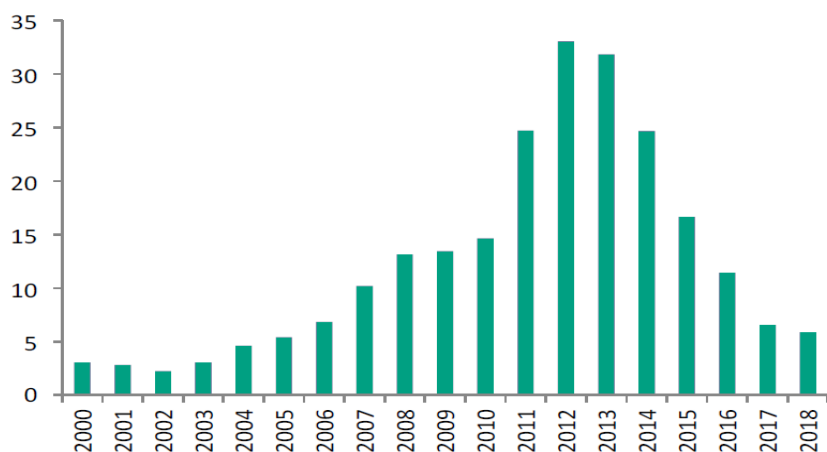


# Market Overview

as of: 11 May 2015

- Copper:** Prices have risen by over 5% in the last two weeks moving within USD 6,034-6,481/mt range. The price surge was largely driven by further supply side disruptions, Chinese government's and central bank's actions to alleviate economic slowdown as well as gradual short covering as the price moved higher (*page 2*).
- Precious metals:** Market was moving sideways over past two weeks without any decisive breaks in any direction. Volatility on the market remained subdued (*page 4*).
- Freight market:** Shipping freight rates, which hit multi year lows in February, are set to remain weak for the rest of the decade or even longer. Goldman Sachs' research explains that view by enlisting large number of idle vessels as well as relatively low fuel prices which limit operating costs inflation (*page 5*).
- LME:** New measures aimed to increase the amount of metal withdrawn from warehouses, relative to material brought in, will help to reduce queues at LME registered warehouses (*page 6*).
- Other metals:** Spot Mo oxide prices have drifted lower over the past fortnight as a lack of demand has resulted in quiet spot market conditions, while nickel prices surged nearly 10%. (*page 7*).
- European interest rates:** The 10Y Bunds sell-off started on the 20th of April and, according to J.P. Morgan, it is fairly mature. The additional upside for yields could be 10-15bp, with a wider range of 0-30bp, depending on a variety of indicators. (*page 9*).

## Total capex in copper mines peaked in 2012 and is forecast to decline since then (USD bn)



Source: Citi Research, KGHM

## Key market prices

	Close price	2w chng.
<b>LME (USD/t)</b>		
▲ Copper	6 396.50	6.2%
▲ Nickel	14 100.00	9.6%
<b>LBMA (USD/troz)</b>		
▲ Silver	16.31	3.0%
▲ Gold (PM)	1 186.00	0.3%
<b>FX</b>		
▲ EUR/USD	1.1221	3.7%
▲ EUR/PLN	4.0552	1.0%
▼ USD/PLN	3.6095	-2.2%
▼ USD/CAD	1.2088	-0.6%
▼ USD/CLP	610.61	-1.2%
<b>Stocks</b>		
▲ KGHM	129.90	8.7%

 Source: Bloomberg, KGHM; (*more on page 12*)

## Important macroeconomic data

Release	For		
 GDP (annlzd., qoq)	1Q	0.2%	▼
 Non-farm payrolls chng.	Apr	223	▲
 Manufacturing PMI	Apr	52.1	▲
 Exports (yoy)	Apr	-6.4%	▲
 Copper exports (\$)	Apr	2 882	▲

 Source: Bloomberg, KGHM; (*more on page 10*)

## Market Risk Unit

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## Base and precious metals

### Copper

Prices have risen by over 5% in the last two weeks moving within USD 6,034-6,481/mt range. The price surge was largely driven by further supply side disruptions, Chinese government's and central bank's actions to alleviate economic slowdown as well as gradual short covering as the price moved higher.

#### Major Chinese hedge funds may be cutting short positions

According to Metal Bulletin, the surge in global copper prices is forcing Chinese hedge funds to reconsider their short positions in the red metal. The rethink is also being driven by the fall in the Chinese stock market last week, because some of copper-short position strategies involve going long on the stock market index.

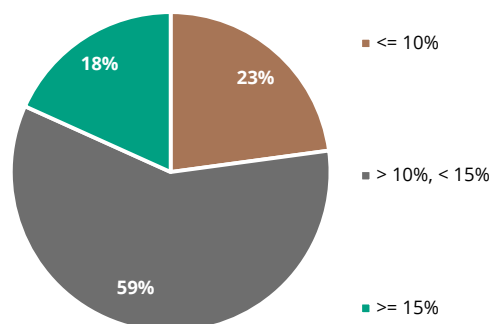
**Copper prices hit 6,481 USD/t on May 5.**

Copper prices have been rising since much faster than market expectations and reached a year-high of 6,481 USD/t on May 5 (LME). Prices for the red metal have been climbing since April 30, just as Chinese market participants started their Labour Day Holiday. The drivers are thought to be rising hopes in an economic stimulus from Beijing in response to China's poor economic data, falling copper stocks on the Shanghai Futures Exchange, and expectations of improved Chinese demand in the second quarter.

