

April 8, 2014

Research
Global

Global Metals Playbook: 2Q14

Supply Challenges Ahead of a Cyclical Recovery

- Our broad thesis for the sector remains largely unchanged since the last quarterly review – while there are likely to be pockets of strength among select metals and bulk commodities, we believe 2014 is too early in the cycle to buy the sector. Supply and demand balances are generally more compelling from 2015.
- **Base Metals: Neutral** – Supportive shifts in supply/demand fundamentals exist, particularly in nickel and aluminium/alumina, but we think these transitions are longer dated. Recent copper price weakness offers a good entry point for value seekers.
- **Precious Metals: Bearish/Neutral** – Gold faces too many structural headwinds to realize significant price appreciation this year. PGMs have persuasive demand fundamentals, but recent lacklustre performance remains a concern.
- **Bulk Commodities: Neutral** – Iron ore prices will gain momentum in 2Q, but the transition to perennial oversupply is close at hand. In coal, as least a quarter of seaborne market producers are currently operating at a loss. Prices are unlikely to materially rise until production growth contracts.

Morgan Stanley Australia Limited+

Joel Crane

Joel.Crane@morganstanley.com

+61 3 9256 8961

Commodity Thermometer

Commodity	Bearish	Neutral	Bullish
Palladium			
Uranium			
Nickel			
Copper			
Platinum			
Alumina			
Iron Ore			
Lead			
Coking Coal			
Zinc			
Aluminum			
Thermal Coal			
Gold			

Source: Morgan Stanley Research

Morgan Stanley does and seeks to do business with companies covered in Morgan Stanley Research. As a result, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of Morgan Stanley Research. Investors should consider Morgan Stanley Research as only a single factor in making their investment decision.

For analyst certification and other important disclosures, refer to the Disclosure Section, located at the end of this report.

+ = Analysts employed by non-U.S. affiliates are not registered with FINRA, may not be associated persons of the member and may not be subject to NASD/NYSE restrictions on communications with a subject company, public appearances and trading securities held by a research analyst account.

Table of Contents

Key Changes	4
Sector Outlook	6

Base Metals

Aluminium & Alumina	13
Copper	17
Lead	21
Nickel	23
Zinc	27

Precious Metals

Gold	31
Silver	34
Platinum	35
Palladium	37
Rhodium	39

Steel and Steel-making Raw Materials

Steel	41
Iron Ore	47
Met Coal	50

Mined Energy

Thermal Coal	54
Uranium	57

Global Commodities Team

Global Commodities, Metals & Bulk Commodities (Australia)

Joel Crane 6+ 61 3 9256 8961

EMEA Metals & Mining, Steel (London)

Menno Sanderse 3+ 44 (0)20 7425 6148

Alain Gabriel 3+ 44 (0)20 7425 8959

Dan Shaw 3+ 44 (0)20 7425 5853

Australia Metals & Mining, Steel (Sydney)

Brendan Fitzpatrick 6+ 61 2 9770 1148

Stefan Hansen 6+ 61 2 9770 1390

Michael Bentley 6+ 61 2 9770 1529

Rahul Anand 6+ 62 2 9770 1136

Kurt Walker 6+ 63 2 9770 9225

EMEA Metals & Mining, Steel (Moscow)

Dmitriy Kolomytsyn 9+ 7 (495) 287 2309

Neri Tollardo 9+ 7 (495) 287 2118

EMEA Metals & Mining, Steel (Johannesburg)

Leigh Bregman 10+ 27 11 282 8969

Christopher Nicholson 10+ 27 11 282 1154

Leroy Mnguni 10+ 27 11 282 1082

India Metals & Mining, Steel (Mumbai)

Vipul Prasad 4+ 91 22 6118 2238

Ritish Rangwalla 4+ 91 22 6118 2258

China Metals & Mining, Steel (Hong Kong)

Rachel Zhang 5+ 852 2239 1520

John Lam 5+ 852 2848 5412

Ada Gao 5+ 852 2239 7810

Korea Metals & Mining, Steel (Seoul)

Young Suk Shin 11+ 82 2 399 9907

Global Commodities, Energy and Agriculture (New York)

Adam Longson 1 1 212 761 4061

Tai Liu 1 1 212 761 3585

Bennett Meier 1 1 212 761 4967

Alan Lee 1 1 212 761 3266

Elizabeth Volynsky 1 1 212 761 7201

Neel Mehta 1 1 212 761 8582

Latin America Metals & Mining, Steel, Pulp & Paper (New York/São Paulo/Mexico)

Carlos de Alba 1 1 212 761 4927

Pablo Abraham 2+ 52 55 5282 6745

Lulica Rocha 2+ 55 11 3048 6081

Asia Oil & Gas, Coal (Hong Kong and Jakarta)

Wee-Kiat Tan 5+ 852 2848 7488

Sara Chan 5+ 852 2848 5292

Andy Meng 5+ 852 2239 7689

Aphrodita Kasih 12+ 62 21 3048 8126

Japan Metals & Mining, Steel (Tokyo)

Harunobu Goroh 7+ 81 3 5424 5343

Akira Morimoto 7+ 81 3 6422 8650

Li Luo 5+ 86 21 2326 0032

Yu Shirakawa 7+ 81 3 6836 5432

North America Metals & Mining, Steel (New York/Toronto)

Evan L. Kurtz 1 1 212 761 7583

Paretosh Misra 1 1 212 761 3590

Piyush Sood 1 1 212 761 3789

Alexander S. J. Levy 1 1 212 761 1734

Marcus Lindberg 1 1 212 761 6715

Brad Humphrey 1 1 416 943 8416

Tom Halton 1 1 416 943 8436

1 Morgan Stanley & Co. Incorporated 2 Morgan Stanley C.T.V.M. S.A. 3 Morgan Stanley & Co. International plc 4 Morgan Stanley India Company Private Limited

5 Morgan Stanley Asia Limited 6 Morgan Stanley Australia Ltd 7 Morgan Stanley MUFG Securities 9 OOO Morgan Stanley Bank

10 RMB Morgan Stanley (Proprietary) Ltd 11 Morgan Stanley & Co. International plc, Seoul Branch 12 PT. Morgan Stanley Asia Indonesia

+ Analysts employed by non-U.S. affiliates are not registered with FINRA, may not be associated persons of the member and may not be subject to NASD/NYSE restrictions on communications with a subject company, public appearances and trading securities held by a research analyst account.

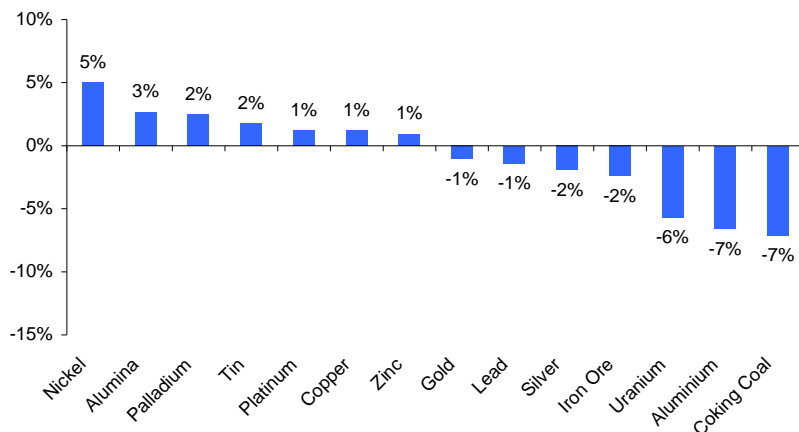
Forecast Price Changes in 2014-15

Base Metals		2Q 14e	3Q 14e	4Q 14e	1Q 15e	2Q 15e	2014e	2015e	LT
Aluminium	US\$/lb	0.78	0.76	0.76	0.78	0.80	0.77	0.82	1.25
	US\$/t	1,720	1,676	1,676	1,720	1,764	1,706	1,797	2,748
<i>vs. previous forecast</i>		0%	0%	3%	3%	0%	1%	1%	0%
Copper	US\$/lb	3.15	3.25	3.35	3.32	3.35	3.23	3.36	3.60
	US\$/t	6,945	7,165	7,385	7,319	7,385	7,127	7,397	7,938
<i>vs. previous forecast</i>		-9%	0%	0%	0%	0%	-4%	0%	0%
Nickel	US\$/lb	7.15	7.20	7.30	7.90	8.10	7.08	7.95	10.18
	US\$/t	15,763	15,873	16,094	17,416	17,857	15,600	17,527	22,439
<i>vs. previous forecast</i>		7%	10%	14%	14%	16%	8%	13%	0%
Zinc	US\$/lb	0.92	0.95	0.96	0.99	1.05	0.94	1.06	1.24
	US\$/t	2,028	2,094	2,116	2,183	2,315	2,066	2,331	2,740
<i>vs. previous forecast</i>		-6%	-3%	0%	0%	0%	-3%	0%	0%
Precious Metals		2Q 14e	3Q 14e	4Q 14e	1Q 15e	2Q 15e	2014e	2015e	LT
Gold	US\$/oz	1,250	1,185	1,150	1,125	1,150	1,219	1,138	1,444
		6%	3%	5%	0%	0%	5%	0%	0%
<i>vs. previous forecast</i>									
Platinum	US\$/oz	1,510	1,550	1,590	1,610	1,630	1,519	1,640	2,246
		0%	0%	0%	0%	0%	-1%	0%	0%
<i>vs. previous forecast</i>									
Palladium	US\$/oz	780	800	837	847	858	790	863	1,117
		1%	2%	0%	0%	0%	0%	0%	0%
<i>vs. previous forecast</i>									
Steel Making Raw Materials		2Q 14e	3Q 14e	4Q 14e	1Q 15e	2Q 15e	2014e	2015e	LT
Spot Iron Ore Fines 62% Equiv, CFR N China	US\$/t	120	115	115	117	115	118	114	114
		0%	0%	0%	0%	0%	-2%	0%	0%
<i>vs. previous forecast</i>									
Spot Premium Hard Coking Coal, FOB	US\$/t	125	135	150	165	170	131	165	180
		-14%	-17%	-17%	-9%	-3%	-12%	-4%	0%
<i>vs. previous forecast</i>									
Mined Energy		2Q 14e	3Q 14e	4Q 14e	1Q 15e	2Q 15e	2014e	2015e	LT
Thermal Coal - Newcastle Spot	US\$/t	76	76	77	77	85	77	85	106
		-9%	-9%	-9%	-9%	-5%	-9%	-5%	0%
<i>vs. previous forecast</i>									
UsO ₆ Spot Price	US\$/lb	38.00	40.00	42.00	42.00	45.00	38.84	45.50	71.63
		3%	8%	5%	5%	5%	4%	5%	0%
<i>vs. previous forecast</i>									

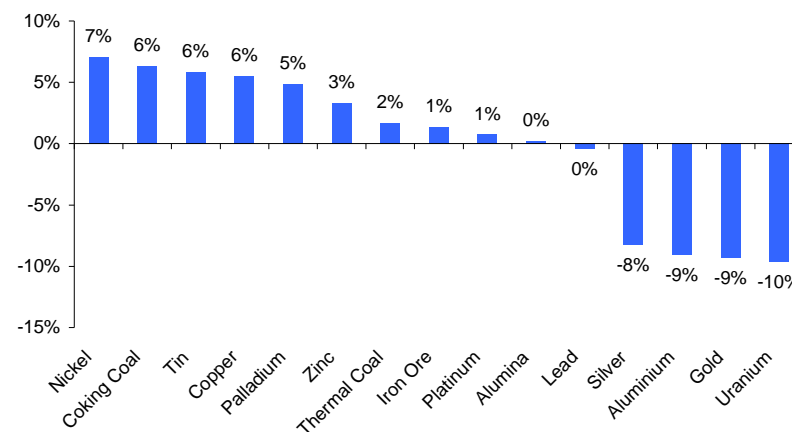
Morgan Stanley Commodity Price Forecasts Versus Consensus

	Unit	MS CY14e	Market CY14	% Diff	MS CY15e	Market CY15	% Diff	MS LT	Market LT	% Diff
Base Metals										
Aluminium	US\$/lb	0.77	0.83	-7%	0.82	0.90	-9%	1.25	1.11	12%
Copper	US\$/lb	3.23	3.20	1%	3.36	3.18	6%	3.60	3.29	9%
Nickel	US\$/lb	7.08	6.74	5%	7.95	7.43	7%	10.18	9.94	2%
Zinc	US\$/lb	0.94	0.93	1%	1.06	1.02	3%	1.24	1.17	6%
Lead	US\$/lb	0.98	0.99	-1%	1.04	1.04	0%	1.15	1.08	7%
Tin	US\$/lb	10.42	10.24	2%	11.06	10.45	6%	11.46	9.22	24%
Precious Metals										
Gold	US\$/oz	1,219	1,232	-1%	1,138	1,255	-9%	1,444	1,318	10%
Silver	US\$/oz	19.74	20.13	-2%	18.86	20.56	-8%	28.54	22.60	26%
Platinum	US\$/oz	1,519	1,501	1%	1,640	1,628	1%	2,246	1,856	21%
Palladium	US\$/oz	790	771	2%	863	823	5%	1,117	835	34%
Bulks										
Iron Ore	US\$/t	118	121	-2%	114	112	1%	114	101	12%
Coking Coal	US\$/t	133	143	-7%	170	160	6%	180	178	1%
HRC Steel Asia	US\$/t	640	589	9%	630	617	2%	569	661	-14%
Thermal Coal	US\$/t	82	84	-3%	90	88	2%	113	99	14%
Other										
Alumina	US\$/t	318	309	3%	323	323	0%	420	371	13%
Uranium	US\$/lb	39	41	-6%	46	50	-10%	72	74	-3%

Morgan Stanley versus Consensus, 2014e



Morgan Stanley versus Consensus, 2015e



e = Morgan Stanley Research estimates and Bloomberg and Consensus Economics for market consensus estimates.

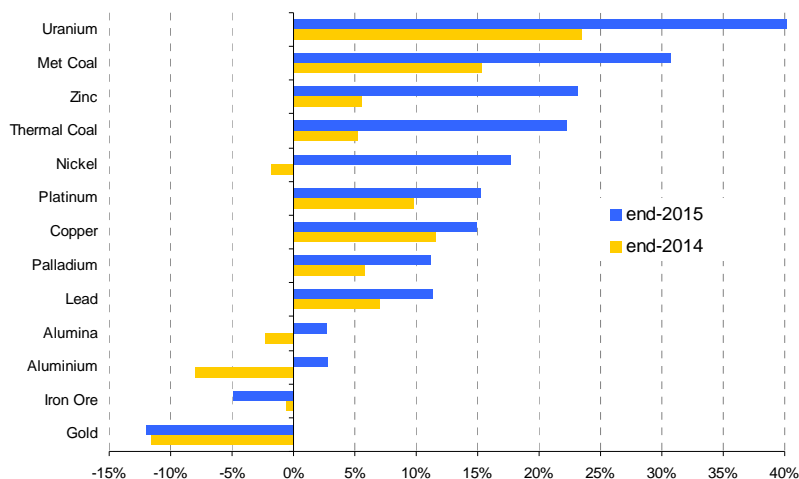
Source: Bloomberg, Consensus Economics, Morgan Stanley Research.

Sector Outlook

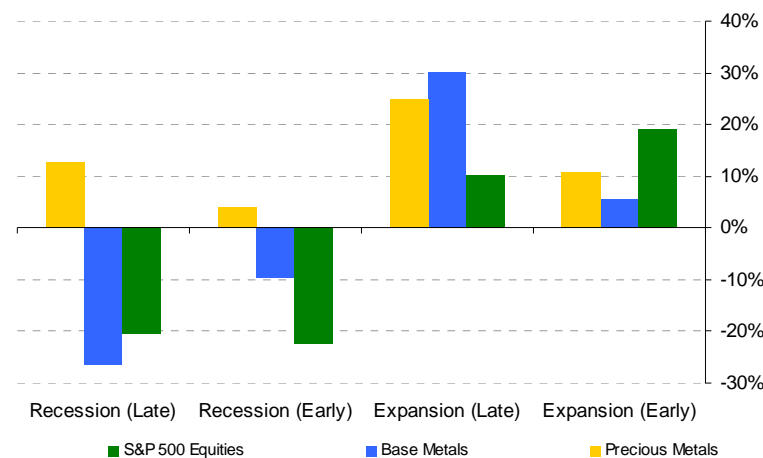
Cyclical demand momentum not yet powerful enough to overcome oversupply

- Commodities tend to outperform in the late expansion phase:** As physical assets, commodities respond to the current environment while equities price off future expectations. This dynamic causes equities to discount slowing EPS growth and inflation pressures as the cycle matures, while commodities continue to benefit from rising demand (and supply constraints) until growth actually turns negative. We argue most indicators suggest we are still in the middle part of the business cycle and have not yet transitioned to a late cycle framework.
- Demand outlook broadly constructive:** Morgan Stanley Research economists expect global GDP growth to accelerate from 3.0% in 2013 to 3.4% in 2014 and 3.7% in 2015. The DM economies will drive this growth as central bank policy remains accommodative for the foreseeable future. However, EM economies may continue struggling with their transitions to new growth models and with the external challenge of rising US real interest rates.
- Supply discipline not yet evident:** This year marks the third in which metals and bulk commodity prices (in aggregate) remain challenging for most producers. However, although many miners are experiencing margin compression, suspension or closure of mines has not been prevalent. Instead operational rationalization including cost cutting and technically based productivity gains have been sought. And in some cases output has been increased in a bid to lower unit costs.
- Supply and demand balances more compelling from 2015:** Our base case output and consumption forecasts suggest the metals and bulk commodities complex faces more supply saturation amid still rebounding demand in 2014.

Current spot price vs 4Q price targets in 2014 & 2015



Average Returns by Stage of Business Cycle (1986 - 2004)

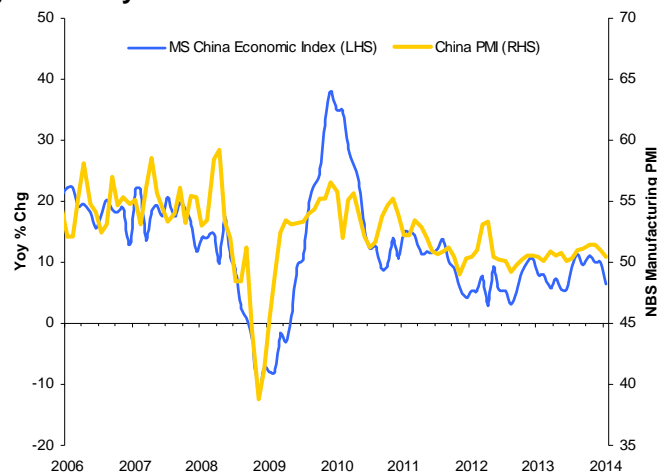


Sector Outlook

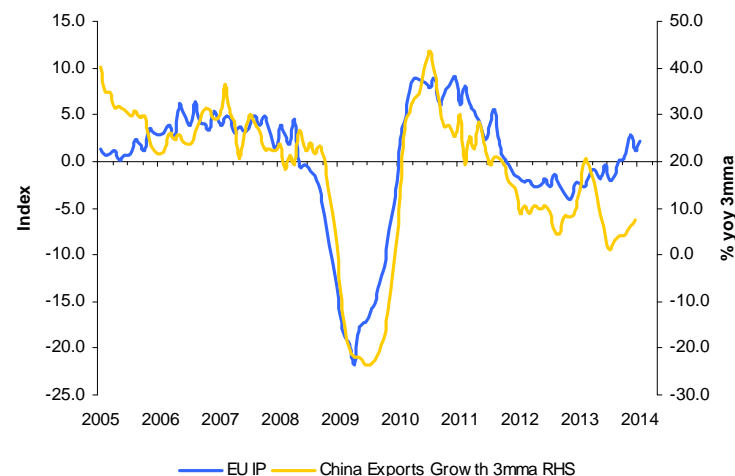
China: Transitioning to reform-led growth

- Policy fine-tuning required:** Evidence has been building that growth momentum has started to weaken as a result of tighter financial conditions in 4Q13. However, with the help of some policy fine-tuning and potentially more reform measures to be launched after the NPC, we still believe that the positive impact will start to surface towards 4Q14 and more meaningfully in 2015. Indeed in the first week of April, Premier Li called for a speeding-up of the construction of railway investment projects, expansion of the tax-cutting program for small and micro enterprises, and acceleration of the pace of the shantytown renovation program via providing sufficient fund support.
- Urbanization still has a long way to run:** A large segment of Chinese industrial demand will be driven by state-led infrastructure consumption designed to promote urbanization. The 2020 plan, or “National new-type urbanization plan,” is to move 100 million people from rural areas into the country’s rapidly growing cities, lifting the urbanization rate from 54% to 60% (compared with ~80% in developed economies). Expect to see large-scale build outs of transport networks, urban infrastructure and residential real estate as well as the redevelopment of 4-5 million social household units in the shanty towns. In our view, this plan represents the final step in the evolution from the fixed asset investment driven economy to the much heralded consumption based economy. We can only conclude demand for commodities will continue to increase, although annual growth rates are likely to vary through 2020.

Morgan Stanley China Economic Index vs China’s manufacturing PMI



EU industrial production vs China export growth



Note: MS-CHEX consists of six data series: electricity production, steel production, fiscal revenue, real exports, real imports and car sales.
Source: Bloomberg, Morgan Stanley Research.

Sector Outlook

Commodity preference

Palladium		A combination of strike activity in South Africa and geo-political risk in Russia converged to send palladium prices higher in 1Q14. Even when/if these supply-side risks subside, palladium market fundamentals remain attractive.
Uranium		Two major miners made drastic cuts to future supply growth, helping establish a floor price. Even though our modeling does not take into account any physical demand requirements from Japanese utilities, we expect a re-start of any nuclear power plants there will support spot pricing.
Nickel		The ban on Indonesian exports is permanent and will result in a structural shift in supply side dynamics, causing us to significantly upgrade our outlook. However, the numerous unknowns surrounding the future face of China's nickel pig iron industry suggest the road to higher prices could be convoluted.
Copper		Recent price weakness offers a good entry point for value seeking investors. While we are far from forecasting a return to 2011 highs, we do think project execution and further scrap market shortages will ensure the global supply/demand balance remains tight.
Platinum		Prices have failed to materially respond to labour disruptions in South Africa as producers have been able to sell down inventory and pipeline stock. However, we continue to see positive directionality in the platinum market balance.
Alumina		We now view the Indonesian ban on bauxite exports as permanent. Chinese alumina refineries are well stocked for bauxite supply this year, but will need to find adequate replacement of turn to greater alumina imports to fill the gap.
Iron Ore		Although we expect prices to continue to recover in 2Q as Chinese steel mill confidence increases on margin relief, 2014 marks the year in which the global seaborne iron ore market will slide into surplus. As supply growth begins to outpace global demand growth, expect prices to ease as the year progresses.
Lead		As new projects/expansions remain inadequate to offset impending supply closures, mined output growth is set to decrease significantly in the near term. Steady China/India auto sector growth outlook to offset US/Europe demand moderation.
Coking Coal		The 2Q quarterly contract marks the lowest price in 7 years - yet producer discipline remains elusive. We expect the new price reality to bite well into the cost curve and prompt a slowing in supply growth, but prices are unlikely to recover meaningfully into year end at best.
Zinc		The price has yet to respond in a meaningful way to improved supply/demand fundamentals because of ample stocks of metal. We nevertheless maintain a positive outlook as the impending supply gap is will be made up by new mine supply, meaning the success of adequate growth must rely on the ability of new capacity to arrive in a timely fashion and at reasonable cost.
Aluminum		The scrapping of the new LME rules is only to the long-term detriment of the sector as it puts further supply curtailments at risk. While primary producers should continue to benefit from higher locations premiums, we remain relatively pessimistic toward the price outlook this year as a consequence of sustained oversupply.
Thermal Coal		The annual price benchmark was set at five-year low of US\$81.80/t, meaning a growing share of the seaborne supply community is operating at negative margins to cash cost. While some of the top global miners have either halted operations or slowed expansion plans, current price dynamics suggest we need to see more to assist in a price recovery, including a slowdown in US exports.
Gold		As many of the factors that supported prices in 1Q dissipate, we believe the gold price is set to resume a declining trend. Indeed Morgan Stanley's global strategic six-month view favors risk assets (equities and credit) over safe havens such as government bonds, and we are also constructive on the USD - all headwinds for gold.

