

# Market Overview

as of: 25 January 2016





- Copper:** Copper traded relatively flat during last two weeks, staying below 4,500 USD/t level, while broad commodity index (BCOM) slid 1.9%, again mostly due to oil. According to Citi analysis, current red metal prices are below sum of 90th centile of C1 cost and sustaining capex, which may threaten short and medium term supply. In broader commodity space, Moody's placed 55 miners under review for possible downgrades (*page 2*).
- Precious metals:** Gold edged higher recently, buoyed by expectations that the U.S. Federal Reserve may have fewer chances to raise interest rates this year in the face of a wobbly global economy (*page 5*).
- Poland:** In the last two weeks rating agency Standard&Poor's (S&P) surprised the market by lowering Poland's long term foreign currency creditworthiness from A- (positive outlook) to BBB+ with negative outlook (*page 6*).

## Key market prices

	Close price	2w chng.
<b>LME (USD/t)</b>		
▼ Copper	4 468.00	-0.4%
▲ Nickel	8 725.00	3.8%
<b>LBMA (USD/troz)</b>		
▲ Silver	14.17	0.9%
▼ Gold (PM)	1 096.25	-0.5%
<b>FX</b>		
▼ EUR/USD	1.0808	-0.5%
▲ EUR/PLN	4.4460	2.3%
▲ USD/PLN	4.1031	2.7%
- USD/CAD	1.4151	0.0%
▲ USD/CLP	726.63	0.7%
<b>Stocks</b>		
▲ KGHM	55.20	1.1%

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

## Important macroeconomic data

Release	For	
 GDP (yoy)	4Q	6.8% ▼
 Industrial prod. (yoy)	Dec	5.9% ▼
 Industr. prod. (wda, yoy)	Nov	1.1% ▼
 CPI (yoy)	Dec	0.7% ▲
 Retail sales (yoy)	Dec	4.9% ▲

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

**PLN already dropped more than 4% versus EUR this year, largely helped by S&P downgrade on Jan, 15 (*more on page 6*)**



Source: Bloomberg, KGHM

## Market Risk Unit

marketrisk@kgHM.com

**Grzegorz Laskowski**
**Łukasz Bielak**
**Marek Krochta**
**Wojciech Demski**
**Lech Chłopecki**

## Base and precious metals | Other commodities

### Copper

**Copper traded relatively flat during last two weeks, staying below 4,500 USD/t level, while broad commodity index (BCOM) slid 1.9%, again mostly due to oil. According to Citi analysis, current red metal prices are below sum of 90<sup>th</sup> centile of C1 cost and sustaining capex, which may threaten short and medium term supply. In broader commodity space, Moody's placed 55 miners under review for possible downgrades.**

#### Low copper prices threat short and medium term supply

Shrinking sustaining CAPEX budgets and declining by-products prices negate ambitious industry cost deflation targets. According to Citi analysis, some miners have been fairly responsive to market price dynamics last year, but any further squeezing of sustaining CAPEX may result in increased technical outages, weighing on already-anaemic short to medium term supply growth outlook.

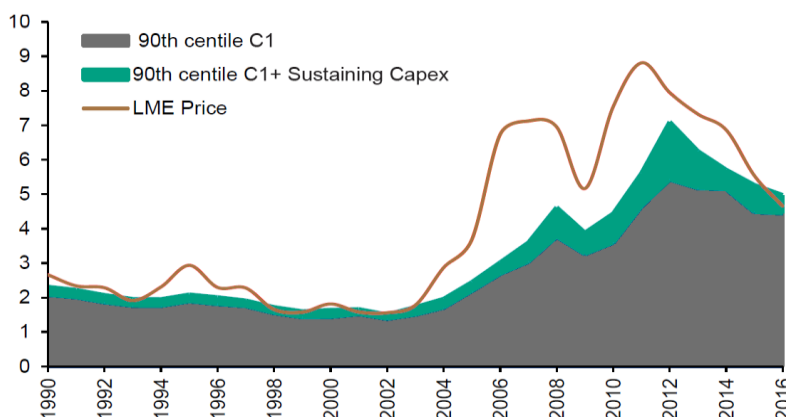
**Despite a 33% fall in sustaining capex 20% of global mines struggle to break even**

