

# Market Overview

as of: 1<sup>st</sup> January 2018




- Copper:** Chinese smelters are reducing their production due to winter environmental restriction implemented by the government, yet the largest Chinese copper producer forecasts country's red metal demand to rise by 400K mt in 2018. Copper prices are peaking, which encourage producers to start new projects and restart operations once shut-down. (Page 2)
- Precious metals:** In the last three weeks of 2017 gold prices have increased significantly towards 1300 USD/t after falling to a local trough at 1240 USD/troz. Silver bounce has been even stronger as visible in the gold to silver ratio which has fallen from the level near 80. The upward move in the precious metals' space has materialized despite FOMC's decision to hike policy rates to a range of 1.25-1.50%. The gold's net long speculative position have been increased as well as physical flows in both in terms of ETF and countries' imports, as shown in November data.
- US taxation:** The tax reform in the United States was authorised in the last days of 2017 by the Senate and the House of Representatives. It is the largest tax change in the US for over 30 years (page 6).

## Key market prices

	Close price	2w chng.
<b>LME (USD/t)</b>		
▲ Copper	7 157.00	9.5%
▲ Nickel	12 260.00	11.6%
<b>LBMA (USD/troz)</b>		
▲ Silver	16.87	6.6%
▲ Gold (PM)	1 296.50	3.7%
<b>FX</b>		
▲ EURUSD	1.1993	2.1%
▼ EURPLN	4.1709	-0.8%
▼ USDPLN	3.4813	-2.8%
▼ USDCAD	1.2545	-2.4%
▼ USDCLP	615.22	-6.1%
<b>Stocks</b>		
▲ KGHM	111.20	8.6%

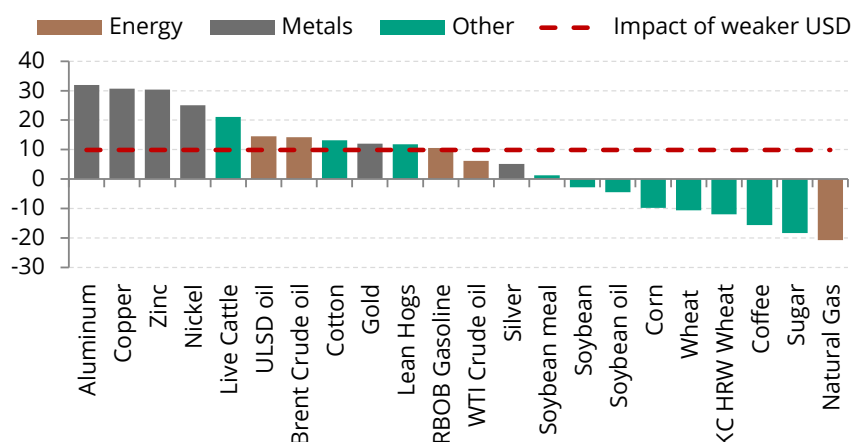
Source: Bloomberg, KGHM Polska Miedź; (more on page 11)

## Important macroeconomic data

Release	For	
 Fed upper rate	Dec	1.50% ▲
 Official manuf. PMI	Dec	51.6 ▼
 Industr. prod. (wda, yoy)	Oct	3.7% ▲
 Core CPI (yoy)	Nov	0.9% ▲
 CPI (yoy)	Dec	1.7% ▼

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

## Metals among commodities' winners in the calendar year 2017



Source: Bloomberg, KGHM Polska Miedź

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## Base and precious metals | Other commodities

### Copper

**Chinese smelters are reducing their production due to environmental restriction of government in winter, yet their largest copper producer forecasts country's red metal demand to rise by 400K mt in 2018. Copper prices are peaking, which encourage producers to start new projects and restart once closed operations.**

**China is forecast to put into use a total of 2.5 million mt/year new blister copper output capacity until 2020**

#### China's mined copper demand to rise by 400K mt in 2018

China is forecast to add 400,000 mt mined copper demand in 2018, due to the anticipated commissioning of new copper smelting projects next year, Jiangxi Copper Corp said in its 2018 copper sector report. The producer said China was forecast to put into use a total of 2.5 million mt/year new blister copper output capacity over 2017-20, with an estimated 440,000 mt/year blister copper capacity to be commissioned in 2018. It said as some of the blister capacity might be commissioned in H2, 2018, thus delaying demand for concentrate, with new copper concentrate demand in China seen at 400,000 mt next year. Jiangxi Copper said Chinese demand for copper concentrate was expected to rise further in 2019, on the anticipated commissioning of Aluminum Corp of China's 400,000 mt/year refined copper project at Ningde City, Fujian Province, South China, as well as Yunnan Copper's 300,000 mt/year refined copper project at Chifeng City, Inner Mongolia, Northwest China next year. The producer said as China's mined copper output growth could not meet all smelters' needs, with an estimated of just 80,000 mt new mined copper output in China in 2018, so pressuring down treatment and refining charges.