Price Forecasts – Quarterly & Annual Profile

Base Metals		Unit	1Q 14	2Q 14e	3Q 14e	4Q 14e	1Q 15e	2Q 15e	3Q 15e	4Q 15e	2014e	2015e	2016e	2017e	2018e	2019e	LT Nominal	LT Real
Aluminium	US\$/lb	0.80	0.78	0.76	0.76	0.78	0.80	0.83	0.85	0.77	0.82	0.88	0.92	1.00	1.10	1.25	1.08	1.08
	US\$/t	1,754	1,720	1,676	1,676	1,720	1,764	1,830	1,874	1,706	1,797	1,940	2,028	2,205	2,425	2,748	2,386	2,386
Copper	US\$/lb	3.18	3.15	3.25	3.35	3.32	3.35	3.30	3.45	3.23	3.36	3.40	3.45	3.35	3.45	3.60	3.13	3.13
	US\$/t	7,013	6,945	7,165	7,385	7,319	7,385	7,275	7,606	7,127	7,397	7,496	7,606	7,385	7,606	7,938	6,891	6,891
Nickel	US\$/lb	6.65	7.15	7.20	7.30	7.90	8.10	8.50	8.75	7.08	7.95	8.30	8.75	8.50	9.00	10.18	8.84	8.84
	US\$/t	14,671	15,763	15,873	16,094	17,416	17,857	18,739	19,290	15,600	17,527	18,298	19,290	18,739	19,842	22,439	19,481	19,481
Zinc	US\$/lb	0.92	0.92	0.95	0.96	0.99	1.05	1.07	1.12	0.94	1.06	1.10	1.12	1.17	1.20	1.24	1.08	1.08
	US\$/t	2,026	2,028	2,094	2,116	2,183	2,315	2,359	2,469	2,066	2,331	2,425	2,469	2,579	2,646	2,740	2,379	2,379
Lead	US\$/lb	0.96	0.96	0.98	1.00	1.02	1.03	1.05	1.04	0.98	1.04	1.06	1.07	1.06	1.10	1.15	1.00	1.00
	US\$/t	2,127	2,116	2,161	2,205	2,249	2,271	2,315	2,293	2,152	2,282	2,326	2,359	2,337	2,425	2,543	2,208	2,208
Tin	US\$/lb	10.25	10.20	10.50	10.75	10.85	11.00	11.15	11.25	10.42	11.06	10.50	10.25	10.00	10.25	11.46	9.95	9.95
	US\$/t	22,592	22,487	23,149	23,700	23,920	24,251	24,582	24,802	22,982	24,389	23,149	22,597	22,046	22,597	25,257	21,927	21,927
Precious Metals		Unit	1Q 14	2Q 14e	3Q 14e	4Q 14e	1Q 15e	2Q 15e	3Q 15e	4Q 15e	2014e	2015e	2016e	2017e	2018e	2019e	LT Nominal	LT Real
Gold	US\$/oz	1,291	1,250	1,185	1,150	1,125	1,150	1,130	1,145	1,219	1,138	1,125	1,100	1,200	1,325	1,444	1,254	1,254
	US\$/t	20.44	20.16	19.43	18.91	18.56	19.04	18.77	19.08	19.74	18.86	19.23	19.64	22.22	25.48	28.54	24.78	24.78
Silver	US\$/oz	1,428	1,510	1,550	1,590	1,610	1,630	1,650	1,670	1,519	1,640	1,760	1,890	2,030	2,180	2,246	1,950	1,950
	US\$/t	745	780	800	837	847	858	868	879	790	863	951	1,050	1,068	1,118	1,117	970	970
Steel Making Raw Materials	Unit	1Q 14	2Q 14e	3Q 14e	4Q 14e	1Q 15e	2Q 15e	3Q 15e	4Q 15e	2014e	2015e	2016e	2017e	2018e	2019e	LT Nominal	LT Real	
	US\$/t	121	120	115	115	117	115	112	110	118	114	110	105	100	95	114	99	99
Spot Iron Ore Fines 62% Equiv, CFR N China	US\$/t	143	120	125	135	150	165	170	175	131	165	180	185	180	180	180	156	156
Spot Premium Hard Coking Coal, FOB	US\$/t	78	76	76	77	77	85	89	89	77	85	99	94	99	99	106	92	92
Mined Energy	Unit	1Q 14	2Q 14e	3Q 14e	4Q 14e	1Q 15e	2Q 15e	3Q 15e	4Q 15e	2014e	2015e	2016e	2017e	2018e	2019e	LT Nominal	LT Real	
	US\$/lb	35	38	40	42	42	45	47	48	39	46	50	55	60	65	72	62	62
Thermal Coal - Japanese Guide Price (JFY)	US\$/t	1,150	1,150	1,150	1,150	1,200	1,200	1,200	1,200	1,150	1,200	1,275	1,294	1,313	1,331	1,500	1,302	1,302
U3O8 Spot Price	US\$/lb	950	950	950	950	1,000	1,000	1,000	1,000	950	1,000	1,075	1,094	1,113	1,131	1,275	1,107	1,107
Mineral Sands	Unit	1Q 14	2Q 14e	3Q 14e	4Q 14e	1Q 15e	2Q 15e	3Q 15e	4Q 15e	2014e	2015e	2016e	2017e	2018e	2019e	LT Nominal	LT Real	
	US\$/t	1,150	1,150	1,150	1,150	1,200	1,200	1,200	1,200	1,150	1,200	1,275	1,294	1,313	1,331	1,500	1,302	1,302
Zircon	US\$/t	950	950	950	950	1,000	1,000	1,000	1,000	950	1,000	1,075	1,094	1,113	1,131	1,275	1,107	1,107
Rutile	US\$/t	950	950	950	950	1,000	1,000	1,000	1,000	950	1,000	1,075	1,094	1,113	1,131	1,275	1,107	1,107

Price Outlook

Key risks to our view

- **Bull case:** The shift in the driver of global growth from EM to the less-commodity intensive DM helps explain recent commodity price underperformance. Any reversal in this trend could pose meaningful upside risk across the complex. Successful implementation of Chinese reform could drive this scenario. Otherwise, better private sector growth in the US will spill into global trade growth.
- **Lower prices might end up being good for Chinese demand for imports:** When prices fall on a sustained basis, Chinese producers are often the first to cut production given Chinese producers generally have higher costs and lower grades that their key import partners (Australia, Brazil, Indonesia).
- **Bear case:** China remains the key risk against the backdrop of investor concern over high indebtedness.
- Intensification of geo-political risk would negatively touch the sector from both supply/demand perspectives.
- Cyclical growth disappointments in the US could slow the longer-term global recovery story currently playing out.

Period	Aluminium			Copper			Nickel			Zinc		
	Bull	Base	Bear	Bull	Base	Bear	Bull	Base	Bear	Bull	Base	Bear
2014e	0.89	0.77	0.77	3.66	3.23	2.91	8.73	7.08	6.70	1.08	0.94	0.84
	1,969	1,706	1,700	8,068	7,127	6,414	19,253	15,600	14,761	2,373	2,066	1,857
2015e	0.90	0.82	0.73	3.86	3.36	3.02	9.14	7.95	7.31	1.16	1.06	0.95
	1,976	1,797	1,617	8,506	7,397	6,657	20,156	17,527	16,125	2,565	2,331	2,098
2016e	0.97	0.88	0.79	3.74	3.40	3.06	9.55	8.30	7.47	1.21	1.10	0.99
	2,134	1,940	1,746	8,245	7,496	6,746	21,043	18,298	16,469	2,668	2,425	2,183

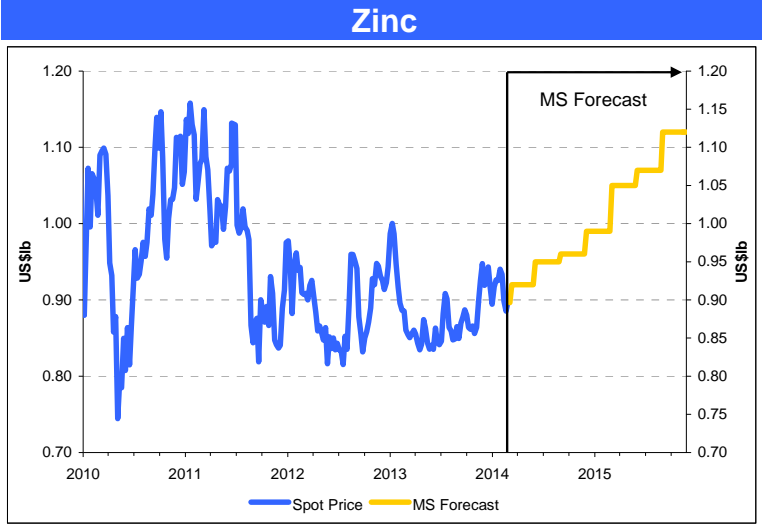
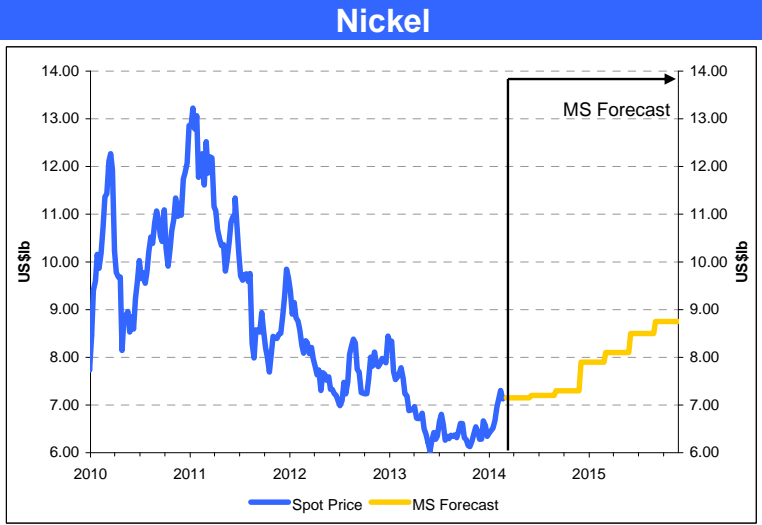
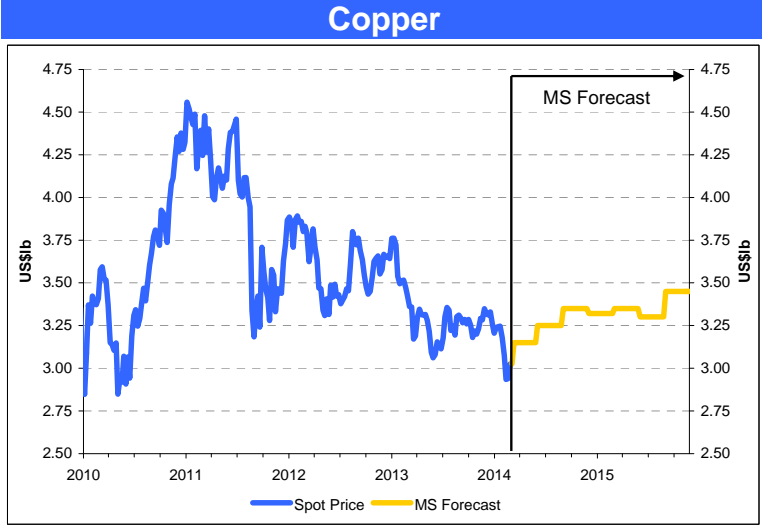
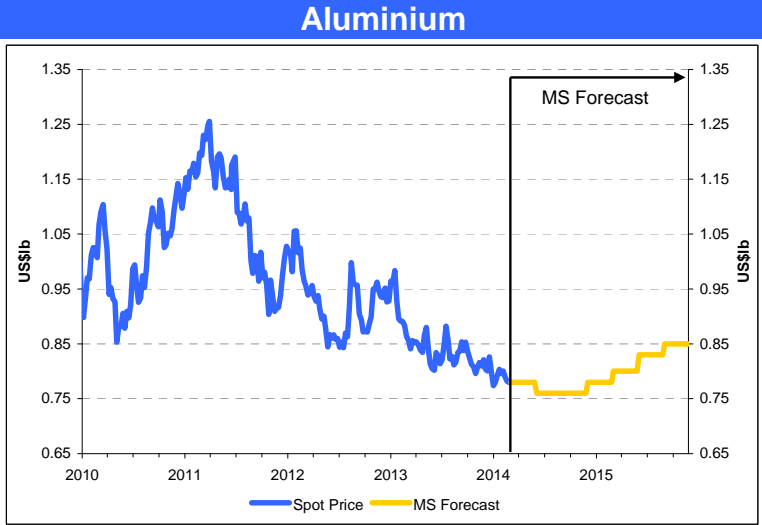
Period	Gold			Silver			Platinum			Palladium		
	Bull	Base	Bear	Bull	Base	Bear	Bull	Base	Bear	Bull	Base	Bear
	US\$/oz			US\$/oz			US\$/oz			US\$/oz		
2014e	1,521	1,219	992	25.67	19.74	16.74	1,811	1,519	1,393	905	790	700
2015e	1,251	1,138	967	20.75	18.86	16.03	1,804	1,640	1,476	949	863	777
2016e	1,181	1,125	956	20.19	19.23	16.35	1,936	1,760	1,584	1,046	951	856

Period	Spot Iron Ore			Spot Coking Coal			Thermal Coal			Spot Uranium		
	Bull	Base	Bear	Bull	Base	Bear	Bull	Base	Bear	Bull	Base	Bear
	US\$/t			US\$/t			US\$/t			US\$/lb		
2014e	132	118	94	148	133	113	89	77	68	50	39	36
2015e	131	114	85	179	170	128	93	85	72	55	46	36
2016e	124	110	83	189	180	135	104	99	84	60	50	38

Base Metals

Base Metals

Historical price vs Morgan Stanley forecast to 2015



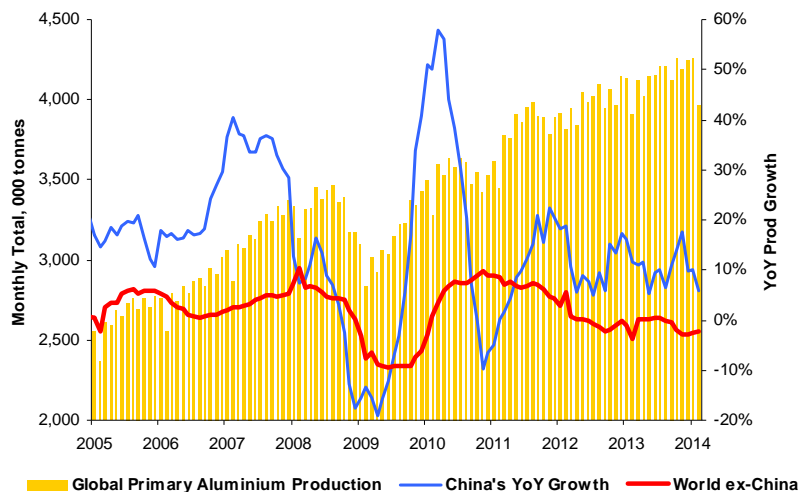
Source: Bloomberg, Morgan Stanley Research

Aluminium

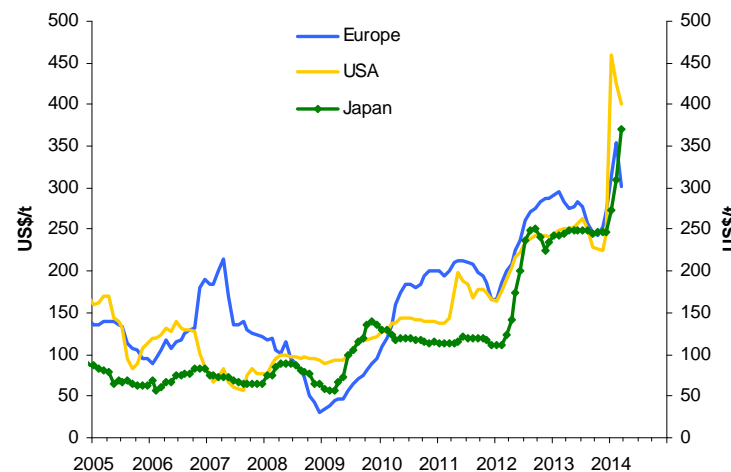
Supply rationalization and positive demand trends helped prices in 1Q...

- **The LME aluminium price saw pockets of strength during 1Q, primarily benefitting from the sustained decline in non-China smelting capacity since September 2013.** The closure of Point Henry in Australia, two smelters in Brazil, two lines of the Massena East smelter in the US, and numerous cutbacks from Rusal brought total capacity cuts to around 2Mtpa since the start of 2013. At the same time it must be noted that global capacity additions continue to outpace reductions (4% net capacity additions in 2014) as China has pressed on with its expansion in Xinjiang while Middle East growth remains strong.
- **Global demand for aluminum** stayed healthy as the automotive industry in the US and Europe has seen strong recovery, leading to recent announcements of investment in expansion of automotive heat-treated capacity in both locations. Moreover we expect China's auto sector to grow 8% this year. Meanwhile, the US construction industry remains buoyant with debate in the sector centering around the rate of growth as opposed to whether or not there is growth. In Europe, an unusually mild winter allowed construction projects to go ahead without significant disruption leaving extrusion suppliers caught short.
- **Premia initially headed in the right direction:** Market trends were improving with the US Midwest premia dropping from the all-time high of US¢21.25/lb to US¢18.5/lb at the start of 2Q. Near-term metal availability increased as European exporters were able to profit from the high premia differential with the US and consumers were learning live more hand to mouth because of the perception that the premium was overpriced.

Global aluminium production and growth



Regional aluminium premia, 2005-14

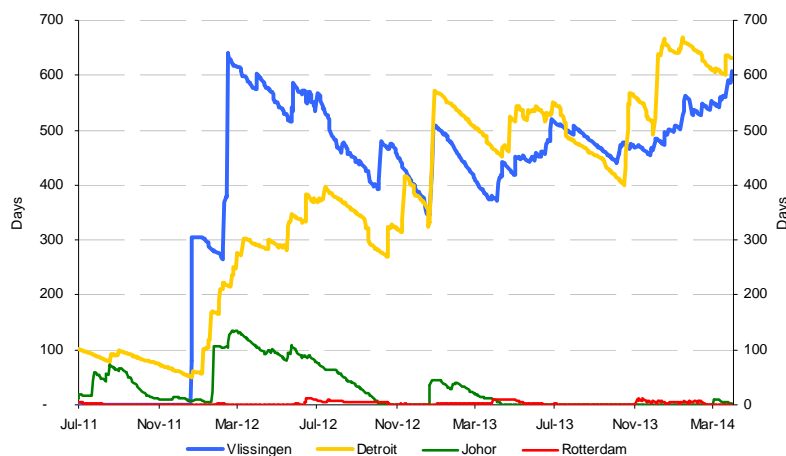


Aluminium

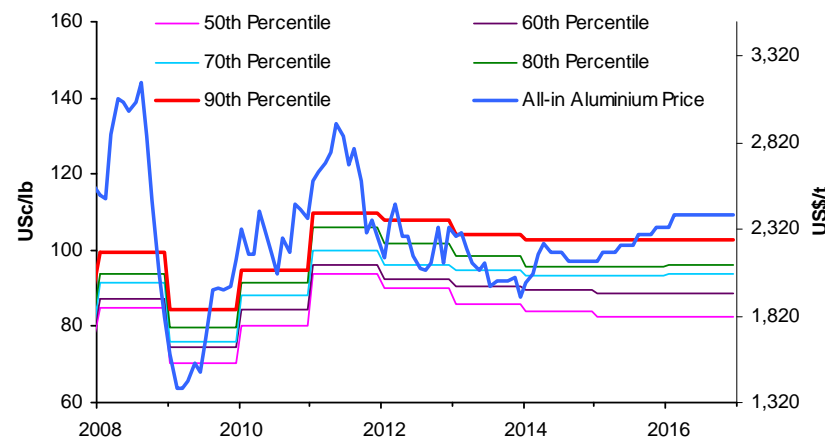
... but new LME rules scrapped, to the detriment of the sector

- **No solution in sight to LME warehouse queue dilemma, sector rationalization at risk:** In a surprise announcement in late March 2014, the UK courts upheld Rusal's lawsuit against the LME, essentially quashing the exchange's attempt to reduce the length of load-out times at some warehouses. This means it is likely queues at warehouses in Detroit (~640 days) and Vlissingen (~610 days) will remain elevated until another solution is presented or inventory financing deals lose their appeal.
- **We were encouraged by evidence of price-related capacity cuts, but are again concerned:** Should the "all-in" price of aluminium remain elevated, producers may again ramp up production to catch the general pick up in global market activity and erode the year-long trend of producer discipline.
- **Consequently, we maintain a relatively pessimistic outlook on aluminum** with a 2014 target of US\$0.77/lb, or US\$1,700/t. We see little relief to extraordinarily high levels of legacy stocks piled up at warehouses around the world. We expect the aluminum market outlook to improve by the earliest in 2015 when we think the market surplus may finally start to unwind. We would become more positive in the near term if we saw not only a continuation of the Western capacity cuts, but also convincing evidence of Chinese smelters aggressively cutting production amid the 4 ½ year-low SHFE prices.

Estimated queues at key LME warehouse locations



Cash costs vs "All-in" aluminium price: Losing incentive to curtail capacity



Source: Bloomberg, Morgan Stanley Research.

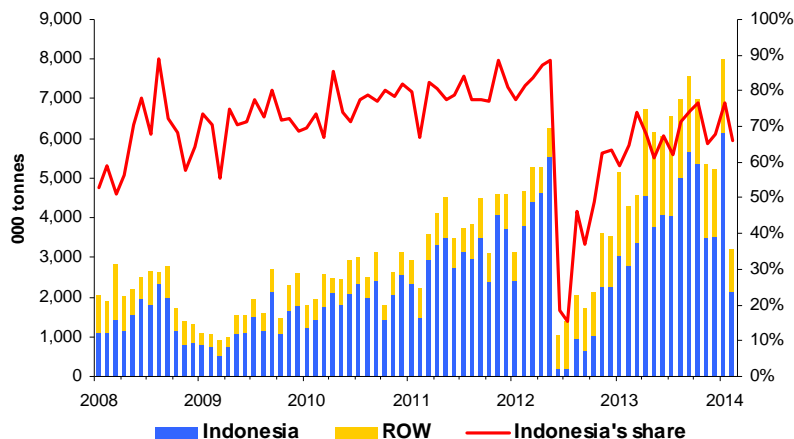
Note: 2014-2016 figures are Morgan Stanley Research estimates
Source: Wood Mackenzie, Morgan Stanley Research.

Alumina

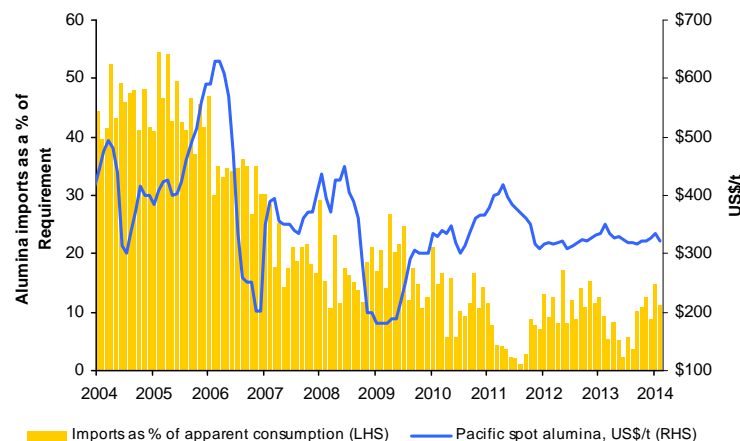
Alumina price will struggle before it gets better

- **Indonesian ban on bauxite imports is permanent:** Our Jakarta-based fact-finding mission convinced us there is little chance of a dilution to Indonesia’s legislation, suggesting an impending downstream supply squeeze. However, the market response is likely to be months away. After climbing to a near three-year high in January of US\$335/t, the purely sentiment fuelled rally petered as alumina remained plentiful.
- **Chinese alumina refineries have been widely reported to have aggressively stocked bauxite** rendering alumina imports to be need-based only in 2014. According to Wood Mackenzie, the seven major import-dependent alumina refineries in China have accumulated enough bauxite stocks to keep operating for 75-80 weeks.
- **China will look to diversify its bauxite sourcing partners in light of the Indonesian ban:** China will turn to India, Australia, the Philippines, and eventually Guinea to replace Indonesian exports. Although its also highly probable Chinese imports of alumina will eventually increase, for the time being the imports remain price-sensitive to higher quality/cost imports versus cheaper domestic sources. Therefore, it is unlikely the spot alumina price will rise above the recently tested US\$335/t mark until China’s cost structure inflates. We do believe this is possible on the back of higher transportation costs of importing bauxite from greater distances, but only then will alumina import prices see support.

Chinese bauxite imports: Stockpiling ahead of the ban



China to remain nearly self-sufficient alumina or re-enter the import market?