**One of short position cutters may be Shanghai Chaos Investment**

Current situation is very much different compared to start of the year. Back then prices were depressed, and on January 14 they fell by as much as 7%, with Chinese hedge funds, including Shanghai Chaos Investment, said to be the main forces behind the drop. Now, if talk in the Chinese market is correct, Shanghai Chaos may have decided to cut its short-copper positions. There is some circumstantial evidence for such a move: Shanghai Chaos is believed to be involved in copper futures on the SHFE through three Chinese brokers, Chaos Ternary Futures (a subsidiary of Shanghai Chaos), Brilliant Futures and Yongan Futures. According to SHFE's data Chaos Ternary Futures cut 3,249 lots of copper positions, and Brilliant Futures and Yongan Futures cut 1,312 lots and 8,342 lots, respectively on May 6. Yongan Futures is one of the largest futures companies in China, and is believed to manage funds from several major Chinese hedge funds.

About 18% of new capacity earns  $\geq$  15% return at USD 5,800/t price



Source: Citi Research, KGHM

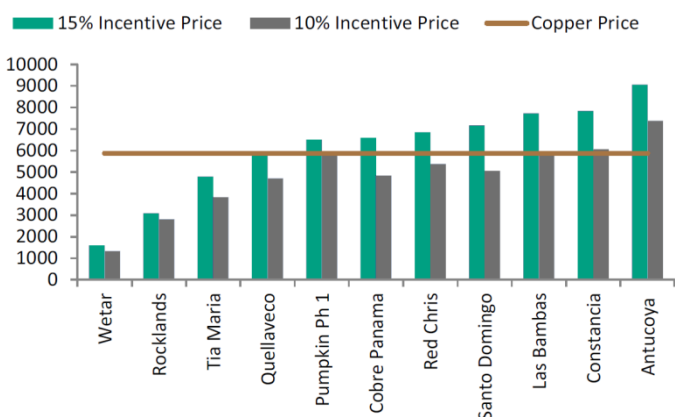
## Incentive prices for new projects remain high

According to Citi's analysis, both operating and capital costs for the mining industry have fallen recently, and in the case of copper operational costs have declined at a much faster rate than capex costs. Bank's analysts investigated 29 copper mining projects across the globe (ex-China), which collectively could represent around 4.7 mln tones of capacity by 2021, and calculated weighted average required incentive price for these projects to be 6,560 USD/t to earn 15% return.

At the price of 5,800 USD/t, close to 1q15 average of 5,818 USD/t, only 18,3% (865,000 t) of new capacity would generate a 15% rate of return. However, almost 1 mln tonnes of probable projects would generate a less than 10% rate of return, which would increase their chances of being delayed or cancelled.

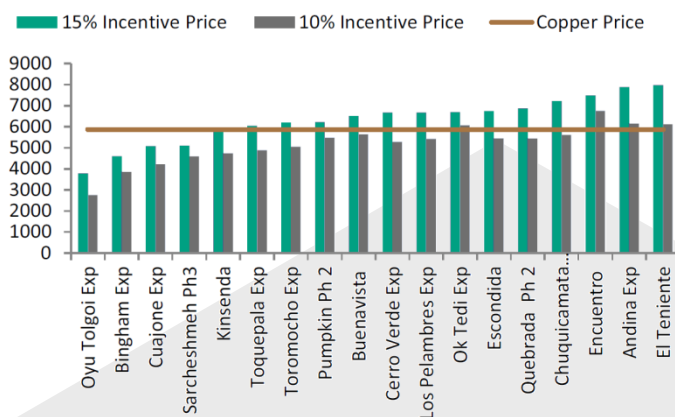
The absolute capex in copper was highest in 2012 – USD 33 bn – and has been declining since, as the producers have become more disciplined on spending, rising hurdle rates and avoiding greenfield projects. This should continue along stronger USD and deflation in developments costs caused by weaker demand for services sector. Of the new supply approximately 71% will be brownfield expansions as they require 20% lower capex per tonne than greenfield. The net benefits for brownfield expansions are, however, not significant as their cash costs are about 14% higher than of greenfield.

## Incentive prices at 15% and 10% discount rate – greenfield projects



Source: Citi Research, KGHM

## Incentive prices at 15% and 10% discount rate – brownfield projects



Source: Citi Research, KGHM

## Other important information on copper market:

- The global refined copper market showed a 59,000 tonnes surplus in January, compared with a 138,000 tonnes surplus in December, according to the International Copper Study Group. The market was in a 142,000 tonnes deficit in the same period a year earlier. The output in January was 1.91 million tonnes, while consumption was 1.85 million tonnes. Bonded

stocks of copper in China showed a 56,000 tonnes surplus in January compared with a 148,000 tonnes surplus in December.

- Antofagasta cut its annual copper production forecast as it posted a fall in 1Q copper output due by protests at one of its mines and heavy rains in the Atacama desert. The company said production in 2015 will be some 15,000 tonnes lower than its previous forecast of 710,000 tonnes.
- Southern Copper Corp said that local protests against its Tia Maria project in Peru might delay its scheduled roll-out in 2017. The miner had been expecting a construction permit for the proposed copper mine when rallies calling for its cancellation broke out a month ago.
- Peru's copper production is expected to rise 10% this year as new mines ramp up operations, according to local Energy and Mines Minister. Both Chinalco's Toromocho mine and Hudbay Minerals' Constancia mine are expected to produce at 100% of capacity this year, while Antamina mine will increase production this year, as it taps higher-grade areas, after its 25% production drop last year.
- BHP Billiton's shareholders approved creation of South32 Ltd., which marks the biggest spin-off in mining industry in almost decade. South32 will be the largest producer of manganese ore and operator of the biggest silver mine, and it will focus in its first six months on productivity before looking at acquisitions. The company may be worth 11.9 bn USD, according to the median estimate of five analysts compiled by Bloomberg.

