilar and El Arco in Mexico and Los Chancas and Michiquillay in Peru. They represent a potential 680,000 tons of additional annual copper capacity. "We're working with the assumption that we will be able to go ahead with these projects when they are mature," Jacob said. "The timing will depend on how fast we solve the challenges that we have in different aspects of each of the projects."

Other important information on copper market:

- Codelco has begun extracting ore from beneath the giant Chuquicamata copper mine in northern Chile, the state-owned mining giant said lately. The announcement marks a major milestone in the transformation of the century-old pit into an underground operation, a move that will allow the mine to remain in production for decades to come, highlighted division head Mauricio Barraza. Last month, CEO Nelson Pizarro said that higher grade ore from the \$5.5 billion Chuquicamata underground project would help Codelco meet its production target of 1.7 million mt in spite of falling ore grades at other operations. However, a new network of crusher plants and conveyor belts to carry the ore to the division's concentrator plant will not be ready until the end of this year and it will take several years to increase production to its design capacity of around 340,000 mt/year. Until the belts are ready, the ore will be hauled to the pit floor by low profile trucks, Codelco said. Chuquicamata underground is the latest of five structural projects that Codelco is advancing without which its production would collapse within a decade. Following a meeting with ministers April 29, board chairman Juan Benavides said that the structural projects, including a new mine level at El Teniente and the new Rajo Inca mine, would represent 74% of Codelco's output by 2029.
- Chile produced 479,080 mt of copper in March, down 3.5% from the same month a year ago, government data showed Tuesday. Statistics agency INE attributed the dip in production to lower ore throughput and a decline in ore grades at several important producers. But the figure represented an increase of 14.9% from February, when torrential rains halted production at a number of mine operations in the north of the country. Production during the first three months of the year totaled 1.356 million mt, down 5.4% from the same period of 2018, reflecting the impact of rains in February as well as maintenance shutdowns at the start of the year. Chile is the world's largest producer of copper, and production of the red metal reached a record 5.831 million mt last year. Earlier this month, the Chilean Copper Commission forecast that output would set a new record of 5.961 million mt this year despite the mining industry's weak performance in the first quarter. Meanwhile, molybdenum output fell to 4,041 mt in March, down 23.2% from the same month of last year and its lowest level in almost four years. The metal is a key byproduct in several of Chile's large copper mines. Production of molybdenum during the first quarter totaled 13,945 mt, down 8.7% from the same period of 2018.
- China's recycled copper and recycled aluminum output are forecast to rise to 4.4 million mt and 9 million mt by 2020, higher than the realized output of 3.05 million mt and 6.2 million mt, respectively, in 2015, key Chinese metals recycler China Metal Resources Utilization said in a filing to Hong Kong Exchanges and Clearing lately. The growing recycled copper and aluminum output is in line with the Ministry of Industry and Information Technology's goals of emission cuts and saving energy. The recycler said stable domestic

economic growth in China has increased demand for copper products all over China last year, lifting its recycled copper output by 89% year on year to 156,589 mt and increasing copper cathode sales by 30% year on year to 308,242 mt in 2018. CMRU said China's economy stayed stable, growing between 6% and 6.5% this year, noting that copper prices have risen 3.8% in the first two months of 2019, which reflected market expectations of continued strong economic growth in China. The group currently has production facilities for recycled copper products in the provinces of Sichuan, Hunan, Hubei and Henan, having a total recycled copper output capacity of 680,000 mt/year and deep processed copper products capacity of 80,000 mt/year, its data showed. In a bid to seize the good opportunities to lift its scale, the recycler is aiming to build 50 cargoes, logistics centres all over China in three years, hiking its eventual recycled copper output capacity to 1 million mt/year, deep processed copper products capacity to 400,000 mt/year, as well as aluminum scrap processing capacity to 1 million mt/year, its data showed.

Precious Metals

Silver total physical demand rose 4% in 2018 to 1,033.5 Moz (32,146 t), driven higher by a recovery in retail investment (bars and coins), plus further gains from jewelry and silverware.

