

**Survey Date  
June 15, 2015**

Energy & Metals Consensus Forecasts surveys more than 40 energy and metals analysts every other month for a range of commodity price forecasts. The results covering over 30 commodities – together with reference data, analysis, special surveys, and the underlying global macroeconomic outlook – are sent to subscribers by express mail and e-mail.

### Contents

	Page
<b>Overview</b> .....	2
<b>Macroeconomic Outlook</b> .....	3
<b>Commodity Price Indices</b> .....	4
<b>Long-Term Forecasts (2015-2024)</b> .....	5
<b>Individual Commodity Forecasts</b>	
Crude Oil .....	6
Gasoline & Heating Oil .....	7
Gas Oil .....	8
Natural Gas .....	9
Coal .....	10
Uranium .....	11
Aluminium .....	12
Alumina .....	13
Copper .....	14
Nickel .....	15
Lead .....	16
Zinc .....	17
Steel .....	18
Iron Ore .....	19
Tin, Cobalt, Manganese .....	20
Molybdenum, Rutile, Ilmenite, Zircon .....	21
Gold .....	22
Silver .....	23
Platinum .....	24
Palladium .....	25
<b>Real (Inflation-Adjusted) Price Trends: A Special Analysis</b> .....	26-27
<b>Chart of Commodity Forecasts</b> .....	28

Our next issue of EMCF will be available on August 21, 2015 and feature a special survey on **Factors Affecting Commodity Prices**.

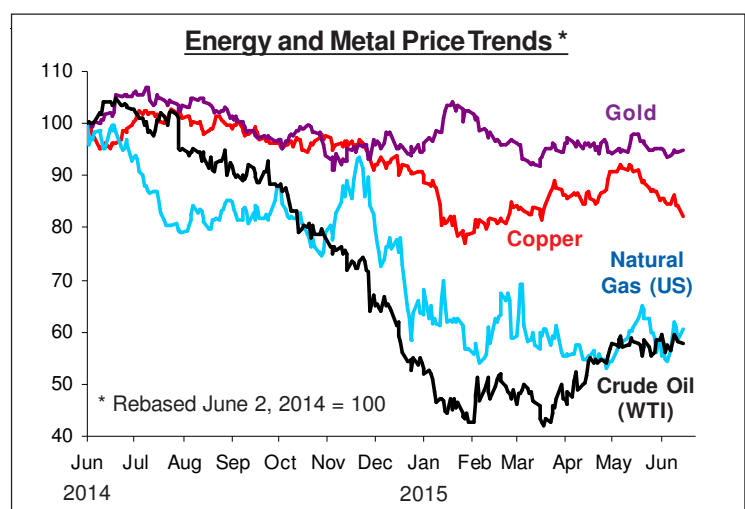
### Real (Inflation-Adjusted) Commodity Price Trends and Forecasts: A Special Analysis

In this month's special analysis on pages 26 and 27, we review how major commodity prices have moved in recent years and consider how inflation-adjusted price projections can alter sentiment over the longer-term horizon.

#### Overview

Despite the relative signs of stability among the major commodity classes (a select few in chart below), substantial uncertainty surrounds the near-term outlook. Most have benefited from a pull back in the **US Dollar** (page 3), the unit in which they are predominantly priced in. In addition, the underlying demand for energy and metals tends to strengthen in Q2 due to a seasonal improvement in industrial activity, following a winter slowdown. **WTI** (page 6) is now valued at around US\$60 per barrel, more than US\$15 above its mid-January low. **Iron Ore** (page 19), a key ingredient in the production of **Steel** (page 18) and an important bellwether to the industrialisation of China, has strengthened a little as well. The price upturn in iron ore may partly be due to earlier sharp corrections and signs of a drop in Chinese port stockpiles of the raw material. However, it will take time for

*(continued on page 2)*



(continued from front page)

excesses in supply to rebalance, while demand for commodities overall is hampered by pockets of global uncertainty (page 3). The situation in the energy sector is particularly complex, notably the supply outlook for Iran, which has weighed on the price outlook. Production of crude oil remains high despite cuts in non-OPEC supply as some Persian Gulf countries spend heavily on production and refining capacity for strategic reasons. For the base metals, industrial developments in China continue to be the main driver of price expectations.

**Copper** (page 14) has declined in recent weeks, despite disruptions to mines in northern Chile and efforts from Beijing to stimulate Chinese demand. Most observers expect a price recovery but retain a cautious view for the metal as lower business overheads (partly through favourable input cost trends) have reduced the likelihood of vast production cuts needed to remove excess capacity in the industry. On page 5, we feature updated **Long-Term Forecasts** for over 25 commodities, covering the years **2015 to 2024**.

### SUMMARY OF SELECT ENERGY & METALS CONSENSUS FORECASTS

See individual commodity pages for mineral specifications	See page	% change since end Dec. 2014	Spot Price Jun. 15 2015	(Nominal, Quarterly Averages) Consensus Forecasts			Forecast % change to Mar. 2016
				Sep. 2015	Dec. 2015	Mar. 2016	
<b>Crude Oil - Brent</b> (US\$/bbl)	6	+15.8%	64.02	<b>61.94</b>	<b>64.45</b>	<b>67.57</b>	+5.5%
<b>- WTI</b> (US\$/bbl)	6	+11.4%	59.55	<b>57.42</b>	<b>59.89</b>	<b>63.68</b>	+6.9%
<b>Natural Gas</b> (US, US\$/MMBtu)	9	-4.7%	2.860	<b>2.965</b>	<b>3.196</b>	<b>3.433</b>	+20.1%
<b>Coal</b> (Steaming, US\$/tonne)	10	-4.2%	59.20	<b>58.76</b>	<b>59.75</b>	<b>60.15</b>	+1.6%
<b>Uranium</b> (US\$/lb)	11	+2.8%	36.25	<b>41.03</b>	<b>42.57</b>	<b>45.05</b>	+24.3%
<b>Aluminium</b> (US\$/tonne)	12	-9.3%	1661	<b>1829</b>	<b>1869</b>	<b>1905</b>	+14.7%
<b>Alumina</b> (US\$/tonne)	13	-1.5%	347.5	<b>333.5</b>	<b>334.6</b>	<b>341.4</b>	-1.8%
<b>Copper</b> (US\$/tonne)	14	+0.2%	5761	<b>6082</b>	<b>6109</b>	<b>6114</b>	+6.1%
<b>Nickel</b> (US\$/tonne)	15	-14.7%	12735	<b>14868</b>	<b>15850</b>	<b>16810</b>	+32.0%
<b>Lead</b> (US\$/tonne)	16	-2.5%	1806	<b>1956</b>	<b>2000</b>	<b>2054</b>	+13.7%
<b>Zinc</b> (US\$/tonne)	17	-3.7%	2087	<b>2238</b>	<b>2315</b>	<b>2395</b>	+14.7%
<b>Tin</b> (US\$/tonne)	20	-25.8%	14430	<b>16586</b>	<b>17415</b>	<b>17932</b>	+24.3%
<b>Steel</b> (HRC, Europe, US\$/tonne)	18	-14.0%	448.0	<b>459.1</b>	<b>469.4</b>	<b>471.9</b>	+5.3%
<b>Iron Ore</b> (N. China. Fine, US\$/tonne)	19	-21.0%	54.36	<b>51.77</b>	<b>54.08</b>	<b>55.89</b>	+2.8%
<b>Gold</b> (US\$/oz.)	22	+0.2%	1186	<b>1192</b>	<b>1197</b>	<b>1217</b>	+2.6%
<b>Silver</b> (US\$/oz.)	23	+2.4%	16.07	<b>16.65</b>	<b>17.04</b>	<b>17.49</b>	+8.9%
<b>Platinum</b> (US\$/oz.)	24	-9.6%	1084	<b>1206</b>	<b>1243</b>	<b>1289</b>	+19.0%
<b>Palladium</b> (US\$/oz.)	25	-7.8%	730.6	<b>811.7</b>	<b>832.8</b>	<b>854.2</b>	+16.9%

### NOTES, ABBREVIATIONS, WEIGHTS AND MEASURES

JUNE 2015

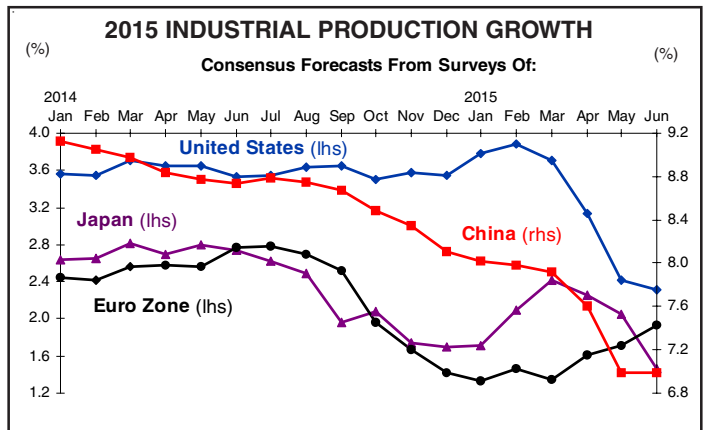
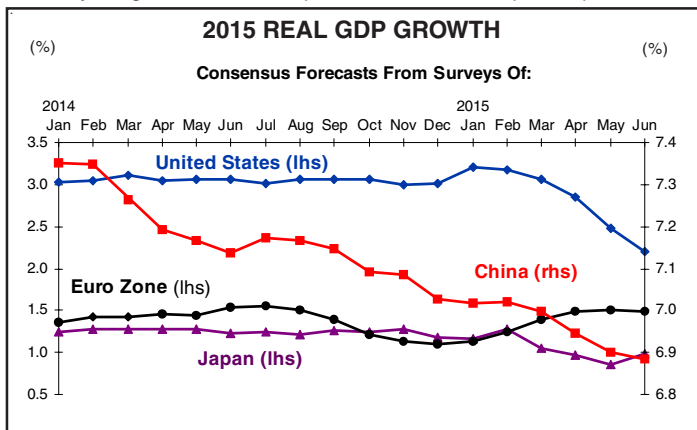
- WTI – West Texas Intermediate
- EIA – Energy Information Agency (USA)
- LME – London Metal Exchange
- LBMA – London Bullion Market Association
- LPPM – London Platinum and Palladium Market
- NYMEX – New York Mercantile Exchange
- COMEX – New York Commodities Exchange
- ICE – Intercontinental Exchange
- e – Estimate
- na – Not Available
- fob – Free On Board
- bbl – Barrel
- dltu – Dry long tonne unit (1/100 of a dry long tonne)
- dmtu – Dry metric tonne unit (1/100 of a dry metric tonne)
- MMBtu – Millions of British Thermal Units (Btu)
- rhs/lhs – right-hand scale/left-hand scale
- All individual commodity forecasts on pages 6-25 are listed in descending order of their approximate 1-year percentage change estimates. Consensus forecasts are mean averages of individual quarterly average forecasts.
- Historical price data in this publication has been provided by Commodity Research Bureau and other sources.
- Gross Domestic Product (GDP) is expressed in real (i.e. inflation-adjusted) terms. GDP and Industrial Production are expressed as average percentage changes over the previous calendar year unless otherwise indicated.
- 1 kilogram = 32.1507 troy ounces
- 1 short ton = 0.907 metric tonnes = 2000 pounds
- 1 kilogram (kg) = 2.2046 pounds
- 1 barrel = 42 US gallons
- 1,000 kilograms = 1 metric tonne = 2204.6 pounds
- 10 Therms of Natural Gas = 1 million Btu = 1MMBtu
- 1 long tonne = 1.016 metric tonnes = 2240 pounds
- 1 metric/long tonne unit (MTU/LTU) = 1/100 of a metric/long tonne

Economic growth rates provide a valuable insight into the behaviour of energy and metals prices, with industrial production growth forecasts in particular giving an overview of the likely demand for many commodities. The forecasts below are taken from the current issues of our publications **Consensus Forecasts**, **Asia Pacific Consensus Forecasts**, **Eastern Europe Consensus Forecasts** and **Latin American Consensus Forecasts**.

REAL GDP GROWTH (% change on previous year)				Consensus Forecasts	
	2012	2013	2014	2015	2016
United States	2.3	2.2	2.4	2.2	2.8
China	7.7	7.7	7.4	6.9	6.7
Japan	1.7	1.6	-0.1	1.0	1.7
Euro zone	-0.8	-0.3	0.9	1.5	1.8
World <sup>1</sup>	4.0	3.1	2.7	2.5	3.1

INDUSTRIAL PRODUCTION GROWTH (% change on previous year)				Consensus Forecasts	
	2012	2013	2014	2015	2016
United States	3.8	2.9	4.2	2.3	3.0
China	10.0	9.7	8.3	7.0	7.2
Japan	0.2	-0.6	2.1	1.5	3.0
Euro zone	-2.4	-0.7	0.8	1.9	2.6
World	2.3	0.6	3.3	2.6	3.6

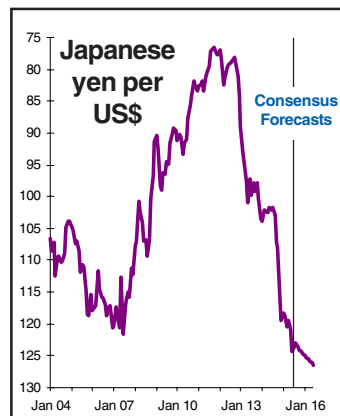
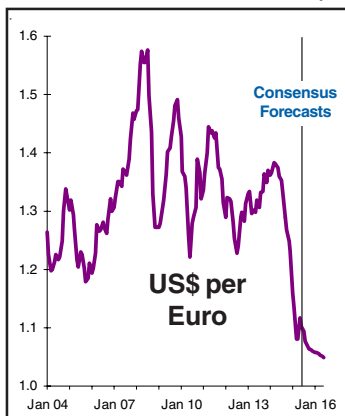
<sup>1</sup> Country weights available to qualified subscribers upon request.



**Shift in Global Growth Risks and Composition**

As highlighted by the recent spike in risk aversion, the global economy continues to face significant challenges. It now appears likely to expand at a slower rate in 2015 than in 2014, due to a loss of momentum in China, which in mid-May persuaded Beijing to cut rates for the third time within six months. A high level of uncertainty also emanates from Brazil and Russia, with the latter in the grips of recession, while investors remain cautious about the ability of the Indian government to deliver promised reforms, following its recent retrospective tax fiasco. Confidence in the G-7 economies has, in contrast, improved during the past six months. The possible exceptions are the US and the UK, as their recent expansions failed to match the pace set in 2014. Forecasts for

2015 have been trimmed in response, but continue to suggest solid performances in both. US real GDP contracted by 0.7% (q-o-q annualised) in Q1, down from 5.5% and 2.2% in Q3 and Q4 of 2014, respectively. In Europe, ongoing troubles in Greece threaten to spread, as Athens is running out of time to assure the IMF and its other creditors of its commitments to fiscal austerity and meeting its financial obligations. The knock-on effects of a possible default are hard to anticipate, but the euro zone is not as susceptible to contagion as before. Resilience in Germany, Spain and Ireland has been followed by signs of improvements in France and Italy. In Asia, the outlook for Japan, which contracted in 2014, has brightened, following an upwardly-revised GDP outturn of 3.9% (q-o-q annualised) in Q1.



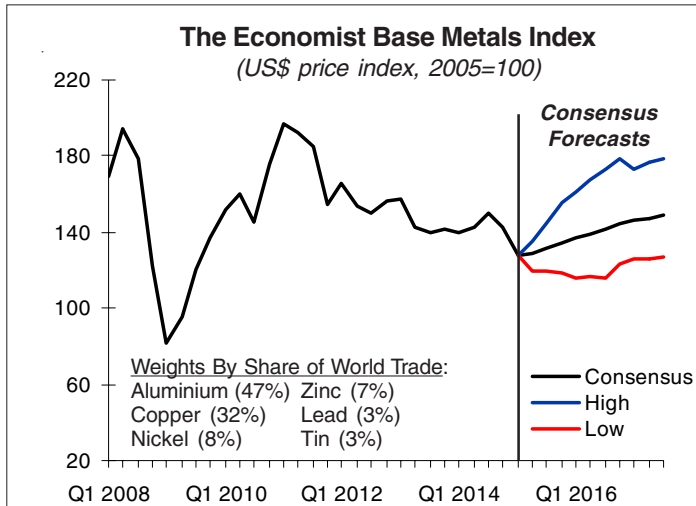
EXCHANGE RATES (per US dollar)		Consensus Forecasts			
<sup>1</sup> US \$ per currency unit	Spot Rate Jun. 8	End Sep 2015	End Jun 2016	% change from spot	End Jun 2017
Euro <sup>1</sup>	1.120	1.065	1.048	-6.5	1.078
Japanese yen	125.3	123.9	126.5	-1.0	125.2
Australian dollar <sup>1</sup>	0.763	0.741	0.717	-6.0	0.737
Chinese renminbi	6.206	6.221	6.233	-0.4	6.304
Canadian dollar	1.245	1.255	1.245	+0.0	1.212
Brazilian real	3.128	3.256	3.262	-4.1	3.236
Indian rupee	64.13	64.01	64.29	-0.3	65.07

**Focus on Fundamentals**

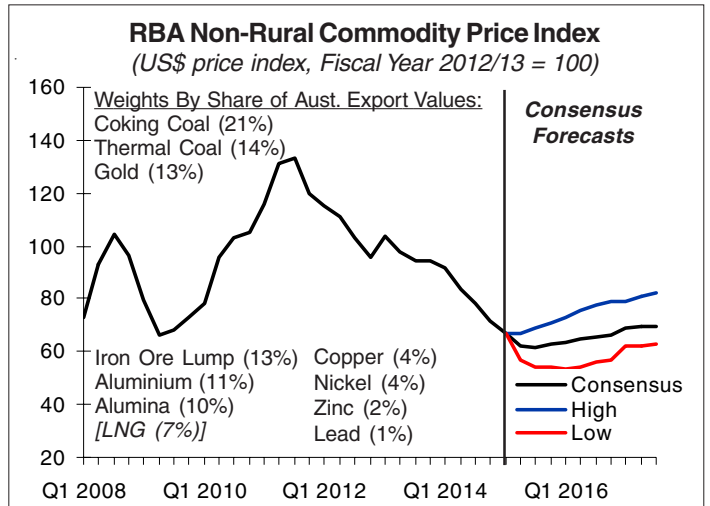
The recent climb in government bond yields (led by the German bund) has dominated the headlines, as investors sought to curb their exposure to risk. FX volatility, which had climbed sharply during the second half of 2014, has remained relatively high, due to divergent monetary policy expectations

between the US and other major countries. The Japanese yen, which has lost 4.3% of its value in the year to date, received some support last week, following news that Q1 GDP growth was revised sharply higher. However, its devaluation bias (as illustrated by the slump in May) has deepened fears about competitive FX dynamics across Asia.

Commodity price indices are useful aggregates of individual commodity price trends. We focus here on two commodity price indices: **The Economist Base Metals Index** (which weights the prices of major base metals according to their share of world trade in 2005) and the **Reserve Bank of Australia (RBA) Non-Rural Commodity Price Index** (which weights the prices of major minerals according to their share of Australian exports in 2012/2013). Both indices are expressed as US\$ prices in a given base year and track the performance of their particular subset of commodities. In addition to showing historical data from the two indices, we also show consensus forecasts for both over the next ten quarters. These are calculated from weighting consensus commodity price forecasts from this edition's survey. In the first two charts below, we also show the highest and lowest projections over the forecast horizon in order to illustrate the range of forecasts.



**The Economist Base Metals Index** is a sub-index of the headline Economist Commodity Price Index, containing six base metals: Aluminium, Copper, Lead, Nickel, Tin and Zinc. The index base year is **2005 =100**, and the headline index is available in sterling and euros, as well as US dollars. It is published on a weekly basis. *Energy & Metals Consensus Forecasts* then converts this week-by-week data into quarterly averages and calculates the index forecasts by using our panellists' projections for the individual metals.

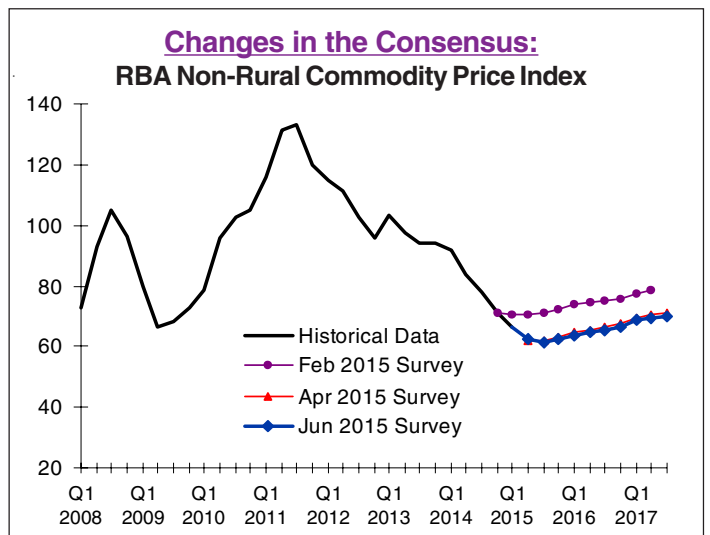
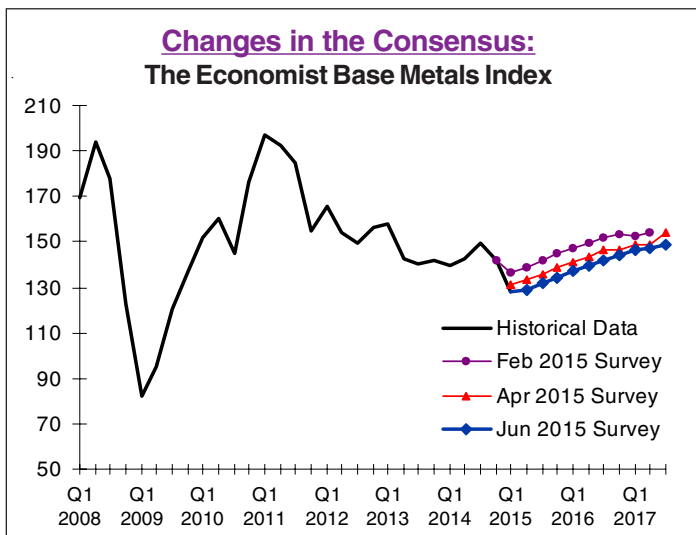


**The RBA Non-Rural Commodity Price Index** is a sub-index of the RBA's Headline Index of Commodity Prices. The index uses an Australian fiscal base year **2012/2013** (July to June) and weights major minerals (listed above) according to their share of Australian export values. Oil is excluded while liquefied natural gas (LNG) is included (it is some 7% of the index, but is not included in *Energy & Metals Consensus Forecasts* calculations, as we do not survey for LNG forecasts).

**Recent Historical Data and Projections Using Consensus Forecasts**

	2014		2015		2016				2017				
	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
<b>Economist Base Metals Index</b>	149.8	142.1	127.8	128.8	131.7	134.5	137.0	139.3	142.0	144.1	146.2	147.4	148.7
<b>RBA Non-Rural Commodity Price Index</b>	78.20	71.32	66.69	62.24	61.54	62.54	63.73	64.56	65.46	66.46	68.68	69.35	69.90

(all index values are quarterly averages)

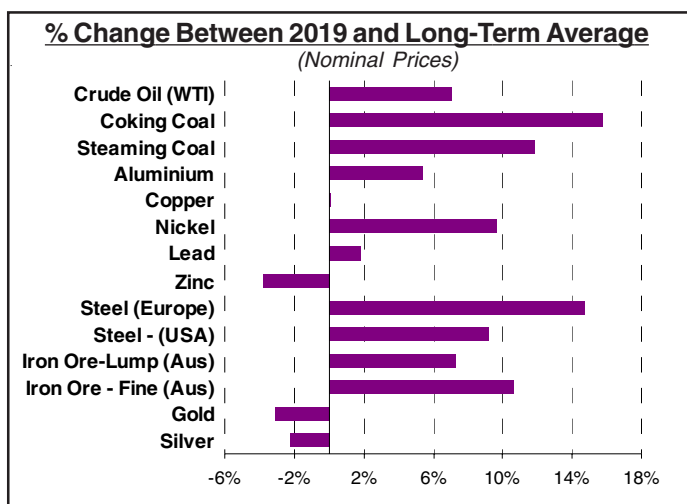
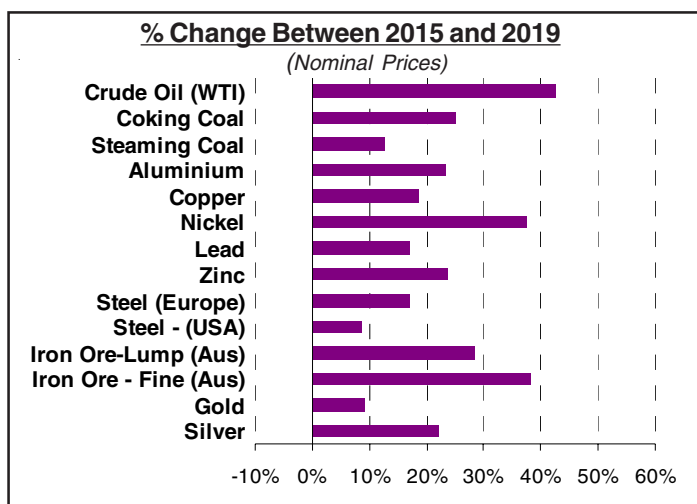




Individual nominal forecasts available in the Excel spreadsheet.