In previous down cycles, margin C1 cash costs plus sustaining capex have set the copper price floor: between 1991-94 and 1997-99 prices have not stayed below C1 plus sustaining capex costs for longer period. Wood Mackenzie data suggests that C1 cash cost plus sustaining capex costs are currently around 4,950 USD/t, compared to an average of 5,265 USD/t last year, driven largely by a 33% decline in estimated sustaining capex from 780 USD/t to 525 USD/t. But even with this collapse in sustaining capex, cost data points to c. 20% of global mine capacity currently struggling to break even. Despite considerable moderation of expected sustaining CAPEX across most western world mines, Wood Mackenzie data implies further squeezes in operational maintenance will drive further mine production losses – either through technical losses or economic closures. CRU International forecasts mine production to grow only 0.5% this year, a decline from 3.0% growth rate last year, and refined production to actually fall this year.

**Disruptions amounted to 9% in 2015 and will remain elevated this year as well**

Citi estimates total mine losses versus planned production in 2015 at close to 9%, well above trend levels. The analysts expect loss rate to remain elevated this year as well, as many of the by-products found in copper ores have themselves lost value, eroding the positive effects of prudent operational cost management. This year's cuts have already started to be announced, with Imperial Metals to be the first – the 20kt/year Huckleberry mine in Canada will be closed over the next three months and Freeport McMoRan recently confirmed a 75% reduction in concentrate capacity at its Sierrita operation starting on January, 18. Additionally, First Quantum announced plans to reduce the c. 1,500 workforce at Zambia's Sentinel copper project by 730 workers due to ongoing power issues.

**Copper prices continues to fall quicker than sum of 90<sup>th</sup> centile C1 cost and sustaining CAPEX (thousand USD/t)**



Source: Citi, KGHM

**Moody's placed 55 miners under review for a downgrade**

Reflecting an effort to align miners' financial situation with the fundamental shift in the conditions of the global mining sector, Moody's has placed 55 mining companies on review for downgrade. The portfolio under consideration includes 12 mining companies from the Europe, Middle East and Africa, 11 US companies, 12 Canadian companies, nine Latin American companies and four Australian companies.

**Anglo American, BHP Billiton, Rio Tinto and Vale are among reviewed companies**

The list encompasses Anglo American, BHP Billiton, South32, Rio Tinto, Vale, Alcoa, Barrick Gold, Newmont Mining, Gold Fields, Petra Diamonds, AngloGold Ashanti, Metalloinvest, Nord Gold, Alrosa and Uranium One. Moody's said that the likelihood had increased that prices for base metals, precious metals, iron ore and metallurgical coal would approach levels closer to company's "stressed sensitivity" scenario. In addition, the strong dollar was a further factor contributing to lower prices, as most metals are traded in dollars.

**Moody's will also conduct broad review to evaluate mining industry conditions**

While the review focuses on companies rated in the range from A1 to B3, Moody's is also re-evaluating higher- and lower-rated companies in the context of industry conditions. This broad ratings review would incorporate ratings that had previously been placed on review in the sector, such as Anglo American, which currently has a Baa3 rating. The broad review would look at companies across the mining portfolio covering gold, diamond and uranium producers and consider each mining company's asset base, cost structure, cash flows and liquidity, as well as management's strategy for coping with a prolonged downturn and the ability to execute on it.

**The outcomes may vary from confirmation to multi-notch downgrades**

Moody's believes current downturn will mark an unprecedented shift for the mining industry. Whereas previous downturns have been cyclical, the effect of slowing growth in China indicates a fundamental change that will heighten credit risk for mining companies. Although all issuers in these sectors had been adversely affected by declining prices, severity varied substantially by issuer.

Accordingly, the range of possible outcomes upon conclusion of the review for given issuers varied from possible confirmation of ratings to multi-notch downgrades. Moody's expects to conclude a majority of the reviews by the end of the first quarter.