Aluminium and Alumina Global supply / demand

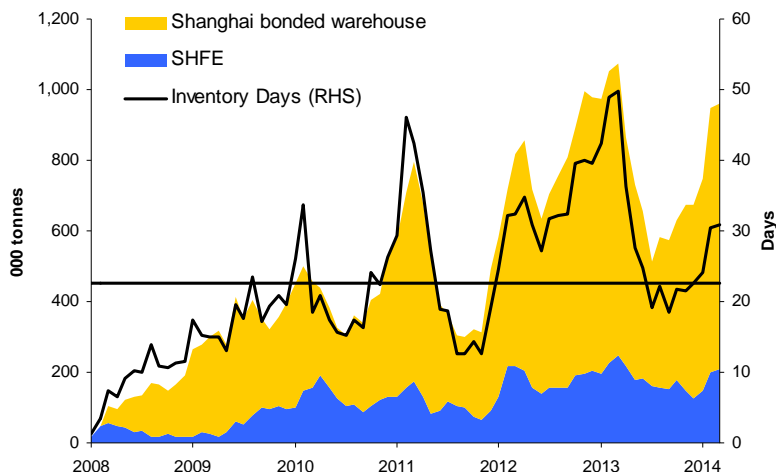
	Unit	2006	2007	2008	2009	2010	2011	2012	2013	2014e	2015e	2016e	2017e	2018e	2019e
World IP growth (Adjusted PPP Weights)	%	6.46	7.21	1.05	-7.94	11.08	5.19	3.54	4.18	4.85	5.61	4.90	5.00	5.08	5.07
World Bauxite Production	Mt	192	209	218	196	215	242	258	273	278	294	308	310	323	344
World Smelter Grade Alumina Production	Mt	68.19	75.19	81.26	73.30	82.38	91.76	96.15	100.23	107.55	113.75	119.59	119.91	125.12	133.69
World Chemical Grade Alumina Production	Mt	5.8	5.5	5.6	4.7	6.0	6.5	6.5	7.0	7.6	7.9	8.2	8.5	8.7	8.8
Total World Alumina Production	Mt	73.9	80.7	86.9	78.0	88.4	98.2	102.6	107.2	115.1	121.7	127.8	128.4	133.8	142.5
World Production Growth	%	11.1	9.2	7.6	-10.2	13.2	11.2	4.5	4.5	7.3	5.7	5.0	0.5	4.2	6.5
Alumina Refinery Capacity	Mt	76.4	87.3	97.1	100.5	107.0	118.6	125.9	133.5	137.9	142.2	149.5	151.8	152.6	155.5
Capacity Utilisation	%	96.8	92.4	89.5	77.7	82.6	82.8	81.5	80.3	78.0	80.0	80.0	79.0	82.0	86.0
World Metallurgical Alumina Consumption	Mt	66.6	75.1	78.5	73.0	83.2	90.5	94.0	98.4	105.8	113.0	117.8	119.5	125.0	133.3
World Alumina Consumption Growth	%	6.1	12.9	4.5	-7.0	14.0	8.8	3.9	4.7	7.5	6.8	4.2	1.4	4.6	6.7
Apparent Alumina Surplus/(Deficit)	Mt	1.63	0.08	2.73	0.30	-0.80	1.26	2.10	1.79	1.71	0.73	1.83	0.46	0.17	0.34
Average Spot Alumina Prices	US\$/t	\$430	\$369	\$354	\$244	\$340	\$361	\$319	\$329	\$318	\$323	\$319	\$329	\$335	\$368
Average Australian Contract Alumina Prices	US\$/t	\$384	\$387	\$360	\$228	\$322	\$383	\$310	\$318	\$316	\$322	\$335	\$351	\$384	\$412
World Primary Aluminium Production	Mt	34.0	38.2	39.7	37.2	41.5	44.9	46.3	48.0	54.0	56.5	59.0	61.6	65.0	68.8
World Primary Smelting Capacity	Mt	38.6	42.4	45.7	49.3	50.2	53.0	55.5	59.2	64.0	68.3	71.7	73.8	75.6	76.4
Capacity Utilisation	%	88.1	90.2	86.8	75.4	82.7	84.8	83.4	81.1	84.5	82.7	82.4	83.5	86.0	90.0
China Primary Production	Mt	9.4	12.6	13.6	13.5	17.3	19.8	22.4	24.8	27.9	29.5	30.7	31.6	33.6	36.9
Non-China Primary Production	Mt	24.6	25.6	26.1	23.7	24.2	25.1	23.9	23.2	26.1	27.0	28.3	30.0	31.4	31.9
World Primary Aluminium Usage	Mt	33.99	37.41	36.90	34.76	40.17	42.41	45.28	46.44	52.10	55.57	57.71	61.39	64.70	68.12
Regional Usage Breakdown															
China	Mt	8.6	12.3	12.4	14.3	15.9	17.6	20.3	22.0	25.4	27.3	29.1	31.8	34.2	36.7
BRI (Brazil, Russia, India)	Mt	2.9	3.1	3.2	3.0	3.1	3.3	3.4	3.3	4.1	4.9	5.0	5.2	5.4	5.7
USA	Mt	6.2	5.5	4.9	3.9	4.2	4.1	4.8	4.7	5.8	6.0	6.0	6.2	6.3	6.5
Europe	Mt	7.7	8.1	7.8	5.7	7.5	7.8	7.2	7.0	7.1	7.2	7.2	7.5	7.6	7.8
Japan	Mt	2.3	2.2	2.3	1.5	2.0	1.9	2.0	1.8	1.7	1.7	1.7	1.6	1.6	1.6
ROW	Mt	6.2	6.1	6.3	6.3	7.4	7.7	7.6	7.7	8.0	8.5	8.7	9.1	9.5	9.8
Primary Aluminium Market Balance	Mt	-0.02	0.78	2.77	2.42	1.33	2.50	1.02	1.57	1.94	0.90	1.33	0.21	0.32	0.67
Reported Stocks	Mt	2.73	2.89	4.68	6.42	6.50	7.05	7.29	7.18	9.12	10.02	11.35	11.56	11.88	12.54
Change in reported stocks	Mt	-0.21	0.16	1.78	1.74	0.08	0.55	0.24	-0.11	1.94	0.90	1.33	0.21	0.32	0.67
Apparent change in off-warrant stocks	Mt	0.19	0.61	0.99	0.68	1.25	1.95	0.78	1.68	0.00	0.00	0.00	0.00	0.00	0.00
Stock-to-Consumption Ratio	Wks	4.18	4.02	6.59	9.60	8.42	8.64	8.37	8.04	9.10	9.37	10.23	9.79	9.55	9.57
Average LME Cash Aluminium Price	US\$/t	\$2,570	\$2,639	\$2,618	\$1,644	\$2,191	\$2,425	\$2,052	\$1,891	\$1,706	\$1,797	\$1,940	\$2,028	\$2,205	\$2,425
	US\$/lb	\$1.17	\$1.20	\$1.19	\$0.75	\$0.99	\$1.10	\$0.93	\$0.86	\$0.77	\$0.82	\$0.88	\$0.92	\$1.00	\$1.10

Copper

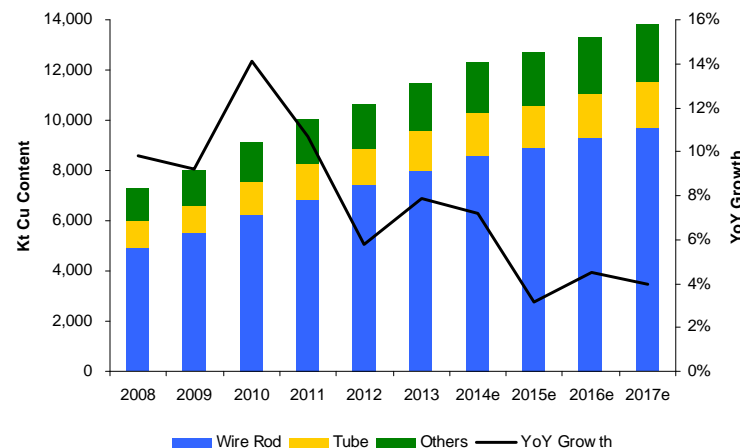
China introduces fresh volatility, but will continue to power demand

- **Price volatility on the back of shadow banking crackdown:** Copper withstood wild price swings in the final month of 1Q after high-profile reports of corporate bond defaults raised fears of cascading systematic risk. Market players feared copper financing deals could be unwound, sending a wall of supply into the domestic market, an outcome we view as highly unlikely. We think policy changes and reforms recently implemented indicate Beijing is targeting those using this channel of the shadow banking network. Consequently once the current round of inventory financing rolls off, it is unlikely to reappear in size.
- **Collateralized copper will not swamp the Chinese market:** Absolute copper inventory is high in China, but not abnormally so in terms of days of use. Indeed the nearly 1Mt stockpile will inevitably de-stock, but we believe it can easily be absorbed.
- **China’s refined output growth designed to match the structural shift in the semi-fabricated market:** After growing 8% in 2013 to 6.3Mt, we forecast China’s refined copper output this year to increase by 17% to 7.4Mt. However, the strong growth is designed to meet demand from a structural change in the semi-fabricated industry, in which significant new wire rod and tube capacity have been commissioned to ensure adequate domestic supply of these products. Indeed one rod producer told Wood Mackenzie it ran out of stock soon after the price dropped in March.

China’s copper inventory and days of use



Copper semi fabricated production in China

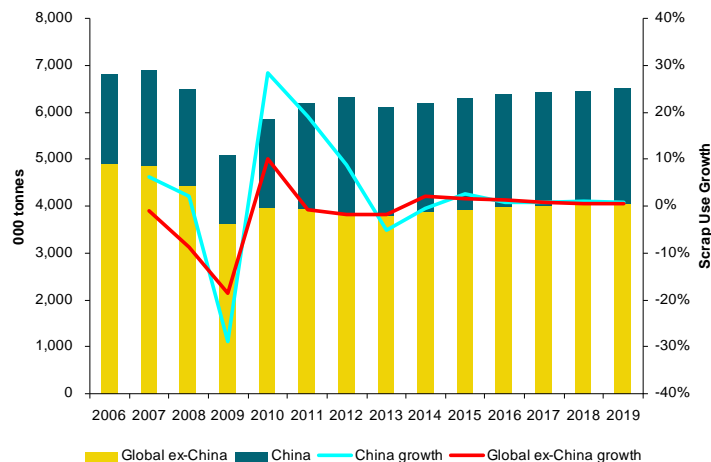


Copper

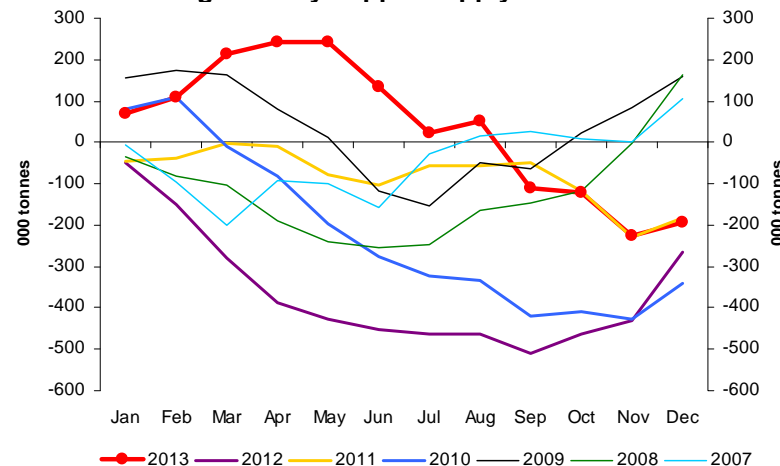
Current market balance tight, questions linger over supply growth

- **Tight concentrate supply in 1Q14:** TC/RCs began declining from mid-Feb to US\$82/t (vs US\$92/t 2014 benchmark) as Asian smelters' buying interest increased after it became clear there would be delays from Indonesia. Although it will slowly ramp up in 2Q, world number three mine Grasberg did not export any concentrate to China in 1Q. Furthermore, Caserones, Toromocho and Cobre Panama are just the latest examples of delays to major projects we highlighted late last year.
- **Scrap market vacuum:** A global scrap shortage was the primary factor in eliminating consensus expectations of a significant surplus in 2013, a trend we believe will linger in 2014. Lower price levels have the potential to meaningfully impact the scrap market. Weak prices limit scrap mobilization, which will ultimately slow the pace of refined output growth as some smelters seek alternative secondary feed sources. After peaking in 2012, direct use of scrap declined in 2013 by 3% and is not set to fully recover until 2016.
- **LT incentive price:** We maintain our view that a long-term copper nominal price of US\$3.60/lb, or US\$7,940/t, is required to incentivise the required production to meet demand through 2020. This view, in tandem with the spectre of supply-driven market deficits, only increases the attractiveness of copper as a medium to long-term investment.

Direct use of scrap flat-lining will pressure refined market



Rolling monthly copper supply/demand balance



Note 2014-2019 figures are Morgan Stanley Research estimates
Source: Wood Mackenzie, Morgan Stanley Research

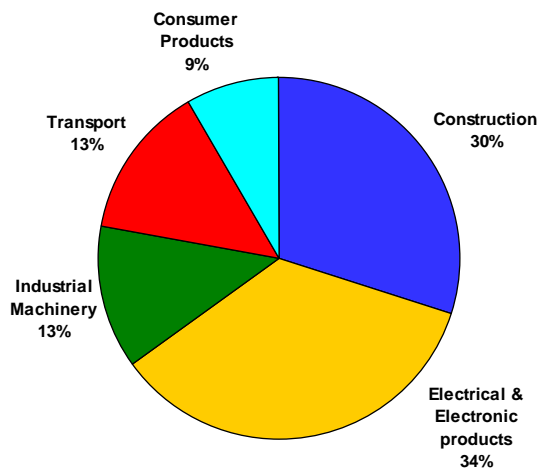
Source: ICSG, Morgan Stanley Research.

Copper

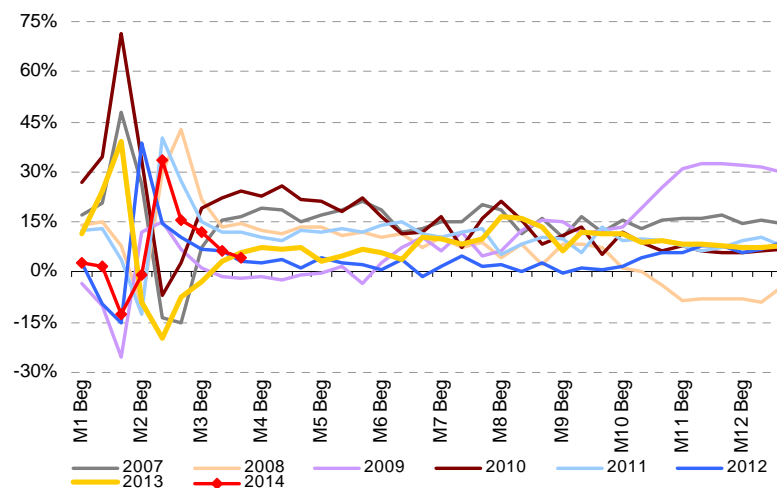
Expect broad-based consumption growth

- **Continued positive signs of global demand growth:** Our forecast calls for 3.8% global growth this year and 5.8% in 2015 vs a 2.8% CAGR in 2002-13. Demand in the **US** will continue to tick up as the turn in construction activity takes hold, with the major copper building wire producers reporting strong pick-ups in orders. **Europe** will become the clear number two source of demand growth over the next three years as industrial activity gathers pace in the key copper-consuming economies of Germany, Poland, and Turkey. The region as a whole will command 15% of all demand growth equalling 330Kt in 2014-17. Japanese copper wire and shipments grew 13% YoY in January on the back of strength in both domestic (construction and utility sectors) and overseas markets (automotive and electric machinery sectors).
- **Chinese 2014 demand to grow 5.7% to just over 10 million tonnes:** The lack of visibility on end-use demand for the Jan-Feb period maintained an element of uncertainty that likely helped capped price appreciation during 1Q. Our relatively positive forecast is based on healthy growth in the key end-use sectors of auto industry, air conditioners and refrigerators and most importantly state investment for electricity supply infrastructure (47% of China's copper consumption). The continued strength in these sectors has led to a structural change in the semi-fabricated industry previously discussed.

Global copper demand by market sector, 2013



China electricity consumption: High frequency data



Copper

Global supply / demand

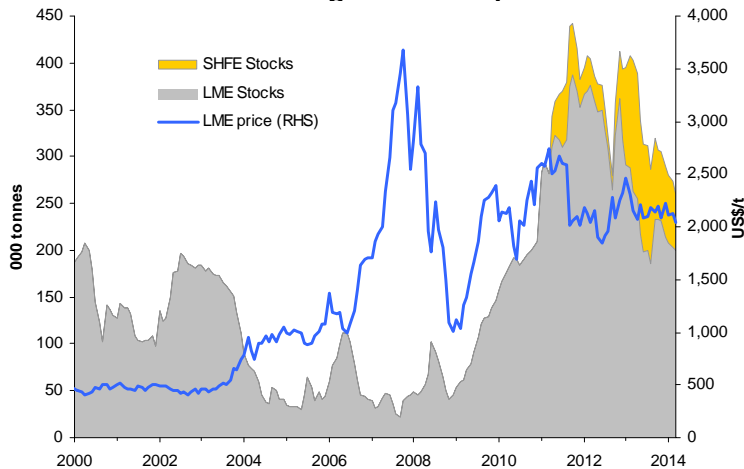
	Unit	2006	2007	2008	2009	2010	2011	2012	2013	2014e	2015e	2016e	2017e	2018e	2019e
World IP growth (Adjusted PPP Weights)	%	6.46	7.21	1.05	-7.94	11.08	5.19	3.54	4.18	4.85	5.61	4.90	5.00	5.08	5.07
World Mine Production															
Concentrates	Mt	12.17	12.48	12.45	12.70	12.70	12.55	13.03	14.25	14.40	15.32	16.52	16.94	17.67	18.51
SX/EW	Mt	2.83	2.99	3.09	3.25	3.33	3.47	3.67	3.80	4.03	4.23	4.12	4.17	4.10	3.86
Total Mine Production	Mt	15.00	15.48	15.55	15.97	16.05	16.03	16.71	18.02	18.48	19.57	20.63	20.99	21.60	22.18
Growth	%	0.5%	3.2%	0.4%	2.7%	0.5%	-0.1%	4.2%	7.8%	2.6%	5.9%	5.4%	1.8%	2.9%	2.7%
Annual Disruptions / Disruption Allowance	Mt	1.09	0.95	1.36	0.96	0.84	1.01	0.98	0.90	1.12	1.20	1.23	1.21	1.19	1.16
Percentage disrupted / Forecast		6.8%	5.7%	8.0%	5.8%	5.0%	5.8%	5.4%	3.2%	5.7%	5.7%	5.7%	5.7%	5.7%	5.7%
World Smelter Production															
Primary	Mt	11.97	12.14	12.35	12.53	12.93	12.85	13.13	13.69	13.84	15.00	16.45	16.86	17.59	18.43
Secondary	Mt	1.98	2.12	2.26	2.39	2.71	3.12	3.46	4.01	3.85	4.03	3.91	4.13	3.94	3.94
Total Smelter Production	Mt	13.95	14.26	14.61	14.92	15.64	15.96	16.59	17.70	17.69	19.03	20.36	20.99	21.53	22.37
Imputed concentrate balance	Kt	195	343	93	171	-225	-301	-99	557	562	323	76	78	81	86
World Refinery Production															
Electrowon	Mt	2.83	2.99	3.09	3.25	3.33	3.47	3.67	3.80	4.03	4.23	4.12	4.17	4.10	3.86
Primary	Mt	11.85	12.20	12.29	12.20	12.42	12.69	12.88	13.38	13.63	14.70	16.12	16.53	17.24	18.06
Secondary	Mt	2.61	2.74	2.82	2.82	3.25	3.48	3.58	3.82	4.25	4.44	4.30	4.54	4.34	4.34
Total Refinery Production	Mt	17.29	17.93	18.20	18.27	19.01	19.65	20.13	21.00	21.91	23.36	24.55	25.23	25.68	26.25
Growth		4.3%	3.7%	1.5%	0.4%	4.0%	3.4%	2.4%	4.3%	4.3%	6.6%	5.1%	2.8%	1.8%	2.2%
World Copper Usage															
World usage growth	%	2.2%	6.9%	-0.9%	0.4%	6.8%	2.5%	2.8%	3.9%	3.8%	5.8%	4.2%	4.0%	1.4%	2.3%
China usage growth	%	-1.3%	37.5%	4.9%	36.9%	3.9%	6.7%	12.2%	7.3%	5.7%	5.5%	5.7%	5.5%	3.0%	3.7%
Non-China usage growth	%	3.2%	-1.7%	-3.0%	-14.2%	8.8%	-0.1%	-2.0%	0.0%	2.2%	6.1%	2.9%	2.6%	0.0%	1.1%
Refined Market Balance															
	Mt	0.26	-0.27	0.16	0.16	-0.34	-0.18	-0.27	-0.20	-0.09	0.08	0.29	0.02	0.11	0.09
Refined Stocks End of Period															
	Kt	1,075	970	1,102	1,376	1,199	1,210	1,373	1,303	1,209	1,288	1,580	1,601	1,715	1,804
Refined Stock Change	Kt	207	-105	132	275	-177	11	163	-70	-93	79	291	21	114	89
Apparent change in off-warrant stocks	Kt	-8	-163	31	-114	-164	-192	-429	-128						
Stock to Usage Rate															
	Weeks	3.3	2.8	3.2	4.0	3.2	3.2	3.5	3.2	2.9	2.9	3.4	3.3	3.5	3.6
TC (US\$/t conc.)	US\$	95.0	60.0	45.0	75.0	46.5	56.0	63.5	70.0	92.0	105.0	110.0	105.0	105.0	100.0
RC (US\$/lb Cu)	US\$	9.5	6.0	4.5	7.5	4.7	5.6	6.4	7.0	9.2	10.5	11.0	10.5	10.5	10.0
LME Copper Price															
	US\$/t	\$6,727	\$7,126	\$6,952	\$5,076	\$7,536	\$8,838	\$7,952	\$7,368	\$7,127	\$7,397	\$7,496	\$7,606	\$7,385	\$7,606
	US\$/lb	\$3.05	\$3.23	\$3.15	\$2.30	\$3.42	\$4.01	\$3.61	\$3.34	\$3.23	\$3.36	\$3.40	\$3.45	\$3.35	\$3.45

Lead

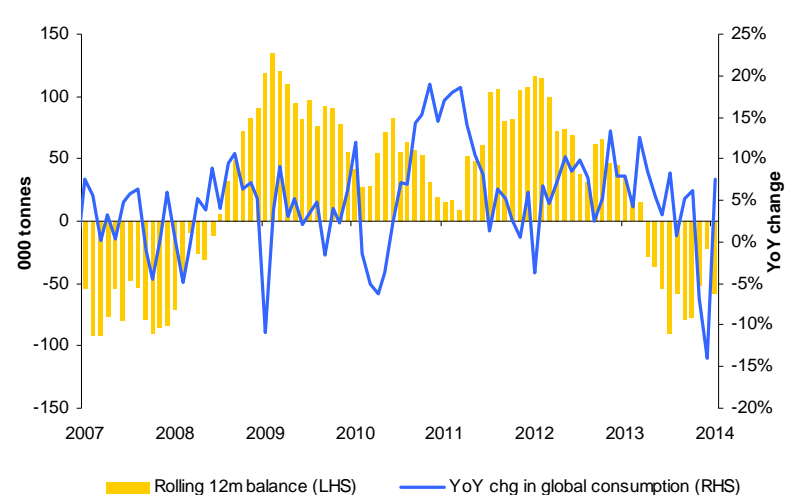
Supply growth to undershoot demand in 2014

- LME lead prices saw downward pressure on the back of broad-based selling in the sector. However, we maintain a relatively constructive price forecast of US\$0.98/lb, US\$2,150/t for 2014 and US\$1.04/lb (US\$2,280/t) for 2015 as the supply outlook remains attractive.
- **Steady China/India auto sector growth outlook to offset US/Europe demand moderation:** Increasing imports of batteries and higher scrapping rates because of vehicle purchase incentives positively impacted the US replacement market. On the downside, weak Western Europe auto market has translated into a lower-than-expected lead growth outlook. However steady demand growth from the Indian auto sector and stable Chinese production outlook should more than offset DM weakness leading to our global lead demand growth forecast of 4% in the medium term.
- **Concentrate supply closures remain on track:** The closure of major global mines (Century, Lisheen in 2015, Brunswick in 2013) will help send the refined lead market into deficit over the next two years. As new projects/expansions remain inadequate to offset the closures, mined output growth is set to decrease significantly in the near term. As a result, we expect TCs to decline as smelting and refining capacity begin to lower utilization. Although we expect secondary refined lead production to pick up at a 4% CAGR in 2013-16, the quantum remains insufficient to meet the gap created by primary mine closures.