## Precious metals

**Market was moving sideways over past two weeks without any decisive breaks in any direction. Volatility on the market remained subdued.**

### Silver market balance according to Reuters – weak outlook

Global mine production increased for a twelfth consecutive year to reach a record level of 877.5 Moz (27,293 t). Gains in mine supply were partially offset by weak scrap supply, falling by 12.5% year-on-year and representing a 24.1 Moz (750 t) decline. Total physical demand fell by 4% last year, as a decline in retail investment offset gains from jewellery, silverware and the photovoltaic sector. Jewellery fabrication rose to a new record level of 215.2 Moz (6,693 t) in 2014, helped by lower silver prices and a strong rebound in Indian demand.

**Silver: Growing supply, falling demand**

Analysts believe that 1200 USD/troz represents an important support for gold due to the supply and demand responses that are triggered whenever the price falls below this level. However the gold price could fall substantially below \$1,200 per ounce for a short period as a consequence of early Fed tightening. It is said that this risk is offset by the potential for an escalation of the Greek crisis.

**Gold: prices stay around 1200 USD/troz**

### Volatility and liquidity at historic lows

Volumes in the global spot gold market have fallen to their lowest in a year, with shrinking liquidity and a slowdown in interbank trade making customers reluctant to transact on a large scale.

Tighter regulation and credit constraints resulting from the 2008-2009 financial crisis saw several banks withdraw from the commodity sector to ease cost pressures and boost efficiency against a background of lower raw material prices. Price-setting was also transformed last year, in an attempt to address accusations of market manipulation. London bullion "fixes" morphed into electronically derived prices. Dealers have noted a sharp decline in bank-to-bank activity a mainstay of OTC (over the counter) gold trade.

### Low turnover on interbank market

February's clearing statistics for gold, collected by the London Bullion Market Association, showed the volume of ounces transferred between London banks dropped to a one-year low of 17.8 million. Total ounces transferred continued to stay south of 20 million in March, the latest data available.

## Freight market

**Shipping freight rates, which hit multi year lows in February, are set to remain weak for the rest of the decade or even longer. Goldman Sachs' research explains that view by enlisting large number of idle vessels as well as relatively low fuel prices which limit operating costs inflation.**

### Lower freight costs = more competition in dry bulk markets

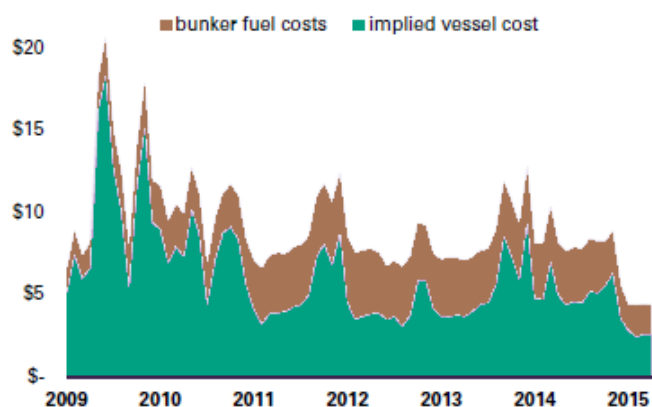
Low freight rates would benefit large iron ore and coal producers as they could access new markets, while high cost producers would suffer from greater competition and a declining share of their regional markets. Meanwhile, mining companies which bought vessels and/or entered into long term leases at the peak of the market have seen the value of these assets decline at a time when balance sheets are already under pressure from lower commodity prices.

**When transportation is cheaper and distance matters less, the world appears to be smaller and goods can travel further**

**Low freight rates are set to last until 2020+**

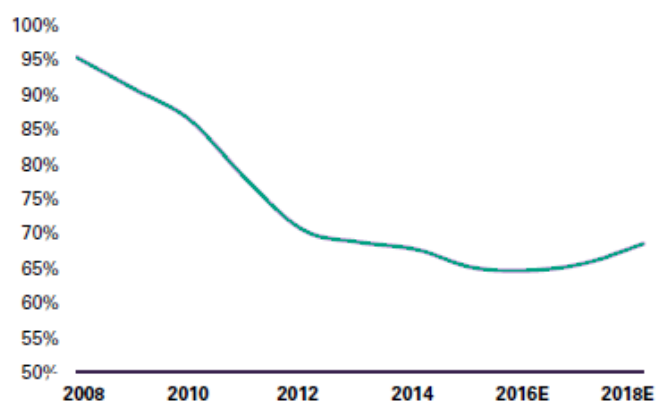
The daily charter rate for a capesize vessel has declined from a peak in excess of US\$100,000 in 2008 down to its current level below US\$10,000. The ship owners are likely to charge charter rates that are range bound between the cash cost of operating the vessel and the accounting break-even rate as they are faced with risk of leaving ships idle over long period. This compounds the impact of lower fuel prices, resulting in a period of cheap freight that should last until older vessels have been scrapped in sufficient numbers to balance the market, most likely beyond 2020.

### Cheap fuel + cheap ships = cheap freight (as measured by Australia - China freight rate in USD/t)



Source: Goldman Sachs, KGHM

### Goldman Sachs forecasts suggest that vessel fleet utilization rate might remain low (capesize + panamax)



Source: Goldman Sachs, KGHM

## LME

**New measures aimed to increase the amount of metal withdrawn from warehouses, relative to material brought in, will help to reduce queues at LME registered warehouses.**

### LME determined to cut warehouse queues faster

LME, the world centre for industrial metals trading with more than 80% of global non-ferrous metals business conducted on three trading platforms oversees warehouses where companies that buy metals on its futures market can take delivery of quality assured supplies if needed.