### Other important information on copper market:

- State Grid Corporation of China plans to spend RMB 439bn (USD 66.8bn) on its electricity grid on 2016, lower than its spending in 2015. The country's largest grid company invested a record RMB 452.1bn on the electricity grid in 2015, up 17.1% on an annual basis. China's power sector accounts for more than 40% of the country's copper consumption.
- Energy consumption in Chile's copper mining sector will surge 53% over the next decade as mineral ore grades at older deposits fall, according to state copper commission Cochilco. Chile will also see energy consumption rise as more plants start utilizing sea water, which is very energy intensive process.
- Ministro Hales has been officially opened and after just one year of operation is 70% more productive than the average Codelco divisions, with 67 tons of copper per person. Currently, the mine concentrator plant has a power consumption 23% lower than that of Chuquicamata, the next most efficient installation. Much of the operation is automated and partly because of that its accident rate is less than half of industry average, as well as an accident severity level is nine times lower than the sector.
- DR of Congo has again delayed a ban on exports of copper and cobalt concentrate because it lacks enough electricity to process the minerals domestically. Congo, the biggest copper producer in Africa and the top global supplier of cobalt, first ordered the ban in 2013, in a bid to encourage local industry to shift production to higher-value finished metals, but still 30% of mined metals continue to be exported in concentrate form. In December, the government extended an exemption set to expire at the end of 2015 by one year.

## Precious metals

**Gold edged higher recently, buoyed by expectations that the U.S. Federal Reserve may have fewer chances to raise interest rates this year in the face of a wobbly global economy.**

### Indian gold monetisation scheme – incentivised

Indian Finance Ministry said that government will pay banks a 2.5% commission for mobilising gold under the gold monetisation scheme and depositors will be permitted premature withdrawal of the deposited metal. Under the modified rules, government will pay the participating banks a fees for their services - gold purity testing charges, refining, storage and transportation charges, among others - on medium and long term gold deposits.

The monetisation scheme encourages households and temples to deposit gold jewellery or bars with banks or collection agents. The gold deposited would be later refined for domestic purpose and would help cut dependence on imports. An estimated 20kt of gold are withheld by households and temples.

### Russia still buying gold

With an increase of 21.8 mt in gold reserves in December, Russia continues to build its central bank bullion holdings – largely through buying most of its own domestic production.

Russia was the world's third largest gold producer (after China and Australia) in 2014, producing 266.2 mt - only 6 mt less than Australia.

### China ends imports ban on silver ore and refined concentrate

The change is due to the fact that these products – along with nine other commodities – are now in compliance with the country's industrial policy. Chinese authorities noted that the products have high technological content, and do not belong to high-energy consuming and high polluting sectors. After the revision, 1,862 commodities still fall under the import and export ban, but the Chinese government will continue to assess their status.

### Silver supply to decline this year

Total silver supply is forecast to fall to 1,014.4 mn troz in 2015, down 3% from the previous year. The decline in metal production is expected to be driven by flat mine output, a 5% drop in scrap return, and net de-hedging of 12.6 mn troz. Mine production is slated to total 867.2 mn troz this year, up 0.3% from a year ago. This would be the weakest performance since 2002, when mine production fell by 2%.

## Global economies | Foreign exchange markets

### Poland: Standard&Poor's downgrades LT rating to BBB+

**In the last two weeks rating agency Standard&Poor's (S&P) surprised the market by lowering Poland's long term foreign currency creditworthiness from A- (positive outlook) to BBB+ with negative outlook.**

**Poland's credit rating has been downgraded for the first time ever**

After almost 10 years with A- rating, S&P for the first time ever decided to lower Poland's creditworthiness to BBB+ level, and to change the outlook from positive to negative. The main reason for this downgrade were concerns over "erosion of public institutions". S&P thinks that Polish government initiated a series of legislative processes that may limit independence of key institutions, including National Bank of Poland (NBP), and in fiscal context, the effectiveness of constitutional debt limits is also doubtful. Negative perspective means that there is 33% possibility of further rating downgrade within next 24 months, if credibility of monetary policy deteriorates or situation of public finances deteriorates versus agency's base case scenario.








**Fundamentally Polish economy is still strong, rating change is rather based on political factors**

S&P's decision was largely based on political factors. In its announcement, the agency said institutional system of separation of powers has been weakened because independence and effectiveness of key institutions, such as Constitutional Court or public media, is being undermined by various legislative initiatives since October elections. In S&P's opinion, these changes extend beyond what would be expected from usual change of ruling party itself. Agency's decision may have been influenced also by government officials responsible for economic matters, suggesting public deficit returns to 3% of GDP, which would mean abandonment of fiscal convergence path.