Lead exchange stocks vs price



Global lead rolling 12-month balance vs. demand growth



Lead

Global supply / demand

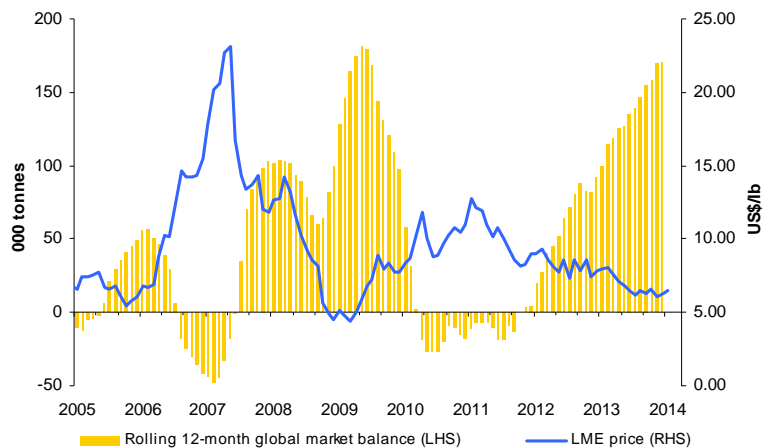
	Units	2006	2007	2008	2009	2010	2011	2012	2013	2014e	2015e	2016e	2017e	2018e	2019e
World IP growth (Adjusted PPP Weights)	%	6.46	7.21	1.05	-7.94	11.08	5.19	3.54	4.18	4.85	5.61	4.90	5.00	5.08	5.07
Total world mine production	Kt	3305	3673	3886	3950	4130	4631	5249	5331	5301	5411	5647	5874	6283	6265
World Mine Production Growth	%	-0.9	11.1	5.8	1.6	4.6	12.1	13.3	1.6	-0.6	2.1	4.4	4.0	7.0	-0.3
Mined production by region															
China	Kt	1,193	1,210	1,243	1,415	1,837	2,358	2,491	2,808	2,899	2,906	2,906	2,906	2,906	2,904
N America	Kt	612	607	589	562	553	570	581	549	579	642	669	642	668	658
Europe	Kt	239	256	257	325	329	356	277	292	292	288	309	293	296	286
Mexico	Kt	124	120	118	132	171	204	212	214	245	278	301	289	325	321
Peru	Kt	289	302	320	270	235	208	222	242	255	264	269	260	259	241
Australia	Kt	621	604	605	529	661	534	568	656	773	740	703	733	761	710
ROW	Kt	227	574	756	718	343	401	899	569	258	293	491	751	1,069	1,145
Total World Primary Smelter Production	Kt	3,852	3,847	4,010	4,237	5,342	5,140	5,233	5,678	6,013	6,170	6,270	6,485	6,920	7,070
Requirement for lead from concentrate	Kt	3,319	3,356	3,466	3,538	3,941	4,404	4,707	5,161	5,448	5,589	5,673	5,898	6,355	6,510
Total World refined production	Kt	7984	8150	8705	8898	9682	9759	10862	11237	11436	11972	12520	13053	13563	14052
Primary Refined Production	Kt	3,852	3,847	4,010	4,237	5,342	5,140	5,233	5,678	6,013	6,170	6,270	6,485	6,920	7,070
Secondary Refined Production	Kt	4,132	4,303	4,695	4,660	4,340	4,618	5,630	5,559	5,539	5,802	6,213	6,568	6,643	6,843
Total World refined production growth	%		2.1	6.8	2.2	8.8	0.8	11.3	3.5	1.8	4.7	4.6	4.3	3.9	3.6
US stockpile disposals	Kt	190	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	2.0
Total refined availability	Kt	8,174	8,150	8,705	8,898	9,682	10,466	10,862	11,237	11,436	11,972	12,520	13,053	13,564	14,054
World Usage	Kt	8,008	8,234	8,615	8,842	9,395	10,191	10,876	11,211	11,578	12,105	12,508	13,068	13,594	13,998
Total world refined usage growth	%	2.7	2.8	4.6	2.6	6.2	8.5	0.1	0.0	3.3	4.6	3.3	4.5	4.0	3.0
Refined usage by region															
China	Kt	2,269	2,650	3,125	3,617	4,136	4,290	4,686	4,921	5,035	5,390	5,680	6,136	6,508	6,815
Europe	Kt	1,969	1,949	1,801	1,555	1,669	1,679	1,681	1,716	1,735	1,768	1,782	1,808	1,825	1,824
USA	Kt	1,573	1,514	1,560	1,390	1,405	1,489	1,510	1,536	1,525	1,540	1,541	1,551	1,569	1,573
ROW	Kt	2,197	2,121	2,129	2,280	2,185	2,733	2,999	3,038	3,283	3,409	3,505	3,573	3,693	3,786
Market balance	Kt	-24	-84	90	55	288	275	-14	26	-142	-133	12	-15	-32	53
Reported total commercial stocks	Kt	277	268	306	389	446	641	697	652	510	377	389	374	342	395
Reported stock to usage ratio	Wks	1.8	1.7	1.8	2.3	2.5	3.3	3.3	3.0	2.3	1.6	1.6	1.5	1.3	1.5
Annual average LME cash prices	USD/t	\$1,287	\$2,590	\$2,094	\$1,676	\$2,164	\$2,393	\$2,073	\$2,154	\$2,152	\$2,282	\$2,326	\$2,359	\$2,337	\$2,425
	US\$/lb	\$0.58	\$1.18	\$0.95	\$0.76	\$0.98	\$1.09	\$0.94	\$0.98	\$0.98	\$1.04	\$1.06	\$1.07	\$1.06	\$1.10

Nickel

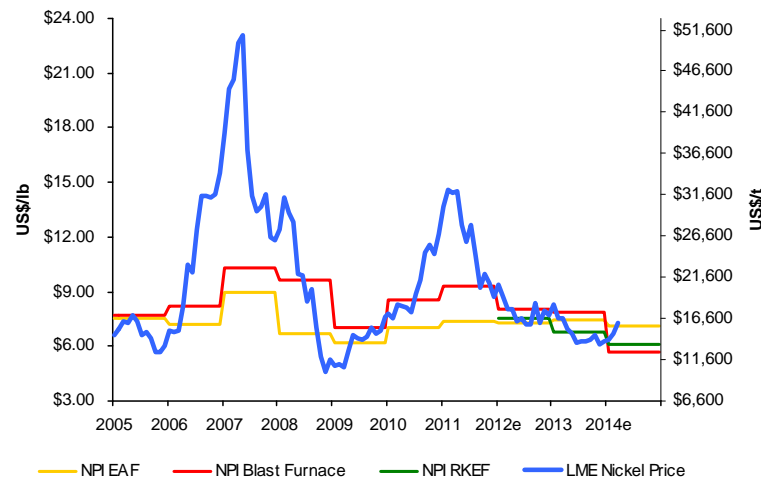
Permanent export ban in Indonesia now the base case

- Indonesia mined output to drop drastically:** We were not the only ones surprised by Indonesia’s full implementation of the ban. As had many other observers, we had expected watered down legislation that would allow at least a lower level of exports to continue. LME prices immediately reacted to the policy implementation and, coupled with fears over further supply disruption as a consequence of sanctions against Russia (15-20% global supply), this means the nickel price is so far the best performing metal in 2014.
- Big cut to production forecast:** After a fact-finding mission in Jakarta, our base case is the export ban remains permanent. Consequently, we reduce our estimation of Indonesian mine output by 80% in 2014 to 113Kt from 640Kt in 2013, dropping the country’s share of global output to 6% from 30%.
- Structural shift in supply side dynamics:** China’s nickel pig iron (NPI) production will not be affected until 2015 as Wood Mackenzie estimates at least 20Mt of nickel ore stocks are held in country. However, once these stocks are drawn down, lower NPI output will have a significant impact on the global refined metal market balance. Our model is showing a sizeable surplus of 70Kt in 2014, but deteriorates to a 60Kt deficit by 2015 and remains in deficit through 2019.
- Significant upgrade to price profile:** Given our 1Q14 base case price profile did not include a full Indonesia ban, we have revised our price forecasts now that our supply/demand modeling integrates permanence. Our 2014 price expectation is now US\$7.08/lb (US\$15,600/t) and US\$7.95/lb (US\$17,525/t) in 2015.

Global nickel rolling 12-month balance vs. price



The nickel price is breaking out of NPI cost ranges

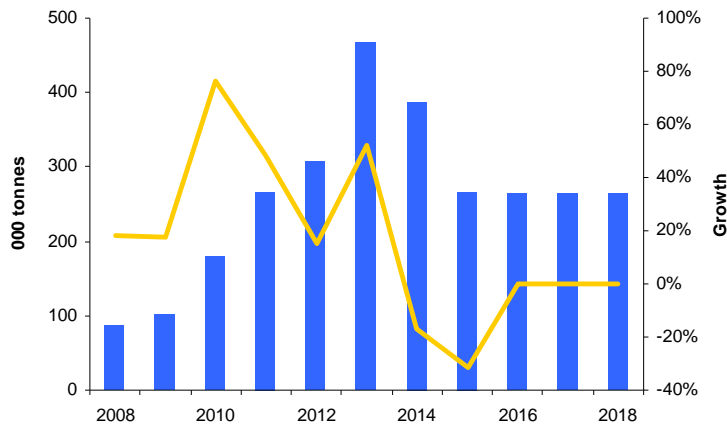


Nickel

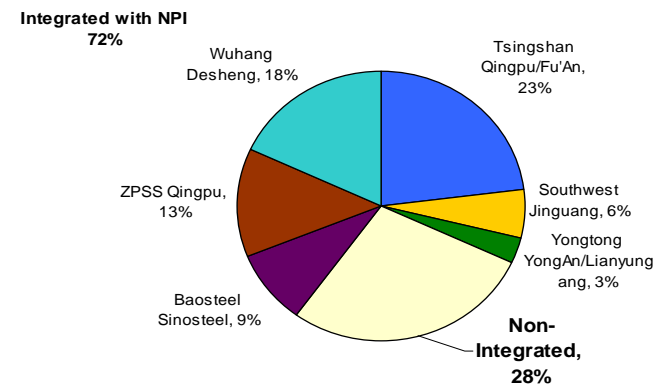
China's NPI conundrum

- **China's nickel and stainless steel industry faces significant challenges** given NPI currently accounts for 60% of primary nickel needs at China's stainless steel mills. If this ratio is to remain intact, China needs to find/build more capacity than will be available in the coming years. Although replacement supply can be sourced from the Philippines, the ore grade is much lower – to a point where the cost increase in the NPI production process may be cost prohibitive. Therefore, the only relief to the impending supply squeeze would be the development of replacement NPI capacity in Indonesia.
- **Legislate it and they will come:** Wood Mackenzie's estimates of the costs of building NPI capacity in Indonesia is relatively low because it believes China is capable of building plants with far less capital intensity than for conventional projects – between US\$12,000 and US\$30,000/t Ni/a (compared with US\$75,000/t Ni/a for the latest projects coming to market outside of China, Ambatovy, Koniambo etc). Wood Mackenzie is tracking three smelter projects in Indonesia which could add around 45-50Kt contained nickel in 2015, 90-100Kt by 2016, and 125Kt by 2017. The projects are 1) Tsingshan's joint venture with PT Sulawesi Bintang Delapan for a 50kt/a (contained) RKEF plant; 2) China Nickel Resources' development with PT Jhonlin of an EAF smelter with a capacity of 60kt/a nickel in NPI in Batulicin, East Kalimantan and; 3) Shenwu Energy's joint venture with PT Titan for a 35kt/a RKEF plant. All are scheduled to commence production in 2015.

China's NPI production



China's stainless steel industry is highly integrated with NPI (date relates to 2012)

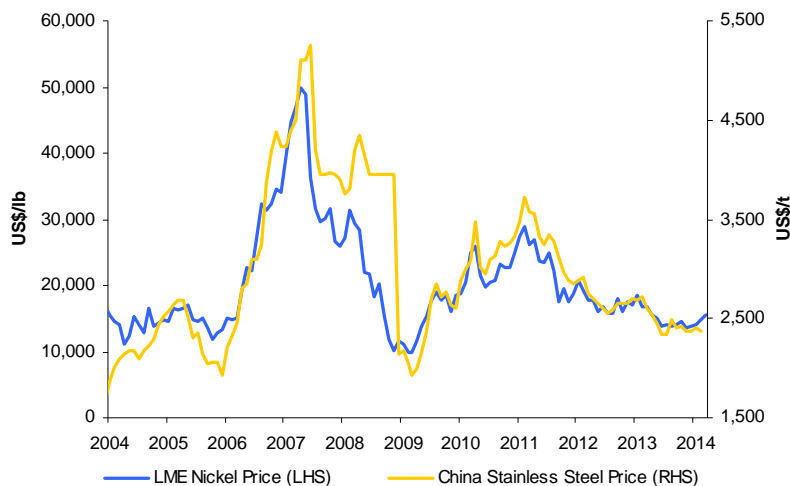


Nickel

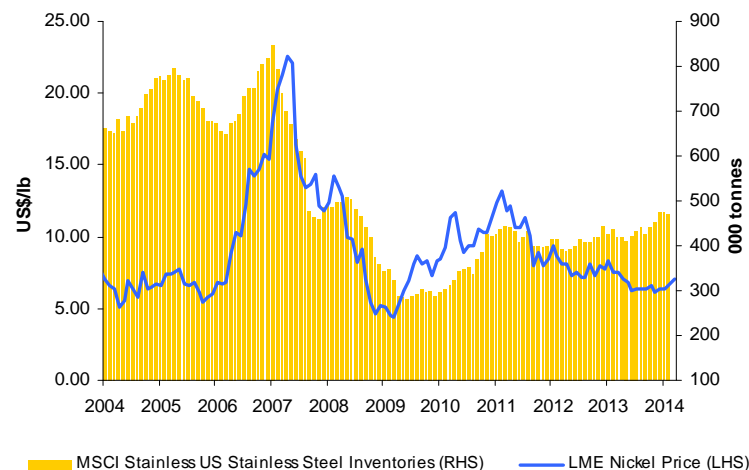
After a tepid 2013, stainless steel producers are optimistic

- **Global stainless steel production growth of 8% in 2013 was below expectations** as China production growth (18%) saw a slight slowing from its five-year CAGR of 22% while the challenging economic conditions in Europe stifled demand.
- **In 2014, the outlook is more promising**, in the first instance if **Chinese** stainless producers are forced to external primary markets to make up for losses in their NPI industry. The industrial pick-up in the **US** is only good for nickel end-use demand and producers have started to hike their base prices on the back of rising nickel prices. Top stainless producers in **Europe** have indicated so far this year that the market has improved considerably, reporting substantial YoY increases in orders at a time of low inventory following considerable de-stocking amid weak prices last year. **Japan** was the outlier in 2013, producing record levels of stainless melt output and 2014 looks healthy as well, particularly in the home consumer segment. Outside of stainless, demand conditions for aerospace and automotive applications are promising.
- **What next to monitor in the global nickel market?** We will be watching closely a number of key indicators to gauge the overall health of the nickel market. Namely Chinese imports of refined nickel and scrap and the rate and location of release of nickel inventory.

China stainless steel price vs nickel price



US stainless steel inventory



Nickel

Global supply / demand

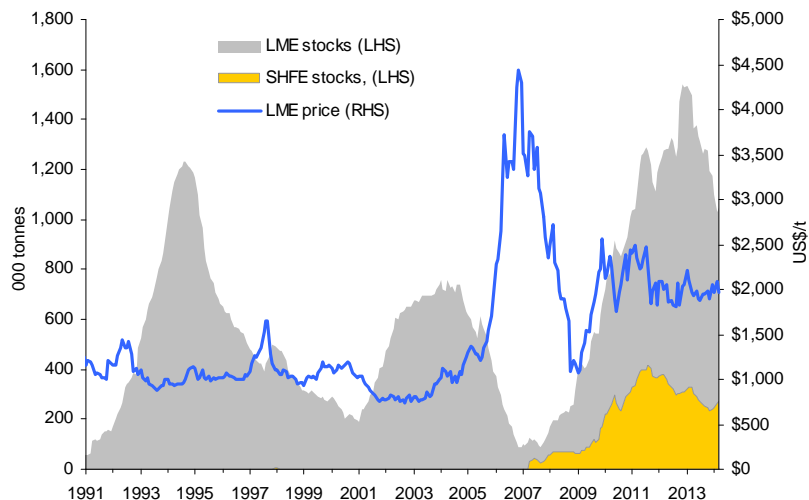
	Unit	2006	2007	2008	2009	2010	2011	2012	2013	2014e	2015e	2016e	2017e	2018e	2019e
World IP growth (Adjusted PPP Weights)	%	6.46	7.21	1.05	-7.94	11.08	5.19	3.54	4.18	4.85	5.61	4.90	5.00	5.08	5.07
Total world mine production	Kt	1,468	1,599	1,510	1,341	1,578	1,916	2,154	2,282	1,793	1,932	2,098	2,148	2,160	2,161
World mine production growth rate	%	7.7	8.9	-5.6	-11.2	17.7	21.4	12.4	6.0	-21.4	7.8	8.6	2.4	0.5	0.0
Regional Mined Production Breakdown															
Indonesia	Kt	174	255	258	228	293	465	546	639	113	169	219	267	270	270
Philippines	Kt	66	92	82	142	175	206	220	196	275	289	312	315	315	315
Russia	Kt	264	257	261	272	279	274	259	245	236	238	232	216	221	219
Canada	Kt	230	251	247	130	155	215	197	220	223	225	226	219	213	213
New Caledonia	Kt	103	125	103	93	130	129	138	150	182	204	236	256	265	267
Australia	Kt	198	190	212	176	181	191	237	233	199	190	190	155	141	129
Brazil	Kt	53	52	51	44	55	95	126	89	98	96	117	125	127	128
Total world primary availability	Kt	1,362	1,425	1,378	1,329	1,446	1,613	1,751	1,940	1,957	1,899	1,963	2,000	2,110	2,139
Total world refined production	Kt	1,322	1,352	1,291	1,227	1,266	1,346	1,444	1,473	1,569	1,634	1,698	1,735	1,735	1,724
China Nickel Pig Iron	Kt	38	74	87	102	180	267	307	467	388	265	265	265	265	265
World refined availability growth rate	%	6.2	4.7	-3.4	-3.5	8.8	11.6	8.6	10.8	0.9	-3.0	3.4	1.9	5.5	1.4
Total world nickel usage	Kt	1,401	1,323	1,278	1,232	1,464	1,608	1,659	1,770	1,888	1,958	2,053	2,105	2,179	2,223
Primary Nickel in Stainless	Kt	883	873	776	847	1,000	1,073	1,101	1,247	1,271	1,299	1,372	1,426	1,484	1,510
Primary Nickel in Non-Stainless	Kt	518	450	502	385	464	535	552	589	618	659	681	679	696	713
World Nickel Usage Growth	%	13.8	-5.6	-3.4	-3.6	18.8	9.9	3.2	6.7	4.8	6.7	3.3	-0.2	2.5	2.4
China Nickel Usage Growth	%	25.7	36.1	-5.8	42.8	20.3	22.6	6.9	19.3	14.5	4.3	4.1	4.1	4.2	2.1
World ex-China Usage Growth	%	11.3	-15.3	-2.5	-20.3	17.9	1.5	0.2	-4.0	-1.5	2.9	5.7	0.7	2.6	1.8
Regional Usage Breakdown															
China	Kt	264	359	338	483	581	712	761	908	1039	1084	1129	1175	1225	1252
USA	Kt	144	134	127	104	127	130	138	134	137	146	152	154	158	160
Europe	Kt	440	404	374	302	347	346	352	325	333	336	346	352	357	360
ROW	Kt	554	426	440	343	409	420	408	402	379	392	425	424	440	452
Refined Nickel Market Balance	Kt	-39.5	102.7	99.4	97.3	-18.1	4.5	92.4	170.7	69.2	-59.1	-89.8	-105.6	-69.8	-84.4
Reported total commercial stocks	Kt	102	151	186	253	235	191	238	409	478	419	329	224	154	70
Reported stock to usage ratio	Wks	3.80	5.95	7.58	10.70	8.33	6.16	7.47	12.02	13.17	11.13	8.35	5.53	3.68	1.63
Average LME Cash Nickel Price	US\$/t	\$24,237	\$37,255	\$21,087	\$14,414	\$21,873	\$22,930	\$17,584	\$15,142	\$15,600	\$17,527	\$18,298	\$19,290	\$18,739	\$19,842
	US\$/lb	\$10.99	\$16.90	\$9.57	\$6.54	\$9.92	\$10.40	\$7.98	\$6.87	\$7.08	\$7.95	\$8.30	\$8.75	\$8.50	\$9.00

Zinc

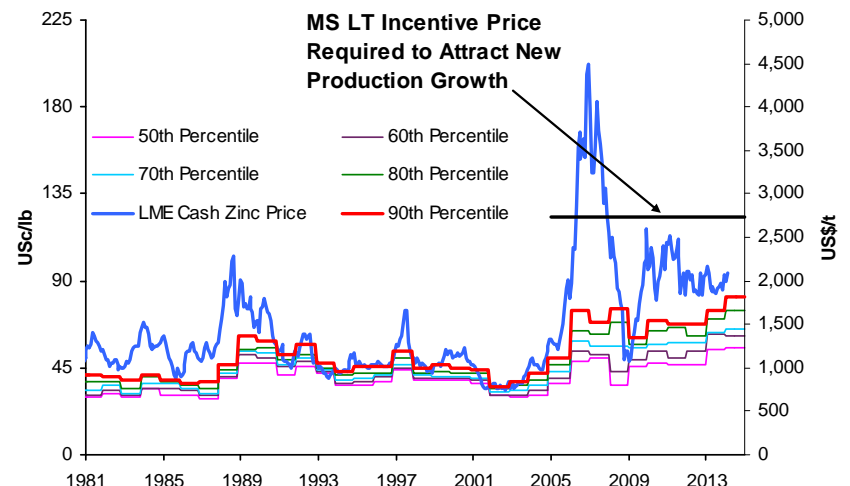
Oversupply trumps improving demand in the near term

- **Despite improved demand fundamentals, the price has yet to respond in a meaningful way because of ample stocks of metal.** However, as the much-heralded supply tightness approaches global inventories should decline. By 2015, this trend should deliver the lowest stock-to-usage ratio since 2008 and prices will respond. We think annual prices will rise 4% from current levels to average US\$0.94/lb, US\$2,065/t in 2014 and then 13% to US\$1.06/lb, US\$2,330/t in 2015.
- **Why the conviction?** The impending supply gap is scheduled to be made up by new mine supply, meaning the success of adequate supply growth must rely on the ability of new capacity to arrive on market in a timely fashion and at reasonable cost. Amid current market conditions, this could prove a challenge given where price sits versus our estimated incentive price.
- **Demand linked to global industrial cycle:** Should concerns over China dissipate and DM consumption patterns sustain, commodities such as zinc with a wide variety of industrial applications will benefit. Indeed China’s 2014 demand trends have progressed at a slower-than-expected rate for the second straight year. However, if the key zinc end-use sectors, namely construction, infrastructure, autos, and galvanized sheet exports, grow at comparable rates to the five-year CAGR, this will provide upside support.