Societe Generale resigns as London gold market maker

The London Bullion Market Association (LBMA) said Societe Generale had resigned as a market maker for gold, as France's third-largest bank pushes ahead with a downsizing of its commodities business.

SocGen said this month it would cut 1,600 jobs to boost profits after poor performance last year and exit over-the-counter commodities trading.

In over-the-counter trading deals are done bilaterally between banks and brokers rather than on a financial exchange. London is the world's largest over-the-counter gold trading hub, overseen by the LBMA.

Market makers commit to provide liquidity to the market. SocGen's exit leaves 12 LBMA market-making banks including JPMorgan, HSBC and BNP Paribas.

Silver Survey report summary

Filtering out the noise in order to underline the major points that characterized the silver industry last year, few main developments stand out.

Total physical demand rose 4% in 2018 to 1,033.5 Moz (32,146 t), driven higher by a recovery in retail investment (bars and coins), plus further gains from jewelry and silverware. The modest increase in these sectors offsetting a slight contraction in silver used in industrial applications. Indeed, investment in silver bars and coins category grew by an impressive 20% last year to 181.2 Moz (5,636 t), driven by an exceptionally strong demand sentiment in India. It is primarily an effect of a rise in physical bar demand (53% last year). Silver jewelry fabrication

increased almost 4% to 212.5 Moz (6,611 t) in 2018, with India and North America accounting for the bulk of the rise in demand, offsetting falls across East Asia and Europe. Global silverware fabrication increased for the second year in succession, rising 6% year-on-year to an 61.1 Moz (1,900 t), a three-year high. India once again accounted for the bulk of the annual rise, increasing 10% year-on-year and accounting for more than two thirds of global consumption. On the other hand demand from industrial applications fell to 578.6 Moz (17,997 t) in 2018, a 1% decline from the previous year which reduced its market share from 59% to 56%. A drop in silver demand from the photovoltaic sector (PV) accounted for the bulk of the decline, offsetting annual increases in electronics and electrical and the brazing alloys and solders sectors. Silver demand from the photovoltaic (PV) sector retreated in 2018, easing 9% to 80.5 Moz (2,504 t). While the market continued to advance (with global installations reaching a record high last year), silver used in this segment declined due to ongoing thrifting of silver loadings. China again dominated new installations in 2018, but a legislative change in May last year had an acute impact on domestic demand. Demand from photographic applications in 2018 slipped by 4% to 39,3 Moz (1,222 t) and now contribute just 4% of total demand. It would appear that demand has now largely stabilized and that current fabrication volumes may be largely sustainable, or at worst held to modest declines. Indeed there are some industry segments that are having somewhat of a renaissance and may well deliver gains in the future.

On the supply site, for the third consecutive year, silver mine output fell, declining by 2% last year. The decline is attributable to the primary lead/zinc sectors, mainly in the Americas, as Guatemala's High Court suspended the mining license of its biggest operation, while maintenance problems in Canada's top producer negatively affected silver output by a combined 23.5 Moz (736 t). Partially offsetting the losses, India, China and Argentina's silver production rose by a combined 8.8 Moz (275 t). World Silver Survey estimates that on a co-product accounting basis, Total Cash Cost + Capex decreased by 1.6% at a global level, averaging \$10.37/ oz. The ramping up of operations in Argentina, India and Mexico are expected for 2019, with global production anticipated to rise. On a scrap site, supply fell by 2% last year to 151.3 Moz (4,706 t), driven by the 8% decline in the average silver price, with fewer consumers incentivized to return their old jewelry and silverware items, pushing total silver supply for 2018 down 3%. The drop has been recorded across all regions except North America. Supply from North America was slightly higher due to a continued robust economic climate that generated silver industrial waste. The global silver producer hedge book decreased by 2.8 Moz (88 t), leaving the delta-adjusted position at 18.7 Moz (581 t) by the end of 2018. The delivery into the hedge book was led by Nyrstar, followed by Industrias Peñoles and Harmony Gold. The producer community strongly favored forward sales over options. As a result, the physical market balance reached a minor deficit of 29.2 Moz (908 t), which is approximately 3% of annual demand and therefore, give or take, within the boundaries of error considered as a more or less balanced market. The small shortage was absorbed by metal made available from exchange traded products (ETPs), which recorded net-sales of 20.3 Moz (631 t) last year.