## Macroeconomic calendar

### Important macroeconomic data releases

Weight	Date	Event	For	Reading <sup>1</sup>	Previous	Consensus <sup>2</sup>	
<b>China</b>							
☉☉	13-Jan	Trade balance (USD bn)	Dec	60.1 ▲	54.1	51.3	
☉☉	13-Jan	Exports (yoy)	Dec	-1.4% ▲	-6.8%	-8.0%	
☉	15-Jan	New yuan loans (CNY bn)	Dec	598 ▼	709	700	
☉☉☉☉☉	19-Jan	GDP (yoy)	4Q	6.8% ▼	6.9%	6.9%	
☉☉☉☉☉	19-Jan	GDP (sa, qoq)	4Q	1.6% ▼	1.8%	1.8%	
☉☉☉☉	19-Jan	Industrial production (yoy)	Dec	5.9% ▼	6.2%	6.0%	
☉☉	19-Jan	Fixed assets investments (ytd, yoy)	Dec	10.0% ▼	10.2%	10.2%	
☉	19-Jan	Retail sales (yoy)	Dec	11.1% ▼	11.2%	11.3%	
<b>Poland</b>							
☉☉	13-Jan	Trade balance (EUR mn)‡	Nov	756 ▲	499	350	
☉☉	13-Jan	Exports (EUR mn)‡	Nov	15 504 ▲	15 348	14 890	
☉☉	13-Jan	Current account balance (EUR mn)‡	Nov	620 ▲	- 163	- 230	
☉☉☉☉☉	14-Jan	NBP base rate decision	Jan	1.50% -	1.50%	1.50%	
☉	14-Jan	M3 money supply (yoy)‡	Dec	9.1% ▼	9.4%	9.7%	
☉☉☉☉	15-Jan	Consumer inflation CPI (yoy) - final data	Dec	-0.5% -	-0.5%	--	
☉☉☉☉	18-Jan	Core CPI (excluding food and energy, yoy)	Dec	0.2% -	0.2%	0.2%	
☉☉	20-Jan	Average gross salary (yoy)	Dec	3.1% ▼	4.0%	3.6%	
☉	20-Jan	Employment (yoy)	Dec	1.4% ▲	1.2%	1.2%	
☉☉☉☉	21-Jan	Sold industrial production (yoy)	Dec	6.7% ▼	7.8%	5.5%	
☉☉☉	21-Jan	Retail sales (yoy)	Dec	4.9% ▲	3.3%	3.2%	
☉☉	21-Jan	Producer inflation PPI (yoy)	Dec	-0.8% ▲	-1.8%	-0.9%	
<b>US</b>							
☉☉	15-Jan	Retail sales (excluding autos, mom)‡	Dec	-0.1% ▼	0.3%	0.2%	
☉☉☉☉	15-Jan	Industrial production (mom)‡	Dec	-0.4% ▲	-0.9%	-0.2%	
☉	15-Jan	Capacity utilization‡	Dec	76.5% ▼	76.9%	76.8%	
☉☉	15-Jan	University of Michigan confidence index - preliminary data	Jan	93.3 ▲	92.6	92.9	
☉☉☉☉	20-Jan	Consumer inflation CPI (mom)	Dec	-0.1% ▼	0.0%	0.0%	
☉☉☉☉	20-Jan	Consumer inflation CPI (yoy)	Dec	0.7% ▲	0.5%	0.8%	
☉☉	21-Jan	Philadelphia Fed business outlook‡	Jan	- 3.5 ▲	- 10.2	- 5.9	
☉☉☉	22-Jan	Manufacturing PMI - preliminary data	Jan	52.7 ▲	51.2	51.0	
<b>Eurozone</b>							
☉☉☉☉	13-Jan	Industrial production (sa, mom)‡	Nov	-0.7% ▼	0.8%	-0.3%	
☉☉☉☉	13-Jan	Industrial production (wda, yoy)‡	Nov	1.1% ▼	2.0%	1.3%	
☉	15-Jan	Trade balance (EUR mn)‡	Nov	23.6 ▼	24.2	23.0	
☉☉☉☉	19-Jan	Consumer inflation CPI (yoy) - final data	Dec	0.2% -	0.2%	0.2%	
☉☉☉☉	19-Jan	Core CPI (yoy) - final data	Dec	0.9% -	0.9%	0.9%	
☉	19-Jan	ZEW survey expectations	Jan	22.7 ▼	33.9	--	
☉☉☉☉☉	21-Jan	ECB main refinancing rate	Jan	0.05% -	0.05%	0.05%	
☉☉☉☉☉	21-Jan	ECB deposit facility rate	Jan	-0.3% -	-0.3%	-0.3%	
☉	21-Jan	Consumer confidence - estimation	Jan	- 6.3 ▼	- 5.7	- 5.7	
☉☉☉	22-Jan	Composite PMI - preliminary data	Jan	53.5 ▼	54.3	54.1	
☉☉☉	22-Jan	Manufacturing PMI - preliminary data	Jan	52.3 ▼	53.2	53.0	
☉☉☉	22-Jan	Services PMI - preliminary data	Jan	53.6 ▼	54.2	54.2	