Zinc exchange stocks vs price



Zinc costs vs price and MS LT Incentive price



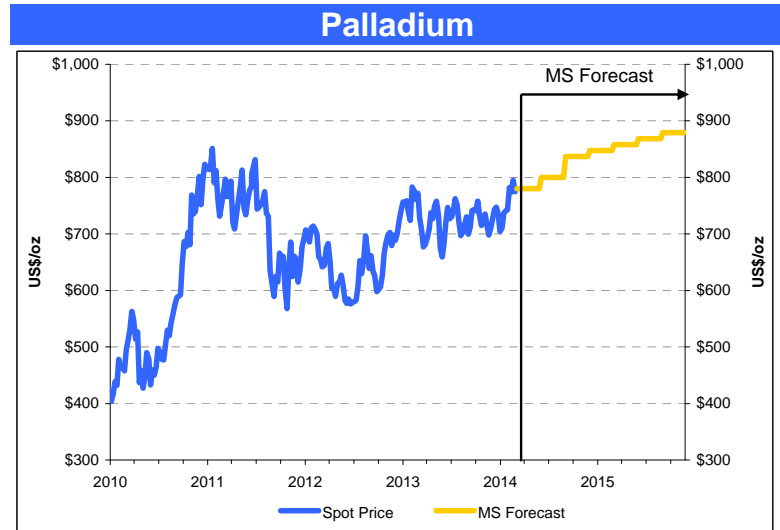
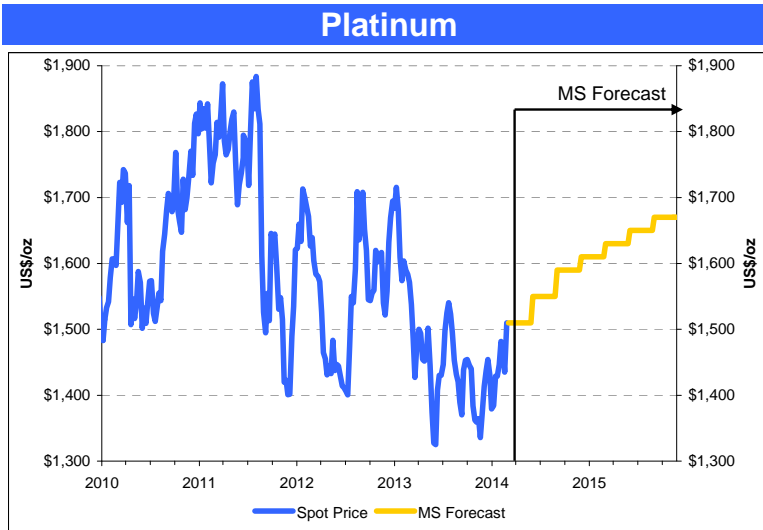
Zinc

Global supply / demand

	Units	2006	2007	2008	2009	2010	2011	2012	2013	2014e	2015e	2016e	2017e	2018e	2019e
World IP growth	%	6.46	7.21	1.05	-7.94	11.08	5.19	3.54	4.18	4.85	5.61	4.90	5.00	5.08	5.07
(Adjusted PPP Weights)															
World Mine Production	Mt	10.45	11.13	11.69	11.38	12.36	12.57	12.78	12.47	13.21	13.73	14.36	14.58	14.96	15.04
World Mine Production Growth	%	3.0	6.5	5.0	-2.6	8.6	1.7	1.7	-2.4	5.9	3.9	4.6	1.5	2.6	0.5
World Refined Production	Mt	10.66	11.36	11.66	11.29	12.83	13.10	12.71	13.05	13.76	14.41	15.18	15.74	15.90	15.74
Primary Refined Production	Mt	10.05	10.62	11.02	10.67	12.14	12.39	12.01	12.30	12.97	13.56	14.21	14.73	14.88	-1.01
Secondary Refined Production	Mt	0.60	0.74	0.64	0.62	0.69	0.71	0.70	0.74	0.80	0.85	0.97	1.01	1.02	16.74
World Refined Production growth	%	4.2	6.6	2.6	-3.2	13.7	2.1	-3.0	2.7	5.5	4.7	5.3	3.7	1.0	-1.0
Total Refined Availability	Mt	10.68	11.37	11.66	11.29	12.83	13.10	12.71	13.05	13.76	14.41	15.18	15.74	15.90	16.74
World Refined Usage	Mt	11.02	11.31	11.44	10.84	12.54	12.74	12.46	13.10	13.85	14.57	15.13	15.73	15.86	16.34
World Refined Usage Growth	%	3.8	2.7	1.1	-5.2	15.7	1.6	-2.2	-1.6	5.7	5.2	3.9	4.0	0.9	3.0
China Refined Usage Growth	%	11.0	11.5	7.5	8.0	14.8	11.7	6.6	8.2	7.0	7.7	6.8	6.9	3.0	4.4
World ex-China Usage Growth	%	1.2	-0.9	-1.7	-11.7	16.3	-4.5	-8.4	2.7	4.5	3.0	1.1	1.1	-1.3	1.4
Regional Usage Breakdown															
China	Mt	3.17	3.53	3.80	4.10	4.71	5.26	5.61	6.06	6.49	6.99	7.47	7.98	8.22	8.58
BRI (Brazil, Russia, India)	%	0.87	0.94	0.94	0.85	0.98	1.06	1.11	1.13	1.16	1.22	1.26	1.30	1.32	1.38
USA	%	1.22	1.10	0.98	0.90	0.95	1.01	1.07	1.07	1.10	1.16	1.17	1.18	1.15	1.15
Europe	Mt	2.56	2.56	2.33	1.76	2.10	2.19	2.01	2.00	2.00	2.01	2.00	2.00	1.95	1.95
ROW	Mt	2.57	2.59	2.83	2.81	3.26	2.73	2.19	2.36	2.62	2.70	2.74	2.78	2.76	2.81
Market balance	Mt	-0.33	0.06	0.22	0.44	0.29	0.36	0.25	-0.06	-0.09	-0.16	0.05	0.01	0.04	0.40
Reported commercial stocks	Mt	0.49	0.53	0.84	1.10	1.44	1.80	1.53	1.48	1.39	1.23	1.28	1.29	1.33	1.73
Change in reported commercial stocks	Mt	-0.32	0.04	0.30	0.26	0.35	0.36	-0.27	-0.06	-0.09	-0.16	0.05	0.01	0.04	0.40
Apparent change in off-warrant stocks	Mt	0.02	-0.02	0.08	-0.04	0.09	0.01	-0.63	0.21	-0.03	-0.07	0.21	-0.04	0.02	0.37
Stock to usage ratio	Wks	2.32	2.46	3.80	5.25	5.98	7.35	6.39	5.85	5.22	4.40	4.41	4.28	4.36	5.51
Annual average LME cash prices	US\$/t	\$3,277	\$3,252	\$1,879	\$1,628	\$2,180	\$2,213	\$1,965	\$1,941	\$2,066	\$2,331	\$2,425	\$2,469	\$2,579	\$2,646
	US\$/lb	\$1.49	\$1.48	\$0.85	\$0.74	\$0.99	\$1.00	\$0.89	\$0.88	\$0.94	\$1.06	\$1.10	\$1.12	\$1.17	\$1.20

Precious Metals

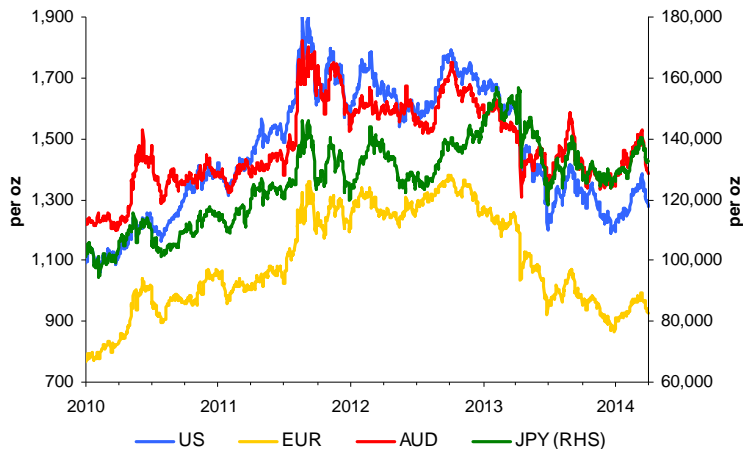
Precious Metals Historical price vs Morgan Stanley forecast to 2015



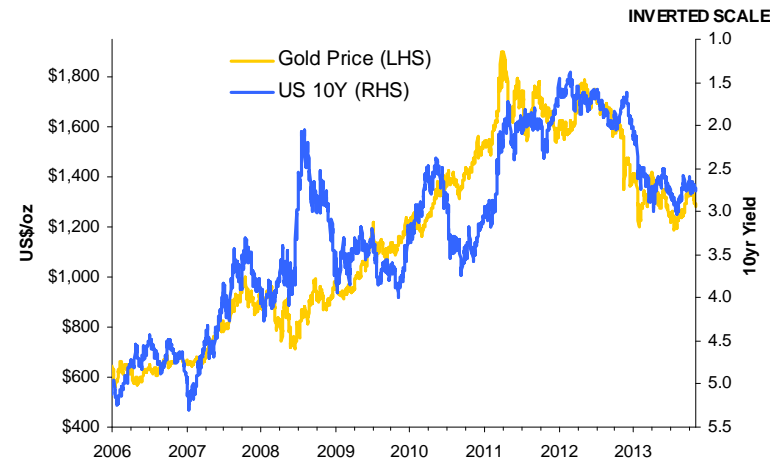
Gold Bear market to resume

- **Posting gains of close to 10%, gold was one of the top performing commodities in 1Q.** We attribute the surprising strength to: 1) lingering concerns over the vigour of the US-led global growth recovery after macro data was mixed; 2) wobbling EM growth models; 3) worry over China’s economic health; and 4) geopolitical tension regarding the situation in Crimea. During the same time frame, gold ETF physical liquidation slowed, the USD rise stalled, and Chinese gold imports surged ahead of the Lunar New Year festival. All things considered, various factors positive factors lined up for one of 2013’s worst performers and in hindsight it may actually be a surprise the gold price failed to appreciate more.
- **With many of those factors dissipating, we believe the gold price is set to resume a declining trend.** In our view, it is hard to build a plausible scenario in which gold could continue to rise in the coming quarters. Morgan Stanley’s global strategic six-month view favours risk assets (equities and credit) over safe havens such as government bonds, and we are also constructive on the USD. This outlook, together with market expectations of rising real US interest rates and bond yields as well as low expectations of inflationary pressure, generates considerable headwinds for the precious metals complex.
- **Price outlook:** Barring further exogenous shocks such as the ones felt in 1Q, we expect gold prices to decline on an average basis for the next four quarters. In 2Q14, we forecast an average price of US\$1,250/oz and in 2H14 an average of US\$1,168/oz. In 2015 we expect an outcome of US\$1,138/oz.

Gold price in various currencies



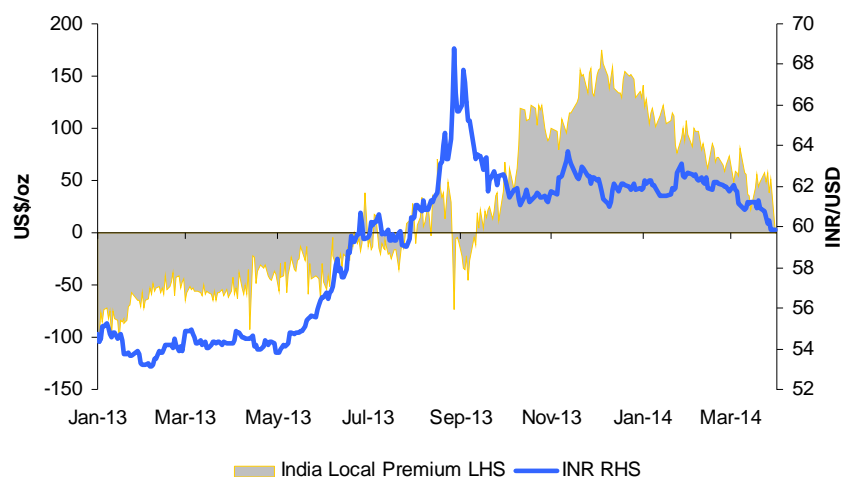
The US10Y yield is not an exclusive driver of the gold price, but an important one



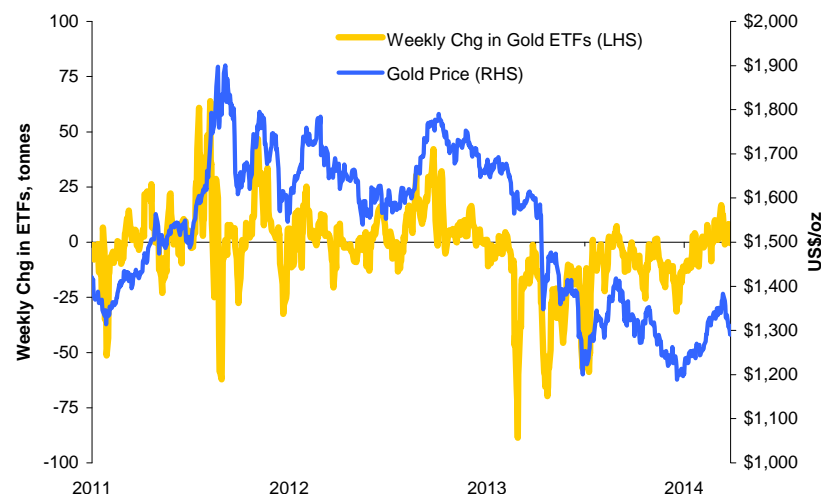
Gold Eastern shift in global gold demand

- We argued in a mid-1Q report that India and China’s robust growth in consumer demand was certainly a positive market development.** Last year’s significant price drop helped spark a surge in physical demand (jewellery, coins, bar hoarding) and propelled the two countries into the spotlight as key drivers in the global gold market. Indeed we believe without this underlying support, the gold price would have fallen much further in 2013. As metals flowed out of ETFs, Asian consumers were happy to sweep up volume at lower prices.
- Good to have, but not enough to offset the major headwinds:** We also recently argued any relaxation in India’s gold import restrictions is unlikely to have a material impact on the gold market this year. In a new development, five more private banks will be allowed to import gold, significantly increasing the number of suppliers to the local market. However, in our view, imports will not dramatically increase, as the more onerous import restrictions in the form of the 80:20 rule (requiring 20% of all imported tonnes to be re-exported), upfront payment to be made on all imports, and the 10% import duty continue to act as major bottlenecks. Even if official imports pick up on the back of import curb relaxations, we firmly believe this would only result in shifting of tonnes from the unofficial channel to official channel while total import supply remains unaltered on a net basis.

INR appreciation decreases the local premium and makes imports cheaper



Global ETF liquidation slowed in 1Q14



Gold

Global supply / demand

	Unit	2006	2007	2008	2009	2010	2011	2012	2013	2014e	2015e	2016e	2017e	2018e	2019e
Supply															
Total Mine Supply	tonnes	2441	2437	2377	2521	2581	2648	2738	2829	3017	3035	3051	3040	3009	3090
<i>year-over-year chg</i>	%	-0.2	-0.2	-2.5	6.1	2.4	2.6	3.4	3.3	6.6	0.6	0.5	-0.4	-1.0	2.7
Scrap supply	tonnes	1133	982	1316	1695	1645	1605	1580	1390	1320	1200	1125	1025	990	919
<i>year-over-year chg</i>	%	25.6	-13.3	34.0	28.8	-2.9	-2.4	-1.6	-12.0	-5.0	-9.1	-6.3	-8.9	-3.4	-7.2
Official sector net sales/(purchases)	tonnes	289	430	-36	-98	25	-346	-139	-180	-100	-75	-25	15	75	75
<i>year-over-year chg</i>	%	-66.0	48.8	-108.5	168.7	-125.2	-1503.5	-59.8	29.7	-44.5	-25.0	-66.7	-160.0	400.0	0.0
Net producer hedging	tonnes	-434	-444	-352	-254	-121	12	-40	-50	70	90	125	180	220	220
Total Supply	%	3429	3404	3305	3864	4129	3919	4139	3989	4307	4250	4276	4260	4294	4304
<i>year-over-year chg</i>	%	-15.4	-0.7	-2.9	16.9	6.9	-5.1	5.6	-3.6	8.0	-1.3	0.6	-0.4	0.8	0.2
Demand															
Carat Jewellery	tonnes	2300	2424	2304	1816	2020	1975	1896	2210	2135	2206	2270	2426	2510	2598
<i>year-over-year chg</i>	%	-15.4	5.4	-4.9	-21.2	11.3	-2.2	-4.0	16.5	-3.4	3.3	2.9	6.9	3.5	3.5
Electronics	tonnes	316	322	311	275	326	320	285	282	285	295	305	320	320	320
<i>year-over-year chg</i>	%	10.7	1.8	-3.4	-11.6	18.6	-1.9	-11.1	-0.7	0.9	3.5	3.4	4.9	0.0	0.0
Dental	tonnes	61	58	56	53	50	53	39	37	55	55	55	55	55	56
<i>year-over-year chg</i>	%	-2.7	-4.8	-3.6	-5.4	-4.9	4.8	-26.5	-3.4	47.5	0.0	0.0	0.0	0.8	0.8
Official Coins, Medals & Imitation coins	tonnes	189	204	262	293	302	333	411	387	463	449	431	413	429	445
<i>year-over-year chg</i>	%	26.9	7.9	28.4	11.8	2.9	10.5	23.3	-5.7	19.5	-3.0	-4.1	-4.0	3.8	3.8
Total Fabrication Demand	tonnes	2866	3007	2933	2436	2698	2681	2630	2916	2938	3005	3060	3214	3315	3419
<i>year-over-year chg</i>	%	-10.9	4.9	-2.5	-16.9	10.7	-0.6	-1.9	10.9	0.7	2.3	1.8	5.0	3.1	3.1
Change in ETF Holdings	tonnes	260	252	321	617	368	238	279	-881	-200	-150	-50	-50	-50	-50
Bar Hoarding	tonnes	233	240	622	498	886	1197	963	1267	1229	1192	1132	1076	1022	971
Implied Investment/(Disinvestment)	tonnes	70	-95	-571	313	178	-197	268	686	340	203	133	20	7	-35
Total Investment Demand		563	397	372	1428	1431	1238	1509	1072	1369	1245	1216	1046	979	885
<i>Investment as a % of Total Demand</i>	%	16.4	11.7	11.3	37.0	34.7	31.6	38.8	26.9	33.2	32.2	31.4	30.0	29.3	28.7
Total Demand (Fabrication + Investment)	tonnes	3,429	3,404	3,305	3,864	4,129	3,919	4,139	3,989	4,307	4,250	4,276	4,260	4,294	4,304
Gold Price	US\$/oz	\$605	\$697	\$872	\$976	\$1,226	\$1,546	\$1,669	\$1,411	\$1,219	\$1,138	\$1,125	\$1,100	\$1,200	\$1,325

Silver

Global supply / demand

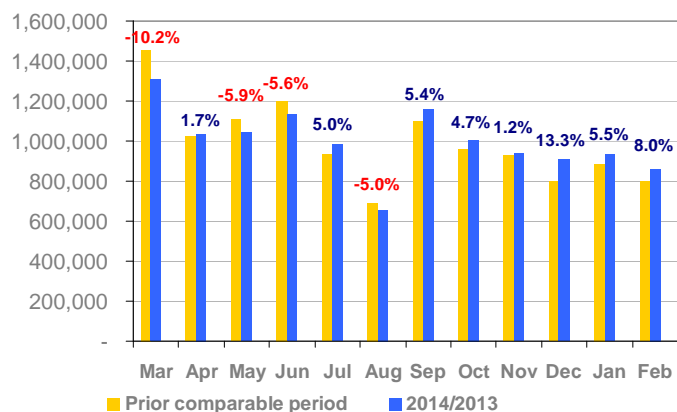
		2006	2007	2008	2009	2010	2011	2012	2013	2014e	2015e	2016e	2017e	2018e	2019e
Supply															
New Mine Production	tonnes	20,825	21,829	22,039	22,953	23,722	24,011	24,974	25,811	25,350	23,725	22,500	22,250	22,795	23,353
<i>year-over-year</i>	%	1.3	4.8	1.0	4.1	3.4	1.2	4.0	3.4	-1.8	-6.4	-5.2	-1.1	2.4	2.4
Net Government Purchase/(Sales)	tonnes	-2,296	-1,499	-925	-475	-1,418	-225	-50	-50	-50	-50	-50	-50	-50	-50
<i>year-over-year</i>	%	2.6	-34.7	-38.3	-48.6	198.6	-84.2	-77.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Old Silver Scrap	tonnes	6,400	6,325	6,250	6,225	7,100	8,025	7,900	6,515	6,004	6,015	5,991	6,155	6,301	6,451
<i>year-over-year</i>	%	1.6	-1.2	-1.2	-0.4	14.1	13.0	-1.6	-17.5	-7.8	0.2	-0.4	2.7	2.4	2.4
Net Producer Hedging	tonnes	-350	-750	-275	-550	1575	375	-1300	0	0	0	0	0	0	0
Total Supply	tonnes	24,579	25,905	27,089	28,153	30,981	32,186	31,523	32,276	31,304	29,690	28,441	28,355	29,046	29,754
<i>year-over-year</i>	%	-5.6	5.4	4.6	3.9	10.0	3.9	-2.1	2.4	-3.0	-5.2	-4.2	-0.3	2.4	2.4
Demand															
Electronics	tonnes	6,410	6,830	6,990	5,750	7,810	7,490	6,820	7,143	7,816	8,282	8,580	8,986	9,251	9,525
<i>year-over-year</i>	%	5.1	6.6	2.3	-17.7	35.8	-4.1	-8.9	4.7	9.4	6.0	3.6	4.7	3.0	3.0
Photography	tonnes	4,450	3,690	3,200	2,510	2,290	2,120	1,850	1,790	1,733	1,680	1,629	1,580	1,411	1,261
<i>year-over-year</i>	%	-11.0	-17.1	-13.3	-21.6	-8.8	-7.4	-12.7	-3.3	-3.2	-3.1	-3.0	-3.0	-10.7	-10.7
Brazing Alloys and Solders	tonnes	1,830	2,000	2,210	2,010	2,200	2,260	2,150	2,307	2,481	2,611	2,726	2,808	2,928	3,052
<i>year-over-year</i>	%	1.7	9.3	10.5	-9.0	9.5	2.7	-4.9	7.3	7.6	5.2	4.4	3.0	4.3	4.3
Coins & Medals	tonnes	1,240	1,230	2,020	2,460	3,110	3,660	2,870	3,014	1,959	1,371	1,200	1,110	1,223	1,347
<i>year-over-year</i>	%	0.0	-0.8	64.2	21.8	26.4	17.7	-21.6	5.0	-35.0	-30.0	-12.5	-7.5	10.2	10.2
Other Applications	tonnes	5,360	5,690	5,450	4,270	4,930	4,760	4,920	5,021	5,181	5,337	5,502	5,693	5,737	5,782
<i>year-over-year</i>	%	5.7	6.2	-4.2	-21.7	15.5	-3.4	3.4	2.0	3.2	3.0	3.1	3.5	0.8	0.8
Total Fabrication Demand	tonnes	26,660	27,030	27,210	24,200	27,880	27,570	25,780	26,700	27,050	27,650	28,375	29,200	29,482	29,808
<i>year-over-year</i>	%	-1.8	1.4	0.7	-11.1	15.2	-1.1	-6.5	3.6	1.3	2.2	2.6	2.9	1.0	1.1
Fundamental Balance															
Fundamental Balance	tonnes	-2,081	-1,125	-121	3,953	3,101	4,616	5,743	5,576	4,254	2,040	66	-845	-436	-54
Change in ETF Holdings	tonnes	3,862	2,242	3,558	3,834	3,648	-811	1,621	459	-400	-350	-500	-750	-749	-749
Reported ETF Holdings	tonnes	4,825	7,067	10,625	14,459	18,107	17,296	18,917	19,376	18,976	18,626	18,126	17,376	16,627	15,878
<i>year-over-year</i>	%		46.5	50.3	36.1	25.2	-4.5	9.4	2.4	-2.1	-1.8	-2.7	-4.1	-4.3	-4.5
Implied Other Investment	tonnes	-5,943	-3,367	-3,679	119	-547	5,427	4,122	5,116	4,654	2,390	566	-95	313	695
Total Demand	tonnes	24,579	25,905	27,089	28,153	30,981	32,186	31,523	32,276	31,304	29,690	28,441	28,355	29,046	29,754
Price															
Price	US\$/oz	\$11.60	\$13.18	\$15.02	\$14.70	\$20.11	\$32.91	\$31.15	\$23.96	\$19.74	\$18.86	\$19.23	\$19.64	\$22.22	\$25.48

Platinum Directionality remains positive, stockpiles dampen near-term price recovery

- Labour disruption in South Africa continues to dominate headlines and limit primary supply.** The AMCU labour union strike at AngloPlats, Implats and Lonmin has served to place c.40% of global platinum supply off-line and is ongoing (in its 11th week as at 31/3/2014). However, prices have as yet failed to respond in a material manner to this strike as producers have been able to sell down inventory and pipeline stock (estimates range up to two months worth of supply).
- We continue to see positive directionality in the platinum market balance.** Our analysis suggests the platinum market will be in a sizable deficit again in 2014. This has primarily been driven by: a) ongoing labour disruptions in South Africa; b) continued pressure on marginal supply; and c) an improvement in EU auto sales (42% of 2013 platinum autocat demand) after six successive months of year-on-year growth (Morgan Stanley Research estimates 4% growth in EU auto sales in 2014).
- This now serves to place the market in a delicate balance.** A c1m oz market deficit of 2013 and a forecast deficit for 2014 has served to draw down on the surpluses accumulated since 2008. However, these accumulated stockpiles continue to dampen the extent of a near-term price recovery. Assuming greater stability in South African supply in 2015 (wage settlements in South Africa are usually multi-year agreements), we continue to forecast a balanced market position on a normalised basis. Despite our forecast of c.3% p.a. growth in gross autocat demand, we see increases in recycled supply as likely to keep net autocat demand flat. We continue forecast an gradual improvement in the US\$ platinum price. Our forecast implicitly assumes a c.10% in ZAR or 7.5% in US\$ improvement in the price to our long-term real incentive price of US\$1940/oz at USD/ZAR of 9.50.

EU auto demand continues to improve off a low base

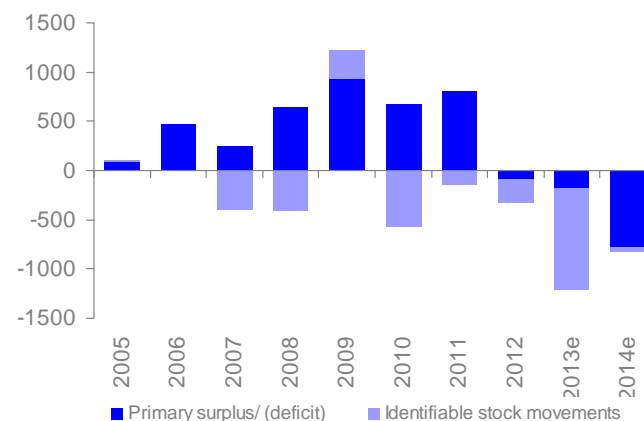
New passenger car registrations in the EU



Source: ACEA, Morgan Stanley Research.