Long-term price forecasts provide a foundation for expected returns from both existing production facilities and those under development. In addition to their annual forecasts for the years 2015 to 2019, the table below summarises our panel's Long-Term 5-10 year average estimates (2020-2024) in nominal and real (inflation adjusted) 2015 dollar terms.

See individual commodity pages for mineral specifications	US\$ Average		Consensus Forecasts						
			(US\$ Nominal, Annual Averages)					Long-Term (2020-2024 Average)	
	2013	2014	2015	2016	2017	2018	2019	Nominal	Real
Crude Oil - Brent	108.6	99.07	59.92	70.17	77.62	82.60	85.70	96.04	85.15
- WTI	97.99	93.29	55.04	65.73	72.28	76.08	78.52	84.06	76.88
RBOB Gas (US)	2.827	2.661	1.840	2.051	2.190	2.600	2.700	na	na
Gas Oil (Europe)	925.8	846.0	569.7	659.5	714.4	718.0	727.0	na	na
Natural Gas - US	3.728	4.356	2.948	3.524	3.841	4.095	4.300	4.550	4.066
- UK, UK£	0.670	0.516	0.465	0.489	0.650	0.665	0.690	na	na
Coking Coal	158.5	125.3	107.7	108.3	121.2	128.5	134.7	156.1	134.8
Thermal Coal - Contract	91.94	80.05	70.41	66.45	70.47	76.36	79.36	88.80	80.25
Spot	83.60	69.54	59.33	61.30	64.80	70.48	73.52	85.10	75.94
Uranium	38.22	33.70	40.14	46.68	54.25	59.47	63.08	73.04	63.93
Aluminium	1846	1863	1821	1946	2033	2156	2244	2365	2093
Alumina	327.1	330.5	336.9	345.2	354.4	366.9	376.0	384.4	338.8
Copper	7328	6857	6014	6275	6645	6930	7140	7146	6356
Nickel	15006	16862	14697	17553	19513	19159	20195	22155	19064
Lead	2142	2094	1924	2109	2177	2225	2257	2299	2022
Zinc	1910	2161	2206	2476	2649	2707	2727	2624	2232
Cobalt	13.06	14.38	13.93	14.19	14.26	14.47	14.68	15.61	13.30
Tin	22314	21908	17154	18528	18591	19633	20434	21790	18678
Manganese	5.355	4.543	3.421	3.533	3.803	4.047	4.218	4.357	3.869
Molybdenum	10.35	11.37	8.439	9.101	9.757	10.49	11.28	12.51	10.53
Rutile	1512	1020	852.2	866.7	949.2	1031	1059	1093	947.7
Ilmenite	249.6	187.7	148.3	161.8	170.7	180.2	185.2	184.2	157.3
Zircon	1390	1217	1068	1083	1135	1220	1272	1245	1080
Steel - HRC, Europe	625.8	588.0	465.7	483.8	508.7	527.8	545.9	626.5	556.2
HRC, USA	657.9	685.3	525.2	545.0	564.1	576.5	569.9	622.5	553.2
HRC, Asia	595.9	559.2	419.2	429.9	458.0	503.3	522.0	624.0	545.0
Iron Ore - Lump (Aus)	131.2	102.1	56.50	58.20	63.87	67.86	72.53	77.81	66.65
Fine (Aus)	122.6	90.46	45.69	48.44	54.80	59.03	63.13	69.87	58.72
Fine (Brz)	119.8	85.07	44.65	48.88	55.89	57.88	59.33	na	na
Gold	1414	1265	1199	1233	1262	1300	1311	1269	1109
Silver	23.81	19.03	16.68	17.93	18.96	19.97	20.39	19.94	17.59
Platinum	1483	1382	1196	1321	1406	1518	1591	1636	1395
Palladium	722.5	797.9	800.4	865.9	900.1	895.4	855.7	776.3	672.3



Survey Date Spot Price  
(Jun. 15): **US\$64.02**

**Brent Crude Oil Forecasts, US\$/barrel**

Nominal, Quarterly Averages

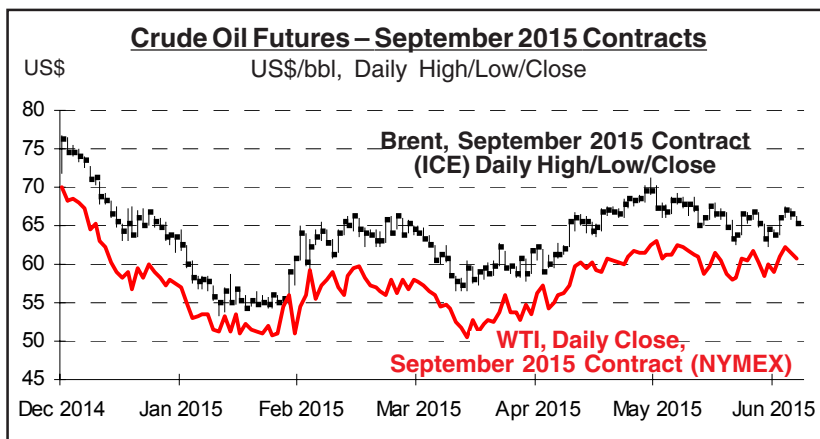
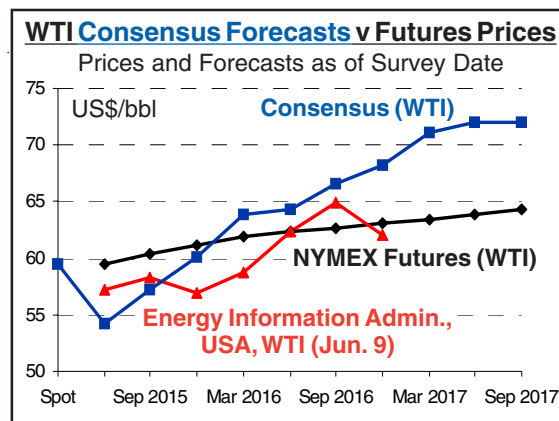
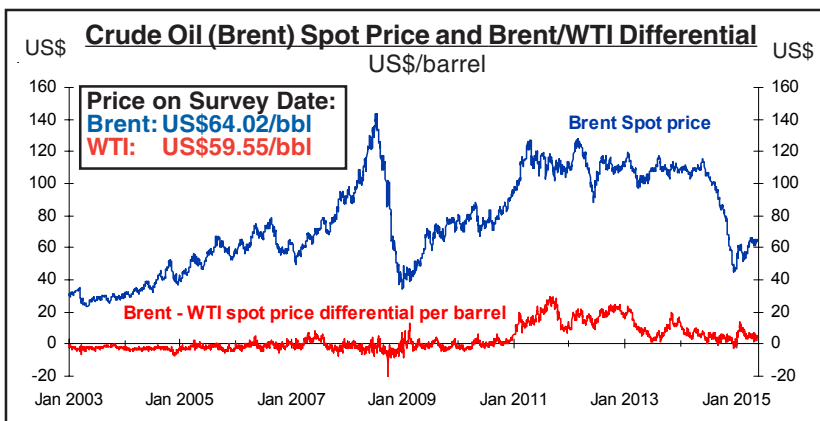
	Jun '15	Sep '15	Dec '15	Mar '16	% change from spot	Jun '16	Sep '16	Dec '16	Mar '17	Jun '17	Sep '17
<b>Energy Aspects</b>	57.00	65.00	73.00	77.00	20.3%	75.00	83.00	90.00	na	na	na
<b>Euromonitor International</b>	62.87	66.45	69.78	75.46	17.9%	78.45	80.95	83.47	85.13	85.70	86.03
<b>GKI Research</b>	65.00	70.00	70.00	75.00	17.2%	75.00	75.00	80.00	80.00	85.00	85.00
<b>BNP Paribas</b>	60.00	62.00	69.00	74.00	15.6%	74.00	75.00	82.00	na	na	na
<b>Credit Suisse</b>	54.00	62.00	71.00	72.00	12.5%	74.00	78.00	80.00	80.00	80.00	80.00
<b>China Int'l Capital Corp</b>	55.00	60.00	70.00	70.00	9.3%	70.00	70.00	70.00	na	na	na
<b>P K Verleger</b>	60.00	65.00	68.00	70.00	9.3%	72.00	74.00	75.00	na	na	na
<b>Scotiabank</b>	63.00	65.00	70.00	70.00	9.3%	65.00	70.00	75.00	75.00	73.00	73.00
<b>Australia Dept of Industry</b>	58.00	63.00	63.00	68.00	6.2%	68.00	68.00	68.00	80.00	80.00	80.00
<b>BIPE</b>	62.00	65.00	65.00	68.00	6.2%	69.00	71.00	72.00	na	na	na
<b>Deutsche Bank</b>	57.50	60.00	62.50	68.00	6.2%	68.00	72.00	72.00	na	na	na
<b>HWWI</b>	65.00	66.00	67.00	68.00	6.2%	70.00	72.00	74.00	79.00	79.00	79.00
<b>UBS</b>	55.00	57.50	57.50	67.50	5.4%	67.50	67.50	67.50	80.00	80.00	80.00
<b>Oxford Economics</b>	60.89	63.45	65.11	66.31	3.6%	67.28	68.13	68.88	69.57	70.20	70.60
<b>Commonwealth Bank</b>	56.31	59.77	62.66	66.19	3.4%	70.20	74.58	75.54	76.50	76.80	77.38
<b>Econ Intelligence Unit</b>	62.80	60.85	63.25	66.00	3.1%	68.80	71.40	70.85	76.50	80.22	81.00
<b>Societe Generale</b>	na	65.00	65.00	66.00	3.1%	64.00	na	na	na	na	na
<b>Macquarie</b>	52.00	57.00	60.00	64.00	0.0%	62.00	70.00	75.00	80.00	81.00	80.00
<b>Deloitte Access Economics</b>	62.03	59.71	61.07	61.63	-3.7%	63.16	67.44	74.93	79.83	84.13	88.38
<b>Capital Economics</b>	62.00	60.00	60.00	61.00	-4.7%	62.00	63.00	64.00	64.00	64.00	64.00
<b>ANZ</b>	53.17	54.00	56.50	60.00	-6.3%	63.50	65.00	66.00	67.00	67.50	68.00
<b>Citigroup</b>	64.00	68.00	63.00	60.00	-6.3%	65.00	70.00	75.00	na	na	na
<b>Investec</b>	57.00	50.00	50.00	60.00	-6.3%	60.00	60.00	60.00	70.00	70.00	70.00
<b>Consensus (Mean)</b>	<b>59.30</b>	<b>61.94</b>	<b>64.45</b>	<b>67.57</b>	<b>5.5%</b>	<b>68.34</b>	<b>71.18</b>	<b>73.60</b>	<b>76.17</b>	<b>77.10</b>	<b>77.49</b>
<b>High</b>	65.00	70.00	73.00	77.00		78.45	83.00	90.00	85.13	85.70	88.38
<b>Low</b>	52.00	50.00	50.00	60.00		60.00	60.00	60.00	64.00	64.00	64.00
<b>Standard Deviation</b>	3.97	4.58	5.48	5.03		4.87	5.41	6.84	5.92	6.65	6.99

Survey Date Spot Price  
(Jun. 15): **US\$59.55**

**West Texas Intermediate Crude Oil Forecasts, US\$/barrel**

Nominal, Quarterly Averages

	Jun '15	Sep '15	Dec '15	Mar '16	% change from spot	Jun '16	Sep '16	Dec '16	Mar '17	Jun '17	Sep '17
<b>Consensus (Mean)<sup>1</sup></b>	<b>54.30</b>	<b>57.42</b>	<b>59.89</b>	<b>63.68</b>	<b>6.9%</b>	<b>64.10</b>	<b>66.64</b>	<b>68.48</b>	<b>71.15</b>	<b>71.93</b>	<b>72.03</b>
<b>High</b>	61.00	65.00	69.00	74.00		71.00	79.00	78.00	77.23	80.00	80.00
<b>Low</b>	47.50	50.00	50.00	53.00		55.00	55.00	55.00	59.00	59.00	59.00
<b>Standard Deviation</b>	4.04	3.93	4.96	5.29		5.01	5.75	5.79	5.17	5.64	5.59



**Supply Continues to Exceed Demand**

- ◆ Brent has recovered to near US\$65 per barrel in recent months, around US\$20 above its mid-January low.
- ◆ The upturn was partly buoyed by demand from Asia and concerns about supply disruptions from the Middle East and North Africa.
- ◆ Further price improvements will depend on the recovery of the global economy and OPEC production levels, notably crude oil supply from Iran, which could add to the current situation of excess. The consensus is predicting that Brent will average US\$59.92 per barrel in 2015 and US\$70.17 in 2016.

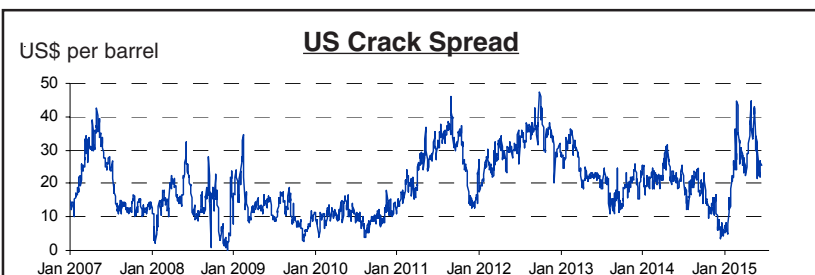
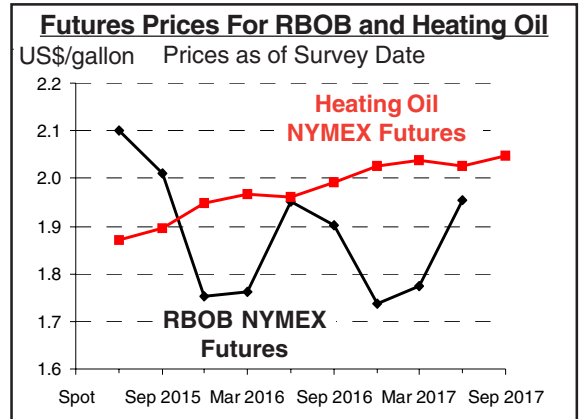
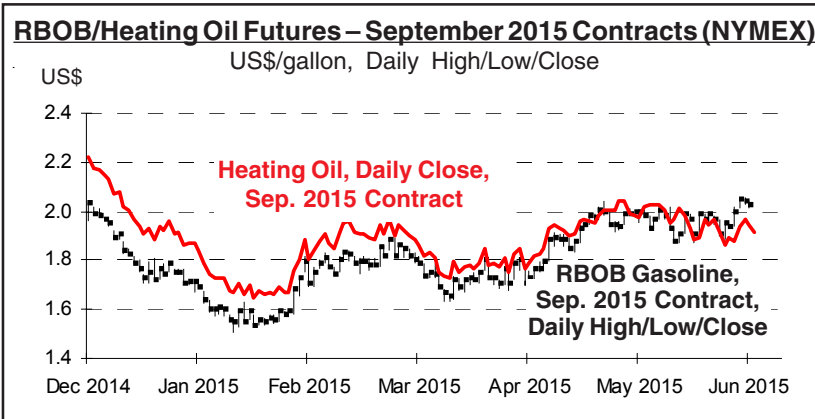
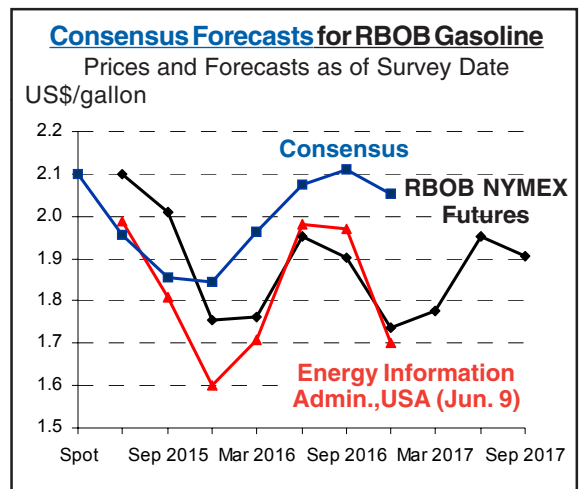
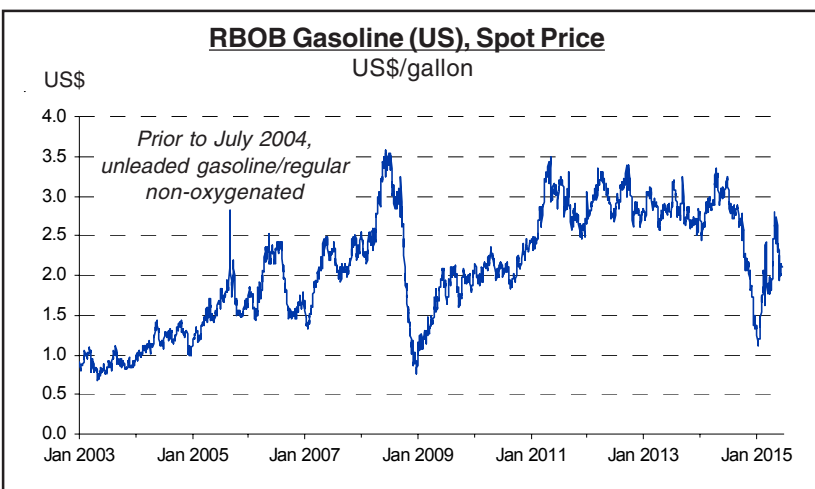
Survey Date Spot Price  
(Jun. 15): **US\$2.099**

**RBOB Gasoline (US) Forecasts, US\$/gallon, fob**

Nominal, Quarterly Averages

<sup>1</sup>Reformulated Blendstock for Oxygenate Blending

	Jun '15	Sep '15	Dec '15	Mar '16	% change from spot	Jun '16	Sep '16	Dec '16	Mar '17	Jun '17	Sep '17
<b>BNP Paribas</b>	1.905	1.786	1.810	2.143	2.1%	1.976	2.143	2.143	na	na	na
<b>GKI Research</b>	2.000	2.000	2.100	2.100	0.0%	2.200	2.200	2.300	2.300	2.500	2.500
<b>P K Verleger</b>	1.966	1.916	1.897	1.899	-9.5%	2.182	2.130	2.033	na	na	na
<b>Deutsche Bank</b>	na	1.718	1.576	1.710	-18.5%	1.934	1.975	1.741	na	na	na
<b>Consensus (Mean)</b>	<b>1.957</b>	<b>1.855</b>	<b>1.846</b>	<b>1.963</b>	<b>-6.5%</b>	<b>2.073</b>	<b>2.112</b>	<b>2.054</b>	<b>na</b>	<b>na</b>	<b>na</b>
<b>High</b>	2.000	2.000	2.100	2.143		2.200	2.200	2.300	na	na	na
<b>Low</b>	1.905	1.718	1.576	1.710		1.934	1.975	1.741	na	na	na
<b>Standard Deviation</b>	0.048	0.127	0.217	0.199		0.137	0.096	0.236	na	na	na



Crude oil is refined into numerous saleable products including gasoline and heating oil. The crack spread is used to estimate the profitability of refining the raw material. When the spread is positive, the price of the refined products is above that of crude oil, helping profitability. The chart above shows a commonly used 3:2:1 crack spread, reflecting a ratio of refinery output of 2 barrels of RBOB gasoline and 1 barrel of heating oil from 3 barrels of WTI crude oil.

**Near Term Seasonal Support**

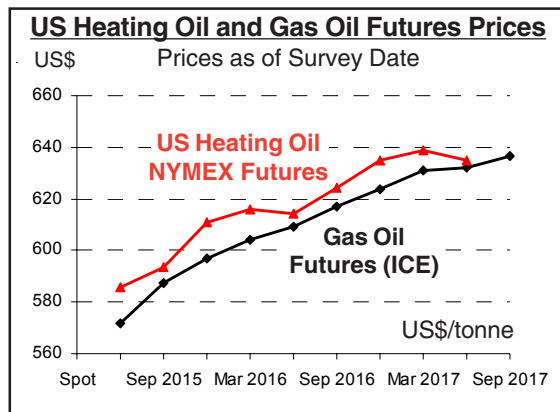
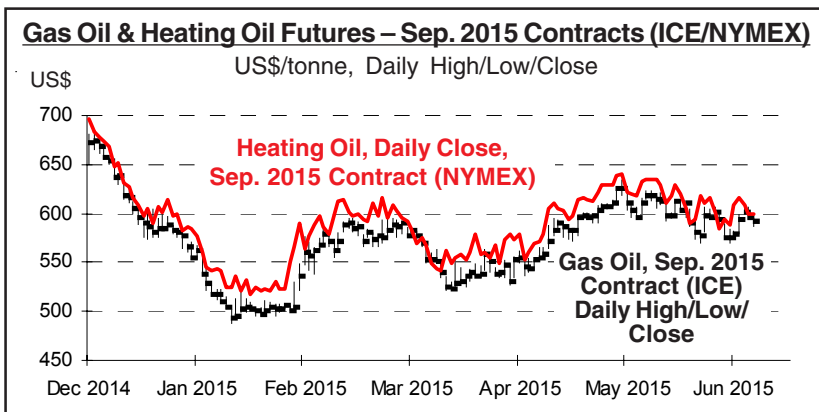
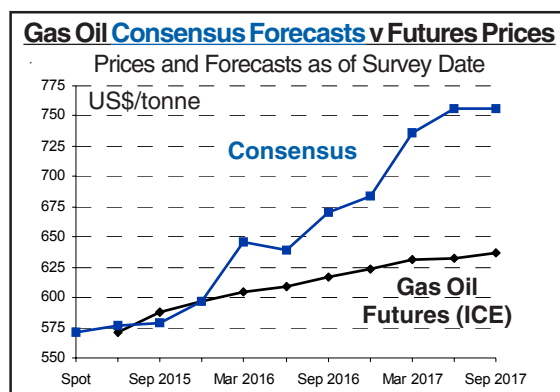
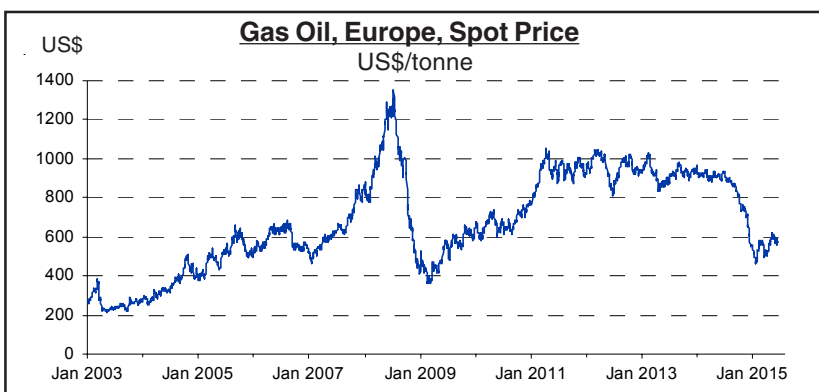
- ◆ The wholesale cost of RBOB gasoline, which excludes taxes (around 65 cents), rose to US\$2.791 per gallon in late April, but dropped back to US\$2.099 on June 15.
- ◆ Recent volatility partly reflects unplanned refinery outages in parts of the US, as well as excess supply and global uncertainties. Positive employment trends have raised expectations regarding consumption ahead of the summer driving season.
- ◆ The crack spread has decreased as the cost of RBOB has dropped at a faster pace than that of crude oil, but it remains much higher than the level at the start of 2015.