Financial institutions as well as metal traders, that own or used to own warehouse and charge rent, have profited from letting long queues build up. Moreover, some institutions also keep huge stocks of metals tied up in long-term financing deals, not available for manufacturers. That is one of the reasons why effective from the 1<sup>st</sup> August 2015 the so-called decay factor under the Linked Load-In/Load-Out Rule will rise to 1.0 from 0.5 previously. It means that companies will now have to withdraw as much material as they bring into a warehouse, compared with the previous requirement to take out half of what was deposited.

The LME's LILO rule is aimed at tackling what the exchange has called embedded queues at locations such as Detroit and Vlissingen and places on warehouse operators additional load-out obligations over and above minimum stipulated requirements. The LME's March report shows queues to load out primary aluminum at Vlissingen at 510 calendar days and at Detroit the queues were 436 days compared with the 50 day delay deemed to be acceptable.

### In progress of queues reduction

**The decay factor will rise starting from 1<sup>st</sup> of August with the major aim to destock the metals from warehouses**

### Fighting the "embedded queues"

## Other metals

Spot Mo oxide prices have drifted lower over the past fortnight as a lack of demand has resulted in quiet spot market conditions, while nickel prices surged nearly 10%.

### Molybdenum: searching for an improvement in spot demand as mine supply declines

Spot molybdenum prices have decreased once more, despite substantially lower 1q15 concentrate production in Chile: 23 mn lbs, which translates into -21% qoq and -12% yoy.

It is forecast that total western world concentrate production will decline in 2015 -3.6% yoy to 359 mn lbs, with by-product production increasing 4.3% yoy to 304M lbs and primary production declining -47% yoy to 55 mn lbs. Should spot demand improve over coming weeks, the western world market is forecast to become tight of material as its mine supply has been declining thus far in 2015.

#### Lower molybdenum production in Chile may trigger price increase

(mln lbs contained MoS)

	Q1 14	Q4 14	Q1 15	% qoq	% yoy
Chuqui & RT	10.25	7.72	6.32	-18%	-38%
Salvador	0.44	0.41	0.43	5%	-2%
Andina	3.50	4.46	3.54	-21%	1%
El Teniente	3.92	4.37	3.78	-14%	-4%
Los Pelambres	3.75	5.29	4.63	-13%	24%
Collahuasi	2.80	3.52	3.19	-9%	14%
Los Bronces	1.42	2.95	1.10	-63%	-23%
Valle Central	0.13	0.16	0.10	-39%	-22%
<b>Total</b>	<b>26.20</b>	<b>28.88</b>	<b>23.08</b>	<b>-20%</b>	<b>-12%</b>

Source: Company report, Cochilco, KGHM

### Nickel: substantial price increase over last two weeks

Nickel prices surged almost 10% over the past two weeks due to:

- investor short covering,
- a weaker USD,
- two week strike at Cerro Matoso ferro nickel mine in Columbia (strike now over),
- reports of declining Chinese laterite stocks,
- potential Chinese short covering of SHFE contracts, as it has been deemed that only 6 Chinese brands of nickel constitute deliverable material.

One of the key news was Indonesia mine ministry data release showing that 12 new nickel smelters are slated to be built in 2015. The data demonstrates

that export ban on raw materials enacted in January 2014 is having the desired effect on building domestic smelters to process raw materials.



## Global economies | Foreign exchange markets

### How far can 10Y Bund yields go?

**The 10Y Bunds sell-off started on the 20<sup>th</sup> of April and according to J.P. Morgan it is fairly mature. The additional upside for yields could be 10-15bp, with a wider range of 0-30bp, depending on a variety of indicators.**

**Polish yields jumped to the six-month high, above 3% level.**

Dynamic movements on the fixed-income market were probably the most important among all market events in the last two weeks. Rapid German yields jump has caused bonds sell-off and in case of Poland dragged the yields above 3% level, the highest from six months. One of the repercussions was cancellation of Polish Ministry of Finance (MoF) debt auction. However, according to A. Radziwiłł, MoF vice president, the Ministry has already covered 66% of total annual financing needs which helps to comfortably manage such market circumstances.

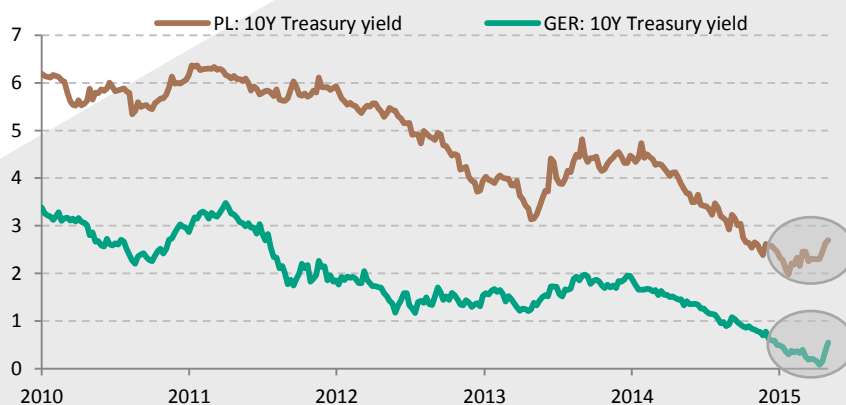
**Many different reasons for bonds to be sold**

In the report J.P. Morgan says that the current sell off is more about catching up with what other macro and financial variables have done since the beginning of the year rather than a reappraisal of the medium term outlook based on recent information. On the other hand, BZ WBK comments that most of the move was triggered by Greek uncertainty as well as activation of stop-loss orders.