Accumulated surpluses since 2008 continue to weigh on a near-term price recovery

Platinum market surplus/(deficit) (000oz)



e = Morgan Stanley Research estimates. Source: Thompson Reuters GFMS, Johnson Matthey

Platinum Global supply / demand

	Unit	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014e	2015e	2016e	2017e	2018e
Platinum Production															
South Africa	Koz	5,115	5,295	5,070	4,515	4,635	4,635	4,860	4,095	4,323	4,380	4,533	4,730	4,926	5,140
Russia	Koz	890	920	915	805	785	825	835	800	802	804	803	799	797	798
North America	Koz	365	345	325	325	260	200	350	295	345	411	424	434	459	485
Others	Koz	270	270	290	295	345	390	440	450	450	450	486	526	526	526
Total World Production	Koz	6,640	6,830	6,600	5,940	6,025	6,050	6,485	5,640	5,920	6,044	6,246	6,489	6,708	6,949
% change	%	2%	3%	-3%	-10%	1%	0%	7%	-13%	5%	2%	3%	4%	3%	4%
Platinum Consumption															
Autocatalyst (net)	Koz	3,025	3,045	3,210	2,525	1,355	1,990	1,945	2,110	1,974	1,932	1,926	1,960	2,065	2,104
<i>gross</i>	Koz	3,795	3,905	4,145	3,655	2,185	3,075	3,185	3,240	3,228	3,377	3,479	3,583	3,691	3,801
<i>recovery</i>	Koz	770	860	935	1,130	830	1,085	1,240	1,130	1,254	1,445	1,553	1,623	1,626	1,698
Chemical	Koz	325	395	420	400	290	440	470	450	470	484	499	514	529	545
Electrical	Koz	360	360	255	225	180	220	220	155	210	216	223	229	236	243
Glass	Koz	360	405	470	315	10	385	515	180	300	259	318	328	338	348
<i>ETF</i>	Koz	-	-	132	281	660	1,152	1,157	1,169						
Jewellery	Koz	1,965	1,640	1,455	1,365	2,245	1,685	1,665	1,890	2,021	2,081	2,140	2,270	2,390	2,526
<i>% change jewellery</i>	%	-9%	-17%	-11%	-6%	64%	-25%	-1%	14%	7%	3%	3%	6%	5%	6%
Petroleum	Koz	170	180	205	240	210	170	210	200	206	212	219	225	232	239
Other	Koz	475	490	495	535	440	530	550	575	592	610	628	647	667	687
Total Demand	Koz	6,680	6,515	6,510	5,605	4,730	5,420	5,575	5,560	5,774	5,795	5,952	6,173	6,457	6,691
Balance -Pre Investment Demand															
	Koz	(40)	315	90	335	1,295	630	910	80	146	249	293	316	251	257
Investment demand	Koz	15	(40)	170	555	660	655	460	455	900	300	400	400	400	400
Balance -Post Investment Demand															
	Koz	(55)	355	(80)	(220)	635	(25)	450	(375)	(754)	(51)	(107)	(84)	(149)	(143)
Average Price (US\$/oz)	US\$/oz	897	1,143	1,304	1,576	1,210	1,607	1,723	1,554	1,519	1,639	1,825	1,970	2,070	2,175

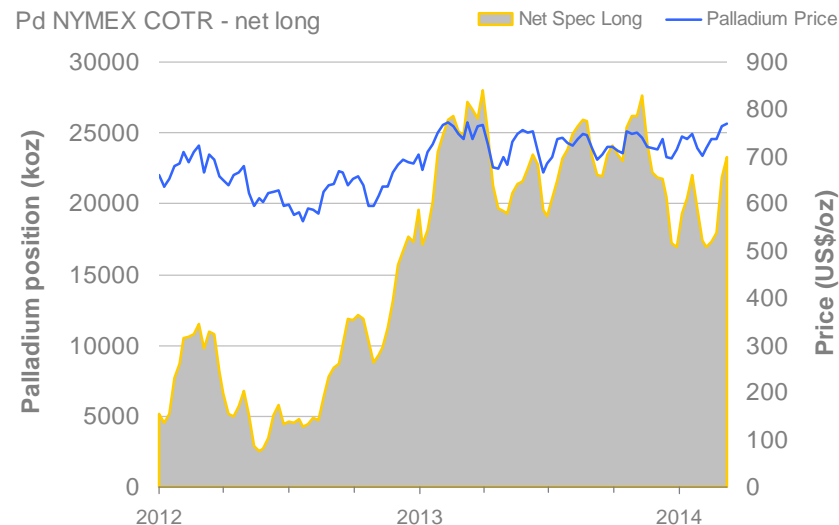
Palladium Bid-up on geo-politics/ labour, medium term outlook remains attractive

- **A combination of strike activity in South Africa (37% of 2013 primary supply) and geo-political risk (Russia accounted for 41% of 2013 primary supply) has converged to create high palladium prices in 1Q14.** The palladium price hit a high of US\$790/oz on 24/3/2014 after starting the year at US\$716/oz.
- **Even when/if these supply-side risks subside, palladium market fundamentals remain attractive.** We continue to expect an ongoing sizable structural deficit, as supply is unlikely to meet growing demand, in our view. Palladium autocat demand remains exposed to regions with faster expected 2014 new vehicle growth rates (N. America, China). Additionally, we continue to see demand upside from tightening Chinese auto emission standards (c. 0.9moz pa uplift just from moving to DM loadings). However, this is somewhat offset by falling demand in the industrial and jewellery segments because of rising prices, industry cyclicality, and consumer preferences, as well as by ongoing increases in recycled supply.
- **Above-ground stockpiles and investment demand remain key risks.** The size of palladium stockpiles above ground (Thomson Reuters GFMS 2013 estimate of 10moz– i.e., c.13 months of fabrication demand) has the potential to dampen near-term price appreciation. Additionally, fluctuations in investment demand can have a significant positive or negative impact on the market in the short term, as was seen in 2011 when a 1.7moz YoY change pushed the market into a large surplus.

Palladium remains exposed to regions with attractive expected auto growth

		Global auto sales				2013e autocat demand (%)		
		2012	2013	2014e	2015e	Platinum	Palladium	Rhodium
E. Europe	Units (m)	4.5	4.6	4.4	4.6			
	y/y change		2%	-4%	5%			
W. Europe	Units (m)	13.1	12.6	13	13.8			
	y/y change		-4%	3%	6%			
Europe	Units (m)	17.6	17.2	17.4	18.4	42%	24%	16%
	y/y change		-2%	1%	6%			
Japan	Units (m)	5.2	5.2	5.1	5.4	11%	14%	24%
	y/y change		0%	-2%	6%			
N America	Units (m)	17.1	18.3	19.3	19.9	16%	26%	2%
	y/y change		7%	5%	3%			
China	Units (m)	15.6	17.7	19.2	20.7	7%	22%	33%
	y/y change		13%	8%	8%			
RoW	Units (m)	20.2	20.4	21	21.9	23%	14%	26%
	y/y change		1%	3%	4%			
Global	Units (m)	75.7	78.8	82	86.3			
	y/y change	6%	4%	4%	5%			

Non-commercial palladium positions on Nymex remain net long



Palladium

Global supply / demand

	Unit	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014e	2015e	2016e	2017e	2018e
Palladium Production															
South Africa	Koz	2,605	2,775	2,765	2,430	2,370	2,640	2,560	2,330	2,463	2,517	2,640	2,729	2,797	2,940
Russia	Koz	4,620	3,920	4,540	3,660	3,635	3,720	3,480	2,880	2,755	2,600	2,599	2,598	2,597	2,596
North America	Koz	910	985	990	910	755	590	900	905	984	1,059	1,094	1,112	1,175	1,184
Others	Koz	270	270	285	310	340	405	420	430	423	447	480	480	515	515
Total Supply	Koz	8,405	7,950	8,580	7,310	7,100	7,355	7,360	6,545	6,625	6,623	6,813	6,920	7,085	7,235
% change	%	-2%	-5%	8%	-15%	-3%	4%	0%	-11%	1%	0%	3%	2%	2%	2%
Palladium Consumption															
Autocatalyst (net)	Koz	3,240	3,210	3,530	3,325	3,085	4,270	4,460	4,955	5,129	5,382	5,563	5,576	5,590	5,661
<i>gross</i>	Koz	3,865	4,015	4,545	4,465	4,050	5,580	6,155	6,615	6,888	7,223	7,512	7,738	7,970	8,209
<i>recovery</i>	Koz	625	805	1,015	1,140	965	1,310	1,695	1,660	1,760	1,841	1,949	2,162	2,380	2,548
Chemical	Koz	415	440	375	350	325	370	440	530	550	567	583	601	619	638
Dental	Koz	815	620	630	625	635	595	540	530	510	500	515	530	546	562
Electronics	Koz	970	1,205	1,235	1,025	975	970	895	770	650	650	670	690	710	732
Jewellery	Koz	1,430	1,005	715	855	705	495	295	255	250	250	257	265	273	281
Other	Koz	265	85	85	75	70	90	110	105	100	103	106	109	113	116
Total Demand	Koz	7,135	6,565	6,570	6,255	5,795	6,790	6,740	7,145	7,189	7,451	7,694	7,771	7,850	7,989
Balance -Pre Investment Demand	Koz	1,270	1,385	2,010	1,055	1,305	565	620	(600)	(563)	(829)	(881)	(851)	(766)	(754)
Investment demand		220	50	260	420	625	1,095	(565)	470	450	200	200	200	200	200
Balance -Post Investment Demand	Koz	1,050	1,335	1,750	635	680	(530)	1,185	(1,070)	(1,013)	(1,029)	(1,081)	(1,051)	(966)	(954)
Average Price (US\$/oz)	US\$/oz	201	320	355	352	263	522	734	645	735	810	910	992	1,069	1,070

Rhodium Global supply / demand

	Unit	2006	2007	2008	2009	2010	2011	2012	2013e	2014e	2015e	2016e	2017e	2018e	2019e
Rhodium Production															
South Africa	Koz	690	696	574	663	632	641	577	574	502	585	607	613	639	648
Russia	Koz	95	90	85	70	70	72	90	85	85	85	85	85	85	85
North America	Koz	20	20	18	15	10	20	23	24	24	27	27	29	29	29
Others	Koz	19	18	18	22	22	32	33	38	37	41	41	41	41	41
Total Supply	Koz	824	824	695	770	734	765	723	721	648	738	760	768	794	802
% change	%	9%	0%	-16%	11%	-5%	4%	-5%	0%	-10%	14%	3%	1%	3%	1%
Rhodium Consumption															
Autocatalyst (net)	Koz	692	695	541	432	486	438	538	520	545	550	566	599	630	671
<i>gross</i>	Koz	863	887	768	619	727	715	790	801	831	861	893	926	961	996
<i>recovery</i>	Koz	171	192	227	187	241	277	252	281	286	311	327	327	330	325
Chemical	Koz	49	63	68	54	67	72	81	79	82	79	81	83	84	85
Electrical	Koz	9	3	3	3	4	6	6	7	7	8	8	8	8	9
Glass	Koz	65	59	34	19	68	77	31	40	41	43	45	46	48	50
Other (incl. Investment)	Koz	23	24	24	21	21	38	66	89	60	31	32	34	35	36
<i>Europe</i>		149	117	58	63	45	38	88	114						
<i>Japan</i>		278	251	241	157	195	183	191	178						
<i>North America</i>		189	186	64	51	22	(7)	30	12						
<i>China</i>			89	105	111	175	186	207	240						
<i>Rest of the World²</i>		222	202	202	147	212	235	206	191						
Total Demand	Koz	838	844	670	529	646	631	722	735	736	711	732	770	805	850
Oversupply/(Undersupply)	Koz	(14)	(20)	25	241	88	134	1	(14)	(88)	27	28	(3)	(11)	(48)
Average Price (US\$/oz)	US\$/oz	4,552	6,191	6,564	1,591	2,454	1,988	1,234	1,059	1,106	1,171	1,467	1,890	2,538	3,114

Steel & Steel Making Raw Materials

Steel Global steel prices to stabilize

Upcoming Capacity Cuts in China

Province	Capacity to reduce (mnt)	Timeframe
Beijing	To close 1200 highly polluting enterprises	2017
Tianjing	1.40	2017
Hebei	70.00	2018
Tangshan	40.00	2017
Shijiazhuang	4.82	2017
Chengde	0.04	2017
Zhangjiakou	3.40	2017
Qinghuangdao	5.20	2017
Langfang	1.70	2017
Baoding	0.96	2017
Cangzhou	4.50	2017
Xingtai	2.64	2017
Handan	12.04	2017
Subtotal	75.30	2017
Shanxi	6.70	2017
Inner Mongolia		2017
Shandong	22.57	2015
Jiangsu	7.00	2018
Zhejiang	0.80	2017
Total	108.47	

Source: Local governments, Morgan Stanley Research

Steel Price Outlook

Period	US HRC			China HRC			Japan HRC			Europe HRC			Russia HRC			Brazil HRC		
	New US\$/t	Old US\$/t	Chg %	New US\$/t	Old US\$/t	Chg %	New US\$/t	Old US\$/t	Chg %	New US\$/t	Old US\$/t	Chg %	New US\$/t	Old US\$/t	Chg %	New US\$/t	Old US\$/t	Chg %
2013	694	695	0%	604			636	636	0%	617			557			811	811	0%
2014e	690	695	-1%	640	640	0%	630	630	0%	586	600	-2%	530	544	-3%	853	853	0%
2015e	705	705	0%	645	645	0%	630	630	0%	604	620	-3%	543	559	-3%	858	858	0%
2016e	715	715	0%	645	645	0%	620	620	0%	614	625	-2%	566	577	-2%	853	853	0%
2017e	700	700	0%	640	640	0%	610	610	0%	620	620	0%	573	573	0%	836	836	0%
2018e	690	690	0%	590	590	0%	600	600	0%	615	615	0%	572	572	0%	831	831	0%
2019	685	685	0%	575	575	0%	600	600	0%	595	595	0%	558	558	0%	826	826	0%
LT	710	710	0%	569	569	0%	600	600	0%	600	600	0%	589	589	0%	837	837	0%

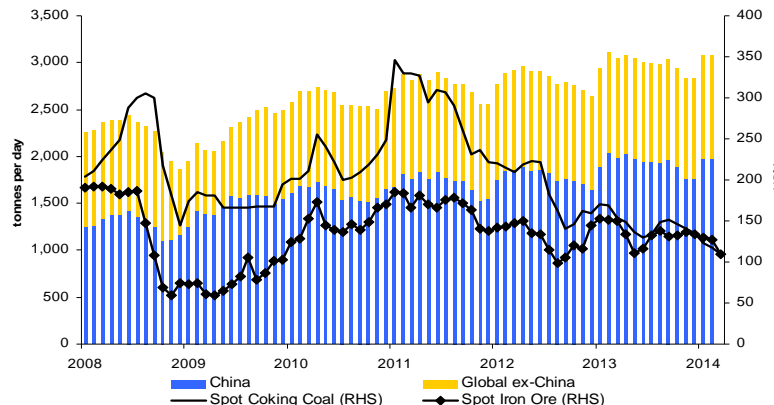
Source: Bloomberg, Morgan Stanley research. e = Morgan Stanley Research estimates

- Improving demand/supply conditions, but recovery still remains slow:** We have lowered our net global demand growth forecast to 2.3% (vs 2.7% previously), mainly because of the high base in 2013 and lowered supply forecasts to reflect more visible capacity adjustments in China. Nevertheless, improvements to global steel operating rates should remain slow and gradual.
- Capacity cuts in China:** We believe the capacity curbs initiated by the State Council will make more meaningful differences than have previous measures to reduce capacity. Stricter pollution controls and tighter lending policies should force small and private mills to cut capacity or exit. Although we expect the process to take some time, we believe excess capacity in China will gradually decline.
- Steel prices to stabilize:** Aided by capacity cuts in China and improving economic conditions, we expect steel prices to stabilize in regions such as the US, China, and Japan and limit further deterioration of metal spreads in the medium term.

Steel Regional updates: US shows healthier momentum versus EU

- United States:** Expecting higher lows and higher highs for pricing. Our big picture steel market view encompasses growing domestic demand and continued import-driven price cycles, marked by both higher price troughs and peaks as utilization ticks up. US steelmakers have hiked flat-rolled prices in an attempt to stem downward price momentum. Near-term conditions will likely support the price increase, as thawing weather releases pent-up demand and mills experience a series of planned and unplanned outages. Although we expect prices to seasonally weaken over the summer, imports could start to decline beginning in 2Q or 3Q and we expect pricing to recover on stronger footing in 2H14. Underlying demand conditions in the US remain favorable, with auto output strong and non-residential construction positioned for improvement this year once weather recovers.
- Europe:** Industrial production in Europe is improving, albeit slowly. The biggest risk remains a strong euro, which could obstruct growth in exports and increase in output. CRU reiterates its IP growth of around only 1.7% in 2014. The construction sector in the Eurozone continues to suffer from tight credit markets, weak domestic demand, elevated corporate debt levels, and property market bubbles, especially in Spain. This is reflected in the Eurozone construction sentiment indicator, which stays at levels we last saw during 3Q08. Nevertheless, Spain and France have recently started showing some signs of recovery in construction. CRU expects only mild growth in construction output in the Eurozone of 1.1% for 2014. Light vehicle production could improve this year, mainly because European output shifts from contraction to modest growth as Eastern Europe moves up a gear. It is not until 2015 that Western European production returns to growth, according to CRU.

Blast Furnace Iron Daily Operating Rate, 2008-current

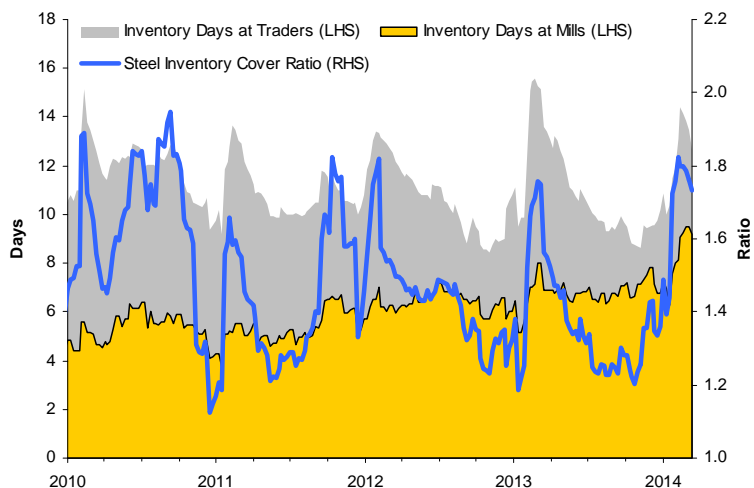


Source: World Steel Association, Morgan Stanley Research

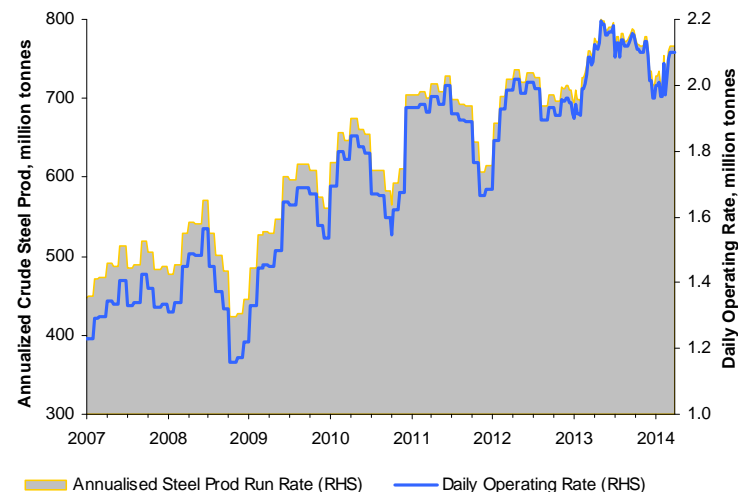
Steel Regional updates: China and Japan seeing improvements

- **China’s post-Lunar New Year holiday demand recovery delayed:** We do, however, see clear evidence demand from March is improving, reflected in the steel PMI and digestion of steel inventory at distributors. Although property demand remains weak, the recently announced spending on infrastructure projects and funding for shanty town renewal suggests the government wants to maintain stable growth. From the supply perspective, we see more capacity trimming by voluntarily shutdowns because of poor profit and broken funding channels, and government led-shut downs because of pollution control. In the longer term, we believe the steel industry is on the road to a more balanced environment.
- **Japan** continues to stand out as well positioned within the materials industry, given our conviction of further profit growth heading into F3/15 coming from a recovery in domestic metal spreads in businesses with major users because of solid domestic demand. We plan to look for the next investment opportunities in late 1Q of F3/15. the key catalysts: (1) the blast furnace operators' official F3/15 guidance at 1Q results, (2) Outcomes of 1H F3/15 contract price negotiations with large domestic steel users (we assume in late July). (3) Confirmation of the impact of consumption tax hike in late 1Q of F3/15. In the mid-term, capacity reduction phase will come during 2014 to 2017 which will support supply/demand in the domestic market.

China’s steel inventory at trades and mills, 2010-14



China’s steel production and daily operating rate, 2007-14



Steel Regional updates: Indian outlook tested by policy uncertainty

- **India:** Tepid economic activity and policy uncertainty have kept steel demand low in the past two years. However, we expect the demand scenario to improve from 2H14 after the national elections in May 2014. On the other hand, appreciation in the rupee and reduced coking coal prices drove steel makers in India to reduce prices about 1-2% in April (after a total increase of about 6-7% in 1Q14). We largely expect steel prices to move in a narrow range for the rest of 2014. Iron ore availability constraints have driven a lot of small steel makers out of business and large integrated players have gained market share. Risk of a regulatory ban on mining in Orissa is still relevant and if implemented could lead to a drop in steel production.
- **Korea:** After capacity additions by POSCO and Hyundai Steel in 2013, we expect capacity additions to slow in Korea. The only capacity addition in 2014 should be the 2mnt/year FINEX capacity schedule by POSCO. Given these new additions, we expect overall demand/supply to remain challenging in 1H14 but improve gradually in 2H14 because of improving demand from shipbuilders.
- **Latin America:** We believe the consensus is overly optimistic about further flat steel price increases in Brazil above and beyond the 4-6% hike already announced earlier in the year. Our view is that internal demand will stay relatively weak this year amid deteriorating macro conditions. Moreover, the potential for energy rationing in 2H14 means downside risk to our cautious view. Recent BRL strength adds additional pressure to domestic prices. We expect little relief on margins from lower IO prices, given that steel producers are now almost fully integrated. In Mexico and other Latin American countries, we expect steel prices to move more in line with international prices.
- **Russia/CIS:** While global flat steel prices continue to exhibit some stability, domestic prices in the CIS have started rising, reflecting the impact of weakening local currencies. Long steel producers have been able to raise domestic prices more than flat steel producers because of the start of construction season. As a result of export parity triggered by devaluation of domestic currencies, Ukrainian producers are no longer interested in exporting flat or long steel to Russia, which bodes well for Russia's supply/demand situation and prices. The Russian long steel market also benefits from lower-than-expected domestic supply – some rebar producers have switched to more profitable billet production for export purposes. We do not expect local prices to rise much further in 2Q14, however, as a result of slowing economic growth in the CIS. Hence, any price growth will depend on global/export steel prices, especially in the US, China, Europe, and Middle East (Russia's key export markets).