Survey Date Spot Price  
(Jun. 15): **US\$571.5**

**Gas Oil, Europe, Forecasts, US\$/tonne**

Nominal, Quarterly Averages

	Jun '15	Sep '15	Dec '15	Mar '16	% change from spot	Jun '16	Sep '16	Dec '16	Mar '17	Jun '17	Sep '17
<b>CIBC</b>	598.9	598.9	598.9	710.5	24.3%	710.5	710.5	710.5	771.4	771.4	771.4
<b>GKI Research</b>	585.0	600.0	600.0	680.0	19.0%	680.0	680.0	700.0	700.0	740.0	740.0
<b>BNP Paribas</b>	551.3	558.8	610.9	655.6	14.7%	633.3	648.2	707.8	na	na	na
<b>P K Verleger</b>	572.3	598.4	627.9	629.7	10.2%	630.0	667.1	659.2	na	na	na
<b>Deutsche Bank</b>	na	538.0	556.0	601.0	5.2%	606.0	646.0	639.0	na	na	na
<b>Societe Generale</b>	na	581.0	589.0	596.0	4.3%	574.0	na	na	na	na	na
<b>Consensus (Mean)</b>	<b>576.9</b>	<b>579.2</b>	<b>597.1</b>	<b>645.5</b>	<b>12.9%</b>	<b>639.0</b>	<b>670.4</b>	<b>683.3</b>	<b>735.7</b>	<b>755.7</b>	<b>755.7</b>
<b>High</b>	598.9	600.0	627.9	710.5		710.5	710.5	710.5	771.4	771.4	771.4
<b>Low</b>	551.3	538.0	556.0	596.0		574.0	646.0	639.0	700.0	740.0	740.0
<b>Standard Deviation</b>	20.2	25.7	24.1	45.2		49.5	26.5	32.3	50.5	22.2	22.2



OIL & DISTILLATE FUTURES SPECIFICATIONS

**WTI: Futures Market:** NYMEX Low Sweet Crude **Pricing:** US\$/bbl **Contract Size:** 1,000 bbl (42,000 gallons) **Delivery Dates:** Consecutive months for the first 6 years, June and December for the 7th to 9th years. **Contracts Traded:** 146,276,588 (2014). **Brent: Futures Market:** ICE (Intercontinental Exchange) **Pricing:** US\$/bbl **Lot Size:** 1,000bbl (42,000 gallons) **Delivery Options:** 72 consecutive months then June and December for a further 3 years. **Contracts Traded:** 160,418,239 (2014) **Page 6**

**RBOB Gasoline: Futures Market:** NYMEX Reformulated Blendstock for Oxygenate Blending **Pricing:** US\$/gallon **Contract Size:** 1000 bbl (42,000 gallons) **Delivery Dates:** 36 consecutive months on a rolling basis. **Contracts Traded:** 34,689,977 (2014). RBOB is a wholesale non-oxygenated blendstock traded in the New York Harbor barge market that is ready for the addition of 10% ethanol at the truck rack. **Page 7**

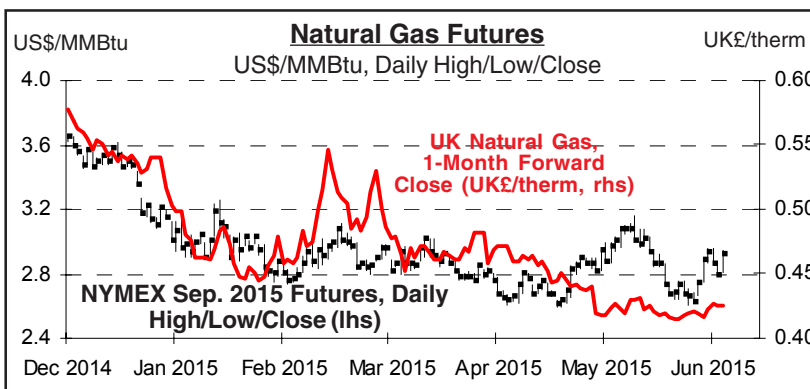
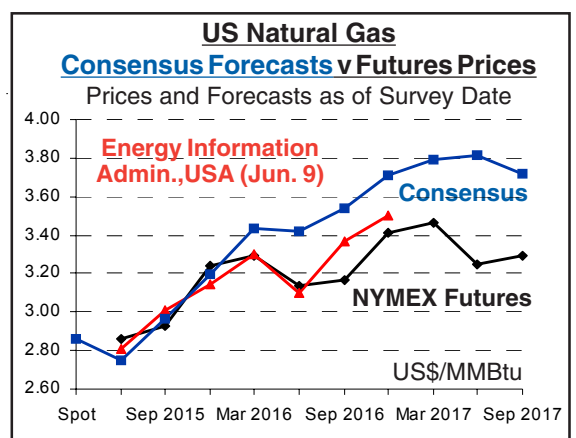
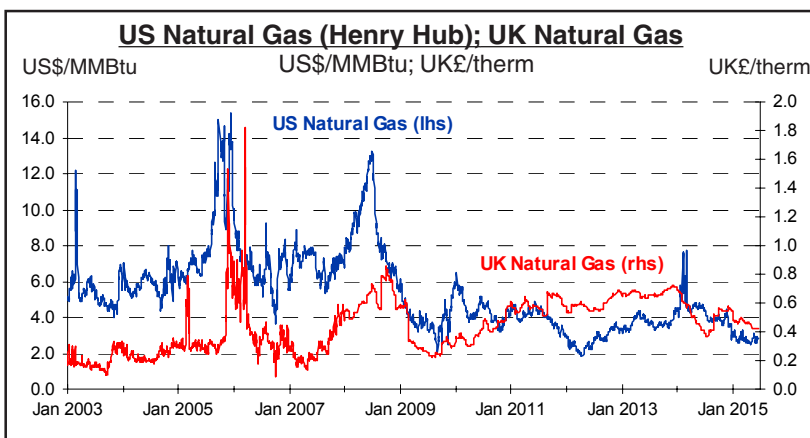
**NY Harbor ULSD: Futures Market:** NYMEX **Pricing:** US\$/gallon **Contract Size:** 1,000 bbl (42,000 gallons) **Delivery Dates:** Refer to rulebook chapter 150 **Contracts Traded:** 34,295,284 (2014). The heating oil futures contract may also be used to hedge diesel fuel and jet fuel, both of which trade in the cash market. **Page 7**

**Gas Oil: Futures Market:** ICE (Intercontinental Exchange) **Pricing:** US\$/tonne **Contract Size:** 100 tonnes **Delivery Dates:** 36 consecutive months, then quarterly to 48 months, then half-yearly to 60 months **Contracts Traded:** 52,799,818 (2014). ICE Gasoil Futures are used as a pricing reference for distillate trading in Europe and beyond. **Above**



Survey Date Spot Price (Jun. 15): US\$2.860		<b>Natural Gas (US, Henry Hub) Forecasts, US\$/MMBtu</b>					Nominal, Quarterly Averages				
	Jun '15	Sep '15	Dec '15	Mar '16	% change from spot	Jun '16	Sep '16	Dec '16	Mar '17	Jun '17	Sep '17
Credit Suisse	2.700	2.900	3.200	4.200	46.9%	4.200	4.200	4.200	4.500	4.500	4.500
Commonwealth Bank	3.250	3.816	4.093	4.117	43.9%	3.919	3.945	4.232	4.285	4.062	4.103
Capital Economics	2.600	3.000	3.500	4.000	39.9%	4.500	4.750	5.000	na	na	na
Liberium Capital	na	3.500	3.500	4.000	39.9%	4.000	4.000	4.000	na	na	na
Econ Intelligence Unit	2.780	3.040	3.640	3.870	35.3%	3.760	3.550	3.920	4.100	4.060	3.870
BNP Paribas	2.550	2.750	3.000	3.500	22.4%	3.400	3.900	4.150	na	na	na
Oxford Economics	2.985	3.118	3.264	3.421	19.6%	3.575	3.719	3.798	3.877	3.959	4.042
Investec	3.000	3.000	3.000	3.400	18.9%	3.400	3.400	3.400	3.900	3.900	3.900
Deutsche Bank	2.700	2.700	2.900	3.250	13.6%	3.450	3.600	3.700	na	na	na
Scotiabank	2.750	2.750	3.500	3.250	13.6%	3.000	3.250	3.500	3.250	3.250	3.250
UBS	2.600	2.750	3.000	3.250	13.6%	3.250	3.250	3.250	3.750	3.750	3.750
Energy Aspects	2.770	2.600	3.100	3.200	11.9%	2.700	2.700	3.300	na	na	na
GKI Research	2.700	2.800	3.000	3.200	11.9%	3.200	3.200	3.400	3.400	3.600	3.600
Societe Generale	na	2.860	2.870	3.100	8.4%	3.150	na	na	na	na	na
Euromonitor International	2.697	2.728	2.812	2.911	1.8%	2.967	3.011	3.049	3.074	3.083	3.088
Macquarie	2.700	3.500	3.250	2.900	1.4%	2.700	3.100	3.400	3.800	4.000	3.100
Citigroup	2.500	2.600	2.700	2.800	-2.1%	2.900	3.000	3.100	na	na	na
<b>Consensus (Mean)</b>	<b>2.752</b>	<b>2.965</b>	<b>3.196</b>	<b>3.433</b>	<b>20.1%</b>	<b>3.416</b>	<b>3.536</b>	<b>3.712</b>	<b>3.794</b>	<b>3.816</b>	<b>3.720</b>
High	3.250	3.816	4.093	4.200		4.500	4.750	5.000	4.500	4.500	4.500
Low	2.500	2.600	2.700	2.800		2.700	2.700	3.049	3.074	3.083	3.088
Standard Deviation	0.194	0.345	0.357	0.445		0.521	0.530	0.518	0.450	0.416	0.464

Survey Date Spot Price (Jun. 15): US\$0.426		<b>UK Natural Gas Forecasts, UK£/therm</b>					Nominal, Quarterly Averages				
	Jun '15	Sep '15	Dec '15	Mar '16	% change from spot	Jun '16	Sep '16	Dec '16	Mar '17	Jun '17	Sep '17
GKI Research	0.500	0.550	0.600	0.700	64.3%	0.700	0.700	0.700	0.700	0.800	0.800
Societe Generale	na	0.400	0.500	0.500	17.4%	0.460	na	na	na	na	na
Energy Aspects	0.440	0.400	0.450	0.460	8.0%	0.420	0.350	0.400	na	na	na
Capital Economics	0.440	0.410	0.380	0.380	-10.8%	0.370	0.370	0.360	na	na	na
<b>Consensus (Mean)</b>	<b>0.460</b>	<b>0.440</b>	<b>0.483</b>	<b>0.510</b>	<b>19.7%</b>	<b>0.488</b>	<b>0.473</b>	<b>0.487</b>	<b>na</b>	<b>na</b>	<b>na</b>
High	0.500	0.550	0.600	0.700		0.700	0.700	0.700	na	na	na
Low	0.440	0.400	0.380	0.380		0.370	0.350	0.360	na	na	na
Standard Deviation	0.035	0.073	0.093	0.136		0.146	0.197	0.186	na	na	na



**Small Natural Gas Premium**

- ◆ The price US Henry Hub inched a little higher last week, as warm weather fuelled expectations of a hot summer.
- ◆ Power plants burn more fuel as the grid is pressured by air conditioning usage, while the risk of supply disruptions increase alongside higher chances of Tropical storms (a phenomenon known as El Nino).
- ◆ These developments will probably not be enough to trigger a significant near-term price correction, but should reduce excesses in supply caused by shale oil production.

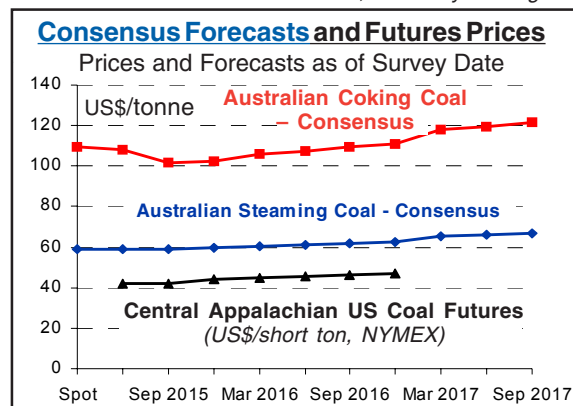
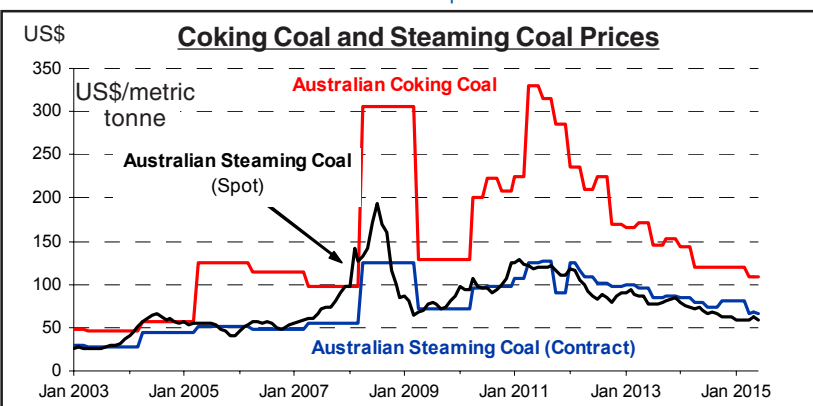
Survey Date Spot Price (Jun. 15): US\$109.5 e		<b>Australian Coking Coal Forecasts, US\$/metric tonne, Contract Price</b>									
	Jun '15	Sep '15	Dec '15	Mar '16	% change from spot	Jun '16	Sep '16	Dec '16	Mar '17	Jun '17	Sep '17
BoA Merrill Lynch	110.0	105.0	112.0	115.0	5.0%	115.0	115.0	na	na	na	na
RBC Capital Markets	109.5	100.0	105.0	115.0	5.0%	115.0	115.0	115.0	125.0	125.0	125.0
Commonwealth Bank	109.5	105.9	109.3	112.3	2.6%	117.6	121.9	127.0	130.6	132.8	135.8
Scotiabank	109.5	109.5	112.0	112.0	2.3%	114.0	114.0	120.0	130.0	140.0	150.0
Deutsche Bank	109.5	107.0	105.0	110.0	0.5%	115.0	115.0	125.0	na	na	na
Morgan Stanley	100.0	100.0	100.0	110.0	0.5%	115.0	115.0	115.0	120.0	120.0	115.0
Investec	108.0	104.0	104.0	106.0	-3.2%	106.0	110.0	110.0	112.0	112.0	118.0
Australia Dept of Industry	110.0	105.0	105.0	105.0	-4.1%	108.0	108.0	108.0	120.0	120.0	120.0
Credit Suisse	110.0	105.0	105.0	105.0	-4.1%	105.0	105.0	105.0	110.0	110.0	110.0
Macquarie	109.5	95.0	95.0	100.0	-8.7%	100.0	100.0	100.0	110.0	110.0	110.0
UBS	109.5	99.0	97.0	100.0	-8.7%	103.0	105.0	108.0	110.0	115.0	120.0
ANZ	109.5	98.0	96.0	98.0	-10.5%	100.0	105.0	105.0	110.0	110.0	110.0
Liberium Capital	100.0	85.0	85.0	85.0	-22.4%	85.0	90.0	90.0	na	na	na
<b>Consensus (Mean)</b>	<b>108.0</b>	<b>101.4</b>	<b>102.3</b>	<b>105.6</b>	<b>-3.5%</b>	<b>107.6</b>	<b>109.1</b>	<b>110.7</b>	<b>117.8</b>	<b>119.5</b>	<b>121.4</b>
High	110.0	109.5	112.0	115.0		117.6	121.9	127.0	130.6	140.0	150.0
Low	100.0	85.0	85.0	85.0		85.0	90.0	90.0	110.0	110.0	110.0
Standard Deviation	3.6	6.4	7.6	8.4		9.2	8.3	10.5	8.5	10.4	12.8

Survey Date Spot Price (Jun. 15): US\$59.20 e		<b>Australian Steaming Coal Forecasts, US\$/metric tonne, Spot Price</b>									
	Jun '15	Sep '15	Dec '15	Mar '16	% change	Jun '16	Sep '16	Dec '16	Mar '17	Jun '17	Sep '17
Euromonitor International	63.64	65.49	67.82	70.51	19.1%	72.13	73.44	74.68	75.65	76.28	76.82
Commonwealth Bank	63.00	65.00	68.34	70.00	18.2%	72.40	75.39	77.57	79.64	80.16	81.02
Morgan Stanley	60.00	60.00	65.00	65.00	9.8%	66.00	66.00	66.00	66.00	70.00	70.00
ANZ	59.18	60.00	61.00	62.50	5.6%	64.00	65.00	66.00	67.00	67.00	67.50
Societe Generale	na	59.20	60.80	61.40	3.7%	65.30	na	na	na	na	na
Australia Dept of Industry	59.00	61.00	61.00	60.00	1.3%	60.00	60.00	60.00	58.00	58.00	58.00
Econ Intelligence Unit	56.40	55.40	57.60	58.40	-1.4%	58.50	59.40	60.50	62.00	64.00	66.00
Deutsche Bank	60.00	59.00	59.00	57.00	-3.7%	56.00	56.00	59.00	na	na	na
Capital Economics	57.00	57.00	55.00	55.00	-7.1%	55.00	55.00	55.00	na	na	na
Macquarie	60.00	55.00	52.50	55.00	-7.1%	52.50	55.00	57.50	60.00	57.50	57.50
UBS	55.00	53.00	54.00	55.00	-7.1%	57.00	59.00	61.00	63.00	65.00	67.00
Credit Suisse	58.00	55.00	55.00	52.00	-12.2%	52.00	52.00	52.00	55.00	55.00	55.00
<b>Consensus (Mean)</b>	<b>59.20</b>	<b>58.76</b>	<b>59.75</b>	<b>60.15</b>	<b>1.6%</b>	<b>60.90</b>	<b>61.47</b>	<b>62.66</b>	<b>65.14</b>	<b>65.88</b>	<b>66.54</b>
High	63.64	65.49	68.34	70.51		72.40	75.39	77.57	79.64	80.16	81.02
Low	55.00	53.00	52.50	52.00		52.00	52.00	52.00	55.00	55.00	55.00
Standard Deviation	2.60	3.91	5.28	5.98		7.03	7.65	7.85	8.06	8.55	8.78

(Jun. 15): US\$67.10 e		<b>Australian Steaming Coal Forecasts, US\$/metric tonne, Contract Price</b>									
	Jun '15	Sep '15	Dec '15	Mar '16	% change	Jun '16	Sep '16	Dec '16	Mar '17	Jun '17	Sep '17
<b>Consensus (Mean)<sup>1</sup></b>	<b>67.13</b>	<b>66.36</b>	<b>66.36</b>	<b>66.58</b>	<b>-0.8%</b>	<b>66.11</b>	<b>66.56</b>	<b>66.56</b>	<b>69.29</b>	<b>73.14</b>	<b>73.43</b>
High	70.00	69.00	69.00	70.00		75.00	75.00	75.00	78.00	80.00	80.00
Low	60.00	55.00	55.00	55.00		55.00	55.00	55.00	62.00	65.00	65.00
Standard Deviation	2.84	4.30	4.30	4.44		6.17	6.62	6.62	6.16	5.76	6.08

<sup>1</sup> Individual forecasts available in the Excel spreadsheet service.

Nominal, Quarterly Averages



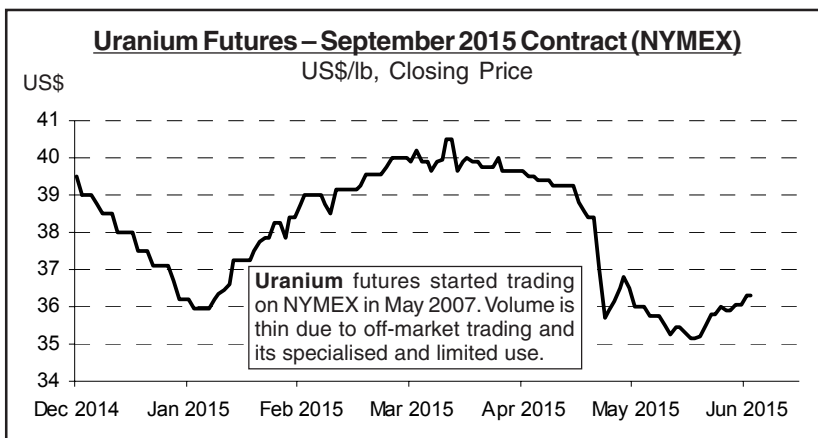
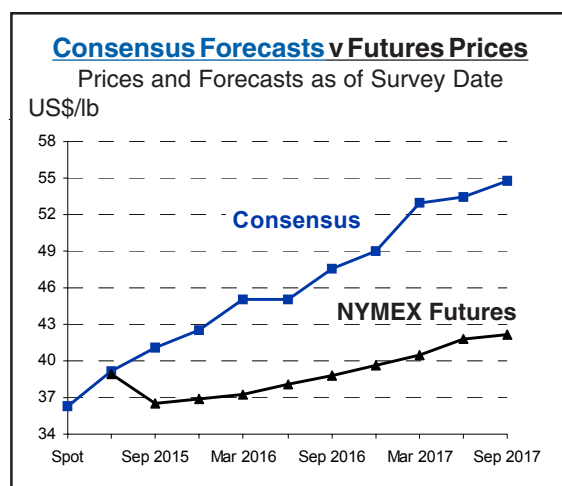
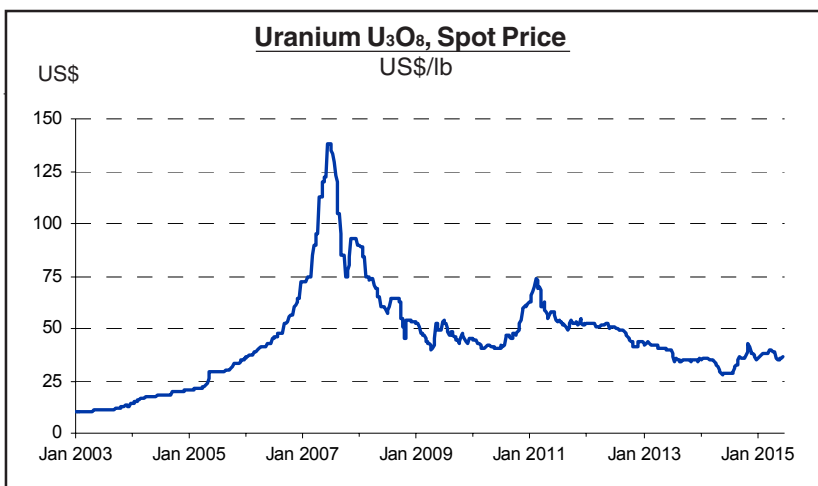
<b>Coal – Energy Information Administration (US) World Demand Forecasts (July 2013)</b>							
	2010	2015	2020	2025	2030	2035	2040
Total OECD Consumption	44.8	42.2	42.3	42.8	42.7	42.8	42.7
Total World Consumption	147	165	180	196	208	217	220

Survey Date Spot Price  
(Jun. 15): **US\$36.25**

**Uranium U<sub>3</sub>O<sub>8</sub> Forecasts, US\$/lb**

Nominal, Quarterly Averages

	Jun '15	Sep '15	Dec '15	Mar '16	% change from spot	Jun '16	Sep '16	Dec '16	Mar '17	Jun '17	Sep '17
Morgan Stanley	40.5	42.0	45.0	52.0	43.4%	52.0	52.0	52.0	58.0	58.0	58.0
Commonwealth Bank	40.9	43.4	47.3	50.6	39.5%	55.2	59.8	62.9	66.0	69.6	72.4
Liberium Capital	45.0	50.0	50.0	50.0	37.9%	50.0	50.0	50.0	na	na	na
UBS	42.5	45.0	45.0	50.0	37.9%	50.0	55.0	55.0	60.0	60.0	60.0
Australia Dept of Industry	37.0	39.0	39.0	45.0	24.1%	45.0	47.0	50.0	53.0	53.0	53.0
Credit Suisse	42.0	44.0	45.0	45.0	24.1%	45.0	45.0	45.0	55.0	55.0	55.0
Investec	37.0	40.0	40.0	45.0	24.1%	45.0	50.0	50.0	55.0	55.0	60.0
Scotiabank	35.8	40.0	45.0	45.0	24.1%	40.0	45.0	50.0	53.0	53.0	53.0
BoA Merrill Lynch	38.0	38.0	38.0	40.0	10.3%	40.0	45.0	na	na	na	na
Numis	39.0	40.0	40.0	40.0	10.3%	40.2	42.3	44.5	46.6	48.8	50.9
RBC Capital Markets	36.6	35.0	40.5	40.0	10.3%	40.0	40.0	40.0	40.0	40.0	40.0
Macquarie	36.0	36.0	36.0	38.0	4.8%	38.0	40.0	40.0	42.5	42.5	45.0
<b>Consensus (Mean)</b>	<b>39.2</b>	<b>41.0</b>	<b>42.6</b>	<b>45.0</b>	<b>24.3%</b>	<b>45.0</b>	<b>47.6</b>	<b>49.0</b>	<b>52.9</b>	<b>53.5</b>	<b>54.7</b>
<b>High</b>	45.0	50.0	50.0	52.0		55.2	59.8	62.9	66.0	69.6	72.4
<b>Low</b>	35.8	35.0	36.0	38.0		38.0	40.0	40.0	40.0	40.0	40.0
<b>Standard Deviation</b>	3.0	4.2	4.2	4.8		5.6	6.0	6.7	8.0	8.5	8.9



- Positive Medium- to Long-Term Outlook**
- ◆ Although the price of uranium has remained at a low level (middle left chart), most panelists retain an optimistic view.
  - ◆ Free trade deals between Australia and several large Asian countries (namely China, Japan and South Korea), alongside fresh efforts by the G7 nations to de-carbonise the world economy, suggest a turnaround in demand for the nuclear fuel.
  - ◆ US\$40/lb is considered to be the floor price and a long-term figure in excess of US\$70 may be required to kick start investment in the sector and avoid a supply gap.