**Negative impact on TC/RCS were expected by H2 2018**

It said the negative impact on TC/RCS were expected by H2, 2018. China imported 15.698 million copper ore and concentrates in January-November, up 2.68% year on year, data from the General Administration of Customs showed. Meanwhile, Jiangxi Copper said China's restriction of copper scrap imports was expected to spur a periodic refined copper shortage next year. The producer said an estimated 350,000 mt of Category 7 copper scrap waste copper wire, cable and waste electrical grade could not be imported by China in 2018 on China's scrap metal import restriction, which was expected to result in the 350,000 mt scrap to lie idle in overseas, then processed into Category 6 copper scrap (purple copper and yellow copper), and then exported to China.

#### Other important information on copper market:

- The global world refined copper market showed a 132,000 tonnes deficit in September, compared with a 94,000 tonnes surplus in August, the International Copper Study Group (ICSG) said in its latest monthly bulletin. For the first 9 months of the year, the market was in a 181,000 tonnes deficit

compared with a 167,000 tonnes deficit in the same period a year earlier, the ICSG said. World refined copper output in September was 1.98 million tonnes, while consumption was 2.11 million tonnes. Bonded stocks of copper in China showed a 132,000 tonnes deficit in September compared with a 79,000 tonnes surplus in August.

- Tongling Nonferrous Metals Group, one of China's top copper smelters, has reduced production by 20-30 percent to comply with winter output restrictions, a company official said on Thursday. Cutbacks started at the end of last month, and will remain in force until January, the official added. Tongling Nonferrous has copper smelting capacity of 900,000 tonnes per year and refining capacity of 1.3 million tonnes per year, official said. Its home city of Tongling in Anhui province had in September asked major cement, smelting, steel and chemical firms to cut capacity by 30 percent from October to December. Tongling is not one of 28 northern Chinese cities ordered by the central government to impose strict curbs on industrial output this winter for environmental reasons.
- The commodities recovery is finally spurring spending. In top copper producer Chile, environmental regulators have approved the most raw-materials projects this year since 2011, when copper prices peaked, government data show. This year's list of approvals includes two energy and nine mining projects of \$100 million or more. Among the mines given the green light is the underground expansion of Codelco's Chuquicamata, a \$2 billion investment that was downsized to \$1.4 billion and received its approval last week.
- Hindustan Copper has brought back online its Kendadih mine, with an annual output of 225,000 tonnes of copper ore, it said on Tuesday December 12. There are 12.85 million tonnes of copper ores reserves at the Kendadih mine with a grade of 1.73% copper, according to the Indian miner's official website. The copper mine, located in Jharkhand of east India, was shut down "due to economic reasons" in February 2000 when London Metal Exchange benchmark copper prices hovered around \$1,800 per tonne. Behind the copper price surge is the tight mining supply. The supply crunch in copper concentrates have weighed on treatment charges which fell to \$85.4 per tonne in late November from \$89.20 per tonne a month ago. "Considering the present favourable market conditions, the company has reworked the mine business plan," company spokesman Sampa C Lahiri said in a statement. Dewatering activity and mining infrastructure have been completed while all the statutory clearances, such as environment and forest, and execution of a mining lease deed from the central and state governments are also ready. The company also plans to restart its Rakha mine, which sits on 47.19 million tonnes of copper ores with a grade of 0.97% copper soon.

## Precious Metals

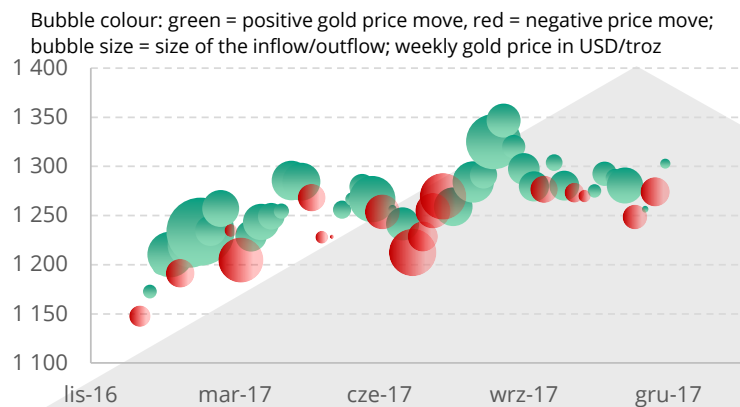
In the last three weeks of 2017 gold prices have increased significantly towards 1300 USD/t after falling to a local trough at 1240 USD/troz. Silver bounce has been even stronger as visible in the gold to silver ratio which has fallen from the level near 80. The upward move in the precious metals' space has materialized despite FOMC's decision to hike policy rates to a range of 1.25-1.50%. The long speculative position have been increased as well as physical flows in gold both in terms of ETF and countries' imports, as shown in November data.

**Gold ETF has gathered a total holding (Jan-Nov 2017) to 2347t, 8.3% year-over-year.**

### Gold ETFs add 9.1 tonnes in November

The World Gold Council has reported that gold ETFs saw net inflows amounting to 9.1 tonnes of gold during November, bringing total holdings to 2,357t (\$8.5 billion). Global net inflows were dominated by flows into European-listed funds, which added 15.8t. North America saw outflows of 5.4t during November, marking the second consecutive month of net outflows for the region's gold ETFs. So far during 2017, gold ETFs have added 198t of gold, bringing total holdings to 2,357t, an increase of 8.3% from the end of 2016. European-listed funds have led inflows during this time, capturing 75% of global net new assets to add 143t to their holdings, representing 14% of total AUM. North American funds have recorded 62.3t of inflows during the year so far, while Asian funds have seen outflows of 13.7t. Other regions are almost unchanged for the year with net outflows of 0.1t.