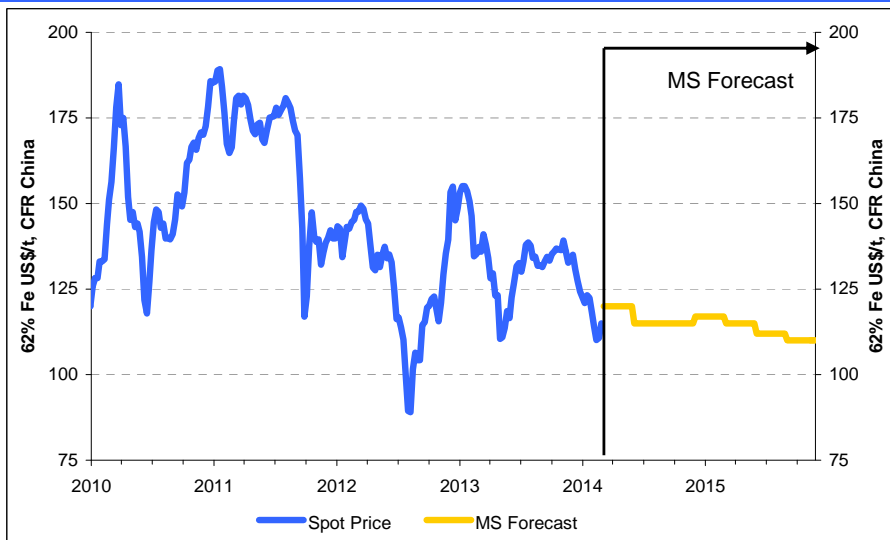
Steel

Global steel summary supply/demand and operating rate model

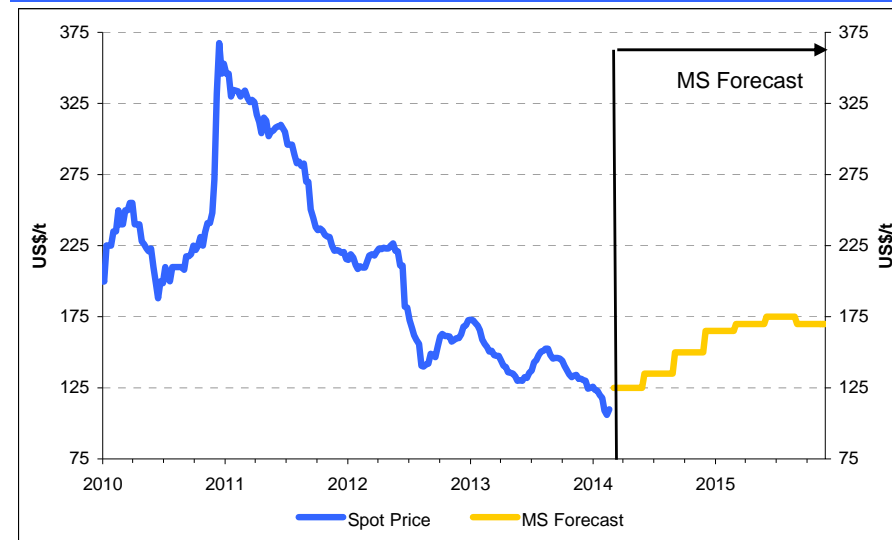
	2006	2007	2008	2009	2010	2011	2012	2013	2014e	2015e	2016e	2017e	2018e	2019e
Demand - Finished Steel (mmt)														
EU (27)	188	198	183	120	145	153	142	143	145	148	151	154	157	160
Other Europe	29	32	29	24	30	33	33	33	33	35	36	38	39	40
CIS/Russia	49	56	50	36	48	55	57	58	59	60	61	62	63	65
North America	155	142	131	84	111	121	131	131	136	143	148	153	159	165
South America	37	41	44	34	45	46	46	47	46	47	49	51	53	54
China	378	423	435	548	576	624	638	696	710	717	724	731	738	746
Japan	79	81	78	53	64	64	61	64	65	66	64	64	63	64
S.Korea	50	55	59	45	52	56	54	53	54	55	56	57	58	59
India	46	52	51	58	65	68	71	73	76	82	89	97	105	114
Other Asia/Pacific	73	74	89	70	93	84	86	89	92	96	99	102	105	107
Africa/Middle East	54	64	70	69	72	71	73	76	80	84	88	93	98	102
Global Demand - Finished Steel	1,138	1,218	1,218	1,140	1,301	1,374	1,392	1,462	1,496	1,531	1,564	1,601	1,638	1,677
% change Y-o-Y	9.2%	7.0%	0.0%	-6.4%	14.1%	5.6%	1.3%	5.0%	2.3%	2.4%	2.2%	2.4%	2.3%	2.3%
World ex-China	760	795	784	592	725	750	754	766	786	815	840	870	900	931
% Change	9.4	4.6	-1.5	-24.5	22.5	3.5	0.5	1.6	2.6	3.6	3.2	3.5	3.5	3.4
China	378	423	435	548	576	624	638	696	710	717	724	731	738	746
% Change	8.7	11.9	2.9	26.1	5.1	8.3	2.4	9.0	2.0	1.0	1.0	1.0	1.0	1.0
Global Demand - Crude Steel	1,239	1,338	1,339	1,253	1,430	1,510	1,530	1,607	1,644	1,683	1,719	1,759	1,800	1,843
% change Y-o-Y	9.5%	8.0%	0.0%	-6.4%	14.1%	5.6%	1.3%	5.0%	2.3%	2.4%	2.2%	2.4%	2.3%	2.3%
Ratio Finished/Crude - %	91.8	91.0	91.0	91.0	91.0	91.0	91.0	91.0	91.0	91.0	91.0	91.0	91.0	91.0
Production - Crude Steel (mmt)														
EU (27)	207	210	198	139	173	177	169	166	168	170	172	175	178	179
Other Europe	28	31	32	29	34	37	38	37	38	38	39	41	41	41
CIS/Russia	120	124	114	98	108	112	111	109	110	111	113	115	117	119
North America	131	133	126	82	112	119	120	119	124	129	132	134	138	141
South America	46	48	47	38	44	48	47	46	48	50	54	57	58	58
China	419	489	500	574	627	684	730	779	793	800	811	821	831	842
Japan	116	120	119	88	110	108	107	111	112	114	112	108	106	105
S.Korea	48	52	54	49	59	69	69	69	71	72	72	72	72	72
India	49	53	58	64	69	73	78	79	84	91	98	104	112	120
Other Asia/Pacific	48	51	49	40	47	49	45	49	50	52	54	56	58	59
Africa/Middle East	34	35	34	33	36	36	37	39	40	41	41	42	43	44
Global Production	1,247	1,347	1,331	1,232	1,418	1,513	1,551	1,601	1,637	1,668	1,698	1,726	1,755	1,780
% change Y-o-Y	9.0%	8.0%	-1.2%	-7.5%	15.1%	6.7%	2.5%	3.2%	2.2%	1.9%	1.8%	1.7%	1.7%	1.5%
World ex-China	828	857	831	658	791	829	821	823	843	867	887	905	923	938
% Change	4.7	3.5	-3.1	-20.8	20.2	4.8	-0.9	0.2	2.5	2.9	2.3	2.0	2.0	1.6
China	419	489	500	574	627	684	730	779	793	800	811	821	831	842
% Change	18.7%	16.8%	2.2%	14.7%	9.3%	9.1%	6.7%	6.6%	1.9%	0.9%	1.3%	1.3%	1.3%	1.3%
Operating Rate - Crude Steel														
Global Operating Rate	88%	85%	81%	71%	77%	78%	74%	73%	74%	76%	77%	79%	80%	80%

Steel Making Raw Materials **Historical prices vs Morgan Stanley forecast through 2015**

Iron Ore



Metallurgical Coal



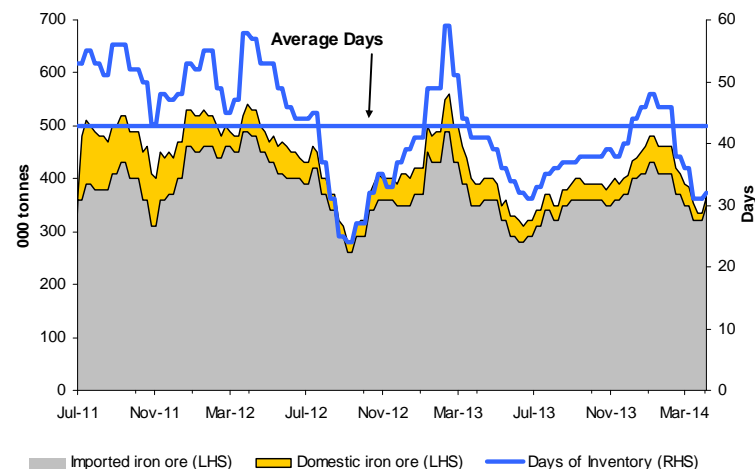
Iron Ore **Expect a price rebound in early 2Q, and then fade into 2015**

- Chinese steel mill confidence increases on margin relief:** The weaker iron ore and coking coal prices in March helped improve steel maker margins precisely at the time steel sales began to pick up. Consequently in the final weeks of the quarter, Chinese domestic rebar and billet futures began climbing and with greater sales volume bolstering cashflow, mills have more comfort room to purchase seaborne cargoes and port stocks to replenish low inventories. We would expect most mills to call on port stocks in the first instance given they have traded at a discount to seaborne material during this period. However, we do not think the elevated level of iron ore inventory held at Chinese ports is an indication the long-heralded seaborne surplus is upon us – that is a 2H14/2015 story. For now, the seaborne market remains in balance. Look for a sustained drop in Chinese iron ore port stocks as a signal seaborne purchases could pick up.
- Demand normalizing:** According to a market report published by the China Iron & Steel Association (CISA), Chinese domestic steel prices should rebound in late April in concert with lower steel inventories and warmer weather, which boosts construction activities. Steel maker giant Baosteel noted in its recent post-results conference call that its order book is full and demand too strong to fulfill (Baosteel controls >50% share of the auto steel market).
- Price outlook in 2Q:** We expect the price to average US\$120/t N China cfr in 2Q14 before easing to US\$115/t as an average in 2H14.

Components of MS China steel consumption index: Construction the key driver

Key Drivers & Weightings	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	2013e	2014e
(YoY chg)							
Res Property (GFA Sold) - 24%	12%	10%	21%	12%	15%	2%	1%
Other Property (GFA Sold) - 18%	16%	15%	34%	15%	11%	6%	1%
Infrastructure (FAI) - 25%	23%	33%	17%	4%	18%	10%	6%
Machinery Sales - 15%	12%	18%	11%	17%	15%	14%	9%
Auto sales - 6%	10%	10%	20%	20%	31%	13%	6%
Ship building - 3%	5%	-26%	-25%	-9%	-32%	-20%	-10%
White goods sales - 2%	-1%	6%	5%	5%	4%	4%	3%
Other Industrial (PMI) - 7%	0%	1%	1%	1%	1%	1%	1%
Steel Consumption Index	14%	16%	18%	10%	13%	7%	3%

China's Iron Ore Inventory at Small and Medium-Sized Steel Mills



Iron Ore **The transition year for both supply and demand**

- 2014 marks the year in which the global seaborne iron ore market will slide into surplus:** Although current market conditions remain relatively balanced, supply growth will begin to outpace global demand growth as the year progresses. Price declines and volatility are likely to take a toll on more risky and higher cost new projects, but the reality is most new production comes from traditional producers with low cost output. Australia is the primary bearer of this burden, with Rio Tinto set to overtake Vale as the top global exporter. We expect little slippage in our current production profile, meaning the market is set to remain in oversupply for a number of years.
- China's domestic production has peaked:** Our production profile is declining primarily because of grade decline, but also because of price-related displacement.
- Impact on iron ore of Beijing's clampdown on polluters limited in our forecast period:** A key debate is whether or not hazardous smog will hastening steel capacity cuts. To date, the majority of forced closures are of outdated small scale capacity, most of which was already idle and not participating in the iron ore market. In our view, there is unlikely to be any major impact on crude steel production given the sheer level of overcapacity in China's steel sector. We believe unused capacity will be utilized to replace any production. According to Wood Mackenzie, even if 100Mt of capacity was shuttered, the remaining capacity would still be sufficient to support 830Mt crude steel production by 2015.

Iron Ore Supply/Demand Half-Yearly basis

Seaborne Exports	1H13	2H13	1H14e	2H14e	1H15e	2H15e	1H16e	2H16e
Rio Tinto (Australia)	120	131	136	138	162	164	172	172
BHP Billiton	97	104	108	119	118	122	118	126
Fortescue Metals Group	42	50	66	73	73	73	73	73
Other Australia	32	34	36	37	41	42	50	50
Total Australia	291	320	345	366	393	400	412	420
Vale	118	147	127	137	146	158	145	157
Other Brazil	32	36	38	38	43	43	52	52
Total Brazil	150	183	165	175	190	201	197	209
India	5	5	13	13	15	15	15	15
Rest of World	147	151	151	151	148	148	159	159
Total Exports	593	658	674	705	746	764	783	803
Seaborne Demand	1H13	2H13	1H14e	2H14e	1H15e	2H15e	1H16e	2H16e
China Crude Steel Production	389	390	396	397	401	399	407	404
<i>Steel Production Growth</i>	<i>10.4%</i>	<i>0.1%</i>	<i>1.8%</i>	<i>0.1%</i>	<i>1.1%</i>	<i>-0.6%</i>	<i>1.9%</i>	<i>-0.7%</i>
China domestic production	173	192	156	176	141	160	124	140
China iron ore import	385	417	438	419	460	438	485	465
ROW	32	32	34	34	37	37	40	40
Total Imports	601	634	660	641	688	666	718	698
Seaborne Market Balance	-9	24	14	64	58	98	65	105
Iron Ore Price 62% Fe, Cfr N China (US\$/t)	137	133	120	115	116	111	110	110

e = Morgan Stanley Research estimates.

Source: Wood Mackenzie, United Nations Commission for Trade and Development, Tex Report, Steel Business Briefing, World Steel Association, Morgan Stanley Research.

Iron Ore Global supply / demand

Million Metric Tonnes	2006	2007	2008	2009	2010	2011	2012	2013	2014e	2015e	2016e	2017e	2018e	2019e
World IP growth	6.46	7.21	1.05	-7.94	11.08	5.19	3.54	4.15	4.93	5.49	4.90	5.00	5.08	5.07
China Steel Production	419	489	500	574	627	684	730	779	793	800	811	821	831	842
China Annual % Change	18.7%	16.8%	2.2%	14.7%	9.3%	9.1%	6.7%	6.6%	1.9%	0.9%	1.3%	1.3%	1.3%	1.3%
Total World Steel Production	1,247	1,347	1,328	1,228	1,419	1,510	1,550	1,602	1,635	1,665	1,693	1,719	1,750	1,777
Total Annual % Change	9.0%	8.0%	-1.4%	-7.5%	15.6%	6.4%	2.6%	3.3%	2.1%	1.8%	1.7%	1.6%	1.8%	1.6%
Apparent/derived demand for iron ore	1,376	1,503	1,484	1,419	1,622	1,749	1,818	1,902	1,965	2,025	2,083	2,141	2,141	2,141
Seaborne Iron Ore Demand														
China	326	384	444	628	619	692	754	820	856	898	950	991	1,024	1,074
Japan	134	139	140	105	134	128	131	136	139	138	136	132	130	128
South Korea	44	46	50	42	56	65	66	63	66	68	70	72	74	74
Taiwan	16	16	16	12	19	21	18	22	23	23	24	24	25	25
Other Asia	12	13	11	11	13	13	13	15	16	16	17	19	21	22
Western Europe	166	167	159	93	137	130	125	133	134	137	141	144	142	142
ROW	26	25	27	10	20	18	18	15	16	18	19	21	23	25
Total Seaborne Demand	759	824	882	935	1,040	1,111	1,173	1,254	1,301	1,354	1,416	1,467	1,505	1,558
Annual % Change	9.0%	8.6%	7.0%	5.9%	11.3%	6.8%	5.5%	6.9%	3.8%	4.1%	4.6%	3.7%	2.5%	3.5%
Seaborne Iron Ore Supply														
China ROM Iron Ore Production	588	696	824	878	1,065	1,315	1,329	1,423	1,297	1,173	1,032	933	933	933
China (Adjusted to Fe 62% Equivalent)	288	314	262	212	280	280	285	365	333	301	265	239	222	202
Seaborne Supply														
Rio Tinto (Australia)	150	161	171	204	224	229	235	251	274	326	344	362	370	370
BHP Billiton	115	120	137	137	149	174	187	218	241	254	258	269	283	279
Fortescue Metals Group	0	0	15	33	40	46	64	92	139	146	146	146	146	146
Other Australia	10	16	20	25	30	32	48	66	73	83	100	114	119	130
Vale	227	245	240	222	257	272	265	265	264	305	302	345	397	397
Other Brazil	21	29	39	40	53	61	61	69	77	87	104	108	124	139
India	87	91	101	114	103	77	47	10	25	30	30	30	30	31
ROW	128	137	138	154	179	196	209	284	288	282	303	296	292	320
Total Seaborne Iron Ore Supply	739	799	860	929	1,034	1,087	1,116	1,254	1,380	1,512	1,588	1,671	1,761	1,812
Annual % Change	2.0%	8.1%	7.7%	8.0%	11.3%	5.1%	2.7%	12.4%	10.0%	9.6%	5.0%	5.2%	5.4%	2.9%
Apparent Seaborne Market Balance	-21	-26	-22	-6	-6	-25	-56	1	79	158	172	203	256	254
Annual Average Prices (JFY annual negotiated FOB price prior to 2010)														
Iron Ore Fines 62% Fe, CFR N China (US\$/t)	\$47	\$51	\$93	\$62	\$117	\$168	\$128	\$135	\$118	\$114	\$110	\$105	\$100	\$95

e = Morgan Stanley Research estimates.

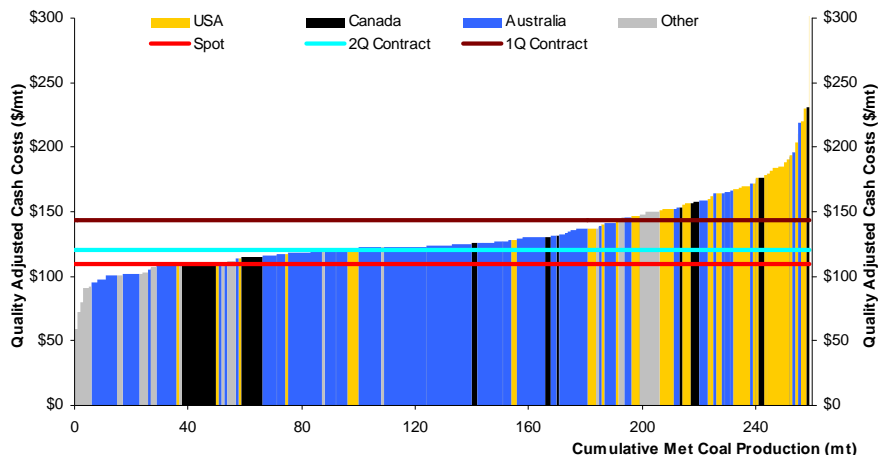
Source: Wood Mackenzie, United Nations Commission for Trade and Development, Tex Report, Steel Business Briefing, World Steel Association, Morgan Stanley Research.

Metallurgical Coal

Sharp drop in quarterly fix should force supplier discipline

- 2Q settlement lowest in seven years:** Anglo American and Nippon steel makers fixed April to June term spot prices for premium coking coal at US\$120/t FOB Australia vs the Jan-March settlement of US\$143/t. In our view this was a relatively good outcome for the steel makers given the 1Q spot price average was US\$122/t, and the spot price has only risen so far in 2Q. At the same time, the much weaker-than-expected 1Q spot price performance has prompted us to made significant reductions to our forecasts for this year and next, down 14% in 2014 and a further 3% in 2015 to US\$133/t and US\$170/t FOB, respectively.
- Until now, the global supply cost curve did not support prices:** Only producers in the US have received price signals to trim output (see table below), but a large portion of miners continue to demonstrate they will operate at a loss. We think the 16% drop in the quarterly fix will exert enough pressure to force curtailments, at least in exports. We forecast US exports will drop 19%, or 10 million tonnes YoY, in 2014. In Australia, the 1Q contract price was not adequately low enough to spark supplier discipline, particularly as the weaker AUD over the past year shielded supplier margins amid the falling price environment. However, we think this year will be different and forecast essentially flat export growth vs 2013.

Global Seaborne met coal cost curve



Million tonnes uneconomic at 3 different prices:

	1Q Contract \$143		2Q Contract \$120		Current Spot Price \$110	
	Mt	% share	Mt	% share	Mt	% share
Australia	17	11%	96	65%	124	84%
USA Exports	34	69%	47	93%	50	99%
Canada	7	21%	11	36%	19	60%
Russia	1	8%	3	26%	6	45%
TOTAL	59	23%	157	60%	198	76%

Metallurgical Coal

Global supply / demand

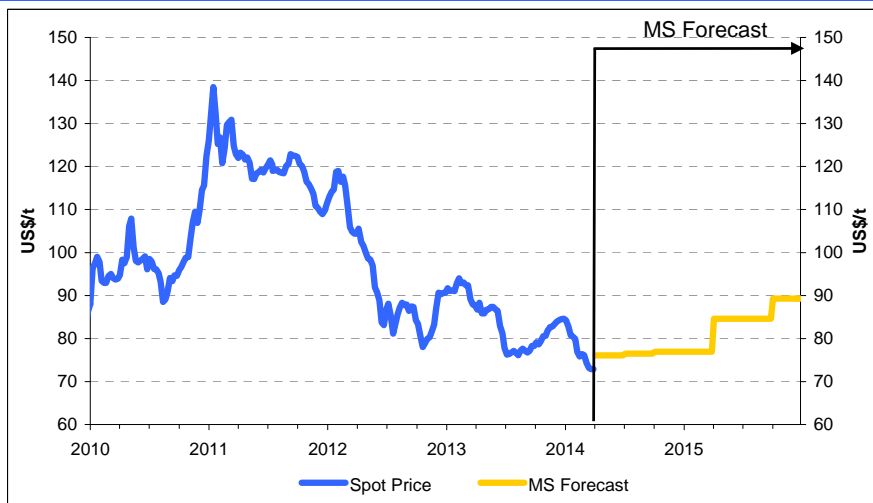
(Mt, natural weight)	2006	2007	2008	2009	2010	2011	2012	2013	2014e	2015e	2016e	2017e	2018e	2019e
Global Crude Steel Production	1,238	1,340	1,328	1,228	1,419	1,510	1,550	1,602	1,635	1,665	1,693	1,719	1,750	1,777
Global Pig Iron Production	875	949	927	898	1,034	1,083	1,101	1,173	1,235	1,266	1,299	1,319	1,342	1,363
Total Metallurgical Coal Usage in Steel Making	818	886	867	847	965	1,015	1,029	1,097	1,146	1,173	1,205	1,213	1,234	1,256
Requirement for metallurgical coal for coke making	731	791	773	755	859	904	917	976	1,018	1,043	1,070	1,077	1,095	1,115
Metallurgical Coal Seaborne Exports														
Australia	124	137	137	131	159	133	145	162	165	176	188	190	192	194
USA (excluding exports to Canada)	20	26	35	31	47	58	58	53	43	40	41	41	41	42
Canada (excluding exports to the USA)	25	26	27	21	28	29	27	34	38	39	40	42	44	46
Russia	12	12	14	8	14	14	12	19	19	19	20	23	25	26
Mozambique	0.0	0.0	0.0	0.0	0.0	0.3	2.3	3.9	5.6	6.6	9.5	10.4	14.2	15.1
Indonesia	3.9	3.8	3.5	3.5	4.4	2.8	7.8	9.1	12.7	6.3	8.3	8.6	8.7	8.0
China	5.4	2.5	3.5	0.2	1.1	0.7	1.0	1.0	1.0	1.0	1.1	1.1	1.1	1.1
South Africa	0.9	0.7	0.7	0.5	1.4	1.7	1.8	1.5	2.3	2.8	2.5	2.2	2.2	2.2
Colombia	0.3	1.1	0.6	0.5	0.6	0.5	0.4	1.2	1.6	2.4	2.4	2.4	2.4	2.4
New Zealand	2.3	1.7	2.2	1.0	1.0	2.8	0.4	1.3	1.4	1.1	1.2	1.6	1.7	2.0
Venezuela	2.2	2.0	1.5	0.2	0.5	0.5	0.5	0.5	0.5	0.5	1.0	1.2	1.3	1.3
Vietnam	1.8	1.4	1.7	0.4	0.0	3.0	0.0	2.5	2.3	2.3	2.3	2.3	2.2	2.2
Total Seaborne Metallurgical Coal Exports	198	214	226	197	257	246	256	290	292	296	317	325	336	342
Metallurgical Coal Seaborne Imports (all coking and direct injection coals)														
Japan	59	60	59	49	59	54	54	57	57	59	57	57	57	57
China	2	3	4	43	41	31	48	64	69	76	83	83	89	95
India	22	22	24	25	30	33	37	36	42	45	48	50	52	54
South Korea	19	20	21	19	25	29	29	29	31	31	32	32	33	33
Brazil	13	14	18	13	16	17	18	16	18	18	19	19	19	20
Total Europe	58	56	60	40	52	52	48	49	49	49	50	52	53	53
Rest of World	21	19	17	16	20	20	19	23	24	26	28	29	31	31
Total Seaborne Metallurgical Coal Imports	194	194	204	205	243	237	254	273	290	305	317	323	333	344
Apparent Traded Market Surplus/Deficit	4.2	19.9	21.1	-7.5	13.8	8.4	2.9	16.7	2.0	-8.8	0.3	2.4	2.8	-2.1
Annual Average Prices (JFY annual negotiated price prior to 2010; CY Quarterly Averages from 2010)														
Spot Premium Hard Coking Coal (US\$/t)							192	147	133	170	180	185	180	180
Contract Premium Hard Coking Coal (US\$/t)	115	101	305	129	191	289	210	159	131	165	180	185	180	180
Contract Semi-Soft Coking Coal (US\$/t)	65	64	235	80	136	211	145	112	90	118	131	137	133	133
Contract Low Volatile PCI Coal (US\$/t)	65	67	260	90	147	218	153	125	101	125	136	142	139	139