<b>World Nuclear Electricity Production (2010)</b>			
Producers (% share of World)	Installed Capacity (Gigawatts)	Nuclear power as a % of total domestic electricity	
USA 30.4%	USA 101	France 75.9%	
France 15.6%	France 63	Ukraine 47.3%	
Japan 10.4%	Japan 49	South Korea 29.9%	
Russia 6.2%	Russia 24	Japan 26.0%	
S. Korea 5.4%	Germany 20	Germany 22.6%	

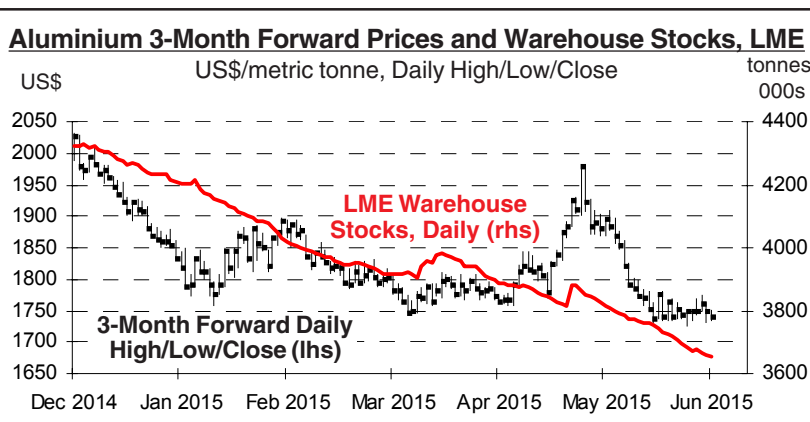
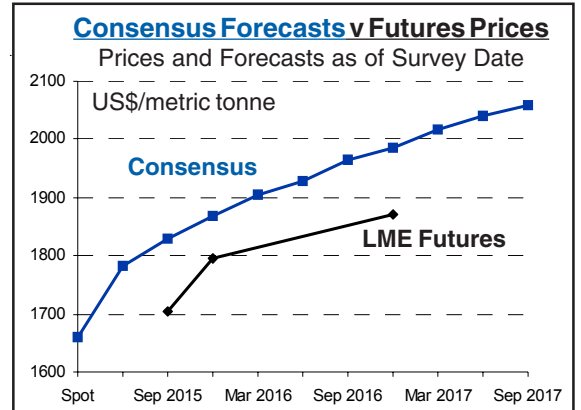
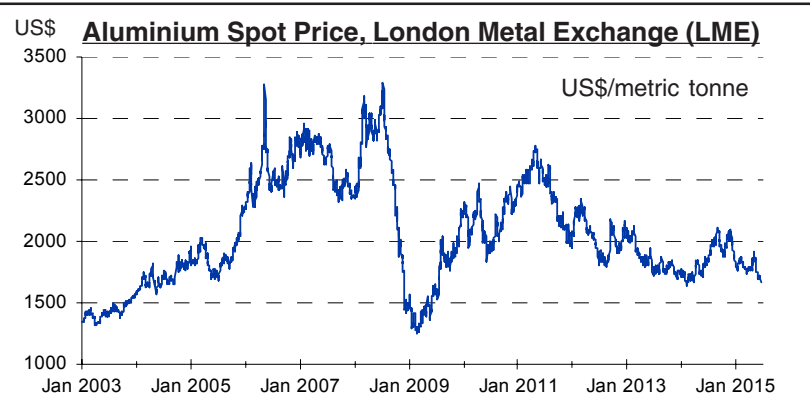
Uranium futures began trading on NYMEX in May 2007 in an attempt to introduce greater price transparency. Volumes and liquidity are currently very low (see chart above left).  
**Futures Market: NYMEX Pricing: US\$/lb Contract Size: 250lbs Trading Months: 60 consecutive months. Settlement price: The final settlement price is the spot-month end price published by UxC.**

Survey Date Spot Price  
(Jun. 15): **US\$1661**

**Aluminium Forecasts, US\$/metric tonne, fob**

Nominal, Quarterly Averages

	Jun '15	Sep '15	Dec '15	Mar '16	% change from spot	Jun '16	Sep '16	Dec '16	Mar '17	Jun '17	Sep '17
Capital Economics	1820	2000	2150	2200	32.5%	2250	2325	2375	na	na	na
BNP Paribas	1835	1845	1940	2050	23.5%	2100	2150	2240	na	na	na
China Int'l Capital Corp	na	1850	1900	2050	23.5%	2050	na	na	na	na	na
Credit Suisse	na	1950	2000	2050	23.5%	2050	2100	2100	2100	2100	2100
HWWI	1700	1950	2000	2050	23.5%	2090	2120	2150	2200	2200	2200
Deutsche Bank	1780	1820	1950	2000	20.4%	2050	2075	2100	na	na	na
Euromonitor International	1831	1889	1927	1981	19.3%	2011	2038	2068	2096	2120	2144
Australia Dept of Industry	1800	1870	1920	1970	18.6%	2010	2020	2050	2080	2100	2100
Macquarie	na	1980	1951	1951	17.5%	1951	1951	1951	2000	2000	2000
BIPE	1810	1860	1900	1950	17.4%	1990	2020	2050	na	na	na
CPM Group	1814	1835	1900	1950	17.4%	1980	1995	1935	1940	na	na
Econ Intelligence Unit	1800	1850	1940	1950	17.4%	2022	2100	2100	2200	2300	2350
RBC Capital Markets	1764	1808	1859	1929	16.2%	1929	1929	1929	2039	2039	2039
Oxford Economics	1794	1836	1880	1913	15.2%	1941	1960	1980	2000	2020	2040
Prometeia	1836	1886	1874	1874	12.9%	1919	1946	1933	1995	2037	2067
Scotiabank	1701	1764	1874	1874	12.9%	1874	1874	1874	2094	2094	2094
Morgan Stanley	na	1808	1808	1874	12.9%	1874	1984	2094	2138	2138	2138
IHS Global Insight	1796	1819	1844	1855	11.7%	1880	1896	1910	1957	2006	2054
ANZ	1791	1776	1776	1851	11.5%	1932	1988	2022	2040	2059	2068
Citigroup	1825	1820	1830	1850	11.4%	1870	1930	1950	2100	2100	2100
Investec	1800	1764	1764	1808	8.9%	1808	1852	1852	1896	1896	1940
BoA Merrill Lynch	1750	1800	1850	1800	8.4%	1800	1900	na	na	na	na
Societe Generale	na	1800	1835	1800	8.4%	1800	na	na	na	na	na
CIBC	1678	1678	1678	1770	6.6%	1770	1770	1770	1827	1827	1827
Commonwealth Bank	1781	1786	1797	1768	6.5%	1762	1756	1772	1854	1903	1934
Numis	1764	1764	1764	1764	6.2%	1783	1803	1823	1843	1863	1883
UBS	1720	1698	1698	1742	4.9%	1786	1830	1874	1940	1962	2006
Liberium Capital	1829	1719	1719	1719	3.5%	1719	1763	1763	na	na	na
<b>Consensus (Mean)</b>	<b>1783</b>	<b>1829</b>	<b>1869</b>	<b>1905</b>	<b>14.7%</b>	<b>1929</b>	<b>1964</b>	<b>1987</b>	<b>2017</b>	<b>2040</b>	<b>2057</b>
High	1836	2000	2150	2200		2250	2325	2375	2200	2300	2350
Low	1678	1678	1678	1719		1719	1756	1763	1827	1827	1827
Standard Deviation	46	78	101	115		126	134	150	112	118	117



**Chinese Exports Fuel Supply**

- ◆ A supply glut, led by the expansion of Chinese exports, has pinned down prices of aluminium, which dipped below US\$1700 per tonne last week. Government support has helped Chinese producers, lowering break-even costs and keeping smelters active.
- ◆ In the rest of the world, mine closures and tighter production continue. Big non-Chinese producers Alcoa and Rusal are reportedly shutting high-cost plants to pursue new low cost ventures. Rusal has benefited from the Russian rouble's steep declines.
- ◆ Stalling production may help to reverse the downtrend in prices further out.

Aluminium Production (2013)			Consumption (2013)		
Production	mn tn	% of world	Consumption	mn tn	% of world
1. China	22.0	46.2%	1. China	22.0	47.5%
2. Russia	3.7	7.8%	2. USA	4.6	10.0%
3. Canada	3.0	6.2%	3. Germany	2.1	4.5%
4. USA	1.9	4.1%	4. Japan	1.8	3.8%
5. UAE	1.9	3.9%	5. India	1.5	3.3%
World	47.7		World	46.2	

**Aluminium: Futures Market: LME Pricing: US\$/tonne Contract Size: 25 tonnes Delivery Dates:** Daily for cash to 3 month contracts, Wednesdays for 3 month to 6 month contracts; then every third Wednesday for 7 months out to 123 months. **Contracts Traded:** 65,439,689 (2014).

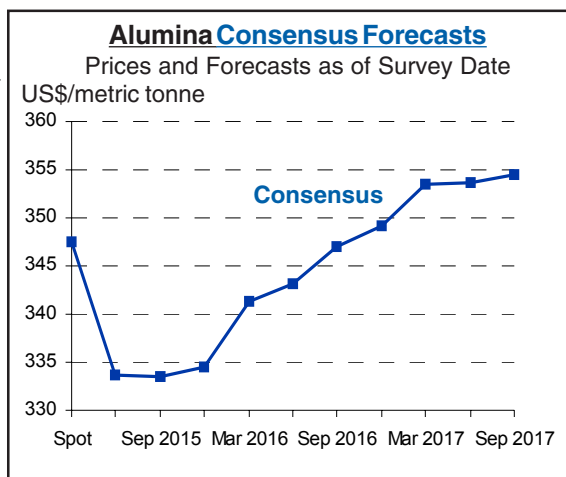
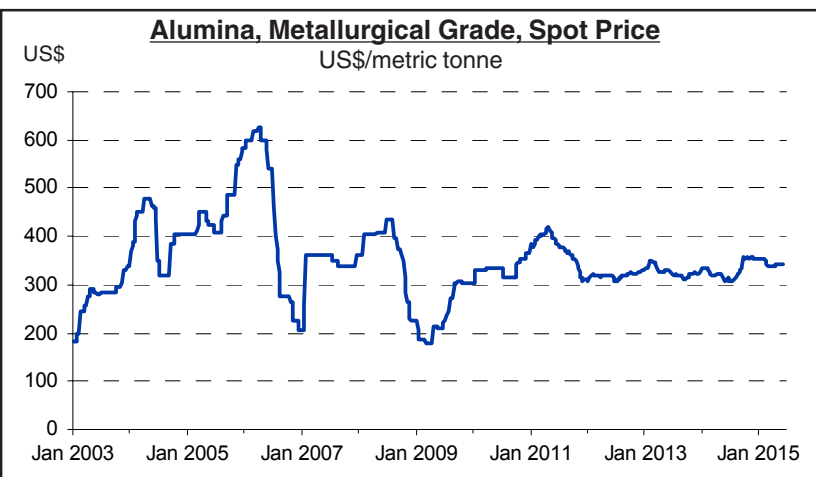


Survey Date Spot Price  
(Jun. 15): **US\$347.5**

**Alumina Forecasts, US\$/metric tonne, fob**

Nominal, Quarterly Averages

	Jun '15	Sep '15	Dec '15	Mar '16	% change from spot	Jun '16	Sep '16	Dec '16	Mar '17	Jun '17	Sep '17
Investec	340.0	367.0	367.0	378.0	8.8%	378.0	379.0	379.0	369.0	369.0	377.0
Capital Economics	335.0	350.0	360.0	370.0	6.5%	370.0	375.0	375.0	na	na	na
Australia Dept of Industry	340.0	345.0	345.0	360.0	3.6%	360.0	360.0	360.0	350.0	350.0	350.0
Credit Suisse	330.0	330.0	340.0	350.0	0.7%	350.0	350.0	350.0	360.0	360.0	360.0
Macquarie	340.0	350.0	352.0	344.0	-1.0%	344.0	340.0	340.0	344.0	344.0	344.0
Commonwealth Bank	349.0	343.0	341.3	341.1	-1.8%	341.9	342.7	343.5	349.2	351.3	354.0
UBS	340.0	330.0	325.0	340.0	-2.2%	348.0	355.0	358.0	360.0	360.0	360.0
Morgan Stanley	333.3	316.4	316.4	327.9	-5.6%	327.9	347.2	366.5	374.2	374.2	374.2
RBC Capital Markets	325.4	325.4	325.4	327.9	-5.6%	327.9	327.9	327.9	336.5	336.5	336.5
ANZ	325.9	319.6	316.0	323.8	-6.8%	334.2	339.9	341.6	338.6	337.6	334.9
Liberium Capital	311.1	292.3	292.3	292.3	-15.9%	292.3	299.8	299.8	na	na	na
<b>Consensus (Mean)</b>	<b>333.6</b>	<b>333.5</b>	<b>334.6</b>	<b>341.4</b>	<b>-1.8%</b>	<b>343.1</b>	<b>347.0</b>	<b>349.2</b>	<b>353.5</b>	<b>353.6</b>	<b>354.5</b>
<b>High</b>	349.0	367.0	367.0	378.0		378.0	379.0	379.0	374.2	374.2	377.0
<b>Low</b>	311.1	292.3	292.3	292.3		292.3	299.8	299.8	336.5	336.5	334.9
<b>Standard Deviation</b>	10.2	20.4	22.0	23.8		23.3	21.8	22.6	13.2	13.2	15.0

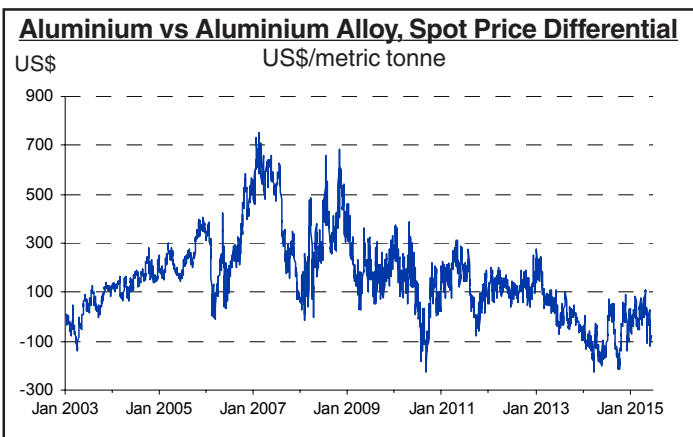
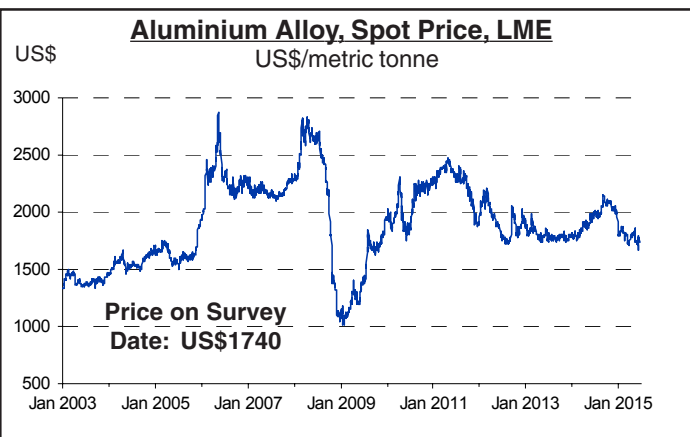


**Alumina** is derived from bauxite ore and is used to produce primary aluminium at a ratio of two tonnes of alumina per tonne of aluminium. Prices can be linked to the LME primary aluminium price.

**Aluminium Alloy** prices provide a reference basis for the secondary aluminium market. **Futures Market:** LME **Pricing:** US\$/tonne **Contract Size:** 20 tonnes **Delivery Dates:** Daily for cash to 3 month contracts, Wednesdays for 3 month to 6 month contracts; then every third Wednesday for 7 months out to 27 months. **Contracts Traded:** 275,957 (2014).

**World Production of Alumina (100.5 million tonnes, 2012)**

Producer	% of world total
1. China	27.8%
2. Australia	18.3%
3. Indonesia	12.9%
4. Brazil	11.4%

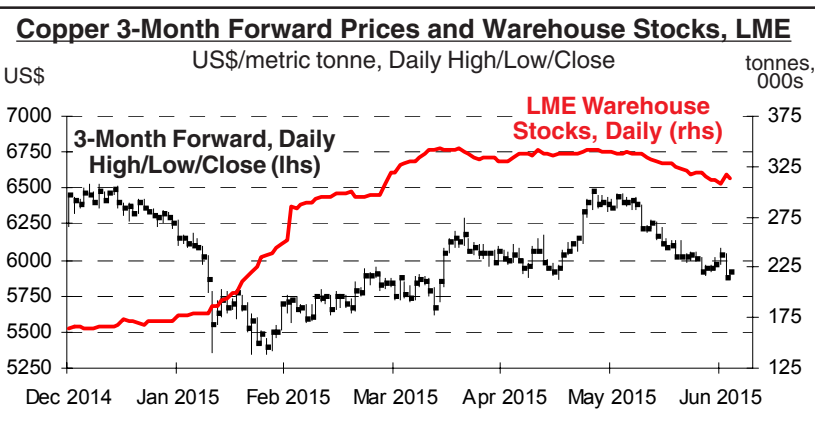
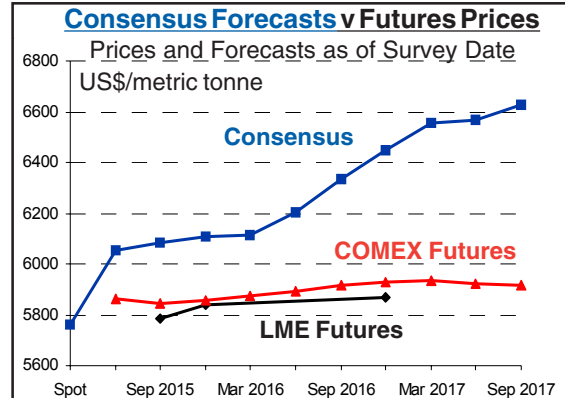
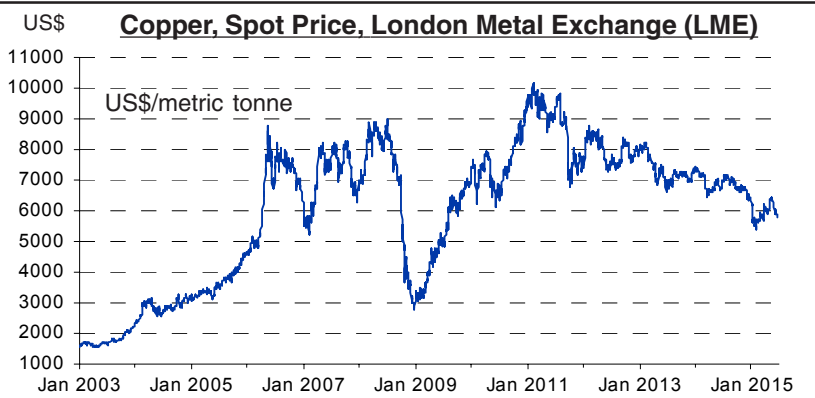


Survey Date Spot Price  
(Jun. 15): **US\$5761**

**Copper, Grade A, Forecasts, US\$/metric tonne, fob**

Nominal, Quarterly Averages

	Jun '15	Sep '15	Dec '15	Mar '16	% change from spot	Jun '16	Sep '16	Dec '16	Mar '17	Jun '17	Sep '17
Capital Economics	6150	6525	7000	7350	27.6%	7500	7650	7890	na	na	na
Citigroup	6300	6600	7000	7100	23.3%	7250	7450	7700	8200	8200	8200
Econ Intelligence Unit	6100	6220	6500	6800	18.0%	7005	7080	7172	7100	7200	7220
Investec	6100	6349	6349	6504	12.9%	6504	6724	6724	6834	6834	6944
BNP Paribas	6150	5950	6175	6475	12.4%	6625	6725	7075	na	na	na
Macquarie	6389	6519	6471	6451	12.0%	6620	6601	6799	6799	6900	7101
HWWI	6100	6450	6400	6450	12.0%	6600	6750	6650	6650	6650	6650
Morgan Stanley	6063	5952	5952	6393	11.0%	6393	6173	6173	6614	6614	7055
Commonwealth Bank	5952	6037	6218	6342	10.1%	6525	6707	6757	6804	6722	6835
CPM Group	6168	6000	6115	6300	9.4%	6375	6515	6150	6550	na	na
Prometeia	6279	6393	6243	6295	9.3%	6502	6658	6521	6698	6734	6871
Barclays Capital	6300	6600	6500	6250	8.5%	6250	6250	6250	na	na	na
Numis	5952	6063	6063	6173	7.2%	6322	6473	6737	6779	6695	6609
Oxford Economics	5951	6011	6071	6132	6.4%	6193	6255	6317	6358	6400	6441
ANZ	5883	5826	5976	6126	6.4%	6377	6501	6476	6426	6402	6377
Scotiabank	6063	6063	6173	6100	5.9%	6200	6100	5850	5950	6050	6100
RBC Capital Markets	6129	6154	6154	6063	5.2%	6063	6063	6063	7165	7165	7165
UBS	5952	5952	6063	6063	5.2%	6063	6063	6504	6614	6614	6614
Credit Suisse	na	6600	6400	6000	4.2%	6100	6100	5700	5500	5500	5500
CIBC	5500	5500	5500	6000	4.2%	6000	6000	6000	6091	6091	6091
IHS Global Insight	6179	6053	6002	5898	2.4%	5963	5996	6127	6143	6166	6207
Euromonitor International	6083	5753	5679	5758	0.0%	5796	5849	5926	6004	6066	6133
Deutsche Bank	5900	6200	6500	5600	-2.8%	5500	6450	6550	na	na	na
Liberium Capital	6061	5510	5510	5510	-4.3%	5510	5730	5730	na	na	na
China Int'l Capital Corp	5800	5750	5500	5500	-4.5%	5450	na	na	na	na	na
Societe Generale	na	5862	5800	5500	-4.5%	5800	na	na	na	na	na
Australia Dept of Industry	5800	5500	5500	5300	-8.0%	5400	5400	5400	5800	5800	5800
BoA Merrill Lynch	6150	5900	5250	4750	-17.5%	4750	4409	na	na	na	na
<b>Consensus (Mean)</b>	<b>6056</b>	<b>6082</b>	<b>6109</b>	<b>6114</b>	<b>6.1%</b>	<b>6201</b>	<b>6333</b>	<b>6450</b>	<b>6554</b>	<b>6569</b>	<b>6627</b>
<b>High</b>	<b>6389</b>	<b>6600</b>	<b>7000</b>	<b>7350</b>		<b>7500</b>	<b>7650</b>	<b>7890</b>	<b>8200</b>	<b>8200</b>	<b>8200</b>
<b>Low</b>	<b>5500</b>	<b>5500</b>	<b>5250</b>	<b>4750</b>		<b>4750</b>	<b>4409</b>	<b>5400</b>	<b>5500</b>	<b>5500</b>	<b>5500</b>
<b>Standard Deviation</b>	<b>188</b>	<b>332</b>	<b>430</b>	<b>538</b>		<b>581</b>	<b>636</b>	<b>594</b>	<b>583</b>	<b>595</b>	<b>613</b>



**Global Growth Concerns Weaken Prices**

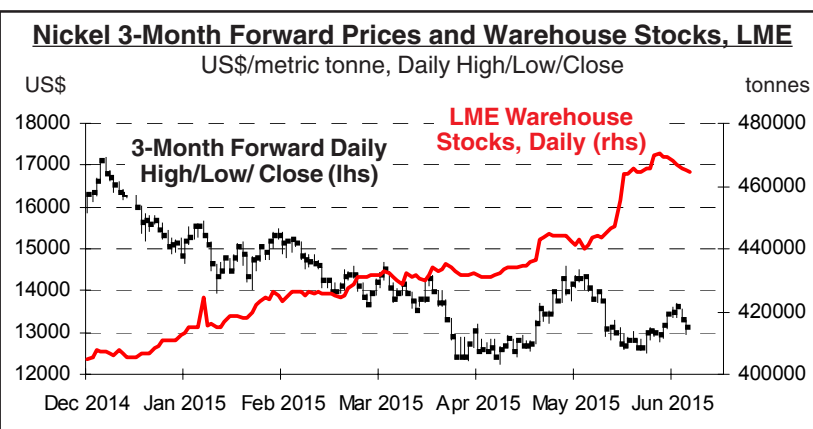
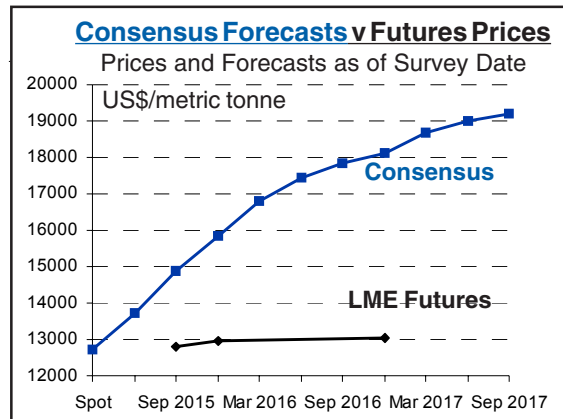
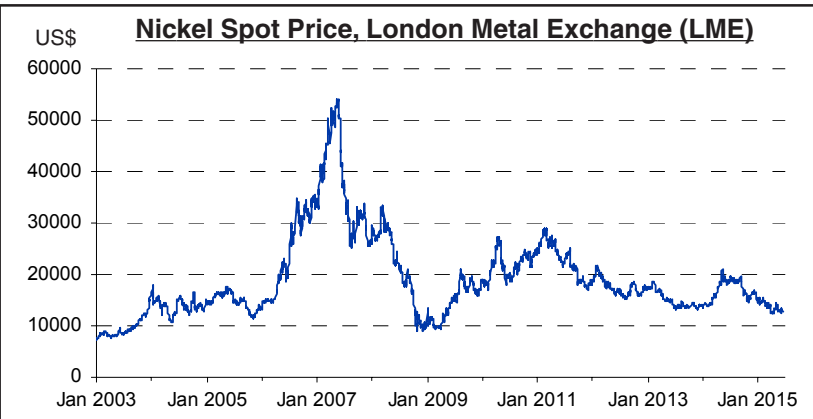
- ◆ Copper has slipped back below US\$5800 per tonne amid growing concerns over softer global demand.
- ◆ 2015 global growth was downgraded in June's OECD report and mixed data releases in China have dented copper prices. Chinese imports slumped in May, while government stimulus measures have thus far failed to ramp-up activity.
- ◆ A strong US dollar and bulging inventories on the London Metal Exchange add to the bearish outlook for the red metal. Our panel anticipate a 6.1% climb by March 2016.