**Are German Bunds discounting positive state of the economy in the nearest future?**

Some financial institutions say that the move is over due to its rapidness and the need of correction. In theory a rally in yields discounts an upcoming economic growth which looking at the recent macroeconomic publications is becoming much more probable. However, the inflation target seems to be far away and the Greek refinancing deal is still not signed. The expectations in Poland are towards IRS and yields increase until the end of the year as well as inflation rebound as the consequence of higher growth and ECB QE policy.

### German yields surge caused further sell-off in Europe, dragging Polish yields from the lowest levels in the history



Source: Bloomberg, KGHM

# Macroeconomic calendar

## Important macroeconomic data releases

Weight	Date	Event	For	Reading <sup>1</sup>	Previous	Consensus <sup>2</sup>
<b>China</b>						
☉☉	27-Apr	Industrial profits (yoy)	Mar	-0.4%	--	--
☉☉☉	01-May	Official manufacturing PMI	Apr	50.1 -	50.1	50.0
☉☉☉	04-May	HSBC's manufacturing PMI - final data	Apr	48.9 ▼	49.2	49.4
☉☉	08-May	Trade balance (USD bn)	Apr	34.1 ▲	3.1	39.6
☉☉	08-May	Exports (yoy)	Apr	-6.4% ▲	-15.0%	1.6%
☉☉☉☉	09-May	Consumer inflation CPI (yoy)	Apr	1.5% ▲	1.4%	1.6%
☉☉	09-May	Producer inflation PPI (yoy)	Apr	-4.6% -	-4.6%	-4.5%
<b>Poland</b>						
☉	30-Apr	NBP inflation expectations	Apr	0.2% -	0.2%	0.2%
☉☉☉	04-May	Manufacturing PMI	Apr	54.0 ▼	54.8	54.6
☉☉☉☉☉	06-May	NBP base rate decision	May	1.50% -	1.50%	1.50%
<b>US</b>						
☉☉☉	27-Apr	Composite PMI - preliminary data	Apr	--	59.2	--
☉☉☉	27-Apr	PMI services - preliminary data	Apr	--	59.2	58.8
☉	27-Apr	Dallas Fed manufacturing activity	Apr	-16.0 ▲	-17.4	-12.0
☉	28-Apr	S&P/CaseShiller home price index‡	Feb	174 ▲	173	173
☉	28-Apr	Richmond Fed manufacturing index	Apr	-3.0 ▲	-8.0	-2.0
☉☉☉☉☉	29-Apr	GDP (annualized, qoq) - estimation	1Q	0.2% ▼	2.2%	1.0%
☉☉☉☉☉	29-Apr	FOMC base rate decision - upper bound (Fed)	Apr	0.25% -	0.25%	0.25%
☉☉☉☉☉	29-Apr	FOMC base rate decision - lower bound (Fed)	Apr	0.00% -	0.00%	0.00%
☉☉☉☉	30-Apr	Consumer spending inflation PCE (mom)	Mar	0.1% -	0.1%	0.2%
☉☉☉☉	30-Apr	Consumer spending inflation PCE (yoy)‡	Mar	1.3% -	1.3%	1.4%
☉☉	30-Apr	Personal income (sa, mom)	Mar	0.0% ▼	0.4%	0.2%
☉☉	30-Apr	Personal spending (sa, mom)‡	Mar	0.4% ▲	0.2%	0.5%
☉☉☉	01-May	Manufacturing PMI - final data	Apr	54.1 ▼	54.2	54.2
☉☉	01-May	ISM Manufacturing	Apr	51.5 -	51.5	52.0
☉☉	01-May	University of Michigan confidence index - final data	Apr	95.9 -	95.9	96.0
☉☉☉	05-May	PMI services - final data	Apr	57.4 ▼	57.8	57.8
☉☉	08-May	Change in non-farm payrolls (ths)‡	Apr	223 ▲	85.0	228
☉☉	08-May	Underemployment rate (U6)	Apr	10.8% ▼	10.9%	--
☉☉	08-May	Unemployment rate	Apr	5.4% ▼	5.5%	5.4%
☉	08-May	Average hourly earnings (yoy)	Apr	2.2% ▲	2.1%	2.3%
<b>Eurozone</b>						
☉	29-Apr	M3 money supply (yoy)	Mar	4.6% ▲	4.0%	4.3%
☉	29-Apr	Economic confidence	Apr	104 ▼	104	104
☉	29-Apr	Industrial confidence	Apr	-3.2 ▼	-2.9	-2.9
☉	29-Apr	Consumer confidence - final data	Apr	-4.6 -	-4.6	-4.6
☉	29-Apr	Business climate indicator	Apr	0.3 ▲	0.2	0.2
☉☉☉☉	30-Apr	Core CPI (yoy) - estimation	Apr	0.6% -	0.6%	0.6%
☉☉☉☉	30-Apr	CPI estimate (yoy)	Apr	0.0% ▲	-0.1%	0.0%
☉☉	30-Apr	Unemployment rate	Mar	11.3% -	11.3%	11.2%
☉☉☉	04-May	Manufacturing PMI - final data‡	Apr	52.0 -	52.0	51.9
☉☉	05-May	Producer inflation PPI (yoy)	Mar	-2.3% ▲	-2.8%	-2.3%
☉☉☉	06-May	Composite PMI - final data	Apr	53.9 ▲	53.5	53.5
☉☉☉	06-May	Services PMI - final data	Apr	54.1 ▲	53.7	53.7
☉☉	06-May	Retail sales (yoy)‡	Mar	1.6% ▼	2.8%	2.4%