Weight	Date	Event	For	Reading <sup>1</sup>	Previous	Consensus <sup>2</sup>	
<b>Germany</b>							
☆☆☆☆	19-Jan	Harmonized consumer inflation HICP (yoy) - final data	Dec	0.2%	-	0.2%	0.2% ○
☆☆☆☆	19-Jan	Consumer inflation CPI (yoy) - final data	Dec	0.3%	-	0.3%	0.3% ○
☆☆☆	22-Jan	Composite PMI - preliminary data	Jan	54.5	▼	55.5	55.1 ◡
☆☆☆	22-Jan	Manufacturing PMI - preliminary data	Jan	52.1	▼	53.2	53.0 ◡
<b>France</b>							
☆☆☆☆	13-Jan	Harmonized consumer inflation HICP (yoy)	Dec	0.3%	▲	0.1%	0.2% ◢
☆☆☆☆	13-Jan	Consumer inflation CPI (yoy)	Dec	0.2%	▲	0.0%	0.1% ◢
☆☆☆	22-Jan	Composite PMI - preliminary data	Jan	50.5	▲	50.1	50.3 ◢
☆☆☆	22-Jan	Manufacturing PMI - preliminary data	Jan	50.0	▼	51.4	51.3 ◡
<b>Italy</b>							
☆☆☆☆	14-Jan	Industrial production (wda, yoy)‡	Nov	0.9%	▼	3.0%	2.5% ◡
☆☆☆☆	15-Jan	Harmonized consumer inflation HICP (yoy) - final data	Dec	0.1%	-	0.1%	0.1% ○
<b>UK</b>							
☆☆☆☆	12-Jan	Industrial production (yoy)	Nov	0.9%	▼	1.7%	1.7% ◡
☆☆☆☆☆	14-Jan	BoE base rate decision	Jan	0.50%	-	0.50%	0.50% ○
☆☆☆☆	14-Jan	BoE asset purchase target (GBP bn)	Jan	375	-	375	375 ○
☆☆☆☆	19-Jan	Consumer inflation CPI (yoy)	Dec	0.2%	▲	0.1%	0.2% ◢
☆☆	20-Jan	Unemployment rate (ILO, 3-months)	Nov	5.1%	▼	5.2%	5.2% ◡
<b>Japan</b>							
☆☆☆☆	18-Jan	Industrial production (yoy) - final data	Nov	1.7%	▲	1.6%	--
☆☆☆	22-Jan	Manufacturing PMI - preliminary data	Jan	52.4	▼	52.6	52.8 ◡
<b>Chile</b>							
☆☆☆☆☆	14-Jan	BCCh overnight rate target	Jan	3.50%	-	3.50%	3.50% ○
<b>Canada</b>							
☆☆☆☆☆	20-Jan	BoC base rate decision	Jan	0.50%	-	0.50%	0.50% ○
☆☆☆☆	22-Jan	Consumer inflation CPI (yoy)	Dec	1.6%	▲	1.4%	1.7% ◢