**World Production of Copper (18.3 million tonnes in 2013)**

Mine Production % of world total (2013)		Smelter Production % of world total (2013)	
1. Chile	31.6%	1. China	24.4%
2. China	9.3%	2. Japan	10.6%
3. Peru	7.5%	3. Chile	9.2%
4. USA	6.9%	4. Russia	5.8%

**Copper: Futures Market: LME Pricing: US\$/tonne**  
**Contract Size: 25 tonnes Delivery Dates:** Daily for cash to 3 month contracts, Wednesdays for 3 month to 6 month contracts; then every third Wednesday for 7 months out to 123 months. **Contracts Traded:** 38,811,609 (2014). **US Futures Market: COMEX Pricing:** USc/lb **Lot Size: 25,000lbs Deliverability:** 24 consecutive months.

Survey Date Spot Price (Jun. 15): US\$12735		Nickel Forecasts, US\$/metric tonne, fob										
		Nominal, Quarterly Averages										
		Jun '15	Sep '15	Dec '15	Mar '16	% change from spot	Jun '16	Sep '16	Dec '16	Mar '17	Jun '17	Sep '17
Deutsche Bank	na	17500	19500	20000	20000	57.0%	21000	22000	23000	na	na	na
RBC Capital Markets	12963	14881	16893	19841	19841	55.8%	19841	19841	19841	24251	24251	24251
ANZ	14671	17754	18755	19504	19504	53.2%	20504	21255	21755	22005	21505	20504
Citigroup	14300	16000	17520	19500	19500	53.1%	21000	22000	23000	24000	24000	24000
Capital Economics	13300	15500	18000	19000	19000	49.2%	18500	17500	17000	na	na	na
Societe Generale	na	15000	17370	19000	19000	49.2%	21000	na	na	na	na	na
Macquarie	13999	15501	17000	18501	18501	45.3%	20000	21001	21001	22000	22000	23001
UBS	13448	14594	15763	18188	18188	42.8%	18188	17306	16865	16535	16314	16535
Credit Suisse	na	16980	16980	18080	18080	42.0%	18080	18080	18080	18740	18740	18740
BNP Paribas	13350	14200	16100	17750	17750	39.4%	19000	20250	22000	na	na	na
Liberium Capital	14767	15428	15428	17632	17632	38.5%	17632	17632	17632	na	na	na
Commonwealth Bank	14771	15432	16094	16755	16755	31.6%	17417	17857	18649	18672	18594	18561
Scotiabank	13060	13228	15432	16755	16755	31.6%	18557	19695	22190	23148	23148	23148
Oxford Economics	14324	15136	15828	16540	16540	29.9%	17251	17942	18534	18997	19339	19629
CIBC	15909	15909	15909	16527	16527	29.8%	16527	16527	16527	18409	18409	18409
BoA Merrill Lynch	14000	15000	17500	16500	16500	29.6%	19000	20000	na	na	na	na
Econ Intelligence Unit	13337	14276	16076	16444	16444	29.1%	17215	17325	17840	18097	18979	19346
Investec	13275	14991	14991	16094	16094	26.4%	16094	16975	16975	18188	18188	19290
HWI	13020	14600	15150	15950	15950	25.2%	16100	16850	17000	17000	17000	17000
Morgan Stanley	13669	14330	14991	15873	15873	24.6%	16314	16314	15873	17196	17857	19290
BIPE	13600	14330	15030	15630	15630	22.7%	15800	16270	16430	na	na	na
IHS Global Insight	13617	13724	14241	15460	15460	21.4%	15814	16311	16705	17885	18110	18288
Australia Dept of Industry	14000	14000	14200	15200	15200	19.4%	15800	16000	16000	17000	17500	17500
China Int'l Capital Corp	na	15500	15200	15000	15000	17.8%	14350	na	na	na	na	na
Prometeia	13481	13899	13934	14429	14429	13.3%	15273	16141	16181	16819	16828	16992
CPM Group	13164	13000	13500	13750	13750	8.0%	14000	14320	15000	15150	na	na
Euromonitor International	13052	12930	13175	13561	13561	6.5%	13728	13877	14064	14245	14387	14543
Numis	12346	12676	13228	13228	13228	3.9%	14419	14508	14904	15304	15709	16118
<b>Consensus (Mean)</b>		<b>13726</b>	<b>14868</b>	<b>15850</b>	<b>16810</b>	<b>32.0%</b>	<b>17443</b>	<b>17838</b>	<b>18122</b>	<b>18682</b>	<b>18992</b>	<b>19218</b>
High	15909	17754	19500	20000	20000		21000	22000	23000	24251	24251	24251
Low	12346	12676	13175	13228	13228		13728	13877	14064	14245	14387	14543
Standard Deviation	774	1266	1610	1938	1938		2201	2289	2639	2922	2777	2723



**Production Cutbacks Anticipated**

- ◆ After increasing above US\$14000/T in early May, nickel slipped back to US\$12735 on our survey date. Recent soft demand and significant upturn in stocks (which have reached record levels on the LME this year) have battered the ductile metal.
- ◆ Potential new stimulus measures from the Chinese government may revive demand and stem the price decline.
- ◆ The consensus is predicting a sharp recovery in the price of nickel during the next four quarters, partly because of expectations of a tightening in supply.

Nickel Production and Consumption by World Share (2013)					
Production	000s tn	% of world	Consumption	000s tn	% of world
1. Indonesia	477.0	21.0%	1. China	897.0	50.6%
2. Philippines	378.1	16.6%	2. USA	138.0	7.8%
3. Russia	240.0	10.5%	3. Japan	129.5	7.3%
4. Australia	234.2	10.3%	4. S. Korea	78.6	4.4%
5. Canada	223.3	9.8%	5. Germany	78.1	4.4%
World	2275		World	1772	

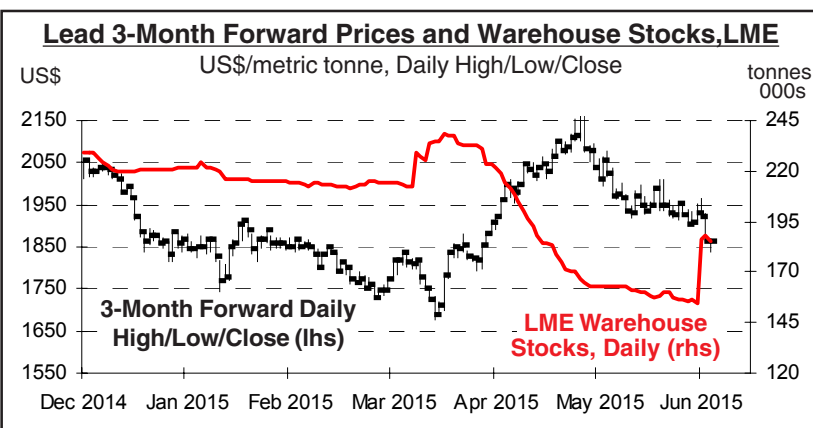
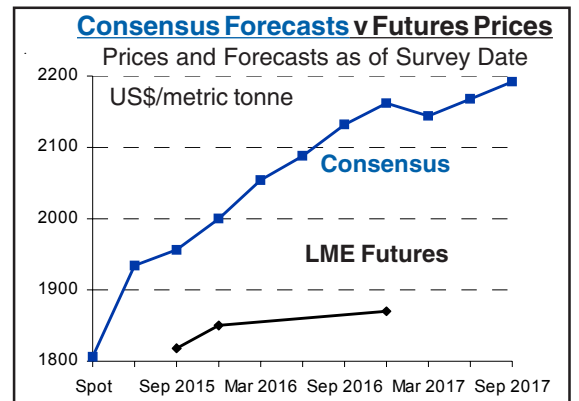
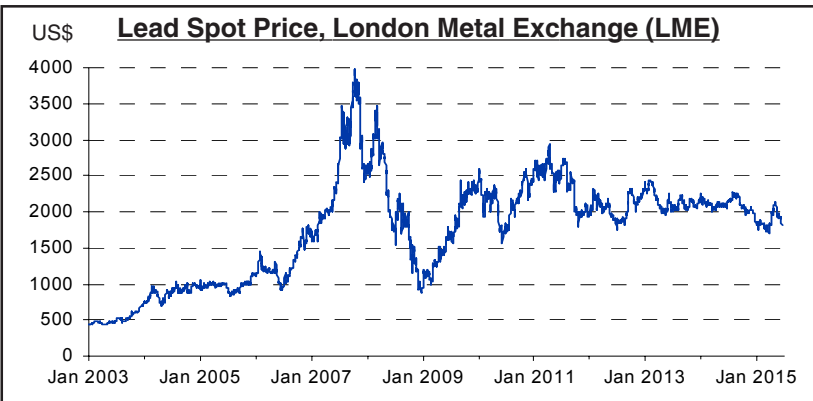
Nickel prices are closely related to demand from stainless steel producers who account for about two-thirds of total demand. **Futures Market:** LME **Pricing:** US\$/tonne **Contract Size:** 6 tonnes **Delivery Dates:** Daily for cash to 3 month contracts, Wednesdays for 3 month to 6 month contracts; then every third Wednesday for 7 months out to 63 months. **Contracts Traded:** 18,079,099 (2014).

Survey Date Spot Price  
(Jun. 15): US\$1806

**Lead Forecasts, US\$/metric tonne, fob**

Nominal, Quarterly Averages

	Jun '15	Sep '15	Dec '15	Mar '16	% change from spot	Jun '16	Sep '16	Dec '16	Mar '17	Jun '17	Sep '17
Credit Suisse	2000	2200	2200	2400	32.9%	2400	2600	2600	2600	2600	2600
BNP Paribas	1950	1985	2160	2350	30.1%	2500	2625	2825	na	na	na
HWWI	1970	2170	2250	2300	27.4%	2350	2350	2350	2350	2350	2350
BIPE	2050	2100	2180	2260	25.1%	2290	2330	2400	na	na	na
China Int'l Capital Corp	2050	2050	2100	2150	19.0%	2150	na	na	na	na	na
Citigroup	1915	1850	1900	2150	19.0%	2100	2200	2300	2350	2350	2350
Morgan Stanley	1874	1984	1984	2094	16.0%	2094	2028	2028	2161	2161	2205
Econ Intelligence Unit	1960	2020	2110	2080	15.2%	2145	2240	2275	2250	2310	2300
Capital Economics	1960	2025	2050	2075	14.9%	2100	2100	2100	na	na	na
BoA Merrill Lynch	1900	1900	2100	2061	14.1%	2250	2200	na	na	na	na
Deutsche Bank	1780	1800	1900	2050	13.5%	2100	2150	2200	na	na	na
IHS Global Insight	1940	1994	2059	2044	13.2%	2054	2087	2116	2081	2045	2056
Oxford Economics	1840	1881	1944	2038	12.9%	2124	2192	2258	2303	2322	2340
UBS	1940	1984	2006	2028	12.3%	2072	2116	2161	2205	2205	2205
Commonwealth Bank	1830	1861	1954	2020	11.8%	2068	2096	2150	2179	2223	2297
Prometeia	2009	1974	1947	1996	10.5%	2063	2113	2099	2120	2121	2133
Liberium Capital	1873	1984	1984	1984	9.8%	1984	1984	1984	na	na	na
RBC Capital Markets	1969	1947	1955	1965	8.8%	1965	1965	1965	1983	1983	1983
CPM Group	1996	1972	1990	1960	8.5%	1930	1975	1990	1965	na	na
Investec	1970	1874	1874	1940	7.4%	1940	1984	1984	2072	2072	2205
Societe Generale	na	1825	1875	1925	6.6%	1925	na	na	na	na	na
Macquarie	2019	1951	1909	1920	6.3%	1951	2000	2101	2161	2216	2224
ANZ	1817	1825	1875	1900	5.2%	1926	1951	1926	1900	1950	1999
Numis	1808	1808	1874	1874	3.8%	1996	2009	2021	2034	2046	2059
Euromonitor International	2011	1929	1818	1778	-1.6%	1746	1732	1732	1738	1743	1752
<b>Consensus (Mean)</b>	<b>1935</b>	<b>1956</b>	<b>2000</b>	<b>2054</b>	<b>13.7%</b>	<b>2089</b>	<b>2132</b>	<b>2162</b>	<b>2144</b>	<b>2168</b>	<b>2191</b>
<b>High</b>	2050	2200	2250	2400		2500	2625	2825	2600	2600	2600
<b>Low</b>	1780	1800	1818	1778		1746	1732	1732	1738	1743	1752
<b>Standard Deviation</b>	78	105	118	150		169	204	238	200	201	196



**Prices Plunge as Inventories Rise**

- ◆ Stockpiles jumped amid news of an unexpectedly large delivery at the Dutch port of Vlissingen. Prices slumped significantly in mid-June to around the US\$1825/T mark.
- ◆ In May, lead prices had advanced by more than 15% from the start of 2015 following a raft of cancelled warrants on the LME. However, the recent supply gains and market pessimism over a stalling Greek debt deal have contributed to a sharp reversal.
- ◆ Car sales have picked up noticeably in the US and Euro area, which should support demand for batteries.

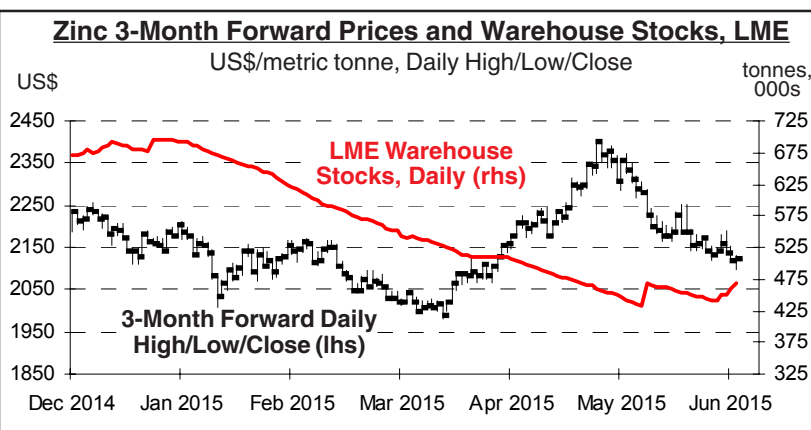
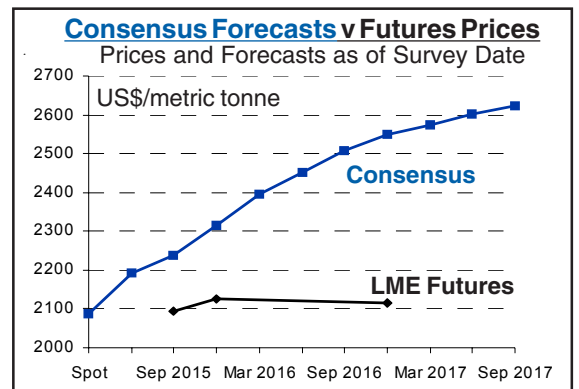
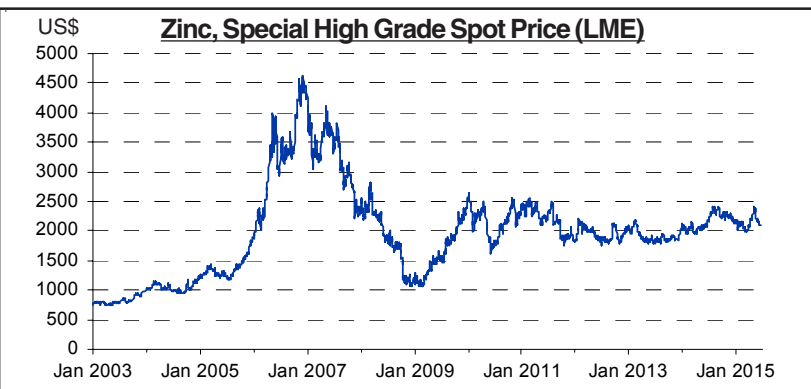
**Lead Production and Consumption (2012)**

Production	% of world total	Consumption	% of world total
1. China	53.6%	1. China	44.6%
2. Australia	11.8%	2. USA	14.4%
3. USA	6.6%	3. India	5.0%
4. Peru	4.7%	4. South Korea	4.1%
5. Mexico	4.5%	5. Germany	3.6%

Lead prices can be related to zinc prices as the metals are co-produced. Demand is currently led by increased demand for batteries in Asia. **Futures Market:** LME Pricing: US\$/tonne **Contract Size:** 25 tonnes **Delivery Dates:** Daily for cash to 3 month contracts, Wednesdays for 3 month to 6 month contracts; then every third Wednesday for 7 months out to 63 months. **Contracts Traded:** 12,872,940 (2014).



Survey Date Spot Price (Jun. 15): US\$2087		<b>Zinc, Special High Grade, Forecasts, US\$/MT, fob</b> <small>Nominal, Quarterly Averages</small>									
	Jun '15	Sep '15	Dec '15	Mar '16	% change from spot	Jun '16	Sep '16	Dec '16	Mar '17	Jun '17	Sep '17
Scotiabank	2138	2315	2359	2756	32.1%	3197	3527	3748	3527	3527	3527
RBC Capital Markets	2227	2205	2571	2756	32.0%	2756	2756	2756	3527	3527	3527
BNP Paribas	2185	2210	2435	2650	27.0%	2775	2875	3100	na	na	na
Credit Suisse	2200	2400	2400	2600	24.6%	2800	3000	3000	2900	2900	2900
Societe Generale	na	2300	2570	2600	24.6%	2700	na	na	na	na	na
Macquarie	2280	2310	2421	2500	19.8%	2650	2701	2820	2950	3020	3100
HWWI	2210	2350	2400	2500	19.8%	2500	2500	2500	2500	2500	2500
BoA Merrill Lynch	2205	2315	2403	2491	19.4%	2500	2500	na	na	na	na
Commonwealth Bank	2161	2249	2337	2425	16.2%	2513	2603	2634	2655	2694	2745
UBS	2205	2315	2425	2425	16.2%	2535	2535	2646	2646	2646	2646
Liberium Capital	2204	2314	2314	2424	16.2%	2424	2645	2645	na	na	na
Euromonitor International	2270	2340	2374	2420	15.9%	2435	2446	2461	2475	2484	2496
BIPE	2250	2300	2350	2400	15.0%	2440	2490	2550	na	na	na
Deutsche Bank	2000	2050	2300	2400	15.0%	2450	2500	2550	na	na	na
Australia Dept of Industry	2200	2257	2298	2347	12.5%	2375	2390	2398	2465	2450	2450
Capital Economics	2250	2265	2290	2325	11.4%	2350	2375	2425	na	na	na
Econ Intelligence Unit	2220	2210	2310	2320	11.2%	2320	2410	2470	2490	2575	2640
Investec	2200	2205	2205	2315	10.9%	2315	2425	2425	2535	2535	2646
Morgan Stanley	2161	2205	2205	2315	10.9%	2315	2425	2425	2469	2469	2469
IHS Global Insight	2215	2205	2276	2301	10.3%	2341	2331	2357	2352	2364	2385
China Int'l Capital Corp	2250	2250	2300	2300	10.2%	2300	na	na	na	na	na
Oxford Economics	2187	2258	2278	2293	9.9%	2307	2323	2339	2356	2372	2389
CPM Group	2247	2198	2285	2290	9.7%	2325	2300	2345	2320	na	na
ANZ	2061	2100	2200	2225	6.6%	2213	2239	2276	2351	2426	2416
CIBC	2090	2090	2090	2220	6.4%	2220	2220	2220	2223	2223	2223
Citigroup	2200	2150	2170	2200	5.4%	2300	2370	2390	2400	2400	2400
Prometeia	2265	2201	2162	2162	3.6%	2202	2186	2163	2190	2189	2189
Numis	2094	2094	2094	2094	0.4%	2107	2120	2134	2147	2160	2173
<b>Consensus (Mean)</b>	<b>2192</b>	<b>2238</b>	<b>2315</b>	<b>2395</b>	<b>14.7%</b>	<b>2452</b>	<b>2507</b>	<b>2551</b>	<b>2574</b>	<b>2603</b>	<b>2622</b>
High	2280	2400	2571	2756		3197	3527	3748	3527	3527	3527
Low	2000	2050	2090	2094		2107	2120	2134	2147	2160	2173
Standard Deviation	66	86	119	167		232	292	343	385	391	394



**Sharp Downturn Amid Supply Upturn**

- ◆ Zinc prices have slid after briefly peaking above US\$2400 per tonne in May. The sudden decline (to US\$2087 on our survey date) has wiped out most of the gains the metal had made this year.
- ◆ Stocks in LME warehouses have stabilised and suggestions that sizeable amounts of it exist in non-monitored facilities have dimmed supply fundamentals. Chinese smelter output shows no signs of slowing.
- ◆ The outlook may improve as the Lisheen mine closes later this year, but activity at the Century mine may now continue into Q4.

<b>Zinc Production and Consumption (2013)</b>			
Production	% of world total	Consumption	% of world total
1. China	35.8%	1. China	44.3%
2. Australia	11.5%	2. USA	7.2%
3. Peru	10.2%	3. India	5.0%
4. India	6.0%	4. S. Korea	4.3%
5. USA	6.0%	5. Japan	3.8%

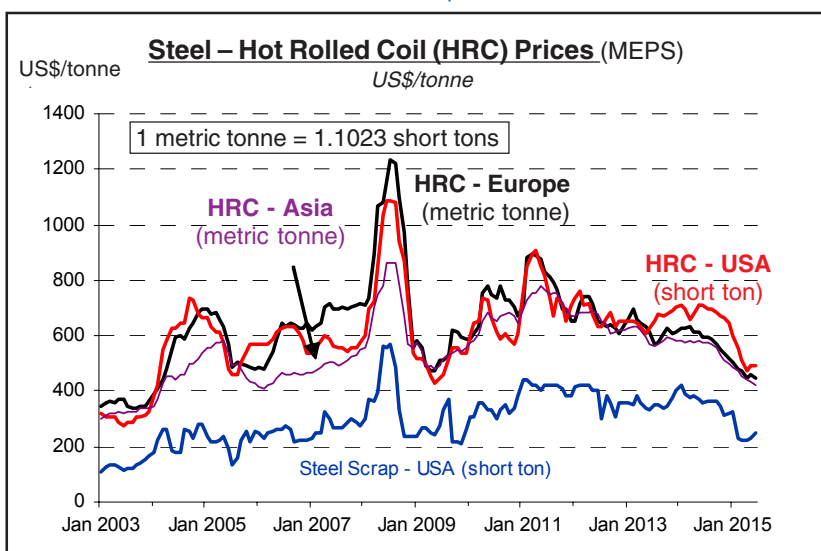
Zinc's primary use is in galvanising steel. **Futures Market:** LME **Pricing:** US\$/tonne **Contract Size:** 25 tonnes (+/- 2%) **Delivery Dates:** Daily for cash to 3 month contracts, Wednesdays for 3 month to 6 month contracts; then every third Wednesday for 7 months out to 63 months. **Contracts Traded:** 30,323,897 (2014).