Global economies | Foreign exchange markets

Is U.S. Economy Solid or Needing Rate Cut?

Subsequent data from the US provoke a mixed reaction of analysts, bolstering views that the economy is rebounding from a soft patch but not by enough to revive inflation.

Mixed data from USA

The U.S. jobs report had something for everyone lately, bolstering views that the economy is rebounding from a soft patch but not by enough to revive inflation. Surprisingly strong payroll gains of 263,000 in April and the lowest unemployment rate since 1969 calmed some fears that a recession could be brewing. Meanwhile, the lack of a surge in wages kept alive speculation on Wall Street that the Federal Reserve will still be forced to cut interest rates. While some analysts labeled it a “Goldilocks” report for being neither too hot nor too cold, traders maintained bets the Fed will lower rates by mid-2020, and White House economic adviser Larry Kudlow said he thinks the central bank will eventually make a reduction. For now, Fed Chairman Jerome Powell will likely feel validated in having resisted such pressure. U.S. stocks advanced, trading near a record, while Treasury yields and the dollar retreated, reflecting the cross-currents facing investors.




Data follow a Federal Open Market Committee statement saying “the labor market remains strong.” Officials in March forecast a 3.7 percent unemployment rate at year end. The gain in payrolls exceeded all estimates in a Bloomberg survey. The jobless rate unexpectedly fell to a fresh 49-year low of 3.6 percent while annual average hourly earnings growth was unchanged at 3.2 percent, below projections. The lower unemployment reading was due in part to a factor economists don’t always see as a healthy sign: The participation rate, or share of working-age people in the labor force, decreased to 62.8 percent from 63 percent.

The payroll gains were somewhat uneven, with construction, health care, and professional and business services posting gains while retail employment fell by 12,000 for a third-straight decline and manufacturing showed a tepid increase of 4,000. A separate report showed a gauge of U.S. service industries unexpectedly dropped for a second month, slipping to the lowest level since August 2017 and suggesting economic momentum might not be as sturdy as the jobs data, or recent GDP indicated.

Recently published data regarding the GDP growth in 1Q 19 were very positive. According to Bureau of Economic Analysis first quarter advance GDP grew 3.2%, exceeding expectations. 1Q GDP forecast range 1% to 2.9% from 72 economists surveyed by Bloomberg. Approximately 1.68 percentage point of 1Q GDP increase attributed to inventories and net exports categories.