**Thin physical flows have helped to drag gold price higher but overall YTD ETFs have gathered 8.3% more gold in 2017 than a year before**



Source: Bloomberg, KGHM Polska Miedź

### Silver import prospects in India

Silver imports by India, one of the world's top buyers, may keep rising next year after bouncing back this year from a four-year low in 2016, boosted by weak prices. Overseas purchases are estimated at as high as 5,500 metric tons in 2017 and may rise to about 6,000 tons next year, surging from 3,000 tons in 2016, according to Chirag Sheth, an analyst at London-based Metals Focus Ltd., an

independent precious-metals research firm. Although it was expected that the shipments will fall, it actually rose amid a rush to import more silver ahead of the implementation of the new goods and services tax in July, Sheth said. Demand suffered in 2017 after Prime Minister Narendra Modi clamped down on the black market. The drop in prices spurred by the GST has turned the tide for silver this year with demand seen rising about 7% to 5,338 tons in 2017. Prices are set for a fourth year of losses in five years. India imports most of its silver, from places including the U.K., mainland China and Hong Kong. Locally, Hindustan Zinc Ltd. produces about 450 tons annually. According to Metal' Focus, there has been a consistent improvement in the market, with visible improvement in the jewelry segment. Where it still continues to disappoint is the investment side and that is also testament to the fact that silver prices have not gone anywhere.

## Global economies | Foreign exchange markets

### US tax system change

**The tax reform in the United States was authorized in the last days of 2017 by the Senate and the House of Representatives. It is the largest tax change in the US for over 30 years.**

#### Key changes in US tax system

The introduction of tax reform was one of the major election pledges of President Donald Trump. The approved changes provide for a tax reduction of almost USD 1.5 trillion over 10 years. The new law includes a permanent reduction of the corporate income tax rate from 35 to 21 percent from 2018. For the period up to 2025 tax rates for individuals will also be partially reduced and the income brackets, which are the basis for applying an appropriate tax rate, will be lowered.

#### Main changes to US taxation system

##### Corporates

The corporate tax rate will fall from 35% to 21%, while some related business deductions and credits are either reduced or eliminated.

The corporate Alternative Minimum Tax will be eliminated.

The Act changes the U.S. from a global to a territorial tax system with respect to corporate income tax. Instead of a corporation paying the U.S. tax rate (35% in terms before and act) for income earned in any country (less a credit for taxes paid to that country), each subsidiary will pay the tax rate of the country in which it is legally established. In theory, the law should reduce the incentive for tax inversion, which is used today to obtain the benefits of a territorial tax system by moving U.S. corporate headquarters to other countries.

One time repatriation tax of profits in overseas subsidiaries of 7.5%, 14.5% for cash. U.S. multinationals have accumulated nearly \$3 trillion offshore, much of it in subsidiaries in tax haven countries. The Act may encourage companies to bring the money home over time, but at these much lower rates.

##### Individuals

###### Single filers

Under previous law		Tax Cuts and Jobs Act	
Rate	Income bracket	Rate	Income bracket
10%	\$0–\$9,525	10%	\$0–\$9,525
15%	\$9,525–\$38,700	12%	\$9,525–\$38,700
25%	\$38,700–\$93,700	22%	\$38,700–\$82,500
28%	\$93,700–\$195,450	24%	\$82,500–\$157,500
33%	\$195,450–\$424,950	32%	\$157,500–\$200,000
35%	\$424,950–\$426,700	35%	\$200,000–\$500,000
39.6%	\$426,700 and up	37%	\$500,000 and up

## Married filing jointly

Under previous law		Tax Cuts and Jobs Act	
Rate	Income bracket	Rate	Income bracket
10%	\$0-\$19,050	10%	\$0-\$19,050
15%	\$19,050-\$77,400	12%	\$19,050-\$77,400
25%	\$77,400-\$156,150	22%	\$77,400-\$165,000
28%	\$156,150-\$237,950	24%	\$165,000-\$315,000
33%	\$237,950-\$424,950	32%	\$315,000-\$400,000
35%	\$424,950-\$480,050	35%	\$400,000-\$600,000
39.6%	\$480,050 and up	37%	\$600,000 and up