Weight	Date	Event	For	Reading <sup>1</sup>	Previous	Consensus <sup>2</sup>	
<b>Germany</b>							
★★★★	29-Apr	Harmonized consumer inflation HICP (yoy) - preliminary data	Apr	0.3% ▲	0.1%	0.2%	▲
★★★★	29-Apr	Consumer inflation CPI (yoy) - preliminary data	Apr	0.4% ▲	0.3%	0.4%	○
★★★	30-Apr	Retail sales (yoy)‡	Mar	3.5% ▲	3.3%	3.1%	▲
★★	30-Apr	Unemployment rate	Apr	6.4% -	6.4%	6.4%	○
★★★	04-May	Manufacturing PMI - final data	Apr	52.1 ▲	51.9	51.9	▲
★★★	06-May	Composite PMI - final data	Apr	54.1 ▼	54.2	54.2	▼
★★★	07-May	Factory orders (wda, yoy)	Mar	1.9% ▲	-1.3%	1.9%	○
★★★★	08-May	Industrial production (wda, yoy)‡	Mar	0.1% ▼	0.2%	0.5%	▼
<b>France</b>							
★★★	04-May	Manufacturing PMI - final data	Apr	48.0 ▼	48.4	48.4	▼
★★★	06-May	Composite PMI - final data	Apr	50.6 ▲	50.2	50.4	▲
★★★★	07-May	Industrial production (yoy)‡	Mar	1.3% ▲	1.2%	1.1%	▲
<b>Italy</b>							
★★	30-Apr	Unemployment rate - preliminary data	Mar	13.0% ▲	12.7%	12.6%	▲
★★★★	30-Apr	Harmonized consumer inflation HICP (yoy) - preliminary data	Apr	0.0% -	0.0%	0.0%	○
★★★	04-May	Manufacturing PMI	Apr	53.8 ▲	53.3	53.4	▲
★★★	06-May	Composite PMI	Apr	53.9 ▲	52.4	52.7	▲
★★★★	08-May	Industrial production (wda, yoy)‡	Mar	1.5% ▲	-0.1%	-0.2%	▲
<b>UK</b>							
★★★★★	28-Apr	GDP (yoy) - estimation	1Q	2.4% ▼	3.0%	2.6%	▼
★★★★★	28-Apr	GDP (qoq) - estimation	1Q	0.3% ▼	0.6%	0.5%	▼
★★★	01-May	Manufacturing PMI (sa)‡	Apr	51.9 ▼	54.0	54.6	▼
★★★	06-May	Composite PMI‡	Apr	58.4 ▼	58.7	58.1	▲
<b>Japan</b>							
★★★★	30-Apr	Industrial production (yoy) - preliminary data	Mar	-1.2% ▲	-2.0%	-3.4%	▲
★★★★	01-May	Consumer inflation CPI (yoy)	Mar	2.3% ▲	2.2%	2.2%	▲
★★★	01-May	Manufacturing PMI - final data	Apr	49.9 ▲	49.7	--	
★★★	07-May	Composite PMI	Apr	50.7 ▲	49.4	--	
<b>Chile</b>							
★★★	29-Apr	Total copper production (metric tons)	Mar	474 507 ▲	447 810	--	
★★★	29-Apr	Manufacturing (yoy)	Mar	-2.8% ▼	-0.1%	0.2%	▼
★★★★	05-May	Economic activity (yoy)	Mar	1.6% ▼	2.0%	1.1%	▲
★★★	07-May	Copper exports (USD mn)	Apr	2 882 ▲	2 862	--	
★★	07-May	Nominal wages (yoy)	Mar	7.1% -	7.1%	--	
★★★★	08-May	Consumer inflation CPI (yoy)	Apr	4.1% ▼	4.2%	3.9%	▲
<b>Canada</b>							
★★★★★	30-Apr	GDP (yoy)	Feb	2.1% ▼	2.4%	1.9%	▲
★★★	08-May	Net change in employment (thrs)	Apr	- 19.7 ▼	28.7	- 5.0	▼

<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

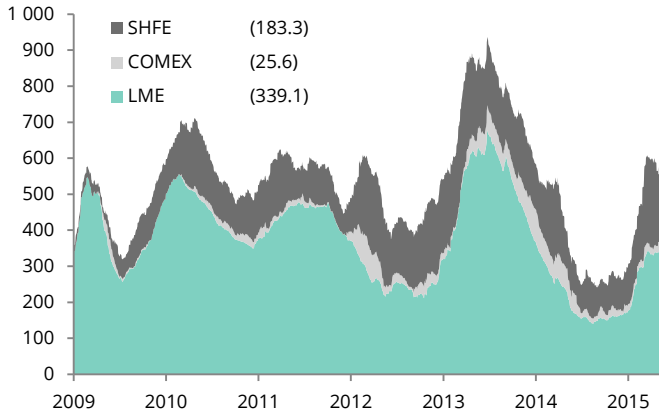
### Key base & precious metal prices, exchange rates and other important market factors

(as of: 08-May-15)