Macroeconomic calendar

Important macroeconomic data releases

Weight	Date	Event	For	Reading ¹	Previous	Consensus ²
China 						
☼☼	27-Apr	Industrial profits (yoy)	Mar	13.9%	--	--
☼☼☼	30-Apr	Official manufacturing PMI	Apr	50.1 ▼	50.5	50.5 ◡
☼☼☼	30-Apr	Caixin's manufacturing PMI	Apr	50.2 ▼	50.8	50.9 ◡
Poland 						
☼☼☼	23-Apr	Retail sales (yoy)	Mar	3.1% ▼	6.5%	4.1% ◡
☼	23-Apr	M3 money supply (yoy)	Mar	9.9% ▲	9.8%	9.6% ◢
☼☼	24-Apr	Unemployment rate	Mar	5.9% ▼	6.1%	5.9% ○
☼☼☼☼	30-Apr	Consumer inflation CPI (yoy) - preliminary data	Apr	2.2% ▲	1.7%	1.8% ◢
☼☼☼	02-May	Manufacturing PMI	Apr	49.0 ▲	48.7	48.8 ◢
US 						
☼	23-Apr	Richmond Fed manufacturing index	Apr	3.0 ▼	10.0	10.0 ◡
☼☼	25-Apr	Durable goods orders - preliminary data‡	Mar	2.7% ▲	-1.1%	0.8% ◢
☼☼☼☼☼	26-Apr	GDP (annualized, qoq) - estimation	1Q	3.2% ▲	2.2%	2.3% ◢
☼☼	26-Apr	University of Michigan confidence index - final data	Apr	97.2 ▲	96.9	97.0 ◢
☼☼☼☼	29-Apr	Consumer spending inflation PCE (mom)	Feb	0.1% -	0.1%	0.1% ○
☼☼☼☼	29-Apr	Consumer spending inflation PCE (mom)‡	Mar	0.0% ▼	0.1%	0.1% ◡
☼☼☼☼	29-Apr	Consumer spending inflation PCE (yoy)	Feb	1.7% ▼	1.8%	--
☼☼☼☼	29-Apr	Consumer spending inflation PCE (yoy)‡	Mar	1.6% ▼	1.7%	1.7% ◡
☼☼	29-Apr	Personal income (sa, mom)	Mar	0.1% ▼	0.2%	0.4% ◡
☼☼	29-Apr	Personal spending (sa, mom)‡	Feb	0.1% ▼	0.3%	0.3% ◡
☼☼	29-Apr	Personal spending (sa, mom)‡	Mar	0.9% ▲	0.1%	0.7% ◢
☼	29-Apr	Dallas Fed manufacturing activity‡	Apr	2.0 ▼	6.9	10.0 ◡
☼	30-Apr	S&P/CaseShiller home price index‡	Feb	213 ▲	212	213 ◡
☼☼☼☼☼☼	01-May	FOMC base rate decision - upper bound (Fed)	May	2.50% -	2.50%	2.50% ○
☼☼☼☼☼☼	01-May	FOMC base rate decision - lower bound (Fed)	May	2.25% -	2.25%	2.25% ○
☼☼☼	01-May	Manufacturing PMI - final data	Apr	52.6 ▲	52.4	52.4 ◢
☼☼	01-May	ISM Manufacturing	Apr	52.8 ▼	55.3	55.0 ◡
☼☼	02-May	Durable goods orders - final data	Mar	2.6% ▼	2.7%	--
☼☼☼	03-May	Composite PMI - final data	Apr	53.0 ▲	52.8	--
☼☼☼	03-May	PMI services - final data	Apr	53.0 ▲	52.9	52.9 ◢
☼☼	03-May	Change in non-farm payrolls (ths)‡	Apr	263 ▲	189	190 ◢
☼☼	03-May	Underemployment rate (U6)	Apr	7.3% -	7.3%	--
☼☼	03-May	Unemployment rate	Apr	3.6% ▼	3.8%	3.8% ◡
☼	03-May	Average hourly earnings (yoy)	Apr	3.2% -	3.2%	3.3% ◡