Survey Date Spot Price (Jun. 15): <b>US\$448.0 e</b>		<b>Hot Rolled Coil (Europe, Domestic) Forecasts, US\$/metric tonne, fob</b>									
	Jun '15	Sep '15	Dec '15	Mar '16	% change from spot	Jun '16	Sep '16	Dec '16	Mar '17	Jun '17	Sep '17
IHS Global Insight	439.0	478.0	539.0	548.0	22.3%	552.0	558.0	550.0	573.0	575.0	581.0
Morgan Stanley	485.0	450.0	475.0	485.0	8.3%	500.0	475.0	490.0	500.0	510.0	500.0
Societe Generale	459.0	459.0	459.0	469.0	4.7%	469.0	469.0	469.0	479.0	479.0	479.0
BoA Merrill Lynch	455.0	465.0	470.0	464.0	3.6%	464.0	464.0	na	na	na	na
MEPS	453.0	440.0	440.0	460.0	2.7%	470.0	455.0	455.0	475.0	485.0	470.0
Oxford Economics	457.3	457.3	457.2	457.2	2.0%	457.1	457.1	457.0	462.0	468.0	474.0
Econ Intelligence Unit	440.0	498.3	500.0	456.7	1.9%	500.0	550.0	586.7	560.0	620.0	630.0
Macquarie	415.0	425.0	415.0	435.0	-2.9%	455.0	455.0	455.0	475.0	475.0	475.0
<b>Consensus (Mean)</b>	<b>450.4</b>	<b>459.1</b>	<b>469.4</b>	<b>471.9</b>	<b>5.3%</b>	<b>483.4</b>	<b>485.4</b>	<b>494.7</b>	<b>503.4</b>	<b>516.0</b>	<b>515.6</b>
<b>High</b>	485.0	498.3	539.0	548.0		552.0	558.0	586.7	573.0	620.0	630.0
<b>Low</b>	415.0	425.0	415.0	435.0		455.0	455.0	455.0	462.0	468.0	470.0
<b>Standard Deviation</b>	20.1	22.5	37.6	33.8		32.8	43.0	52.9	44.7	58.7	63.8

Survey Date Spot Price (Jun. 15): <b>US\$490.0 e</b>		<b>Hot Rolled Coil (USA, Domestic) Forecasts, US\$/short ton, fob</b>									
	Jun '15	Sep '15	Dec '15	Mar '16	% change from spot	Jun '16	Sep '16	Dec '16	Mar '17	Jun '17	Sep '17
<b>Consensus (Mean)<sup>1</sup></b>	<b>499.8</b>	<b>517.0</b>	<b>529.5</b>	<b>546.5</b>	<b>11.5%</b>	<b>548.3</b>	<b>544.0</b>	<b>541.3</b>	<b>547.6</b>	<b>541.9</b>	<b>547.3</b>
<b>High</b>	579.0	617.3	628.3	633.8		622.8	589.7	595.2	611.8	584.2	611.8
<b>Low</b>	450.5	450.0	459.5	473.0		491.0	491.0	491.0	486.5	486.5	486.5
<b>Standard Deviation</b>	60.5	71.9	71.0	58.2		47.2	43.2	46.9	54.0	44.9	56.9

Survey Date Spot Price (Jun. 15): <b>US\$425.0 e</b>		<b>Hot Rolled Coil (Asia, Domestic) Forecasts, US\$/metric tonne, fob</b>									
	Jun '15	Sep '15	Dec '15	Mar '16	% change from spot	Jun '16	Sep '16	Dec '16	Mar '17	Jun '17	Sep '17
<b>Consensus (Mean)<sup>1</sup></b>	<b>397.4</b>	<b>402.8</b>	<b>406.0</b>	<b>420.0</b>	<b>-1.2%</b>	<b>430.0</b>	<b>430.4</b>	<b>439.0</b>	<b>452.8</b>	<b>460.8</b>	<b>465.5</b>
<b>High</b>	435.0	425.0	425.0	440.0		460.0	450.0	461.0	482.0	504.0	523.0
<b>Low</b>	365.0	390.0	390.0	399.0		407.0	415.0	420.0	429.0	434.0	439.0
<b>Standard Deviation</b>	26.2	14.7	14.9	20.3		20.9	16.3	19.7	23.3	31.8	39.5

<sup>1</sup> Individual forecasts available in the Excel spreadsheet.



**Seasonal Decline Adds to Industry Woes**

- ◆ Steel prices in the world's dominant market, China, has slumped to near decade lows as investment in property and infrastructure slowed toward the end of peak construction season (between April and June).
- ◆ Prices for key ingredient, iron ore, have strengthened in recent weeks (see chart, facing page) amid lower shipments from major suppliers, Australia and Brazil.
- ◆ The European Commission has vowed to help domestic steelmakers by clamping down on price dumping and the flood of cheap imports from China and Russia.
- ◆ The consensus, on balance, is predicting that HRC Steel will rise by 5.3% in Europe over the next twelve months, compared with a decline of 1.2% in Asia.

<b>Steel Production and Consumption (2013)</b>			
Producers	% of world total	Consumers	% of world total
1. China	48.2	1. China	46.0
2. Japan	6.9	2. United States	6.5
3. United States	5.4	3. India	5.0
4. India	5.0	4. Japan	4.4
EU	10.4	EU	9.6

**Steel prices** are generally set in contracts between major producers and their clients. However, the London Metal Exchange offers a number of steel billet contracts for delivery to locations across Europe, Asia and North America. Whilst there are many varieties of steel, Hot Rolled Coil (HRC) is a commonly referenced price, but regional complexities prevent the emergence of a clear benchmark at present.

Survey Date Spot Price (Jun. 15): US\$54.36 e		<b>North China Fines Iron Ore Forecasts, US\$/dry metric tonne, cfr</b>									
	Jun '15	Sep '15	Dec '15	Mar '16	% change from spot	Jun '16	Sep '16	Dec '16	Mar '17	Jun '17	Sep '17
Morgan Stanley	55.00	50.00	60.00	65.00	19.6%	70.00	60.00	65.00	70.00	75.00	70.00
CIBC	59.00	59.00	59.00	63.00	15.9%	63.00	63.00	63.00	62.00	62.00	62.00
Scotiabank	60.00	60.00	62.00	62.00	14.1%	62.00	62.00	65.00	66.00	65.00	68.00
BoA Merrill Lynch	52.00	50.00	55.00	60.00	10.4%	50.00	55.00	na	na	na	na
Macquarie	52.00	48.00	54.00	60.00	10.4%	55.00	52.00	55.00	62.50	62.50	62.50
IHS Global Insight	54.00	54.19	55.90	59.22	8.9%	60.82	61.45	64.23	70.81	68.85	67.65
Numis	50.00	52.50	55.00	57.50	5.8%	60.37	60.75	61.12	61.50	61.88	62.26
Euromonitor International	54.75	53.56	54.93	57.04	4.9%	58.12	59.00	59.87	60.45	60.65	60.79
Commonwealth Bank	50.00	45.00	50.00	55.00	1.2%	58.00	61.00	64.00	66.00	67.21	67.62
Deutsche Bank	48.00	46.00	52.00	55.00	1.2%	58.00	62.00	65.00	na	na	na
Investec	58.00	52.00	52.00	55.00	1.2%	55.00	60.00	60.00	62.00	62.00	64.00
Societe Generale	58.00	58.00	58.00	55.00	1.2%	55.00	55.00	55.00	55.00	55.00	55.00
ANZ	55.68	55.00	52.50	53.50	-1.6%	53.50	55.00	56.50	59.00	60.00	60.00
UBS	48.00	45.00	45.00	47.00	-13.5%	46.00	48.00	50.00	53.00	52.00	53.00
Credit Suisse	52.00	45.00	45.00	45.00	-17.2%	45.00	50.00	50.00	50.00	50.00	50.00
Liberium Capital	63.40	55.00	55.00	45.00	-17.2%	45.00	40.00	40.00	na	na	na
<b>Consensus (Mean)</b>	<b>54.36</b>	<b>51.77</b>	<b>54.08</b>	<b>55.89</b>	<b>2.8%</b>	<b>55.93</b>	<b>56.51</b>	<b>58.25</b>	<b>61.40</b>	<b>61.70</b>	<b>61.76</b>
High	63.40	60.00	62.00	65.00		70.00	63.00	65.00	70.81	75.00	70.00
Low	48.00	45.00	45.00	45.00		45.00	40.00	40.00	50.00	50.00	50.00
Standard Deviation	4.47	5.04	4.74	6.03		6.94	6.38	7.25	6.16	6.77	6.10

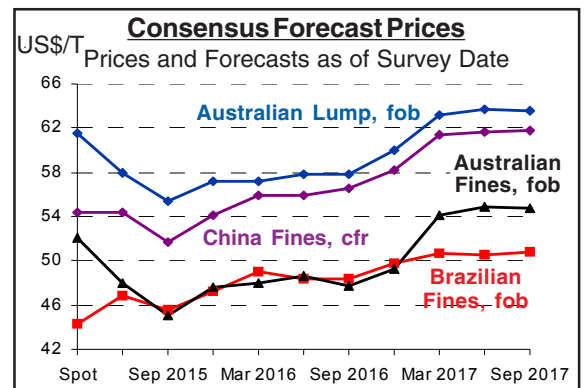
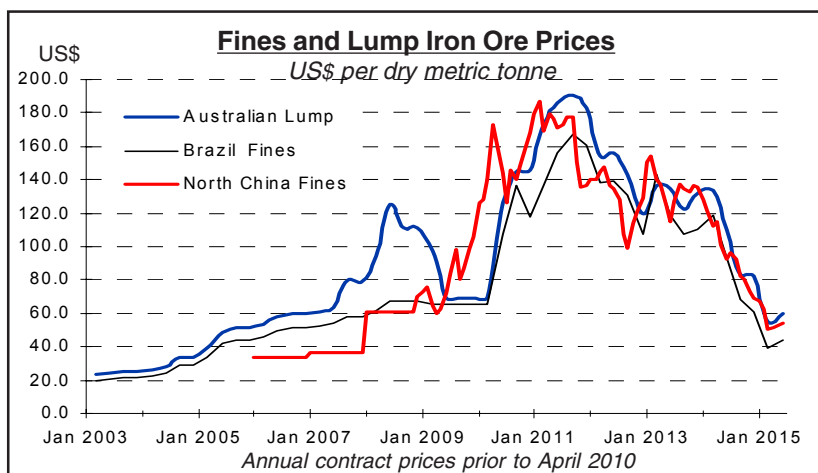
Survey Date Spot Price (Jun. 15): US\$46.06 e		<b>Australian Fines Iron Ore Forecasts, US\$/dry metric tonne, fob</b>									
	Jun '15	Sep '15	Dec '15	Mar '16	% change from spot	Jun '16	Sep '16	Dec '16	Mar '17	Jun '17	Sep '17
<b>Consensus (Mean)</b> <sup>1</sup>	<b>48.05</b>	<b>45.03</b>	<b>47.63</b>	<b>48.03</b>	<b>4.3%</b>	<b>48.60</b>	<b>47.81</b>	<b>49.34</b>	<b>54.13</b>	<b>54.90</b>	<b>54.71</b>
High	54.60	54.00	57.00	54.00		58.00	56.05	56.40	60.00	60.00	60.00
Low	41.00	36.00	40.25	38.00		38.00	32.00	32.00	44.50	43.50	44.50
Standard Deviation	4.60	5.94	4.72	5.41		6.35	7.09	7.28	4.40	4.99	4.61

Survey Date Spot Price (Jun. 15): US\$59.50 e		<b>Australian Lump Iron Ore Forecasts, US\$/dry metric tonne, fob</b>									
	Jun '15	Sep '15	Dec '15	Mar '16	% change from spot	Jun '16	Sep '16	Dec '16	Mar '17	Jun '17	Sep '17
<b>Consensus (Mean)</b> <sup>1</sup>	<b>58.00</b>	<b>55.40</b>	<b>57.13</b>	<b>57.13</b>	<b>-4.0%</b>	<b>57.84</b>	<b>57.78</b>	<b>60.03</b>	<b>63.15</b>	<b>63.76</b>	<b>63.57</b>
High	68.00	68.00	68.00	68.60		70.80	74.10	74.10	72.80	72.80	71.90
Low	41.50	40.81	46.47	45.00		47.50	52.14	52.46	52.79	53.11	53.44
Standard Deviation	8.2	9.0	7.9	8.0		7.5	6.4	6.3	6.5	6.8	6.3

Survey Date Spot Price (Jun. 15): US\$44.30 e		<b>Brazilian Fines Iron Ore Forecasts, US\$/dry metric tonne, fob</b>									
	Jun '15	Sep '15	Dec '15	Mar '16	% change from spot	Jun '16	Sep '16	Dec '16	Mar '17	Jun '17	Sep '17
<b>Consensus (Mean)</b> <sup>1</sup>	<b>46.89</b>	<b>45.59</b>	<b>47.27</b>	<b>49.00</b>	<b>10.7%</b>	<b>48.35</b>	<b>48.34</b>	<b>49.83</b>	<b>50.68</b>	<b>50.50</b>	<b>50.83</b>
High	53.84	54.38	54.92	58.25		56.03	56.59	57.15	59.54	59.54	59.54
Low	39.01	35.37	35.37	33.29		32.25	34.33	36.41	33.29	32.25	33.29
Standard Deviation	7.73	8.03	8.68	11.17		10.87	9.71	9.18	11.93	12.45	11.96

<sup>1</sup> Individual forecasts available in the Excel spreadsheet service.

Iron ore was traded in world markets under contracts. Prices were set by negotiation between iron ore producers and steel manufacturers. Three suppliers, Vale, Rio Tinto and BHP Billiton accounted for 75% of ocean trade in iron ore in 2006. Fines are the most heavily traded category (60% of global trade) while lump iron ore trades has generally traded at a premium price. Producers dropped the annual benchmark price system in April 2010 in favour of quarterly prices based on prior average daily spot prices.



Forecasts for the metals shown on this and the next page were provided by the following leading forecasters:

ANZ	Bank of America – Merrill Lynch	Barclays Capital
BNP Paribas	Capital Economics	Citigroup
CIMB Group	Commonwealth Bank	CPM International
China International Capital Corp.	Credit Suisse	Euromonitor
Economist Intelligence Unit	HWWI	IHS Economics
Investec	Liberum Capital	Macquarie
Morgan Stanley	Numis Securities	Oxford Economics
Prometeia	SG Commodity Research	UBS
	Wilson HTM	

Individual panellist forecasts for these minerals are available as part of our Excel spreadsheet service. Please enquire at [editors@consensuseconomics.com](mailto:editors@consensuseconomics.com).

**TIN**

(Nominal, Quarterly Averages) US\$

US\$/metric tonne	Consensus (Mean)	% change from spot	Forecast Range	
			High	Low
Spot price	14430			
Jun 2015	16209	12.3%	17637	15500
Sep 2015	16586	14.9%	18600	15249
Dec 2015	17415	20.7%	21175	15249
Mar 2016	17932	24.3%	23350	15000
Jun 2016	18556	28.6%	24850	15344
Sep 2016	18598	28.9%	26000	15693
Dec 2016	19027	31.9%	27400	16001
Mar 2017	18103	25.5%	20000	16142
Jun 2017	18032	25.0%	20400	16153
Sep 2017	18148	25.8%	20000	16176



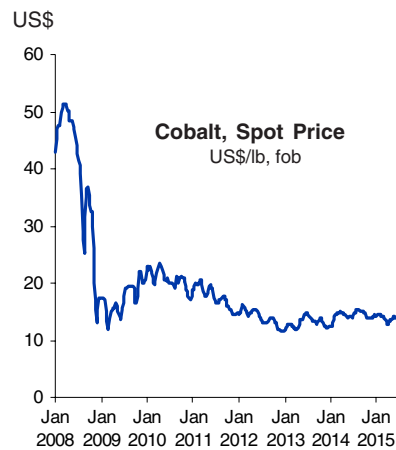
Tin has its physical spot market centred in Kuala Lumpur with the LME recognised as the principal hedging market.

**Futures Market: LME Pricing:** US\$/tonne **Contract Size:** 5 tonnes (+/- 2%) **Delivery Options:** Daily for cash to 3 month contracts, Wednesdays for 3 month to 6 month contracts; then every third Wednesday for 7 months out to 15 months. **Contracts Traded:** 2,111,938 (2014).

**COBALT**

(Nominal, Quarterly Averages) US\$

US\$/lb	Consensus (Mean)	% change from spot	Forecast Range	
			High	Low
Spot price	13.98			
Jun 2015	13.83	-1.0%	15.00	12.50
Sep 2015	13.93	-0.3%	15.00	12.50
Dec 2015	13.91	-0.5%	15.00	12.25
Mar 2016	14.13	1.1%	15.00	12.25
Jun 2016	14.16	1.3%	15.00	12.07
Sep 2016	14.23	1.8%	15.10	12.15
Dec 2016	14.27	2.1%	15.30	12.22
Mar 2017	14.23	1.8%	15.50	12.30
Jun 2017	14.24	1.9%	15.50	12.38
Sep 2017	14.24	1.9%	15.50	12.45



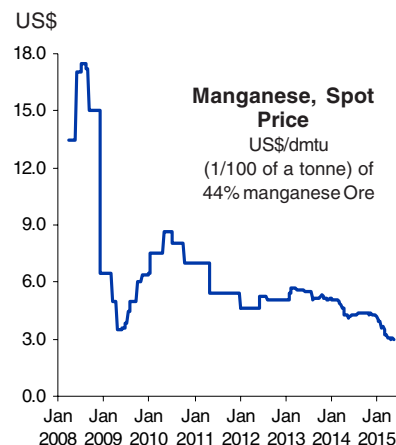
Cobalt is principally used as a super alloying agent because of its anti-corrosive properties. It is commonly a by-product of nickel and used in the production of alloys, catalysts and batteries. The LME launched futures contracts in cobalt in February 2010.

**Futures Market: LME Pricing:** US\$/tonne **Contract Size:** 1 tonne **Delivery Options:** 1 tonne lots in 100-500kg drums of uniform size and weight.

**MANGANESE**

(Nominal, Quarterly Averages) US\$

US\$/metric tonne unit	Consensus (Mean)	% change from spot	Forecast Range	
			High	Low
Spot price	3.000			
Jun 2015	3.221	7.4%	3.750	2.750
Sep 2015	3.245	8.2%	4.000	2.727
Dec 2015	3.329	11.0%	4.000	2.795
Mar 2016	3.448	14.9%	4.200	2.841
Jun 2016	3.491	16.4%	4.200	2.955
Sep 2016	3.581	19.4%	4.500	2.955
Dec 2016	3.611	20.4%	4.500	2.955
Mar 2017	3.787	26.2%	4.750	2.886
Jun 2017	3.818	27.3%	4.750	2.841
Sep 2017	3.809	27.0%	4.750	2.795



Manganese is not exchange-traded so prices are established by negotiation between buyers and sellers. Negotiations occur in line with the beginning of the Japanese fiscal year in April. Following the setting of prices with Japanese manufacturing companies, similar settlement prices are set worldwide.

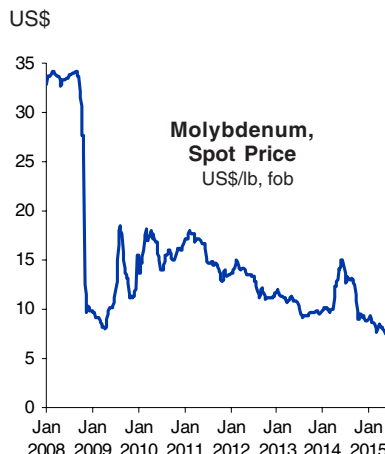
The price is based upon a benchmark ore of 44% manganese content, Cif, Tianjin, China.



**MOLYBDENUM**

(Nominal, Quarterly Averages)

US\$/lb	Consensus (Mean)	% change from spot	Forecast Range	
			High	Low
Spot price	7.450			
Jun 2015	8.161	9.5%	8.600	7.700
Sep 2015	8.405	12.8%	9.000	7.900
Dec 2015	8.623	15.7%	9.106	8.400
Mar 2016	8.924	19.8%	9.365	8.500
Jun 2016	9.074	21.8%	9.510	8.600
Sep 2016	9.158	22.9%	9.615	8.600
Dec 2016	9.248	24.1%	9.800	8.600
Mar 2017	9.74	30.8%	10.50	8.600
Jun 2017	9.77	31.1%	10.50	8.600
Sep 2017	9.88	32.6%	11.00	8.600



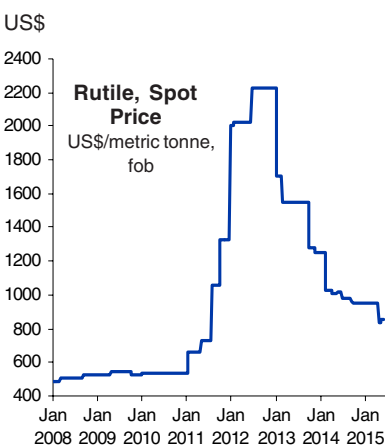
Molybdenum is principally used as an alloying agent in steel because of its anti-corrosive properties. As a by-product of copper, production costs are low and prices can be influenced by the price and demand for nickel and stainless steel, as well as molybdenum roasting capacity.

**Futures Market:** LME (since February 2010) **Pricing:** US\$/tonne **Contract Size:** 6 tonnes Mo (+/-5% (Mo content 57-63%) **Delivery Options:** 10 tonnes (RMC), deliverable in 200 or 250kg drums.

**RUTILE**

(Nominal, Quarterly Averages)

US\$/metric tonne	Consensus (Mean)	% change from spot	Forecast Range	
			High	Low
Spot price	800.0			
Jun 2015	808.5	1.1%	915	650.0
Sep 2015	824.6	3.1%	935	675.0
Dec 2015	825.6	3.2%	935	675.0
Mar 2016	854.8	6.9%	1000	700.0
Jun 2016	862.8	7.8%	1000	700.0
Sep 2016	870.7	8.8%	1000	750.0
Dec 2016	878.7	9.8%	1000	750.0
Mar 2017	929.6	16.2%	1050	758.0
Jun 2017	930.1	16.3%	1050	758.0
Sep 2017	965.6	20.7%	1250	800.0



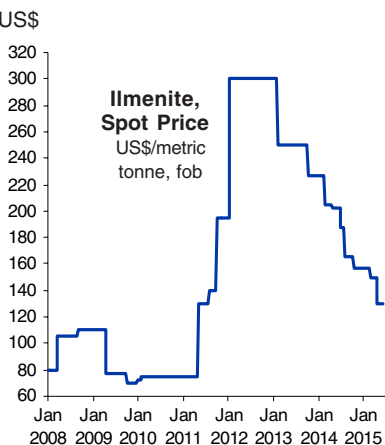
Mineral sand prices are principally determined by derived demand. Rutile is used to make titanium dioxide (it is approximately 95% TiO<sub>2</sub> in its mineral form), which can be used to make titanium or as a white pigment in papers, plastics and paints and cosmetics.

Prices are set under long-term contracts between producers (many of which will produce from mine to end use) and consumers.

**ILMENITE**

(Nominal, Quarterly Averages)

US\$/metric tonne	Consensus (Mean)	% change from spot	Forecast Range	
			High	Low
Spot price	130.0 e			
Jun 2015	140.8	8.3%	185.0	100.0
Sep 2015	147.4	13.4%	190.0	120.0
Dec 2015	150.5	15.8%	190.0	120.0
Mar 2016	159.8	22.9%	200.0	130.0
Jun 2016	159.7	22.9%	200.0	130.0
Sep 2016	163.8	26.0%	200.0	130.0
Dec 2016	163.7	25.9%	200.0	130.0
Mar 2017	168.6	29.7%	200.0	141.9
Jun 2017	168.4	29.6%	200.0	140.4
Sep 2017	172.5	32.7%	200.0	138.9



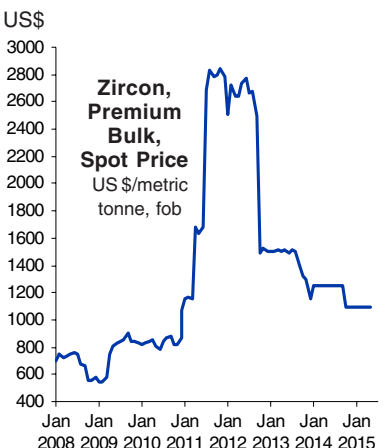
Ilmenite is mined alongside rutile and is also used to make titanium dioxide (it is approximately 54% TiO<sub>2</sub> in its mineral form). Prices are set under long-term contracts. The value of ilmenite is substantially lower than that of rutile and is therefore often used to produce synthetic rutile. 90% of titanium metal is sourced from ilmenite.

Australia is the world's largest producer (55%) of ilmenite and rutile followed by South Africa (24%) and Ukraine (16%).