Source: KGHM Polska Miedz S.A., CNBC, Bloomberg

**Mixed opinion regarding new law**

Experts point out that wealthy people will benefit from the reform more than those with middle- or low-income. The Democrats believe the reform will deepen the gap between rich and poor Americans and increase public debt by \$1.5 trillion over the next 10 years. According to Reuters, referring to the Washington think tank "Tax Policy Center", the average middle-class household next year can save 900 USD tax, when 1 per cent of the richest Americans will see savings of 51 thousand USD. It should be noted that new taxation rules apply primarily to enterprises. It is the reduction of income tax for entrepreneurs up to 21 percent, which is responsible for the vast majority of additional indebtedness of the country over the next decade. In addition, the reduction for entrepreneurs is indefinite as opposed to the reliefs offered to individuals. Critics of the law also indicate haste in its approval at all necessary levels. Republicans, on the other hand, argue that changes in taxes will support the economic situation and increase employment, resulting in a favorable outcome for the Congress elections in November next year. Before the Republicans' proposal was approved by the Senate, White House spokesman Paul Ryan said: "The most important thing is that a typical family with earnings on the median income of American families will receive a tax reduction of 2059 USD next year." In addition, among the positive comments, one can hear forecasts of wage growth for employees due to better financial situation of enterprises. A reliable assessment of the effects of the new tax law for particular social groups, business and the US budget will be clearer during its validity. The first reactions of stock market investors are optimistic, which is indicated by the sharp increases in stock market indices, in the hope of higher profits of listed enterprises. Interestingly, the recent days have also brought a dynamic weakening of the US currency (the lowest level since mid-September 2017), which is in contradiction with the typical market reaction to tax cuts and generally healthy US economy.

**Other countries started actions to prevent losing US investors**




The US tax reform also triggers foreign reactions. Some governments, such as the Canadian, complain that it will lead to the outflow of investments from their







countries to the United States. The Chinese authorities have decided to lower taxes for foreign companies, investing money in selected sectors of the Middle Kingdom economy. The government of the People's Republic of China decided to lift 10 percent tax on investment profits in China. This relief will be granted to foreign companies that will reinvest these profits into one of the economy sectors distinguished by the Chinese officials. These sectors include modern technology industries as well as more traditional ones (e.g. mining). Relief comes into force retroactively - starting from January 1, 2017. Foreign investors may therefore receive a refund for 2017. "This relief will create a better environment for foreign investors and encourage them to sustain investment in China" says the Chinese Ministry of Commerce.