Weight	Date	Event	For	Reading ¹	Previous	Consensus ²
Eurozone						
⊕	23-Apr	Consumer confidence - estimation	Apr	-7.9 ▼	-7.2	-7.0 ◐
⊕	29-Apr	M3 money supply (yoy)	Mar	4.5% ▲	4.3%	4.2% ◐
⊕	29-Apr	Economic confidence‡	Apr	104 ▼	106	105 ◐
⊕	29-Apr	Industrial confidence‡	Apr	-4.1 ▼	-1.6	-2.0 ◐
⊕	29-Apr	Consumer confidence - final data	Apr	-7.9 =	-7.9	-7.9 ◐
⊕	29-Apr	Business climate indicator‡	Apr	0.4 ▼	0.5	0.5 ◐
⊕⊕⊕⊕⊕	30-Apr	GDP (sa, yoy) - estimation‡	1Q	1.2% =	1.2%	1.1% ◐
⊕⊕⊕⊕⊕	30-Apr	GDP (sa, qoq) - estimation	1Q	0.4% ▲	0.2%	0.3% ◐
⊕⊕	30-Apr	Unemployment rate	Mar	7.7% ▼	7.8%	7.8% ◐
⊕⊕⊕	02-May	Manufacturing PMI - final data	Apr	47.9 ▲	47.8	47.8 ◐
⊕⊕⊕⊕	03-May	Core CPI (yoy) - estimation	Apr	1.2% ▲	0.8%	1.0% ◐
⊕⊕⊕⊕	03-May	CPI estimate (yoy)	Apr	1.7% ▲	1.4%	1.6% ◐
⊕⊕	03-May	Producer inflation PPI (yoy)	Mar	2.9% ▼	3.0%	3.0% ◐
Germany						
⊕⊕	24-Apr	IFO business climate‡	Apr	99.2 ▼	99.7	99.9 ◐
⊕⊕⊕⊕	30-Apr	Harmonized consumer inflation HICP (yoy) - preliminary data	Apr	2.1% ▲	1.4%	1.7% ◐
⊕⊕⊕⊕	30-Apr	Consumer inflation CPI (yoy) - preliminary data	Apr	2.0% ▲	1.3%	1.5% ◐
⊕⊕	30-Apr	GfK consumer confidence	May	10.4 =	10.4	10.3 ◐
⊕⊕	30-Apr	Unemployment rate	Apr	4.9% =	4.9%	4.9% ◐
⊕⊕⊕	02-May	Manufacturing PMI - final data	Apr	44.4 ▼	44.5	44.5 ◐
⊕⊕⊕	02-May	Retail sales (yoy)‡	Mar	-2.1% ▼	4.4%	2.9% ◐
France						
⊕⊕⊕⊕⊕	30-Apr	GDP (yoy) - preliminary data	1Q	1.1% ▲	1.0%	1.1% ◐
⊕⊕⊕⊕⊕	30-Apr	GDP (qoq) - preliminary data	1Q	0.3% =	0.3%	0.3% ◐
⊕⊕⊕⊕	30-Apr	Harmonized consumer inflation HICP (yoy) - preliminary data	Apr	1.4% ▲	1.3%	1.4% ◐
⊕⊕⊕⊕	30-Apr	Consumer inflation CPI (yoy) - preliminary data	Apr	1.2% ▲	1.1%	1.2% ◐
⊕⊕⊕	02-May	Manufacturing PMI - final data	Apr	50.0 ▲	49.6	49.6 ◐
Italy						
⊕⊕⊕⊕⊕	30-Apr	GDP (wda, yoy) - preliminary data	1Q	0.1% ▲	0.0%	-0.1% ◐
⊕⊕⊕⊕⊕	30-Apr	GDP (wda, qoq) - preliminary data	1Q	0.2% ▲	-0.1%	0.1% ◐
⊕⊕⊕⊕	30-Apr	Harmonized consumer inflation HICP (yoy) - preliminary data	Apr	1.2% ▲	1.1%	1.3% ◐
⊕⊕	30-Apr	Unemployment rate - preliminary data‡	Mar	10.2% ▼	10.5%	10.7% ◐
⊕⊕⊕	02-May	Manufacturing PMI	Apr	49.1 ▲	47.4	47.8 ◐
UK						
⊕⊕⊕	01-May	Manufacturing PMI (sa)	Apr	53.1 ▼	55.1	53.1 ◐
⊕⊕⊕⊕⊕	02-May	BoE base rate decision	May	0.75% =	0.75%	0.75% ◐
⊕⊕⊕⊕	02-May	BoE asset purchase target (GBP bn)	May	435 =	435	435 ◐
⊕⊕⊕	03-May	Composite PMI	Apr	50.9 ▲	50.0	50.6 ◐
Japan						
⊕⊕⊕⊕	26-Apr	Industrial production (yoy) - preliminary data	Mar	-4.6% ▼	-1.1%	-3.8% ◐
Chile						
⊕⊕⊕	30-Apr	Total copper production (metric tons)	Mar	479 080 ▲	417 097	--
⊕⊕⊕	30-Apr	Manufacturing (yoy)	Mar	1.3% ▲	0.8%	1.5% ◐
Canada						