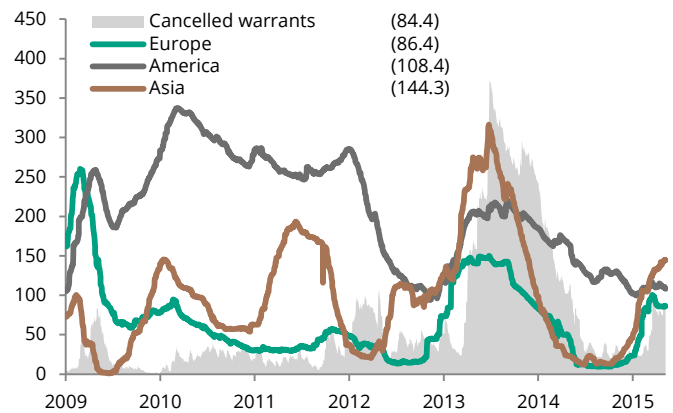
	Price	Price change <sup>4</sup>					From year beginning <sup>2</sup>		
		2W	QTD	YTD	1Y	Average	Min	Max	
<b>LME (USD/t)</b>									
Copper	6 396.50	▲ 6.2%	▲ 5.7%	▲ 0.6%	▼ -4.4%	5 899.07	5 390.50	6 437.00	
Molybdenum	17 100.00	- 0.0%	▼ -7.6%	▼ -18.6%	▼ -44.8%	18 342.61	16 350.00	21 500.00	
Nickel	14 100.00	▲ 9.6%	▲ 13.2%	▼ -5.6%	▼ -27.3%	13 968.86	12 260.00	15 455.00	
Aluminum	1 864.00	▲ 1.9%	▲ 4.2%	▲ 1.8%	▲ 8.5%	1 809.21	1 742.00	1 919.00	
Tin	15 950.00	▲ 1.9%	▼ -4.7%	▼ -18.2%	▼ -31.4%	17 711.82	14 765.00	19 750.00	
Zinc	2 382.50	▲ 7.2%	▲ 14.8%	▲ 9.9%	▲ 17.9%	2 126.00	1 985.00	2 405.00	
Lead	2 070.00	▲ 0.8%	▲ 14.5%	▲ 11.7%	▲ 0.3%	1 867.22	1 696.00	2 140.00	
<b>LBMA (USD/troz)</b>									
Silver	16.31	▲ 3.0%	▼ -1.7%	▲ 2.1%	▼ -15.3%	16.60	15.47	18.23	
Gold <sup>1</sup>	1 186.00	▲ 0.3%	▼ -0.1%	▼ -1.1%	▼ -7.8%	1 212.05	1 147.25	1 295.75	
<b>LPPM (USD/troz)</b>									
Platinum <sup>1</sup>	1 140.00	▲ 1.1%	▲ 1.0%	▼ -5.8%	▼ -20.6%	1 179.70	1 088.00	1 285.00	
Palladium <sup>1</sup>	798.00	▲ 3.1%	▲ 9.5%	- 0.0%	▼ -0.9%	782.00	729.00	831.00	
<b>FX <sup>3</sup></b>									
EUR/USD	1.1221	▲ 3.7%	▲ 4.3%	▼ -7.6%	▼ -19.6%	1.1149	1.0552	1.2043	
EUR/PLN	4.0552	▲ 1.0%	▼ -0.8%	▼ -4.9%	▼ -3.1%	4.1445	3.9822	4.3335	
USD/PLN	3.6095	▼ -2.2%	▼ -5.3%	▲ 2.9%	▲ 20.1%	3.7224	3.5725	3.9260	
USD/CAD	1.2088	▼ -0.6%	▼ -4.7%	▲ 4.2%	▲ 11.3%	1.2372	1.1728	1.2803	
USD/CNY	6.2093	▲ 0.2%	▲ 0.2%	▲ 0.1%	▼ -0.3%	6.2270	6.1883	6.2747	
USD/CLP	610.61	▼ -1.2%	▼ -2.6%	▲ 0.5%	▲ 7.9%	621.22	606.39	642.18	
<b>Money market</b>									
3m LIBOR USD	0.280	▲ 0.00	▲ 0.03	▲ 0.09	▲ 0.25	0.265	0.251	0.280	
3m EURIBOR	-0.009	▲ 8.00	▼ -1.47	▼ -1.12	▼ -1.03	0.033	-0.009	0.076	
3m WIBOR	1.660	▲ 0.01	▲ 0.01	▼ -0.19	▼ -0.39	1.801	1.650	2.060	
5y USD interest rate swap	1.641	▲ 0.11	▲ 0.07	▼ -0.07	▼ -0.04	1.585	1.313	1.849	
5y EUR interest rate swap	0.366	▲ 0.67	▲ 0.50	▲ 0.02	▼ -0.59	0.284	0.176	0.404	
5y PLN interest rate swap	2.180	▲ 0.11	▲ 0.18	▲ 0.12	▼ -0.36	1.857	1.563	2.405	
<b>Fuel</b>									
WTI Cushing	59.39	▲ 6.9%	▲ 24.8%	▲ 11.5%	▼ -40.8%	50.67	43.46	60.93	
Brent	64.31	▲ 1.1%	▲ 20.6%	▲ 15.3%	▼ -40.3%	55.98	45.25	66.37	
Diesel NY (ULSD)	195.49	▲ 1.1%	▲ 13.7%	▲ 7.1%	▼ -33.3%	184.59	161.84	233.64	
<b>Others</b>									
VIX	12.86	▲ 0.05	▼ -0.16	▼ -0.33	▼ -0.04	15.65	12.29	22.39	
BBG Commodity Index	104.10	▲ 2.5%	▲ 6.1%	▼ -0.2%	▼ -23.6%	101.47	96.96	104.73	
S&P500	2 116.10	▼ -0.1%	▲ 2.3%	▲ 2.8%	▲ 12.8%	2 073.56	1 992.67	2 117.69	
DAX	11 709.73	▼ -0.9%	▼ -2.1%	▲ 19.4%	▲ 21.9%	11 230.19	9 469.66	12 374.73	
Shanghai Composite	4 205.92	▼ -4.3%	▲ 12.2%	▲ 30.0%	▲ 108.7%	3 609.15	3 075.91	4 527.40	
WIG 20	2 546.78	▲ 1.1%	▲ 6.3%	▲ 10.0%	▲ 5.9%	2 381.67	2 242.42	2 549.40	
KGHM	129.90	▲ 8.7%	▲ 8.3%	▲ 19.3%	▲ 16.5%	115.89	100.95	130.50	