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

<sup>2</sup> 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



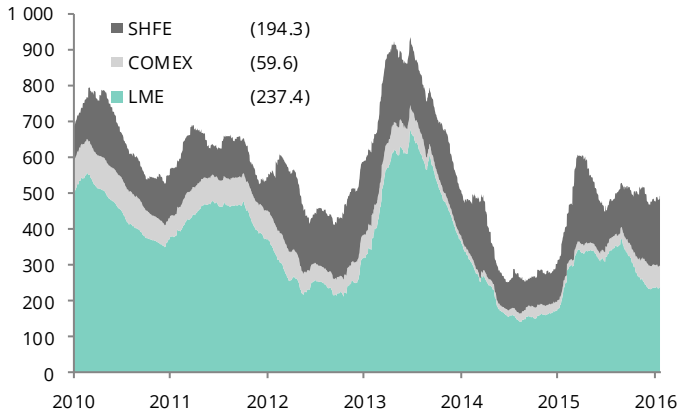
## Key market data

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

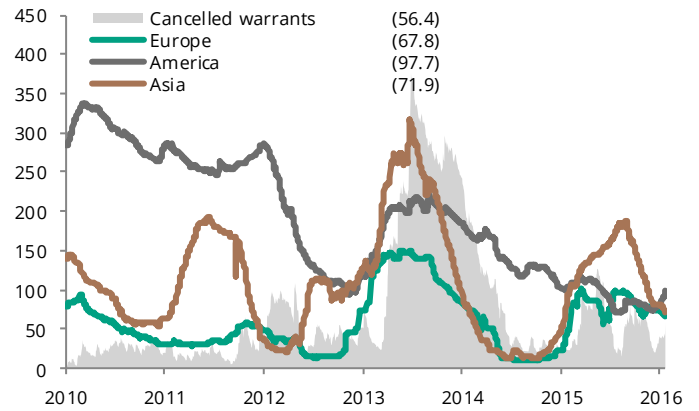
<i>(as of: 22-Jan-16)</i>		Price change °					From year beginning ²		
	Price	2W	QTD	YTD	1Y	Average	Min	Max	
<b>LME (USD/t)</b>									
Copper	4 468.00	▼ -0.4%	▼ -5.0%	▼ -5.0%	▼ -22.2%	4 446.50	4 310.50	4 647.00	
Molybdenum	12 000.00	- 0.0%	- 0.0%	- 0.0%	▼ -41.5%	11 943.33	11 750.00	12 000.00	
Nickel	8 725.00	▲ 3.8%	▲ 0.7%	▲ 0.7%	▼ -40.7%	8 452.67	8 180.00	8 725.00	
Aluminum	1 497.50	▲ 1.5%	▼ -0.7%	▼ -0.7%	▼ -19.8%	1 470.90	1 453.00	1 497.50	
Tin	13 625.00	▼ -2.3%	▼ -6.7%	▼ -6.7%	▼ -30.4%	13 661.33	13 235.00	14 560.00	
Zinc	1 527.00	▲ 3.3%	▼ -4.6%	▼ -4.6%	▼ -28.8%	1 492.37	1 453.50	1 554.00	
Lead	1 665.50	▲ 1.1%	▼ -7.6%	▼ -7.6%	▼ -11.5%	1 642.33	1 597.00	1 762.00	
<b>LBMA (USD/troz)</b>									
Silver	14.17	▲ 0.9%	▲ 2.5%	▲ 2.5%	▼ -21.6%	13.98	13.80	14.17	
Gold ¹	1 096.25	▼ -0.5%	▲ 3.2%	▲ 3.2%	▼ -15.4%	1 092.35	1 077.00	1 106.35	
<b>LPPM (USD/troz)</b>									
Platinum ¹	833.00	▼ -4.7%	▼ -4.5%	▼ -4.5%	▼ -34.9%	848.53	814.00	893.00	
Palladium ¹	507.00	▲ 0.4%	▼ -7.3%	▼ -7.3%	▼ -33.8%	500.67	470.00	550.00	
<b>FX ³</b>									
EUR/USD	1.0808	▼ -0.5%	▼ -0.7%	▼ -0.7%	▼ -7.0%	1.0855	1.0742	1.0914	
EUR/PLN	4.4460	▲ 2.3%	▲ 4.3%	▲ 4.3%	▲ 3.4%	4.3911	4.2935	4.4987	