**ZIRCON**

(Nominal, Quarterly Averages)

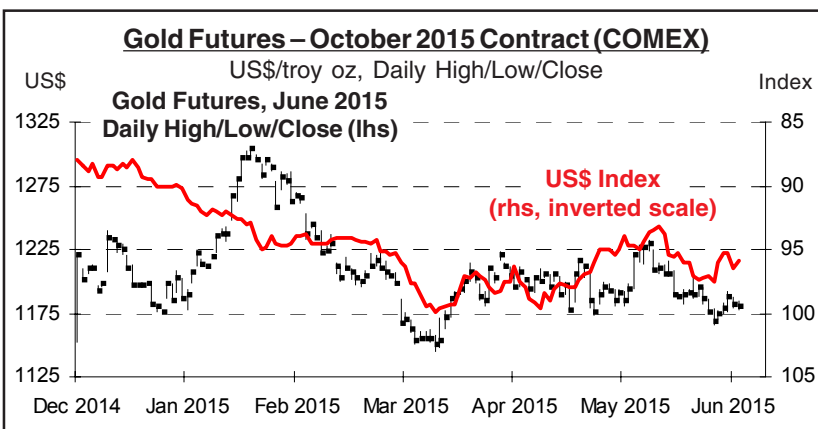
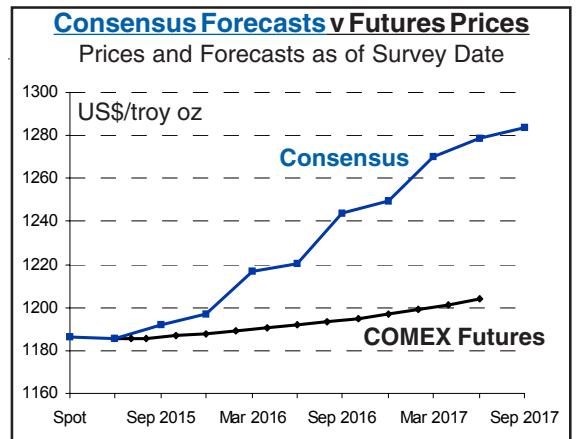
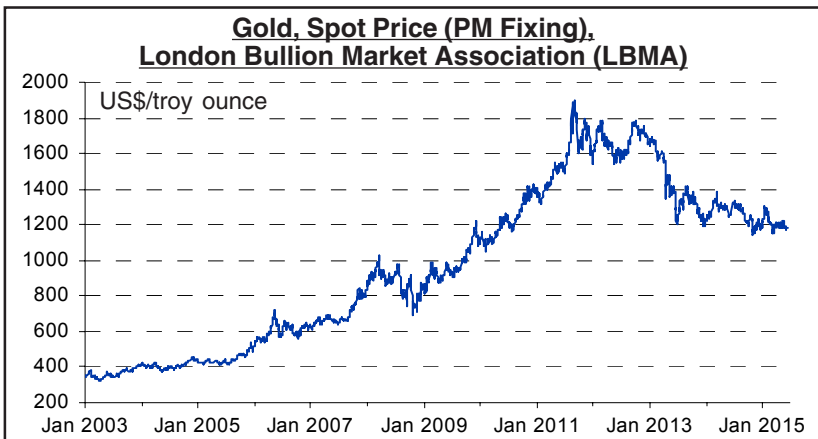
US\$/metric tonne	Consensus (Mean)	% change from spot	Forecast Range	
			High	Low
Spot price	1100			
Jun 2015	1052	-4.4%	1125	1000
Sep 2015	1063	-3.4%	1145	950.0
Dec 2015	1058	-3.8%	1145	900.0
Mar 2016	1074	-2.3%	1135	892.3
Jun 2016	1082	-1.6%	1150	890.1
Sep 2016	1085	-1.4%	1150	887.8
Dec 2016	1092	-0.7%	1200	885.5
Mar 2017	1133	3.0%	1250	883.1
Jun 2017	1132	2.9%	1250	880.6
Sep 2017	1135	3.1%	1250	878.1



The price of Zircon (which is mainly used in ceramics and tiles) is set under long-term contracts between producers and consumers. It has risen sharply in recent years following the move from spot-trading to contract-trading.

Iluka is the world's largest zircon miner and as a result the most influential in setting a benchmark price. Its Eucla basin in Australia is mined principally for zircon unlike the majority of other mines, for which zircon is a coproduct of rutile and ilmenite.

Survey Date Spot Price (Jun. 15): US\$1186		Gold Forecasts, US\$/Troy Ounce									
	Jun '15	Sep '15	Dec '15	Mar '16	% change from spot	Jun '16	Sep '16	Dec '16	Mar '17	Jun '17	Sep '17
Capital Economics	1200	1250	1350	1410	18.9%	1425	1435	1450	na	na	na
BoA Merrill Lynch	1225	1250	1300	1350	13.8%	1250	1350	na	na	na	na
Macquarie	1165	1250	1290	1310	10.5%	1350	1375	1400	1420	1435	1455
RBC Capital Markets	1200	1275	1300	1300	9.6%	1300	1300	1300	1350	1350	1350
Euromonitor International	1218	1231	1242	1253	5.7%	1259	1264	1269	1274	1277	1280
ANZ	1142	1125	1188	1250	5.4%	1308	1360	1400	1435	1450	1450
Credit Suisse	1200	1225	1250	1250	5.4%	1225	1250	1275	1250	1250	1250
Investec	1195	1235	1235	1250	5.4%	1250	1270	1270	1285	1285	1300
UBS	1165	1183	1195	1250	5.4%	1250	1250	1250	1250	1250	1250
Liberium Capital	1171	1240	1240	1240	4.5%	1240	1240	1240	na	na	na
CPM Group	1194	1188	1215	1239	4.5%	1252	1239	1258	1272	na	na
Econ Intelligence Unit	1200	1210	1200	1220	2.9%	1240	1270	1280	1305	1300	1320
Barclays Capital	1190	1150	1170	1215	2.4%	1215	1215	1215	na	na	na
Oxford Economics	1206	1207	1208	1211	2.1%	1214	1217	1222	1226	1231	1236
CIBC	1100	1100	1100	1200	1.2%	1200	1200	1200	1150	1150	1150
Numis	1200	1200	1200	1200	1.2%	1207	1215	1222	1230	1238	1245
Scotiabank	1181	1164	1164	1185	-0.1%	1185	1185	1200	1300	1300	1300
IHS Global Insight	1195	1173	1178	1184	-0.1%	1178	1187	1197	1196	1192	1193
Citigroup	1200	1180	1170	1180	-0.5%	1205	1220	1225	1260	1260	1260
Morgan Stanley	1175	1165	1180	1165	-1.8%	1165	1165	1165	1150	1150	1150
Australia Dept of Industry	1190	1150	1120	1160	-2.2%	1220	1270	1330	1360	1450	1450
China Int'l Capital Corp	1200	1200	1150	1150	-3.0%	1150	1150	1150	na	na	na
Commonwealth Bank	1180	1150	1110	1115	-6.0%	1118	1132	1139	1151	1164	1189
Deutsche Bank	1170	1150	1125	1115	-6.0%	1100	1100	1085	na	na	na
Societe Generale	na	1150	1050	1025	-13.6%	1000	na	na	na	na	na
<b>Consensus (Mean)</b>	<b>1186</b>	<b>1192</b>	<b>1197</b>	<b>1217</b>	<b>2.6%</b>	<b>1220</b>	<b>1244</b>	<b>1250</b>	<b>1270</b>	<b>1278</b>	<b>1284</b>
High	1225	1275	1350	1410		1425	1435	1450	1435	1450	1455
Low	1100	1100	1050	1025		1000	1100	1085	1150	1150	1150
Standard Deviation	25.9	44.8	69.8	78.9		82.7	79.1	86.5	83.8	96.4	97.0



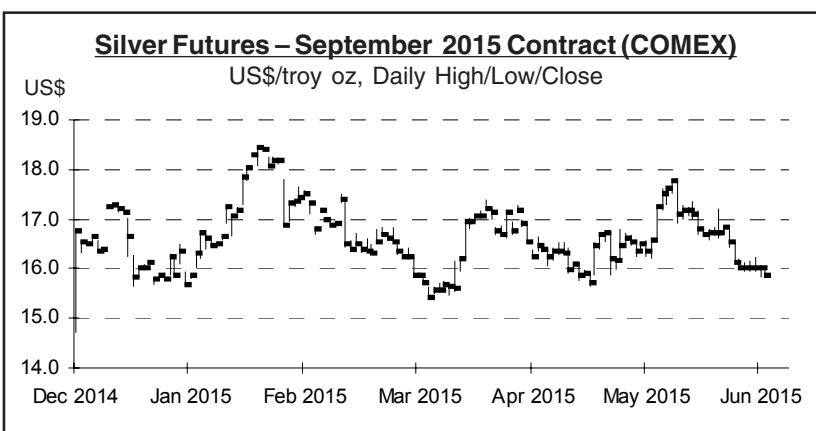
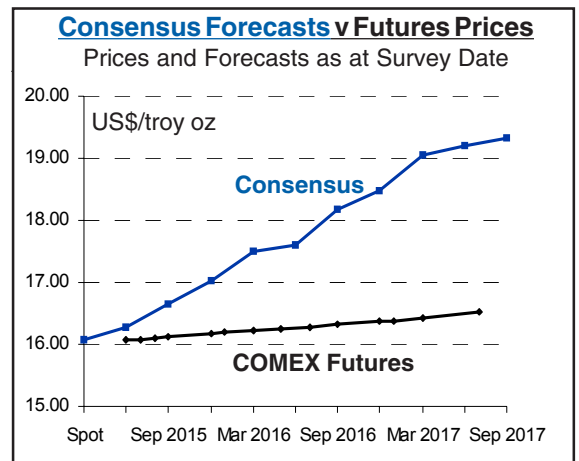
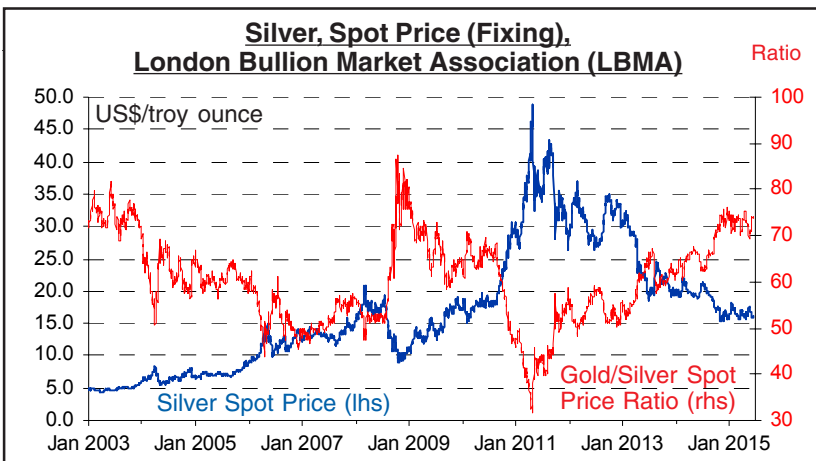
**Relatively Downbeat Price Outlook**

- ◆ Gold retraced some of its losses last week as heightened uncertainty over a possible Greek debt default lifted safe haven demand. However, the opposite influence continues to come from solid US indicators, with speculation about a rate hike as soon as September. Car sales and housing starts have soared in recent months, while 280,000 jobs were added in May. The path of US monetary tightening is likely to be gradual, however.
- ◆ Increased jewellery demand from India ahead of the main wedding season should offer some near-term gold price support.

Gold Supply and Demand (2013)					
Production	tonnes	% of world	Consumption	tonnes	% of world
1 China	420	15.2%	1. China	1312	31.6%
2 Australia	255	9.2%	2. India	975	23.5%
3 USA	227	8.2%	3. USA	190	4.6%
4 Russia	220	7.9%	4. Turkey	175	4.2%
5 Peru	150	5.4%	5. Thailand	158	3.8%
World	2770		World	4150	

Gold prices are fixed twice daily by the LBMA providing a benchmark price for trades on various exchanges and over-the-counter trades.  
**US Futures Market: COMEX Pricing:** US\$/troy ounce  
**Contract Size:** 100 troy ounces **Deliverability:** Next 3 calendar months; any February, April, August and October within 23 months; and any June and December within 72 months. **Contracts Traded:** 40,518,804 (2014).

Survey Date Spot Price (Jun. 15): US\$16.07		Silver Forecasts, US\$/Troy Ounce									
	Jun '15	Sep '15	Dec '15	Mar '16	% change from spot	Jun '16	Sep '16	Dec '16	Mar '17	Jun '17	Sep '17
Capital Economics	16.80	18.25	20.25	21.00	30.7%	22.00	23.00	23.50	na	na	na
UBS	16.00	17.90	19.00	20.00	24.5%	20.00	20.00	20.00	21.00	21.00	21.00
Credit Suisse	16.70	17.70	18.30	19.00	18.2%	19.00	19.00	19.00	19.80	19.80	19.80
Macquarie	16.00	17.25	18.25	19.00	18.2%	19.50	20.00	21.00	22.00	22.30	22.00
BoA Merrill Lynch	17.00	17.50	19.50	18.50	15.1%	17.50	19.00	na	na	na	na
RBC Capital Markets	16.75	17.50	18.00	18.50	15.1%	18.50	18.50	18.50	20.00	20.00	20.00
Morgan Stanley	na	17.40	17.80	18.20	13.3%	18.20	18.20	18.20	18.00	18.00	18.00
Liberium Capital	16.10	18.08	18.08	18.08	12.5%	18.08	18.08	18.08	na	na	na
CPM Group	16.58	16.30	16.90	17.80	10.8%	17.60	17.40	18.75	19.00	na	na
CIBC	15.28	15.28	15.28	17.65	9.8%	17.65	17.65	17.65	17.42	17.42	17.42
Investec	16.50	17.15	17.15	17.61	9.6%	17.61	18.14	18.14	18.62	18.62	19.12
Numis	16.67	16.67	16.67	17.27	7.5%	17.37	18.13	18.25	19.07	19.19	19.31
Deutsche Bank	15.90	17.00	17.00	17.02	5.9%	17.19	17.19	17.22	na	na	na
ANZ	15.58	14.90	15.90	17.00	5.8%	18.25	19.75	21.25	22.50	23.50	24.10
Commonwealth Bank	16.50	16.35	16.20	16.00	-0.4%	16.50	17.00	17.50	18.00	18.50	19.00
Scotiabank	15.93	15.00	15.00	16.00	-0.4%	16.00	17.00	18.00	19.00	19.00	19.00
Citigroup	16.20	16.15	15.80	15.90	-1.0%	16.20	16.40	16.50	16.95	16.95	16.95
Barclays Capital	16.50	15.80	16.00	15.80	-1.7%	15.80	15.80	15.80	na	na	na
IHS Global Insight	16.16	15.91	15.64	15.55	-3.2%	15.20	14.87	15.08	15.17	15.36	15.38
Societe Generale	na	15.00	14.00	14.00	-12.9%	14.00	na	na	na	na	na
<b>Consensus (Mean)</b>	<b>16.29</b>	<b>16.65</b>	<b>17.04</b>	<b>17.49</b>	<b>8.9%</b>	<b>17.61</b>	<b>18.16</b>	<b>18.47</b>	<b>19.04</b>	<b>19.20</b>	<b>19.31</b>
High	17.00	18.25	20.25	21.00		22.00	23.00	23.50	22.50	23.50	24.10
Low	15.28	14.90	14.00	14.00		14.00	14.87	15.08	15.17	15.36	15.38
Standard Deviation	0.46	1.08	1.61	1.66		1.78	1.80	2.01	1.97	2.19	2.24



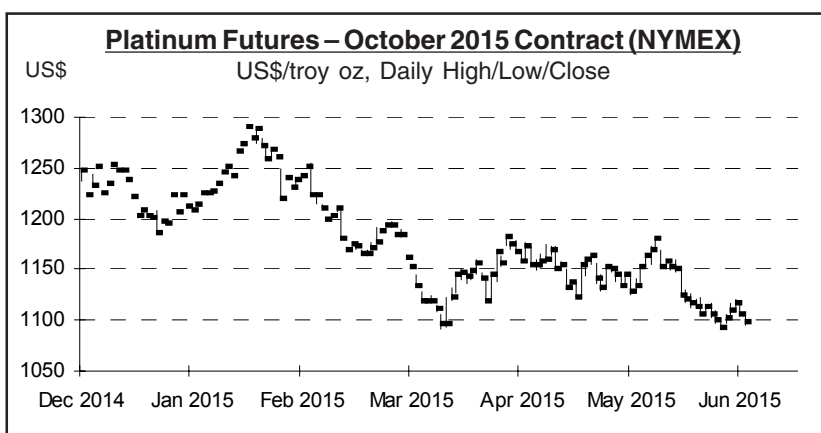
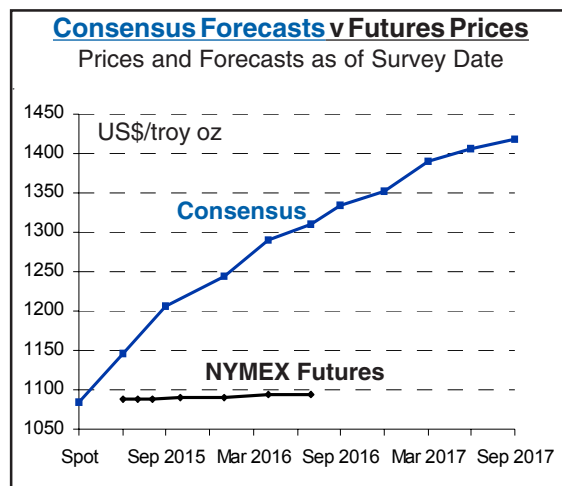
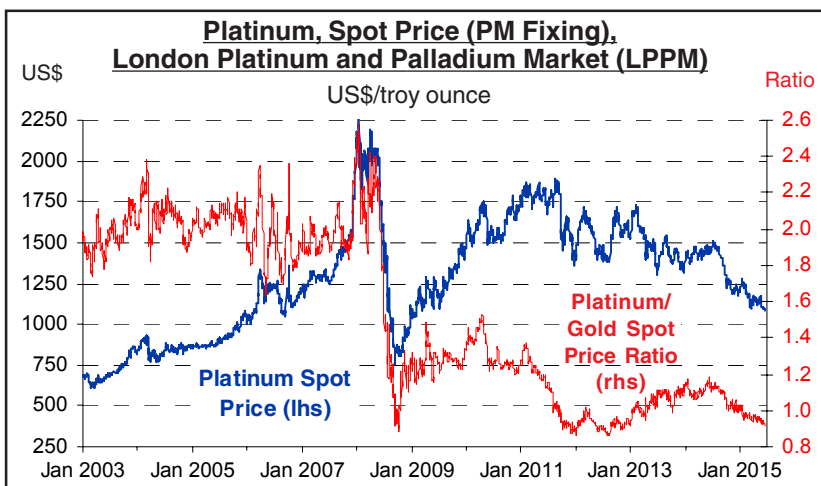
**Improving Supply and Demand Fundamentals**

- ◆ With underlying US\$ strength and widespread disinflation around the globe hampering the appeal of precious metals, silver has struggled in recent months.
- ◆ Our panel expects the metal to strengthen during the second half of 2015 and beyond, mainly reflecting adjustments to supply and demand fundamentals.
- ◆ Current depressed price levels look likely to encourage a reduction in silver production while industrial demand for the metal is set to rise on the back of a pickup in usage, notably on solar power projects.

World Production and Uses of Silver (2013)			
Producer	Millions of Ounces	Use	% of total demand
1. Mexico	169.7	1. Industrial Applications	54.3
2. Peru	118.1	2. Coins & bars	22.7
3. China	118.0	3. Jewellery	18.4
4. Australia	59.2	4. Photography	4.7
5. Russia	45.4	5. Silverware	4.6

Silver, like gold, has a price set by members of the LBMA which is used as a benchmark for over-the-counter trades.  
**US Futures Market: COMEX Pricing:** US\$/troy ounce  
**Contract Size:** 5,000 troy ounces **Deliverability:** Next 3 calendar months; any January, March, May and September within 23 months; and any July and December within 60 months. **Contracts Traded:** 13,696,961 (2014).

Survey Date Spot Price (Jun. 15): US\$1084		Platinum Forecasts, US\$/Troy Ounce									
	Jun '15	Sep '15	Dec '15	Mar '16	% change from spot	Jun '16	Sep '16	Dec '16	Mar '17	Jun '17	Sep '17
Credit Suisse	1150	1250	1250	1500	38.4%	1500	1600	1600	1750	1750	1750
Liberium Capital	1094	1350	1350	1400	29.2%	1400	1450	1450	na	na	na
UBS	na	1300	1375	1400	29.2%	1400	1400	1400	1500	1500	1500
Macquarie	1125	1225	1300	1375	26.9%	1350	1350	1375	1400	1425	1450
Barclays Capital	1215	1250	1300	1325	22.3%	1325	1325	1325	na	na	na
Capital Economics	1150	1165	1250	1325	22.3%	1350	1375	1400	na	na	na
CPM Group	1146	1155	1200	1280	18.1%	1300	1250	1320	1330	na	na
IHS Global Insight	1143	1161	1229	1260	16.3%	1280	1305	1319	1312	1301	1304
Morgan Stanley	na	1228	1232	1256	15.9%	1281	1307	1333	1378	1422	1466
BoA Merrill Lynch	1200	1225	1250	1250	15.3%	1300	1350	na	na	na	na
Citigroup	1175	1235	1250	1250	15.3%	1280	1325	1350	1450	1450	1450
Deutsche Bank	1100	1150	1250	1250	15.3%	1300	1300	1350	na	na	na
RBC Capital Markets	1150	1200	1250	1250	15.3%	1300	1350	1350	1400	1400	1400
Investec	1135	1210	1210	1231	13.6%	1231	1251	1251	1272	1272	1287
Societe Generale	na	1180	1200	1225	13.0%	1250	na	na	na	na	na
Numis	1150	1150	1150	1200	10.7%	1258	1266	1297	1328	1360	1392
ANZ	1109	1063	1088	1138	5.0%	1150	1150	1150	1163	1175	1175
<b>Consensus (Mean)</b>	<b>1146</b>	<b>1206</b>	<b>1243</b>	<b>1289</b>	<b>19.0%</b>	<b>1309</b>	<b>1335</b>	<b>1351</b>	<b>1389</b>	<b>1405</b>	<b>1417</b>
<b>High</b>	1215	1350	1375	1500		1500	1600	1600	1750	1750	1750
<b>Low</b>	1094	1063	1088	1138		1150	1150	1150	1163	1175	1175
<b>Standard Deviation</b>	34	66	68	89		78	99	98	150	154	153



**Sputtering Global Recovery Dents Prices**

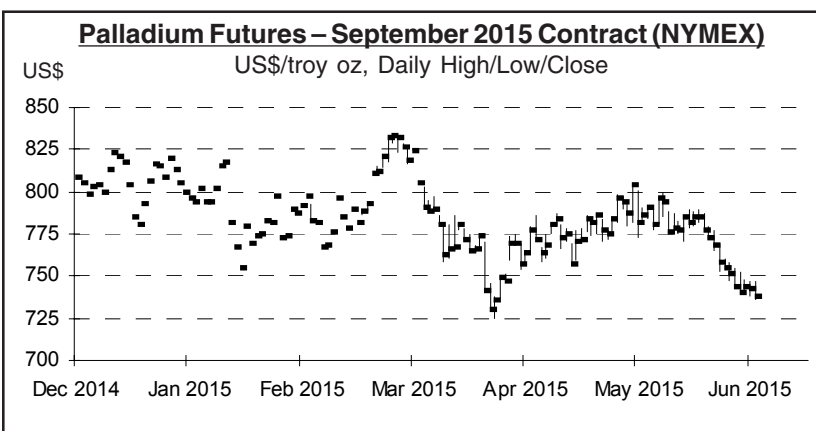
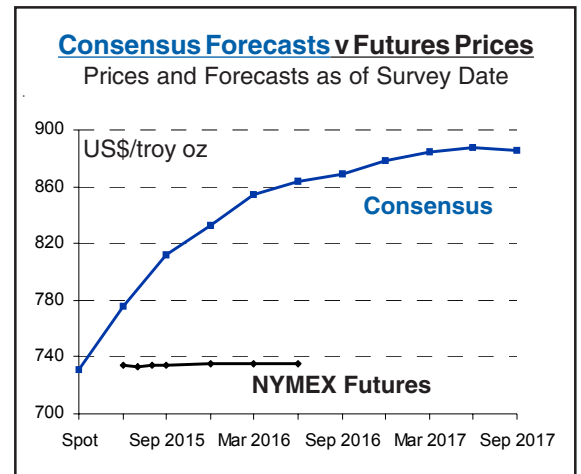
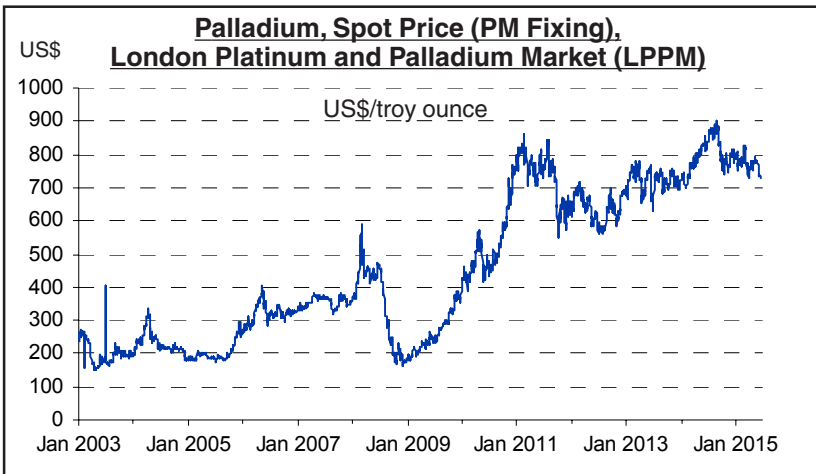
- ◆ The platinum/gold spot price ratio fell to its lowest level since 2013 in early June (see chart, above left) amid fresh concerns over the global growth outlook.
- ◆ Uncertainty surrounding a Greek bailout intensified in the run-up to our survey date as the IMF walked away from negotiations.
- ◆ Platinum, which is primarily used as an emission-reducing autocatalyst, has weighed down by recent car sale falls in China and the euro zone. However, the consensus is predicting that a price rebound during the next four quarters.