# Macroeconomic calendar

## Important macroeconomic data releases

Weight	Date	Event	For	Reading <sup>1</sup>	Previous	Consensus <sup>2</sup>
<b>China</b> 						
⊛	11-Dec	New yuan loans (CNY bn)	Nov	1 120 ▲	663	800 ▲
⊛⊛⊛⊛	14-Dec	Industrial production (yoy)	Nov	6.1% ▼	6.2%	6.1% ○
⊛⊛	14-Dec	Fixed assets investments (ytd, yoy)	Nov	7.2% ▼	7.3%	7.2% ○
⊛	14-Dec	Retail sales (yoy)	Nov	10.2% ▲	10.0%	10.3% ◡
⊛⊛	27-Dec	Industrial profits (yoy)	Nov	14.9% ▼	25.1%	--
⊛⊛⊛	31-Dec	Official manufacturing PMI	Dec	51.6 ▼	51.8	51.6 ○
<b>Poland</b> 						
⊛⊛⊛⊛	11-Dec	Consumer inflation CPI (yoy) - final data	Nov	2.5% -	2.5%	--
⊛⊛⊛⊛	12-Dec	Core CPI (excluding food and energy, yoy)	Nov	0.9% ▲	0.8%	0.9% ○
⊛⊛	14-Dec	Trade balance (EUR mn)‡	Oct	597 ▲	466	480 ▲
⊛⊛	14-Dec	Exports (EUR mn)‡	Oct	17 914 ▲	17 179	18 100 ◡
⊛⊛	14-Dec	Current account balance (EUR mn)‡	Oct	575 ▲	120	210 ▲
⊛⊛	18-Dec	Average gross salary (yoy)	Nov	6.5% ▼	7.4%	7.0% ◡
⊛	18-Dec	Employment (yoy)	Nov	4.5% ▲	4.4%	4.4% ▲
⊛⊛⊛⊛	19-Dec	Sold industrial production (yoy)	Nov	9.1% ▼	12.3%	9.6% ◡
⊛⊛⊛	19-Dec	Retail sales (yoy)	Nov	10.2% ▲	8.0%	7.4% ▲
⊛⊛	19-Dec	Producer inflation PPI (yoy)	Nov	1.8% ▼	3.0%	2.2% ◡
⊛⊛	22-Dec	Unemployment rate	Nov	6.5% ▼	6.6%	6.5% ○
⊛	22-Dec	M3 money supply (yoy)‡	Nov	4.5% ▼	5.7%	5.4% ◡
<b>US</b> 						
⊛⊛⊛⊛⊛	13-Dec	FOMC base rate decision - upper bound (Fed)	Dec	1.50% ▲	1.25%	1.50% ○
⊛⊛⊛⊛⊛	13-Dec	FOMC base rate decision - lower bound (Fed)	Dec	1.25% ▲	1.00%	1.25% ○
⊛⊛⊛⊛	13-Dec	Consumer inflation CPI (mom)	Nov	0.4% ▲	0.1%	0.4% ○
⊛⊛⊛⊛	13-Dec	Consumer inflation CPI (yoy)	Nov	2.2% ▲	2.0%	2.2% ○
⊛⊛⊛	14-Dec	Composite PMI - preliminary data	Dec	53.0 ▼	54.5	--
⊛⊛⊛	14-Dec	Manufacturing PMI - preliminary data	Dec	55.0 ▲	53.9	53.9 ▲
⊛⊛⊛	14-Dec	PMI services - preliminary data	Dec	52.4 ▼	54.5	54.7 ◡
⊛⊛	14-Dec	Retail sales (excluding autos, mom)‡	Nov	1.0% ▲	0.4%	0.6% ▲
⊛⊛⊛⊛	15-Dec	Industrial production (mom)‡	Nov	0.2% ▼	1.2%	0.3% ◡
⊛	15-Dec	Capacity utilization	Nov	77.1% ▲	77.0%	77.2% ◡
⊛⊛⊛⊛⊛	21-Dec	GDP (annualized, qoq) -	3Q	3.2% ▼	3.3%	3.3% ◡
⊛⊛	21-Dec	Philadelphia Fed business outlook	Dec	26.2 ▲	22.7	21.0 ▲
⊛⊛⊛⊛	22-Dec	Consumer spending inflation PCE (mom)	Nov	0.1% ▼	0.2%	0.1% ○
⊛⊛⊛⊛	22-Dec	Consumer spending inflation PCE (yoy)	Nov	1.5% ▲	1.4%	1.5% ○
⊛⊛	22-Dec	Durable goods orders - preliminary data‡	Nov	1.3% ▲	-0.4%	2.0% ◡
⊛⊛	22-Dec	Personal income (sa, mom)	Nov	0.3% ▼	0.4%	0.4% ◡
⊛⊛	22-Dec	Personal spending (sa, mom)‡	Nov	0.6% ▲	0.2%	0.5% ▲
⊛⊛	22-Dec	University of Michigan confidence index - final data	Dec	95.9 ▼	96.8	97.2 ◡
⊛	26-Dec	Dallas Fed manufacturing activity	Dec	29.7 ▲	19.4	20.0 ▲
⊛	26-Dec	Richmond Fed manufacturing index	Dec	20.0 ▼	30.0	21.0 ◡
⊛	26-Dec	S&P/CaseShiller home price index‡	Oct	204 ▲	203	--