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

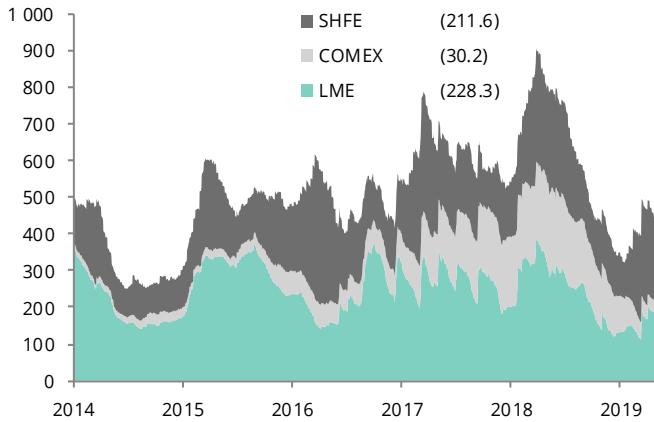
Key base & precious metal prices, exchange rates and other important market factors

<i>(as of: 03-May-19)</i>		Price change ¹					From year beginning ²		
	Price	2W	QTD	YTD	1Y	Average	Min	Max	
LME (USD/t)									
Copper	6 180.00	▼ -4.2%	▼ -4.7%	▲ 3.6%	▼ -9.6%	6 270.16	5 811.00	6 572.00	
Molybdenum	-	-	-	-	-	-	-	-	
Nickel	12 170.00	▼ -3.6%	▼ -6.5%	▲ 14.9%	▼ -13.0%	12 465.99	10 440.00	13 610.00	
Aluminum	1 783.50	▼ -3.0%	▼ -6.1%	▼ -4.6%	▼ -24.1%	1 854.15	1 775.50	1 923.00	
Tin	19 375.00	▼ -5.1%	▼ -10.2%	▼ -0.6%	▼ -9.5%	20 914.19	19 375.00	21 925.00	
Zinc	2 867.00	▲ 0.5%	▼ -4.4%	▲ 14.2%	▼ -5.3%	2 763.01	2 462.00	3 018.00	
Lead	1 880.00	▼ -2.0%	▼ -7.0%	▼ -6.4%	▼ -17.5%	2 010.01	1 859.00	2 154.00	
LBMA (USD/troz)									
Silver	14.66	▼ -2.0%	▼ -2.9%	▼ -5.2%	▼ -11.0%	15.42	14.66	16.08	
Gold ²	1 278.55	▲ 0.2%	▼ -1.3%	▼ -0.2%	▼ -2.8%	1 298.85	1 269.50	1 343.75	
LPPM (USD/troz)									
Platinum ²	855.00	▼ -3.9%	▲ 0.6%	▲ 7.7%	▼ -5.2%	838.73	782.00	914.00	
Palladium ²	1 359.00	▼ -2.6%	▼ -2.2%	▲ 7.6%	▲ 40.0%	1 420.50	1 267.00	1 604.00	
FX³									
EURUSD	1.1155	▼ -0.8%	▼ -0.7%	▼ -2.6%	▼ -7.0%	1.1326	1.1123	1.1535	
EURPLN	4.2795	▼ 0.0%	▼ -0.5%	▼ -0.5%	▲ 0.3%	4.2992	4.2706	4.3402	
USDPLN	3.8177	▲ 0.3%	▼ -0.5%	▲ 1.5%	▲ 7.4%	3.7950	3.7243	3.8537	
USDCAD	1.3429	▲ 0.6%	▲ 0.5%	▼ -1.6%	▲ 4.4%	1.3320	1.3095	1.3600	
USDCNY	6.7354	▲ 0.3%	▲ 0.3%	▼ -2.1%	▲ 6.0%	6.7394	6.6872	6.8721	
USDCLP	683.31	▲ 3.2%	▲ 0.3%	▼ -1.6%	▲ 10.6%	667.74	649.22	697.64	
Money market									
3m LIBOR USD	2.560	▼ -0.02	▼ -0.04	▼ -0.25	▲ 0.20	2.660	2.560	2.804	
3m EURIBOR	-0.309	▲ 0.00	▲ 0.00	- 0.00	▲ 0.02	-0.309	-0.312	-0.306	
3m WIBOR	1.720	- 0.00	- 0.00	- 0.00	▲ 0.02	1.720	1.720	1.720	
5y USD interest rate swap	2.372	▼ -0.05	▲ 0.09	▼ -0.20	▼ -0.53	2.491	2.198	2.715	
5y EUR interest rate swap	0.043	▲ 0.00	▲ 0.03	▼ -0.15	▼ -0.32	0.108	-0.010	0.222	
5y PLN interest rate swap	2.240	▲ 0.16	▲ 0.30	▲ 0.13	▼ -0.19	2.045	1.908	2.240	
Fuel									
WTI Cushing	61.94	▼ -5.7%	▲ 3.0%	▲ 36.4%	▼ -9.5%	57.36	46.54	66.40	
Brent	71.22	▼ -2.9%	▲ 5.5%	▲ 33.9%	▼ -3.3%	65.55	53.83	73.87	
Diesel NY (ULSD)	206.90	▼ -1.7%	▲ 4.7%	▲ 23.0%	▼ -2.8%	197.06	170.01	211.75	
Others									
VIX	12.87	▲ 0.45	▼ -0.84	▼ -12.55	▼ -3.03	15.51	12.01	25.45	
BBG Commodity Index	79.84	▼ -2.6%	▼ -1.5%	▲ 4.1%	▼ -11.0%	80.94	76.99	83.06	
S&P500	2 945.64	▲ 1.3%	▲ 3.9%	▲ 17.5%	▲ 12.0%	2 773.51	2 447.89	2 945.83	
DAX	12 412.75	▲ 1.6%	▲ 7.7%	▲ 17.6%	▼ -2.2%	11 475.82	10 416.66	12 412.75	
Shanghai Composite	3 078.34	▼ -4.3%	▼ -0.4%	▲ 23.4%	▼ -0.7%	2 899.84	2 464.36	3 270.80	
WIG 20	2 319.08	▼ -2.0%	▲ 0.3%	▲ 1.9%	▲ 1.2%	2 349.66	2 247.22	2 414.41	
KGHM	99.54	▼ -7.1%	▼ -7.0%	▲ 12.0%	▲ 3.9%	99.87	86.12	112.00	