<sup>0</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>

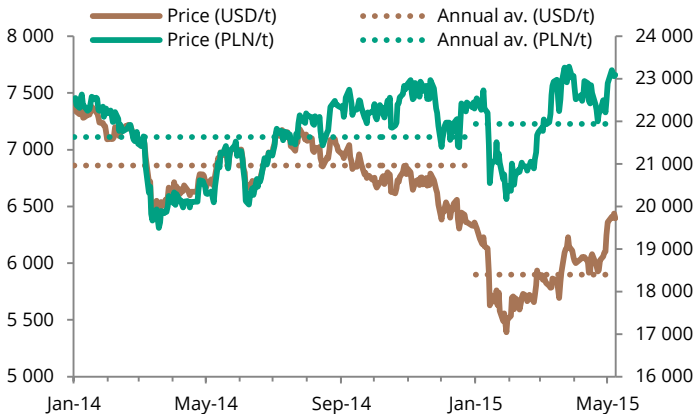
Source: Bloomberg, KGHM

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


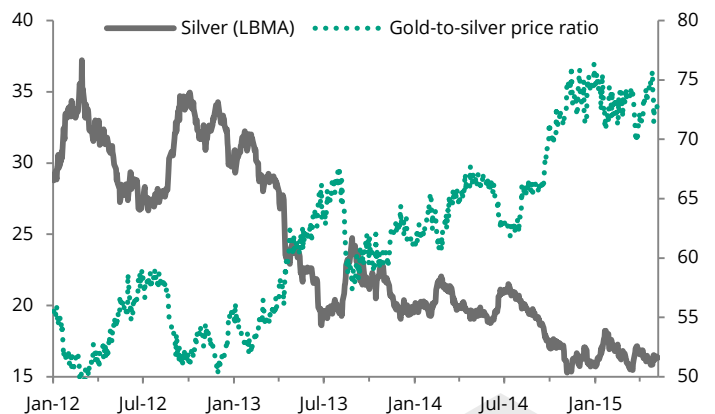
Note: Latest values in brackets. Source: Bloomberg, KGHM

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


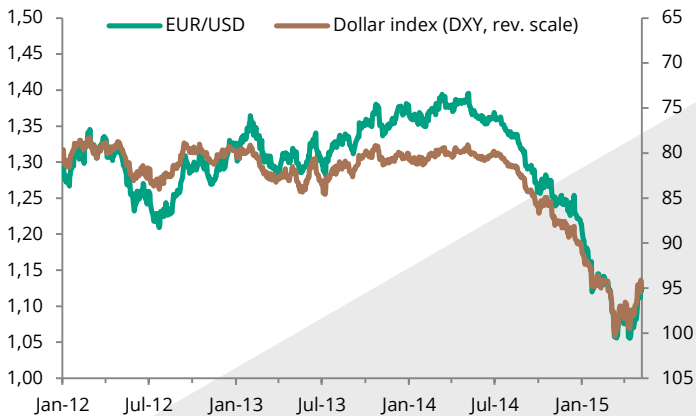
Note: Latest values in brackets. Source: Bloomberg, KGHM

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


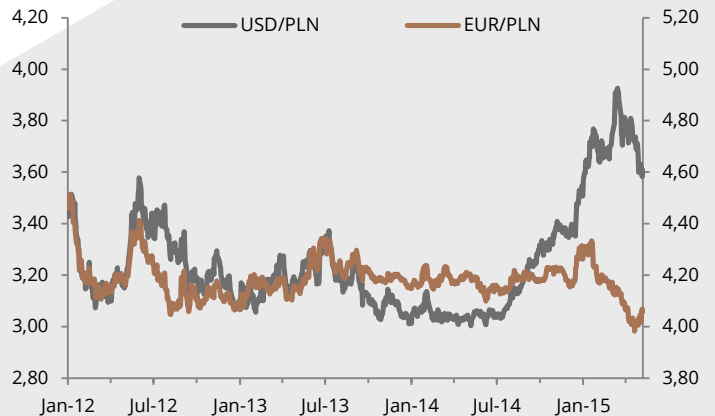
Source: Bloomberg, KGHM

**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: **27 April – 10 May 2015.**

- “Commodities Comment” Macquarie Research Metals and Mining, ▪ “Commodities Daily” Standard Bank, ▪ “Commodities Weekly” Barclays Capital Research, ▪ “Metals Market Update” Morgan Stanley, ▪ “Daily Copper Wrap” Mitsui, ▪ “Base and Precious Metals Daily” JPMorgan, ▪ „Codziennik” BZ WBK, ▪ „Tygodnik Ekonomiczny” BZ WBK, ▪ „Raport dzienny” mBank, ▪ „Biuletyn Dzienny” Bank PEKAO S.A., ▪ „Dragonomics: China Research” Gavekal

Moreover, additional information published here was acquired in direct conversations with market dealers, from financial institution reports and from the following websites: ▪ lme.co.uk, ▪ lbma.org.uk, ▪ economy.com/dismal, ▪ thebulliondesk.com, ▪ lbma.org.uk/stats, ▪ crumonitor.com, ▪ metalbulletin.com, ▪ nbportal.pl, ▪ nbp.pl, as well as data providing systems: Thomson Reuters and Bloomberg.

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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