USD/PLN	4.1031	▲ 2.7%	▲ 5.2%	▲ 5.2%	▲ 10.9%	4.0385	3.9281	4.1303	
USD/CAD	1.4151	- 0.0%	▲ 2.2%	▲ 2.2%	▲ 14.4%	1.4264	1.3969	1.4589	
USD/CNY	6.5788	▼ -0.2%	▲ 1.3%	▲ 1.3%	▲ 6.0%	6.5721	6.5159	6.5948	
USD/CLP	726.63	▲ 0.7%	▲ 2.3%	▲ 2.3%	▲ 15.6%	723.85	710.16	730.31	
<b>Money market</b>									
3m LIBOR USD	0.619	▼ 0.00	▲ 0.01	▲ 0.01	▲ 0.36	0.620	0.612	0.624	
3m EURIBOR	-0.152	▼ -0.01	▼ -0.02	▼ -0.02	▼ -0.21	-0.142	-0.152	-0.132	
3m WIBOR	1.700	▼ -0.02	▼ -0.02	▼ -0.02	▼ -0.32	1.709	1.700	1.720	
5y USD interest rate swap	1.422	▼ -0.08	▼ -0.32	▼ -0.32	▼ -0.10	1.481	1.347	1.709	
5y EUR interest rate swap	0.151	▼ -0.08	▼ -0.18	▼ -0.18	▼ -0.16	0.226	0.133	0.309	
5y PLN interest rate swap	1.970	▲ 0.01	▼ -0.02	▼ -0.02	▲ 0.29	1.956	1.815	2.040	
<b>Fuel</b>									
WTI Cushing	30.99	▼ -6.5%	▼ -16.3%	▼ -16.3%	▼ -32.6%	31.45	26.55	36.76	
Brent	30.98	▼ -3.3%	▼ -13.3%	▼ -13.3%	▼ -33.4%	30.28	26.39	36.23	
Diesel NY (ULSD)	98.60	▼ -2.8%	▼ -8.3%	▼ -8.3%	▼ -39.8%	97.07	86.44	108.03	
<b>Others</b>									
VIX	22.34	▼ -4.67	▲ 4.13	▲ 4.13	▲ 5.94	24.16	19.34	27.59	
BBG Commodity Index	75.24	▼ -1.9%	▼ -4.2%	▼ -4.2%	▼ -25.9%	75.24	72.88	77.91	
S&P500	1 906.90	▼ -0.8%	▼ -6.7%	▼ -6.7%	▼ -7.6%	1 925.44	1 859.33	2 016.71	
DAX	9 764.88	▼ -0.9%	▼ -9.1%	▼ -9.1%	▼ -6.4%	9 844.29	9 391.64	10 310.10	
Shanghai Composite	2 916.56	▼ -8.5%	▼ -17.6%	▼ -17.6%	▼ -12.8%	3 056.69	2 880.48	3 361.84	
WIG 20	1 727.22	▲ 0.1%	▼ -7.1%	▼ -7.1%	▼ -25.5%	1 733.07	1 674.57	1 804.42	
KGHM	55.20	▲ 1.1%	▼ -13.1%	▼ -13.1%	▼ -49.8%	55.07	52.29	60.21	