Weight	Date	Event	For	Reading <sup>1</sup>	Previous	Consensus <sup>2</sup>
<b>Eurozone</b> 						
⊛	12-Dec	ZEW survey expectations	Dec	29.0 ▼	30.9	--
⊛⊛⊛⊛	13-Dec	Industrial production (sa, mom)‡	Oct	0.2% ▲	-0.5%	0.0% ▲
⊛⊛⊛⊛	13-Dec	Industrial production (wda, yoy)‡	Oct	3.7% ▲	3.4%	3.2% ▲
⊛⊛⊛⊛⊛	14-Dec	ECB main refinancing rate	Dec	0.00% -	0.00%	0.00% ○
⊛⊛⊛⊛⊛	14-Dec	ECB deposit facility rate	Dec	-0.4% -	-0.4%	-0.4% ○
⊛⊛⊛	14-Dec	Composite PMI - preliminary data	Dec	58.0 ▲	57.5	57.2 ▲
⊛⊛⊛	14-Dec	Manufacturing PMI - preliminary data	Dec	--	60.1	59.7
⊛⊛⊛	14-Dec	Services PMI - preliminary data	Dec	56.5 ▲	56.2	56.0 ▲
⊛	15-Dec	Trade balance (EUR mn)	Oct	18.9 ▼	26.4	--
⊛⊛⊛⊛	18-Dec	Consumer inflation CPI (yoy) - final data	Nov	1.5% -	1.5%	1.5% ○
⊛⊛⊛⊛	18-Dec	Core CPI (yoy) - final data	Nov	0.9% -	0.9%	0.9% ○
⊛⊛	19-Dec	Labour costs (yoy)	3Q	1.6% ▼	1.8%	--
⊛	21-Dec	Consumer confidence - estimation‡	Dec	0.5 ▲	0.0	0.2 ▲
⊛	29-Dec	M3 money supply (yoy)	Nov	4.9% ▼	5.0%	4.9% ○
<b>Germany</b> 						
⊛⊛⊛⊛	13-Dec	Harmonized consumer inflation HICP (yoy) - final data	Nov	1.8% -	1.8%	1.8% ○
⊛⊛⊛⊛	13-Dec	Consumer inflation CPI (yoy) - final data	Nov	1.8% -	1.8%	1.8% ○
⊛⊛⊛	14-Dec	Composite PMI - preliminary data	Dec	58.7 ▲	57.3	57.2 ▲
⊛⊛⊛	14-Dec	Manufacturing PMI - preliminary data	Dec	--	62.5	62.0
⊛⊛	19-Dec	IFO business climate‡	Dec	117 ▼	118	118
⊛⊛	22-Dec	GfK consumer confidence	Jan	10.8 ▲	10.7	10.7 ▲
⊛⊛⊛⊛	29-Dec	Harmonized consumer inflation HICP (yoy) - preliminary data	Dec	1.6% ▼	1.8%	1.4% ▲
⊛⊛⊛⊛	29-Dec	Consumer inflation CPI (yoy) - preliminary data	Dec	1.7% ▼	1.8%	1.5% ▲
<b>France</b> 						
⊛⊛⊛⊛	14-Dec	Harmonized consumer inflation HICP (yoy) - final data	Nov	1.2% ▼	1.3%	1.3%
⊛⊛⊛⊛	14-Dec	Consumer inflation CPI (yoy) - final data	Nov	1.2% -	1.2%	1.2% ○
⊛⊛⊛	14-Dec	Composite PMI - preliminary data	Dec	60.0 ▼	60.3	59.6 ▲
⊛⊛⊛	14-Dec	Manufacturing PMI - preliminary data	Dec	--	57.7	57.2
⊛⊛⊛⊛⊛	22-Dec	GDP (yoy) - final data	3Q	2.3% ▲	2.2%	2.2% ▲
⊛⊛⊛⊛⊛	22-Dec	GDP (qoq) - final data	3Q	0.6% ▲	0.5%	0.5% ▲
<b>Italy</b> 						
⊛⊛⊛⊛	13-Dec	Industrial production (wda, yoy)‡	Oct	3.1% ▲	2.2%	3.4%
⊛⊛⊛⊛	14-Dec	Harmonized consumer inflation HICP (yoy) - final data	Nov	1.1% -	1.1%	1.1% ○
<b>UK</b> 						
⊛⊛⊛⊛	12-Dec	Consumer inflation CPI (yoy)	Nov	3.1% ▲	3.0%	3.0% ▲
⊛⊛	13-Dec	Unemployment rate (ILO, 3-months)	Oct	4.3% -	4.3%	4.2% ▲
⊛⊛⊛⊛⊛	14-Dec	BoE base rate decision	Dec	0.50% -	0.50%	0.50% ○
⊛⊛⊛⊛	14-Dec	BoE asset purchase target (GBP bn)	Dec	435 -	435	435 ○
⊛⊛⊛⊛⊛	22-Dec	GDP (yoy) - final data	3Q	1.7% ▲	1.5%	1.5% ▲
⊛⊛⊛⊛⊛	22-Dec	GDP (qoq) - final data	3Q	0.4% -	0.4%	0.4% ○
<b>Japan</b> 						
⊛⊛⊛⊛	14-Dec	Industrial production (yoy) - final data	Oct	5.9% -	5.9%	--
⊛⊛⊛	14-Dec	Manufacturing PMI - preliminary data	Dec	54.2 ▲	53.6	--
⊛⊛⊛⊛	26-Dec	Consumer inflation CPI (yoy)	Nov	0.6% ▲	0.2%	0.5% ▲
⊛⊛⊛⊛	28-Dec	Industrial production (yoy) - preliminary data	Nov	3.7% ▼	5.9%	3.6% ▲