^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

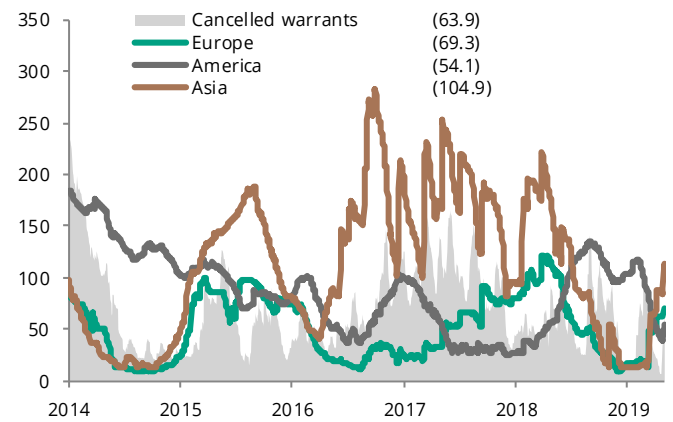
Source: Bloomberg, KGHM Polska Miedź

Copper: official exchange stocks (thousand tonnes)



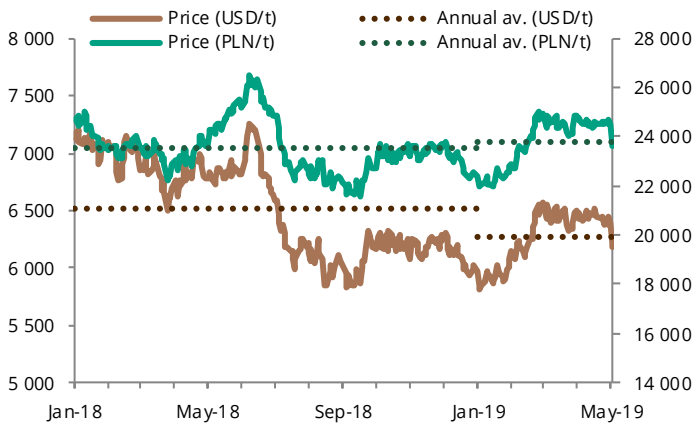
Note: Latest values in brackets. Source: Bloomberg, KGHM