° 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

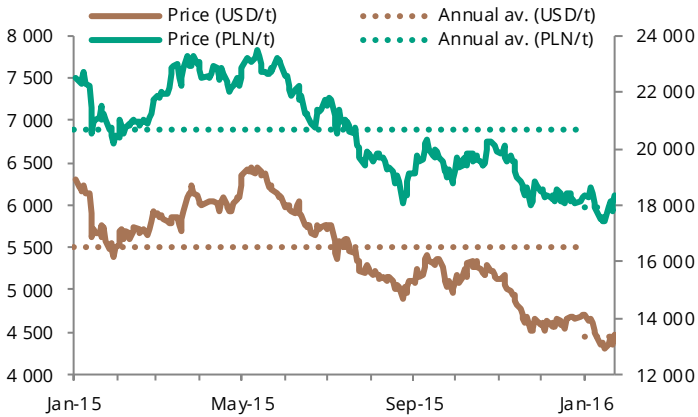
Source: Bloomberg, KGHM

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


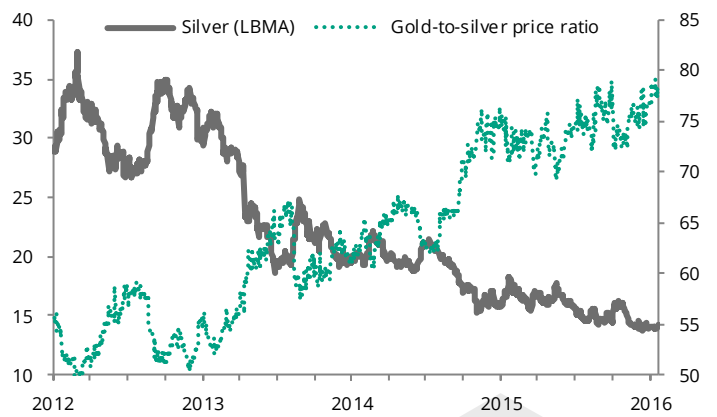
Note: Latest values in brackets. Source: Bloomberg, KGHM

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


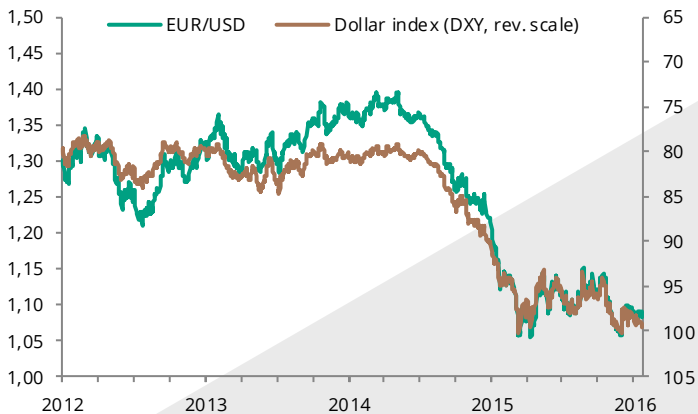
Note: Latest values in brackets. Source: Bloomberg, KGHM

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


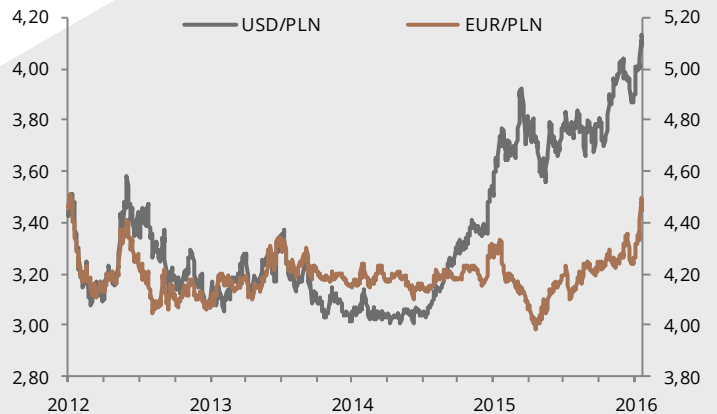
Source: Bloomberg, KGHM

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


Source: Bloomberg, KGHM

**USD: dollar index (lhs) and ECB-based EUR/USD (rhs)**


Source: Bloomberg, KGHM

**PLN: NBP-fixing based rate vs. USD (lhs) and EUR (rhs)**


Source: Bloomberg, KGHM

## Legal note

This document has been prepared based on the below listed reports, among others, published in the following period:  
**11 – 24 January 2016.**

- 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, ▪ SNL Metals & Mining, ▪ Wood Mackenzie.

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, a także systemów: Bloomberg oraz Thomson Reuters.

Official metals prices are available on following websites:

- base metals: [www.lme.com/dataprices\\_products.asp](http://www.lme.com/dataprices_products.asp) (charge-free logging)
- silver and gold: [www.lbma.org.uk/pricing-and-statistics](http://www.lbma.org.uk/pricing-and-statistics)
- platinum and palladium: [www.lppm.com/statistics.aspx](http://www.lppm.com/statistics.aspx)

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In case of questions or comments please contact us:

KGHM Polska Miedz (Polish Copper) S.A.

Departament Zarządzania Ryzykiem Rynkowym i Kredytowym (Market and Credit Risk Management Department)

Wydział Ryzyka Rynkowego (Market Risk Unit)

ul. M. Skłodowskiej-Curie 48

59-301 Lubin, Poland