<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

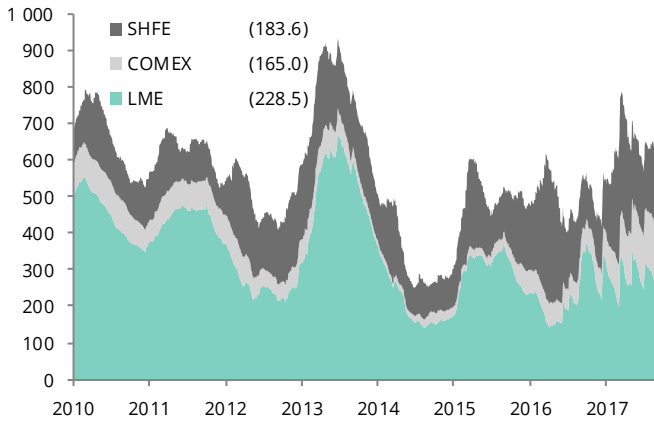
### Key base & precious metal prices, exchange rates and other important market factors

(as of: 29-Dec-17)		Price change <sup>1</sup>					From year beginning <sup>2</sup>		
	Price	2W	QTD	YTD	1Y	Average	Min	Max	
<b>LME (USD/t)</b>									
Copper	7 157.00	▲ 9.5%	▲ 10.4%	▲ 30.1%	▲ 29.8%	6 165.97	5 466.00	7 216.00	
Molybdenum	16 000.00	- 0.0%	- 0.0%	▲ 4.9%	▲ 4.9%	15 903.39	15 250.00	17 500.00	
Nickel	12 260.00	▲ 11.6%	▲ 15.8%	▲ 22.5%	▲ 22.2%	10 411.35	8 715.00	12 830.00	
Aluminum	2 241.50	▲ 12.5%	▲ 6.2%	▲ 30.8%	▲ 30.9%	1 968.74	1 701.00	2 246.00	
Tin	19 875.00	▲ 1.5%	▼ -5.3%	▼ -5.8%	▼ -6.0%	20 104.70	18 760.00	21 300.00	
Zinc	3 309.00	▲ 6.9%	▲ 2.9%	▲ 29.1%	▲ 30.3%	2 882.00	1.00	3 370.00	
Lead	2 495.00	▲ 2.8%	▼ -1.0%	▲ 25.7%	▲ 25.3%	2 317.46	2 007.00	2 586.50	
<b>LBMA (USD/troz)</b>									
Silver	16.87	▲ 6.6%	▲ 0.0%	▲ 3.8%	▲ 5.0%	17.05	15.22	18.56	
Gold <sup>2</sup>	1 296.50	▲ 3.7%	▲ 1.0%	▲ 11.9%	▲ 13.1%	1 257.34	1 151.00	1 346.25	
<b>LPPM (USD/troz)</b>									
Platinum <sup>2</sup>	927.00	▲ 3.9%	▲ 0.8%	▲ 2.2%	▲ 3.2%	948.26	877.00	1 033.00	
Palladium <sup>2</sup>	1 056.00	▲ 4.7%	▲ 12.9%	▲ 56.2%	▲ 57.6%	870.34	706.00	1 057.00	
<b>FX<sup>3</sup></b>									
EURUSD	1.1993	▲ 2.1%	▲ 1.6%	▲ 13.8%	▲ 14.7%	1.1300	1.0385	1.2060	
EURPLN	4.1709	▼ -0.8%	▼ -3.2%	▼ -5.7%	▼ -5.5%	4.2576	4.1709	4.4002	
USDPLN	3.4813	▼ -2.8%	▼ -4.7%	▼ -16.7%	▼ -17.4%	3.7765	3.4813	4.2271	
USDCAD	1.2545	▼ -2.4%	▲ 0.5%	-	-	1.2986	1.2128	1.3743	
USDCNY	6.5068	▼ -1.7%	▼ -2.2%	▼ -6.3%	▼ -6.5%	6.7549	6.4870	6.9640	
USDCLP	615.22	▼ -6.1%	▼ -3.4%	▼ -7.8%	▼ -8.6%	649.19	615.22	679.05	
<b>Money market</b>									
3m LIBOR USD	1.694	▲ 0.15	▲ 0.36	▲ 0.70	▲ 0.70	1.263	0.999	1.695	
3m EURIBOR	-0.329	▼ 0.00	- 0.00	▼ -0.01	▼ -0.01	-0.329	-0.332	-0.319	
3m WIBOR	1.720	- 0.00	▼ -0.01	▼ -0.01	▼ -0.01	1.729	1.720	1.730	
5y USD interest rate swap	2.244	▲ 0.04	▲ 0.24	▲ 0.27	▲ 0.26	1.984	1.711	2.295	
5y EUR interest rate swap	0.313	▲ 0.11	▲ 0.06	▲ 0.24	▲ 0.24	0.200	0.078	0.326	
5y PLN interest rate swap	2.500	▲ 0.02	▲ 0.06	▲ 0.10	▲ 0.18	2.420	2.165	2.625	
<b>Fuel</b>									
WTI Cushing	60.42	▲ 5.3%	▲ 16.9%	▲ 12.5%	▲ 12.4%	50.81	42.31	60.42	
Brent	66.82	▲ 4.9%	▲ 18.2%	▲ 20.6%	▲ 20.2%	54.34	44.21	66.82	
Diesel NY (ULSD)	206.43	▲ 7.4%	▲ 14.3%	▲ 21.6%	▲ 21.6%	165.58	135.85	206.43	
<b>Others</b>									
VIX	11.04	▲ 1.46	▲ 1.53	▼ -3.00	▼ -2.33	11.09	9.14	16.04	
BBG Commodity Index	88.17	▲ 4.9%	▲ 4.4%	▲ 0.7%	▲ 0.6%	84.91	79.36	89.36	
S&P500	2 673.61	▲ 0.8%	▲ 6.1%	▲ 19.4%	▲ 18.9%	2 449.08	2 257.83	2 690.16	
DAX	12 917.64	▼ -1.8%	▲ 0.7%	▲ 12.5%	▲ 12.8%	12 437.93	11 509.84	13 478.86	
Shanghai Composite	3 307.17	▲ 0.5%	▼ -1.2%	▲ 6.6%	▲ 6.8%	3 249.69	3 052.79	3 447.84	
WIG 20	2 461.21	▲ 2.2%	▲ 0.3%	▲ 26.4%	▲ 26.5%	2 334.30	1 989.64	2 551.78	
KGHM	111.20	▲ 8.6%	▼ -5.3%	▲ 20.2%	▲ 21.3%	117.73	94.00	135.50	

<sup>o</sup> change over: 2W = two weeks; QTD = quarter-to-day; YTD = year-to-date; 1Y = one year. <sup>1</sup> based on daily closing prices. <sup>2</sup> latest quoted price. <sup>3</sup> central banks' fixing rates (Bank of China HK for USD/CNY). <sup>4</sup>