Copper: official LME stocks (thousand tonnes)



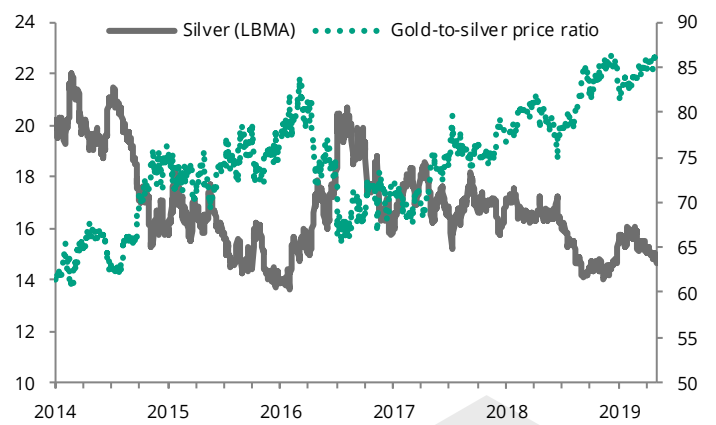
Note: Latest values in brackets. Source: Bloomberg, KGHM

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



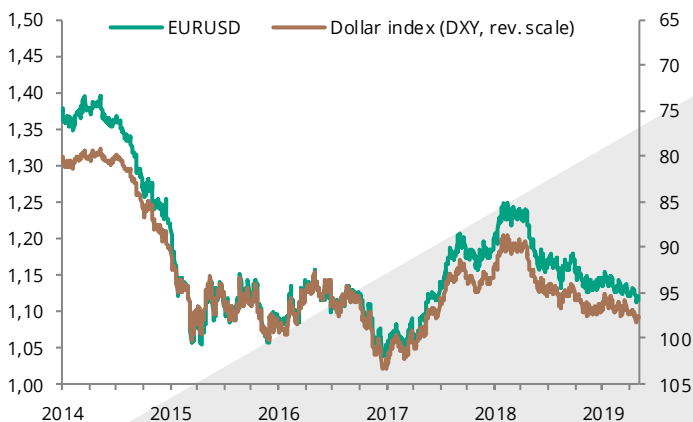
Source: Bloomberg, KGHM Polska Miedź

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



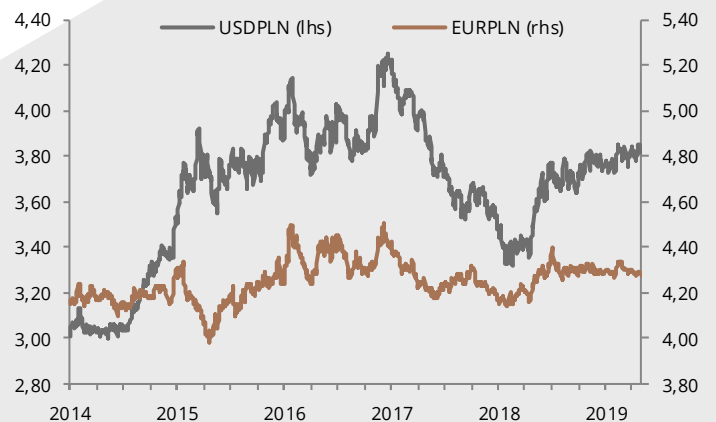
Source: Bloomberg, KGHM Polska Miedź

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:
22nd April – 5th May 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

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 Communications and CSR Department of Communication (Departament Komunikacji i CSR) of and CSR 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