Platinum Production and Consumption (2013)			
Production	% of world total	Consumption	% of world total
1. South Africa	71.8	1. China	27.9
2. Russia	13.6	2. Europe	21.0
3. Zimbabwe	7.0	3. North America	12.8
4. North America	5.5	4. Japan	11.2
Rest of the World 2.2		Rest of the World 27.1	

**Platinum** prices are fixed twice daily by the LPPM to provide a benchmark price in a practice similar to that used for gold and silver.  
**US Futures Market: NYMEX Pricing:** US\$/troy ounce **Lot Size:** 50 troy ounces **Deliverability:** Over 15 months including the next 3 calendar months; then a January, April, June and October cycle. **Contracts Traded:** 3,235,941 (2014)



Survey Date Spot Price (Jun. 15): <b>US\$730.6</b>	<b>Palladium Forecasts, US\$/Troy Ounce</b>										
	Jun '15	Sep '15	Dec '15	Mar '16	% change from spot	Jun '16	Sep '16	Dec '16	Mar '17	Jun '17	Sep '17
Morgan Stanley	na	895.0	945.0	973.0	33.2%	998.0	1013.0	1029.0	1040.0	1040.0	1040.0
Capital Economics	775.0	820.0	875.0	925.0	26.6%	960.0	978.0	993.0	na	na	na
Citigroup	800.3	840.0	870.0	915.0	25.2%	935.0	935.0	950.0	950.0	950.0	950.0
BoA Merrill Lynch	800.0	825.0	850.0	900.0	23.2%	900.0	900.0	na	na	na	na
Credit Suisse	750.0	850.0	850.0	900.0	23.2%	900.0	925.0	925.0	925.0	925.0	925.0
UBS	800.0	885.0	930.0	900.0	23.2%	900.0	900.0	900.0	900.0	900.0	900.0
Macquarie	780.0	835.0	875.0	875.0	19.8%	900.0	925.0	950.0	975.0	1000.0	1000.0
Societe Generale	na	790.0	850.0	875.0	19.8%	900.0	na	na	na	na	na
Liberium Capital	748.0	836.8	836.8	867.8	18.8%	867.8	898.8	898.8	na	na	na
Barclays Capital	795.0	815.0	825.0	850.0	16.3%	850.0	850.0	850.0	na	na	na
RBC Capital Markets	780.0	785.0	800.0	850.0	16.3%	850.0	850.0	850.0	900.0	900.0	900.0
CPM Group	776.0	775.0	800.0	825.0	12.9%	805.0	815.0	835.0	850.0	na	na
Deutsche Bank	805.0	825.0	830.0	825.0	12.9%	850.0	850.0	900.0	na	na	na
Investec	770.0	802.0	802.0	821.0	12.4%	821.0	834.0	834.0	865.0	865.0	888.0
ANZ	770.6	807.5	812.5	815.0	11.6%	817.5	825.0	835.0	845.0	845.0	832.5
Numis	750.0	750.0	750.0	782.6	7.1%	820.3	825.3	810.5	795.5	780.2	764.8
Scotiabank	735.0	735.0	735.0	745.0	2.0%	755.0	755.0	800.0	900.0	900.0	900.0
IHS Global Insight	780.0	739.4	753.6	732.1	0.2%	709.8	683.9	683.4	670.6	655.5	643.7
<b>Consensus (Mean)</b>	<b>775.9</b>	<b>811.7</b>	<b>832.8</b>	<b>854.2</b>	<b>16.9%</b>	<b>863.3</b>	<b>868.4</b>	<b>877.7</b>	<b>884.7</b>	<b>887.3</b>	<b>885.8</b>
<b>High</b>	805.0	895.0	945.0	973.0		998.0	1013.0	1029.0	1040.0	1040.0	1040.0
<b>Low</b>	735.0	735.0	735.0	732.1		709.8	683.9	683.4	670.6	655.5	643.7
<b>Standard Deviation</b>	21.4	44.6	56.4	62.5		70.4	80.0	83.9	93.3	104.6	109.2



**Solid Gains Expected**

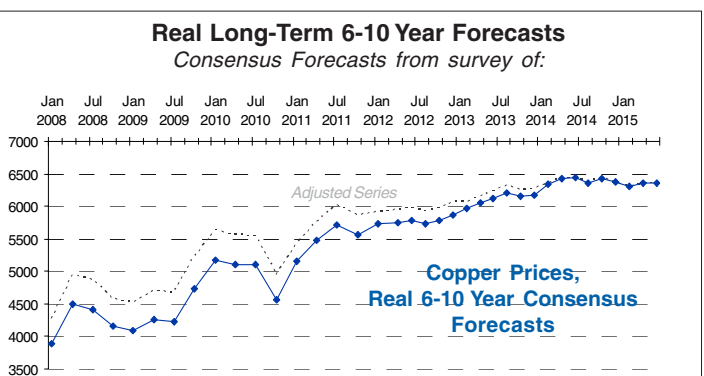
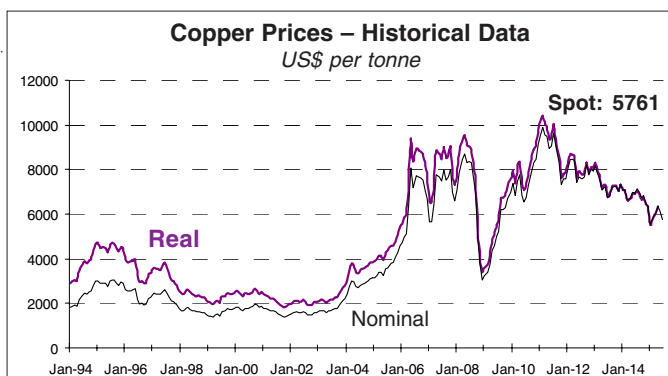
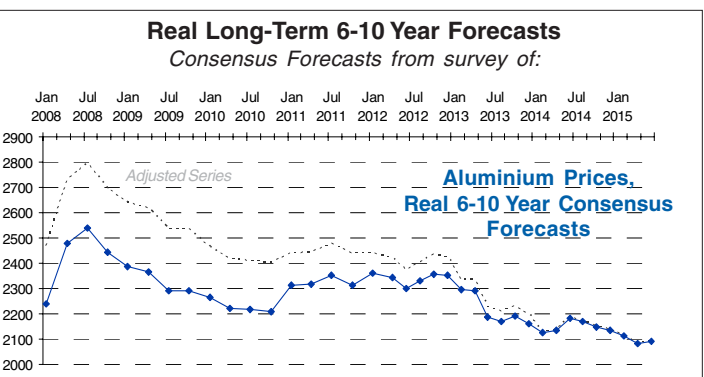
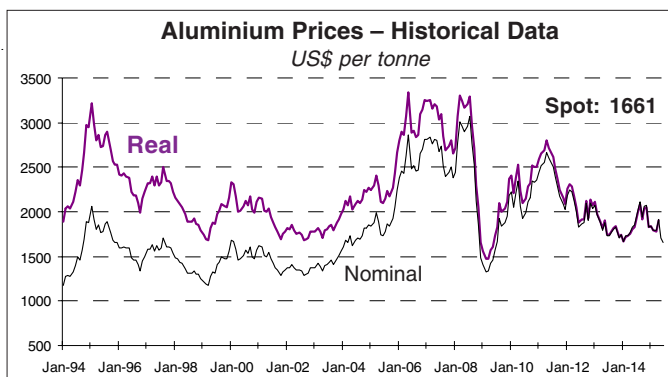
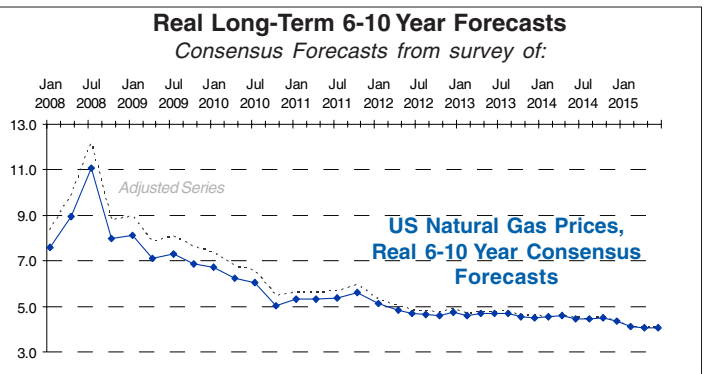
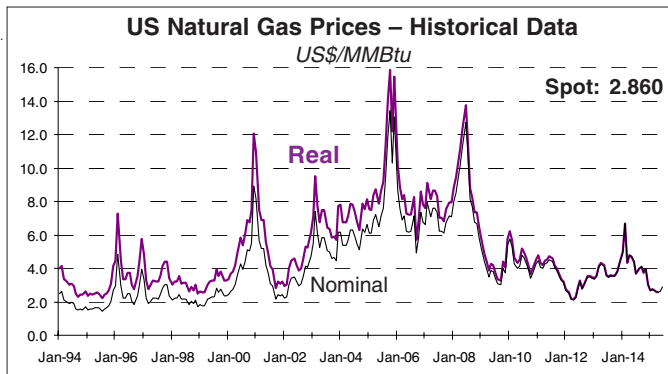
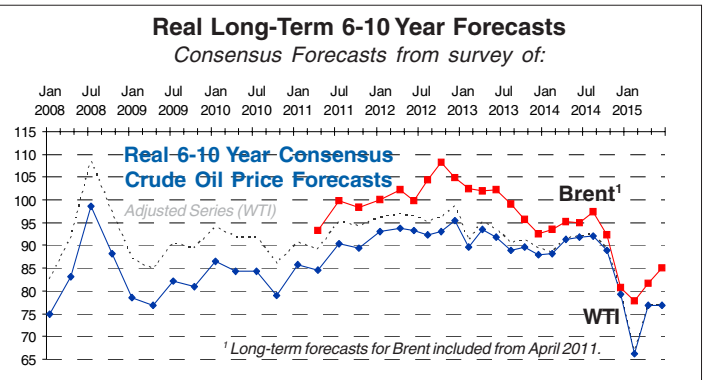
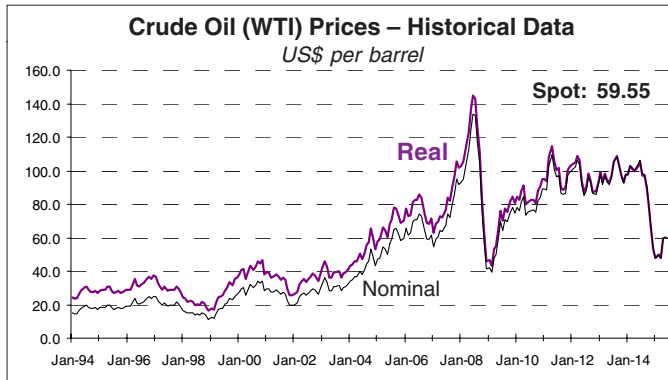
- Caught in the downdraft of sister metal, platinum, palladium fell to a two-month low of US\$730.6 per troy oz on our survey date.
- The consensus is predicting a rebound in the metal due to environmental considerations and high auto sales in China and the US – palladium is most commonly used in catalytic converters.
- Stricter environmental regulation to combat pollution in China and simmering geopolitical tensions involving the world's leading palladium producer, Russia, add upside risks to the price outlook.

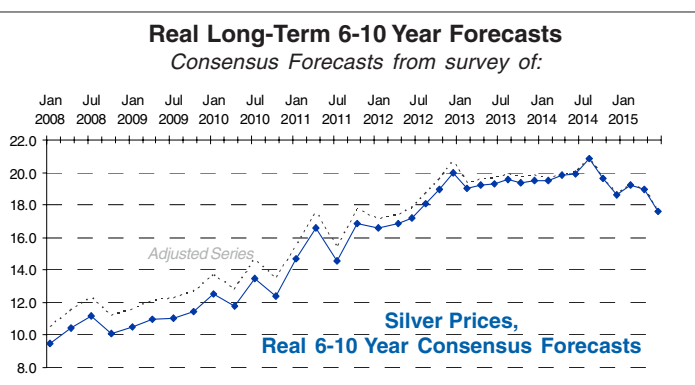
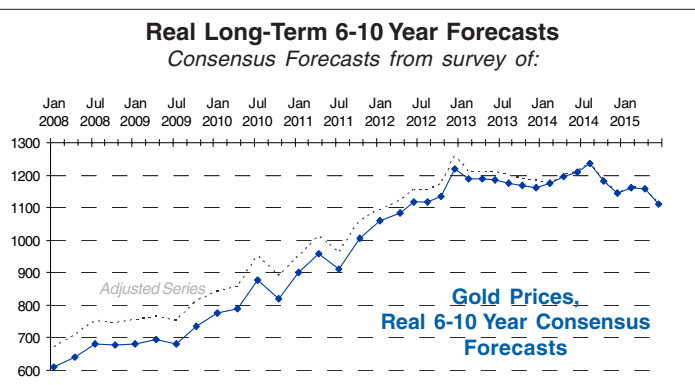
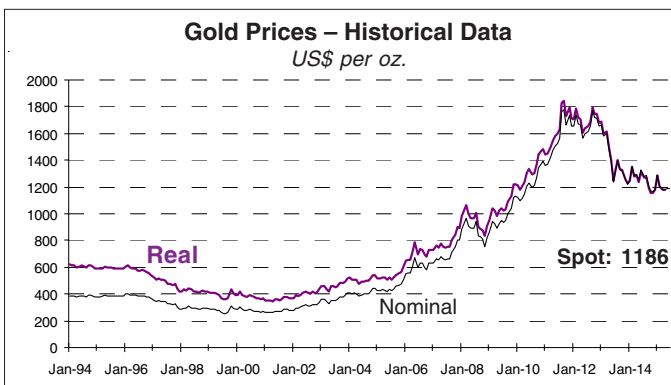
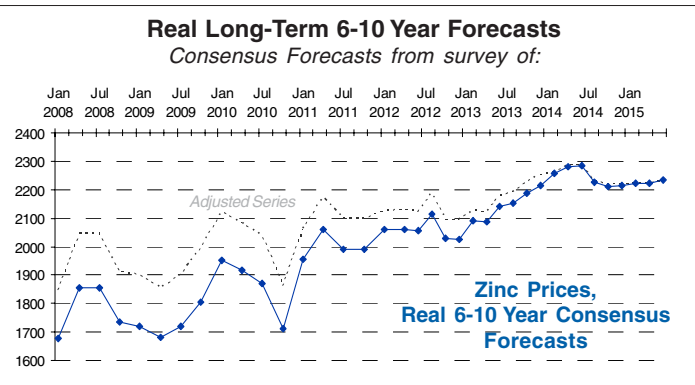
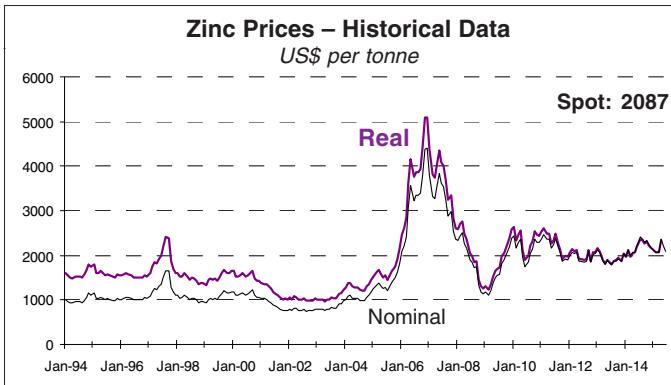
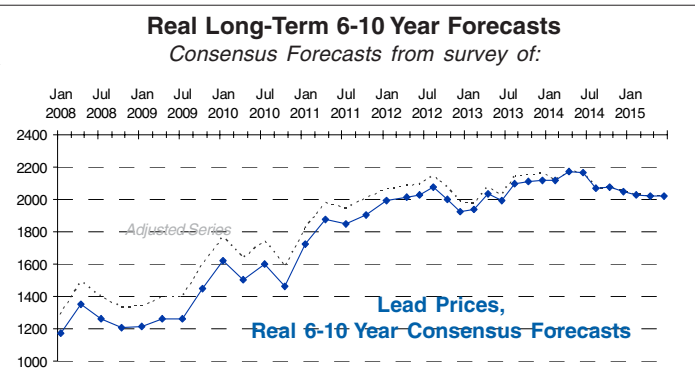
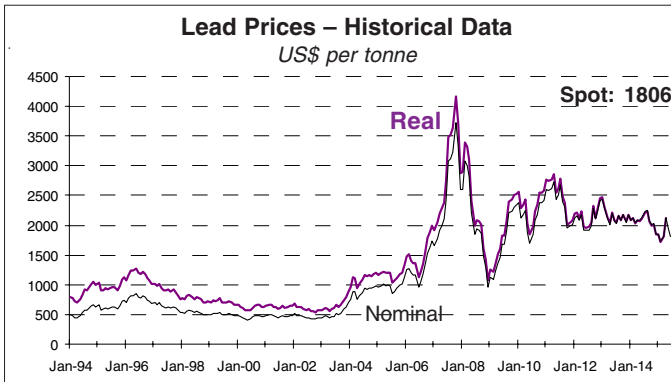
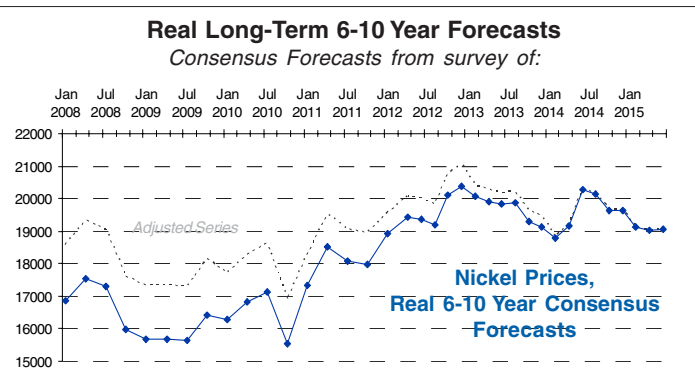
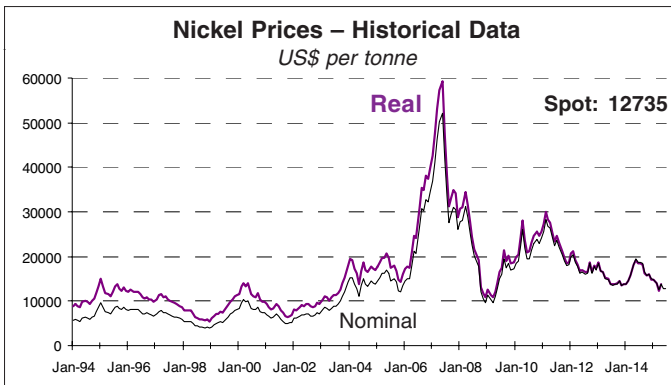
<b>Palladium Production and Consumption (2013)</b>			
Production	% of world total	Consumption	% of world total
1. Russia	42.0	1. North America	24.7
2. South Africa	36.5	2. China	21.3
3. North America	14.5	3. Europe	20.2
4. Zimbabwe	4.8	4. Japan	13.4
Rest of the World 2.2		Rest of the World 20.4	

Palladium prices are fixed twice daily by the LPPM to provide a benchmark price in a practice used for other precious metals. Most palladium is used in catalytic converters. **US Futures Market: NYMEX Pricing:** US\$/troy ounce **Lot Size:** 100 troy ounces **Deliverability:** Over 15 months including the next 3 calendar months; then a March, June, September and December cycle. **Contracts Traded:** 1,573,972 (2014).

Nominal prices are expressed in fixed money terms in a given year, while real values adjust for inflation over the years. In the **historical data charts** below and on the next page (covering 1994 to 2014), we show commodity price series in both nominal (**black line**) and real terms (**purple**). Nominal values are stated in current 2014 US\$ prices (definitions on individual commodity pages), while the real price series inflates the nominal values using the US CPI index (Jan. 2014 = 100). Real prices are important in the analysis of project feasibility and other long-term investment decisions, as is the choice of deflator. Adjustments based on general purpose price indices may be adequate for exploratory data analysis. To the right of each historical data chart, we graph **changes in the**

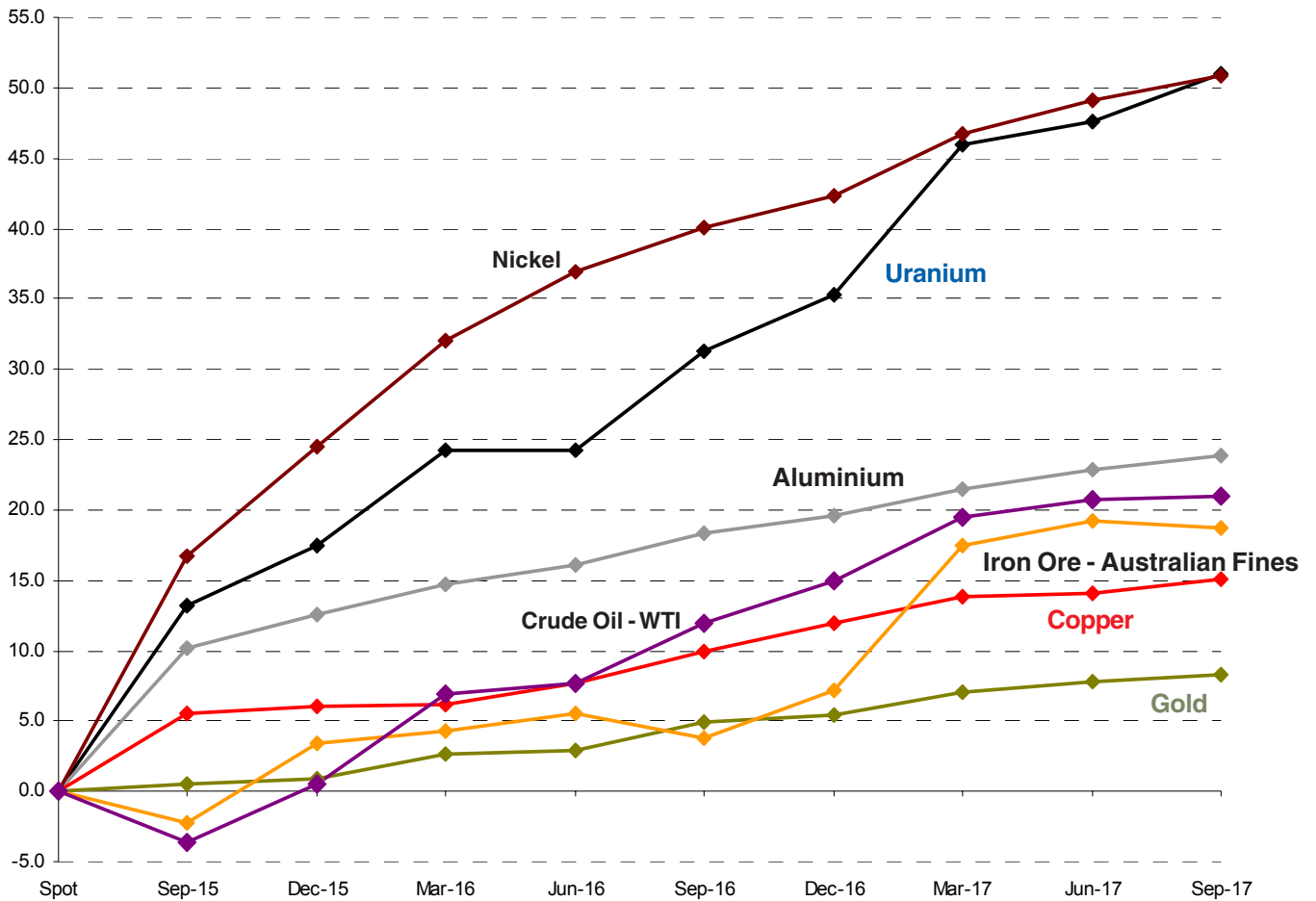
**real long-term consensus price forecasts** (for the 6-10 year rolling aggregate periods) back to January 2008. These price forecasts (**blue line**) are based on the US dollar level for the year in which they are made i.e figures from our 2008 survey are inflation-adjusted at 2008 US dollar prices. In order to make the historical long-term price forecasts comparable with those made in subsequent periods – the last three of which are in 2015 US dollar terms – we have adjusted the series using US CPI (**dashed grey line**), in much the same way as we did with the historical data. For several commodities, the long-term forecasts table on page 5 suggests that the real consensus price expectations can be 70% above (e.g. Uranium) or almost 10% below current spot prices.





## Consensus Forecasts Percentage Changes From US\$ Spot Price During the Next Ten Quarters

% Change



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