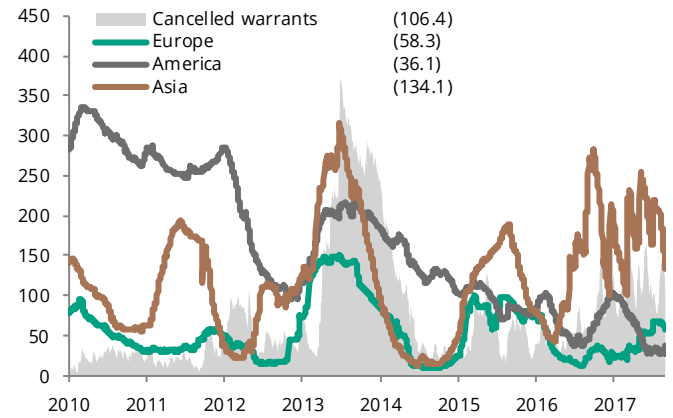
Source: Bloomberg, KGHM

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



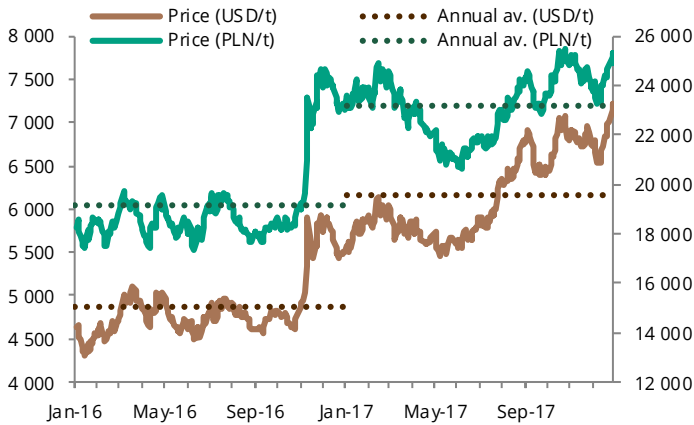
Note: Latest values in brackets. Source: Bloomberg, KGHM

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



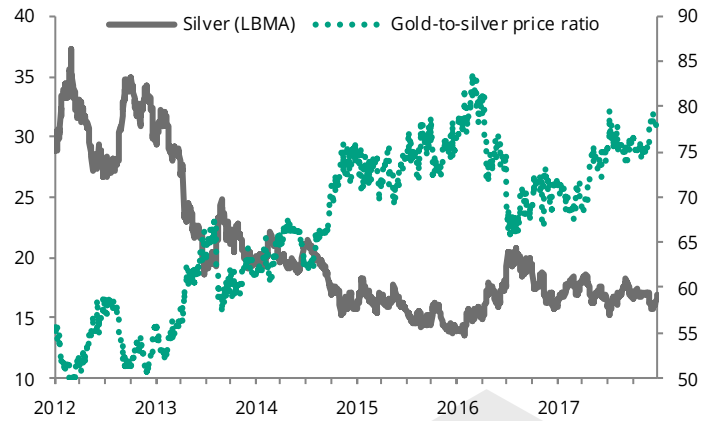
Note: Latest values in brackets. Source: Bloomberg, KGHM

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



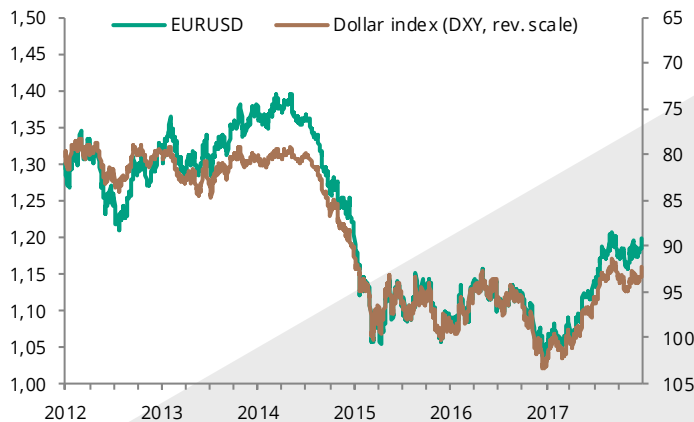
Source: Bloomberg, KGHM Polska Miedź

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



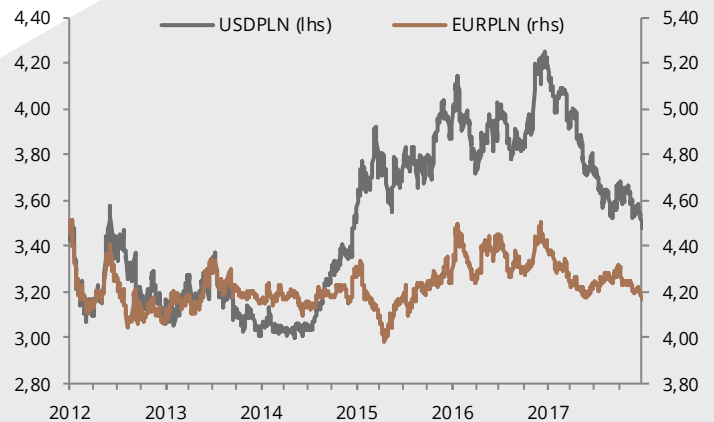
Source: Bloomberg, KGHM Polska Miedź

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



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: **11<sup>th</sup> – 31<sup>st</sup> December 2018**.

- 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.

Moreover, additional information published here was acquired in direct conversations with market dealers, from financial institution reports and from the following websites: ▪ [thebulliondesk.com](http://thebulliondesk.com), ▪ [lbma.org.uk](http://lbma.org.uk), ▪ [lme.co.uk](http://lme.co.uk), ▪ [metalbulletin.com](http://metalbulletin.com), ▪ [nbp.pl](http://nbp.pl), also: Bloomberg and 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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