Mined Energy

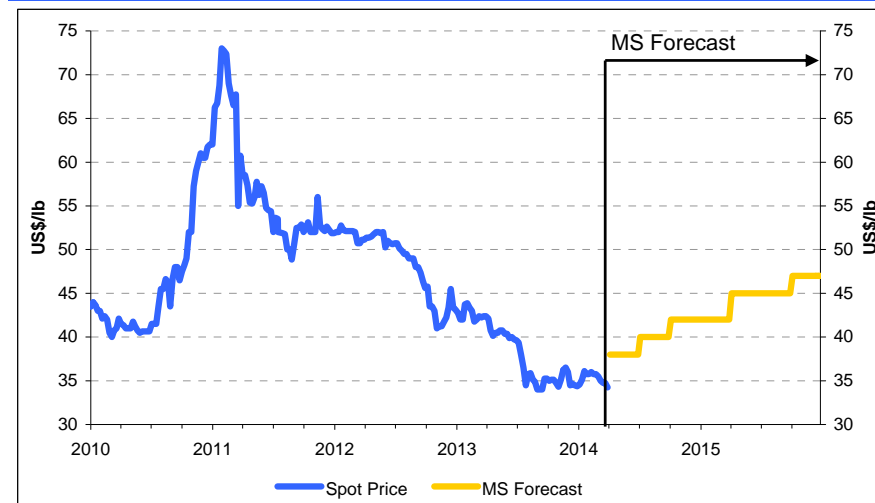
Mined Energy

Historical prices vs Morgan Stanley forecast through 2014

Thermal Coal



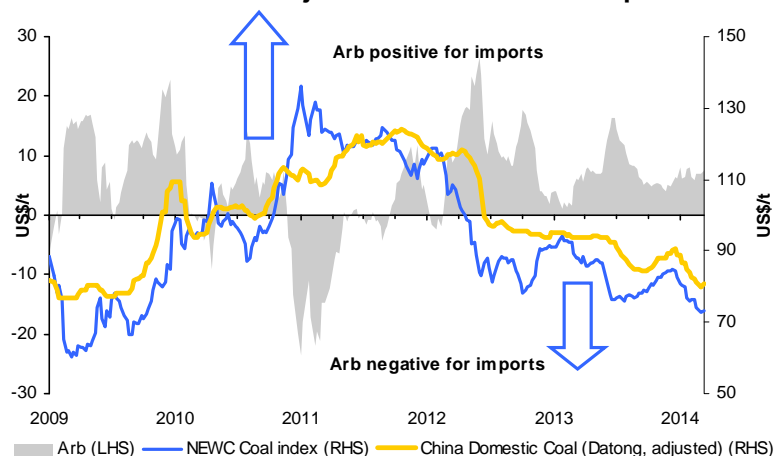
Uranium



Thermal Coal Unrelenting oversupply

- **Annual price benchmark at five-year low:** The Japanese fiscal year (JFY) benchmark price was settled in March at US\$81.80/t, mirroring the average spot Newcastle price over the past four quarters but a 12% premium to current spot. According to our analysis, some 62 million tonnes, or 13% of seaborne producers will operate below cash costs.
- **Recovery likely requires a supply response:** A growing share of the seaborne supply community is operating at negative margins to cash cost, a consequence of committed development prior to the sustained price slump. While some of the top global miners have either halted operations or slowed expansion plans, current price dynamics suggest its not enough to support prices in the near term. In our view, prices are more likely to improve later as 2015 approaches when seaborne production growth slows to 1% vs a 7% CAGR in 2010-13.
- **Price outlook:** We do not expect sustained price appreciation until we see evidence of clear supply discipline. Our forecast for the Newcastle spot price in 2014 is US\$77/t. Two medium-term trends we see potentially assisting price recovery are: 1) company reluctance in capital spending, resulting in an organic slowdown in output growth; and 2) weaker seaborne vs Chinese domestic price differential that could limit Indonesian supply.

Newcastle vs adjusted Chinese domestic prices



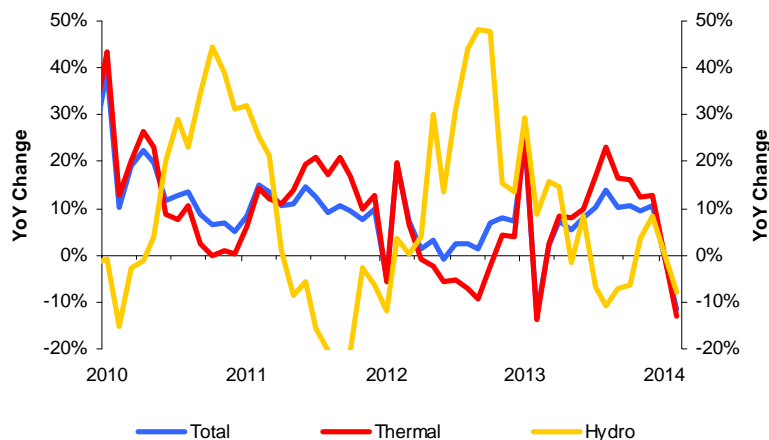
Million tonnes uneconomic at three different price points:

	JFY 13 Contract \$95		JFY 14 Contract \$82		Current Spot Price \$73	
	Mt	% share	Mt	% share	Mt	% share
Australia	3	1%	45	22%	83	41%
USA Exports	6	16%	6	16%	13	33%
Indonesia	4	1%	10	3%	20	6%
S Africa	1	1%	2	2%	6	8%
Colombia	0	n/a	0	n/a	1	1%
TOTAL	14	2%	62	13%	124	25%

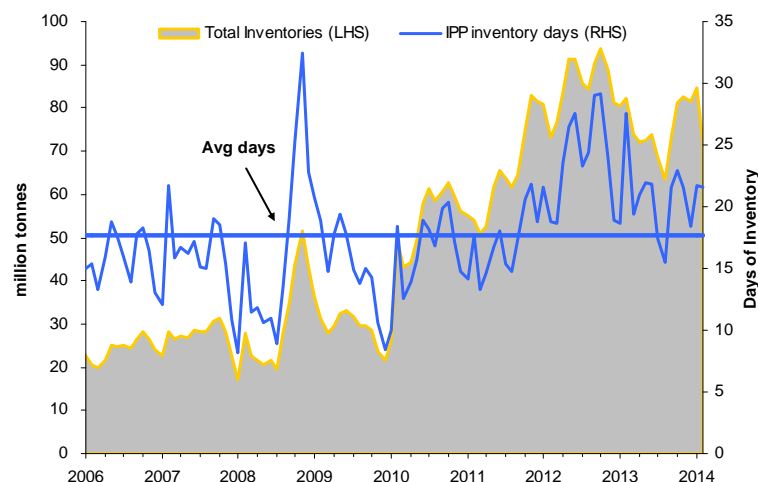
Thermal Coal **Is this the year the US will slow exports?**

- US still the marginal exporter:** The latest benchmark price is significantly lower and as contractual tonnes roll off, the new lower price could finally be the catalyst that drives a decline in exports. However, in the longer term, the further the US goes down the path of greater natural gas use and emission reduction-driven policy decisions, the greater likelihood North American exports of thermal coal will increase. Already the US has nearly tripled exports by 27 million tonnes since 2010 and any other increase will be to the detriment of the seaborne market.
- Prices are low** enough in China to prompt a supply response. According to McCloskey, many small and medium coal mines, especially in Shanxi, Shaanxi, and Inner Mongolia, have shut production amid the low coal price. We will closely monitor Beijing's continuing campaign to close small and bottom-tier mines and ban any new mine with capacity larger than 300Ktpa. We estimate about 25% of coal miners are loss-making at current price and expect production cutbacks.
- Stable China domestic price indicates stable demand:** After slashing its prices in March, Shenhua has kept its 2Q benchmark price (US\$91.70/t FOB) unchanged from 1Q. Current coal inventory has fallen to 18 days from 22-23 days in the last two months. We believe the domestic price should improve amid steady buying by power companies ahead of peak electricity demand in the summer, which could in turn help support the seaborne market on a more favourable price differential. In terms of generation demand, most measures aimed at stabilizing growth in China will benefit power consumption, so we are not overly concerned over a significant growth slowdown.

China's total electricity generation growth vs thermal and hydro



Total tonnage and days of inventories at China's IPPs



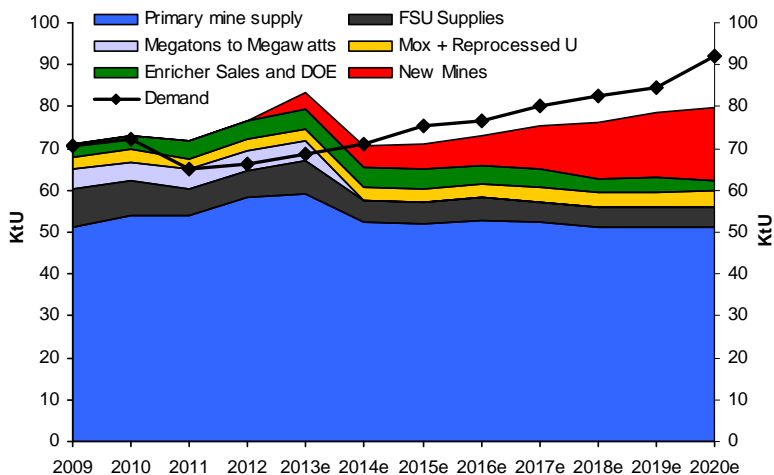
Thermal Coal Global supply / demand

Mt	2006	2007	2008	2009	2010	2011	2012	2013	2014e	2015e	2016e	2017e	2018e	2019e
Supply of Seaborne Thermal Coal														
Indonesia	159	180	186	190	292	321	345	385	390	400	428	450	471	482
Australia	114	114	125	139	139	145	173	187	197	199	192	195	189	187
China	58	51	42	22	14	7	6	9	7	7	8	8	8	7
Russia	77	84	84	84	77	85	99	99	97	97	101	102	96	86
Vietnam	30	33	20	25	23	13	21	20	13	12	12	11	8	6
South Africa	68	67	64	66	67	67	76	74	78	79	80	81	82	83
Colombia	59	65	68	65	71	77	80	79	80	85	89	91	94	98
USA	6	11	17	11	15	30	46	41	34	41	37	38	39	39
Other	24	20	19	13	19	18	34	32	38	21	31	44	54	74
Total Supply	595	623	625	615	717	762	879	926	935	942	977	1,019	1,040	1,063
<i>% Change</i>	8.8%	4.7%	0.3%	-1.5%	16.5%	6.4%	15.3%	5.3%	1.0%	0.7%	3.8%	4.3%	2.1%	2.2%
Demand for Seaborne Thermal Coal														
China	28	41	36	84	97	102	131	139	154	162	169	183	186	211
India	23	29	36	60	75	93	123	138	148	161	177	185	193	203
Japan	116	123	125	107	126	121	131	135	132	133	134	135	136	137
South Korea	60	68	79	84	93	100	97	100	102	103	102	104	109	109
Taiwan	54	60	58	54	55	57	56	56	57	58	58	58	62	64
South East Asia	32	40	42	40	50	51	54	56	59	63	67	70	77	89
Total Asia	341	389	405	461	526	556	626	659	686	714	744	776	807	859
Total Europe	131	124	167	150	132	155	179	172	174	170	167	170	155	120
Total Americas	50	47	46	39	38	37	33	30	33	32	33	32	32	32
ROW	5	5	4	4	4	4	5	5	5	5	6	6	6	7
Total Imports	527	565	622	654	701	752	843	866	898	920	950	984	1,000	1,018
<i>Annual % change</i>	-1.8%	7.2%	10.2%	5.0%	7.3%	7.2%	12.2%	2.7%	3.7%	2.5%	3.2%	3.6%	1.6%	1.8%
Atlantic Market	199	190	233	207	190	211	234	220	224	217	216	218	203	168
<i>% Chg</i>	-14.4%	-4.6%	22.9%	-11.1%	-8.2%	10.9%	10.6%	-5.9%	1.9%	-2.9%	-0.5%	0.9%	-7.0%	-17.2%
Pacific Market	328	375	389	446	511	541	610	646	674	703	733	766	797	850
<i>% Chg</i>	7.8%	14.4%	3.7%	14.7%	14.5%	5.9%	12.8%	6.0%	4.3%	4.3%	4.3%	4.4%	4.1%	6.7%
Apparent Surplus/Deficit	68.2	58.3	2.7	-38.2	15.8	10.7	35.8	59.9	37.0	21.3	27.4	35.2	40.1	44.7
Annual Asian Reference Price (US\$/t) (JFY)	\$53	\$56	\$125	\$70	\$98	\$130	\$115	\$95	\$82	\$90	\$105	\$100	\$105	\$105
Newcastle 6,322 kcal/kg, FOB (US\$/t)								\$85	\$77	\$85	\$99	\$94	\$99	\$99

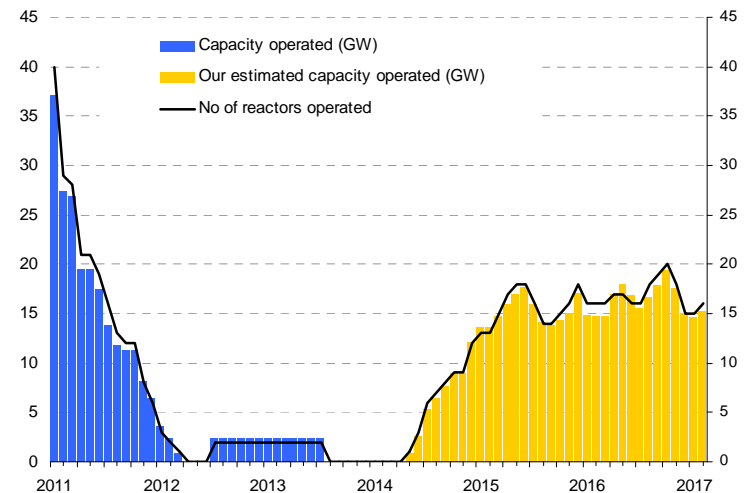
Uranium Producer discipline sets floor price, Japan set to re-start nuclear power

- Top miners react to excess global supply in an uncertain market:** In February, two of the largest uranium miners made fairly drastic cuts to their future supply growth. Paladin Energy placed its Kayelekera Mine on care and maintenance – the mine accounted for one-third of Paladin’s total output. That operation alone represented 2% of global mined supply in 2013 (1.1 KtU or 2.9 Mlbs). However, we estimate its share of the spot market in 2014 would have been a much larger 6.4%, exposing a fairly large hole in the near-term market. Next, Cameco announced it will back away from its previous target of increasing supplies by over 50% by 2018, dropping its forecast of 14 KtU (36 Mlbs) by 2018. Cameco expects production of 9.2 KtU (24.3 Mlbs) of uranium in 2014, up modestly from 9.07 KtU (23.6 Mlbs) last year.
- We expect nine Japanese nuclear power plant restarts in 2014:** On February 25, the Japanese government published a draft energy plan that included a prominent role for nuclear energy. Morgan Stanley Research Japan utilities analyst Yuka Matayoshi believes the first re-start could commence in June, with eight more by December totaling 8.9 GWe capacity operated. For the global uranium market, we believe the re-starts will remove the element of uncertainty surrounding the supply overhang of inventory held in Japan. However, in our modeling, we assume Japanese utilities have no need to contract any uranium through 2020 given their existing stockpile is likely enough to cover our forecast requirements.
- Price outlook:** At this point we leave our year-end price target of US\$40/lb unchanged, but given the circumstances, we highlight that the risks firmly reside with our bull case scenario of US\$50/lb by the end of the year and US\$55/lb in 2015.

The uranium market is entering a period of undersupply



Morgan Stanley Japan reactor re-start forecast



Uranium Global supply / demand

		2006	2007	2008	2009	2010	2011	2012	2013	2014e	2015e	2016e	2017e	2018e	2019e	2020e
Existing mine supply	KtU	34.1	35.3	43.7	51.3	54.1	53.8	58.3	59.1	52.2	51.8	52.8	52.4	51.2	51.0	51.3
	Mlbs	89	92	114	133	141	140	152	154	136	135	137	136	133	133	133
New mines / Ramp-ups	KtU									6.9	8.5	9.8	14.4	19.0	22.4	24.8
New mines / Ramp-ups	Mlbs									18	22	25	38	50	58	64
Total Mine Supply	KtU	34.1	35.3	43.7	51.3	54.1	53.8	58.3	59.1	59.1	60.4	62.6	66.9	70.2	73.4	76.0
Total Mine Supply	Mlbs	89	92	114	133	141	140	152	154	154	157	163	174	183	191	198
Megatons to Megawatts	KtU	6.5	6.9	7.3	4.6	4.6	4.6	4.6	4.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Enricher Sales and DOE	KtU	4.0	1.9	2.6	2.8	3.1	4.3	4.4	4.6	5.0	4.7	4.5	4.4	3.2	3.5	2.5
FSU Supplies	KtU	11.9	11.5	6.9	9.2	8.1	6.5	6.5	7.9	5.4	5.4	5.4	4.9	4.9	4.9	4.9
Mox + Reprocessed U	KtU	3.3	2.6	2.5	2.9	2.9	2.6	2.7	3.0	3.0	3.1	3.3	3.4	3.6	3.7	3.9
Total Secondary Supply	KtU	25.7	23.0	19.4	19.6	18.7	18.0	18.2	20.2	13.4	13.3	13.2	12.7	11.6	12.1	11.2
Secondary Supply	Mlbs	67	60	50	51	49	47	47	52	35	35	34	33	30	31	29
% of secondary sources in supply mix		43%	39%	31%	28%	26%	25%	24%	25%	19%	18%	17%	16%	14%	14%	13%
Total Supply	KtU	59.8	58.3	63.1	70.9	72.8	71.8	76.5	79.3	72.6	73.7	75.8	79.5	81.9	85.4	87.3
Total Supply	Mlbs	155	151	164	184	189	187	199	206	189	191	197	207	213	222	227
Supply growth		-4.3%	-2.6%	8.3%	12.3%	2.8%	-1.4%	6.6%	3.6%	-8.5%	1.5%	2.9%	5.0%	3.0%	4.3%	2.1%
Global Operating Reactors					435	436	394	389	398	415	436	444	457	468	479	502
Global Nuclear Generating Capacity	GWe	368	372	373	371	372	333	329	336	356	377	388	399	411	426	452
Reactor Requirements	KtU	64	64	65	65	67	59	60	62	65	70	72	75	77	79	86
Stockpiling	KtU	4.5	4.5	4.5	4.6	4.7	5.3	5.4	6.2	6.5	7.0	7.2	7.5	7.7	7.9	8.6
Investment demand	KtU	0.9	0.8	1.2	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.9
Generating Capacity Breakdown																
China	GWe				9	9	11	13	20	29	38	43	49	55	64	72
Demand growth						3.9%	30.3%	14.4%	54.6%	45.4%	31.2%	14.1%	13.1%	13.4%	15.5%	12.5%
Japan	GWe				46	46	8	2	0	9	15	18	15	15	15	15
Demand growth							-82.3%	-71.1%	nm	nm	69.1%	17.5%	-13.5%	0.0%	0.0%	0.0%
Total Demand	KtU	69.6	69.7	70.4	70.7	72.1	65.2	66.2	68.6	70.9	75.5	76.5	80.3	82.3	84.6	92.2
Total Demand	Mlbs	181	181	183	184	187	170	172	178	184	196	199	209	214	220	240
Demand growth		0.2%	0.1%	1.1%	0.4%	2.0%	-9.5%	1.6%	3.6%	3.3%	6.6%	1.3%	5.0%	2.5%	2.8%	9.0%
Market Balance	KtU	-9.8	-11.4	-7.3	0.2	0.8	6.6	10.3	10.7	1.7	-1.9	-0.7	-0.8	-0.5	0.8	-5.0
Market Balance	Mlbs	-25.4	-29.6	-18.9	0.5	2.0	17.1	26.7	27.7	4.4	-4.9	-1.8	-2.0	-1.2	2.1	-12.9
U3O8 Spot Price	US\$/lb	47.90	98.77	62.82	46.52	46.10	56.72	48.85	38.84	38.84	45.50	50.00	55.00	60.00	65.00	69.50
U3O8 Term Price	US\$/lb	50.00	91.00	76.00	70.00	61.00	69.33	60.79	52.08	52.50	57.00	62.00	66.00	71.00	74.50	76.50

Key Forecasts and Charts

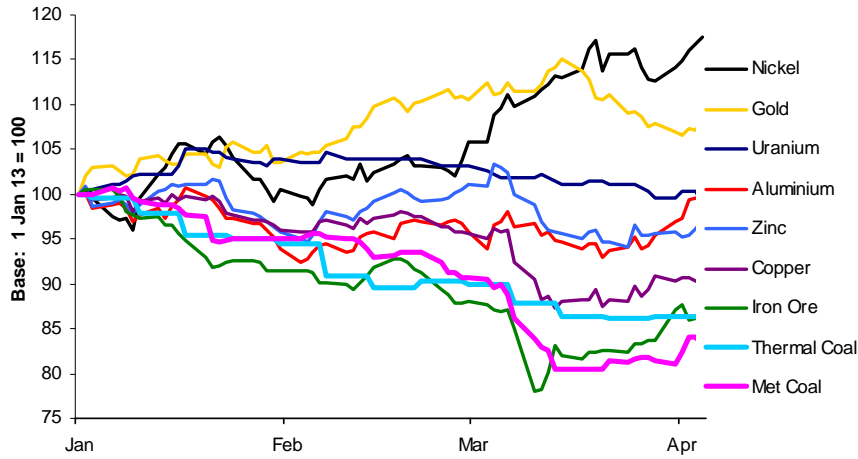
Morgan Stanley Forecasts: Industrial Production and Real GDP growth

Industrial Production	2009	2010	2011	2012	2013	2014e	2015e
Global	-7.9	11.1	5.2	3.5	4.2	4.8	5.6
USA	-11.3	5.7	3.4	3.6	2.0	3.2	3.3
Germany	-16.4	10.8	6.7	-0.3	0.6	1.9	2.1
Japan	-20.8	15.0	-2.8	-0.3	0.5	3.8	4.7
UK	-9.5	2.8	-1.2	-2.5	0.4	2.6	2.8
China	11.1	15.7	13.9	10.0	9.2	8.4	8.7
India	0.5	9.7	4.7	0.5	3.4	4.5	8.4
Brazil	-7.3	10.6	0.4	-2.7	1.0	1.4	1.0
Russia	-9.3	8.3	4.8	2.6	1.6	1.0	2.4
Indonesia	1.3	4.8	4.1	4.1	5.0	5.1	5.1
Mexico	-6.1	4.3	3.2	2.7	-0.4	2.6	3.2

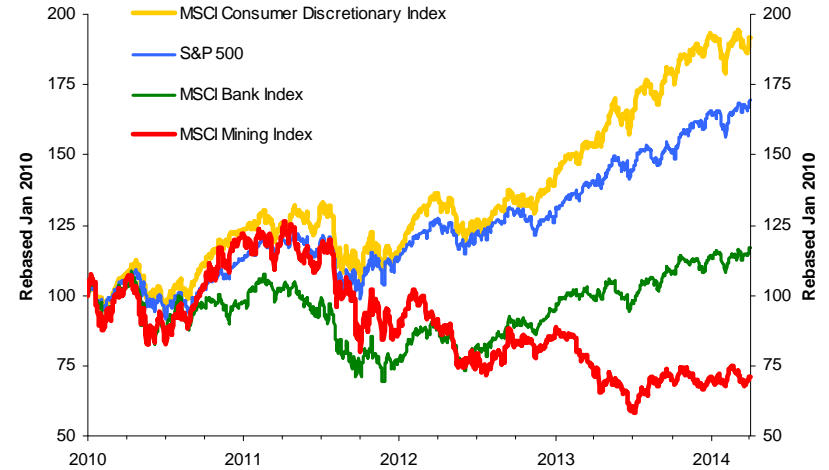
Real GDP	2009	2010	2011	2012	2013	2014e	2015e
Global	-0.9	5.2	3.9	3.0	3.3	3.7	3.7
G10	-3.8	2.8	1.3	1.2	2.0	2.0	2.1
USA	-3.5	3.0	1.8	1.9	2.7	2.7	2.8
Euro Area	-4.1	1.8	1.6	-0.4	0.9	1.1	1.2
Japan	-5.5	4.4	-0.4	1.5	0.9	1.1	1.1
UK	-4.4	2.1	0.9	1.8	2.8	2.2	2.4
EM	2.6	7.9	6.4	4.8	4.7	5.3	5.2
China	9.2	10.4	9.2	7.7	7.2	7.4	7.4
India	7.2	8.5	7.1	4.7	5.2	6.0	6.0
Russia	-7.8	4.3	4.3	1.3	0.8	2.6	2.1
Brazil	-0.6	7.5	2.7	2.3	1.5	1.5	1.1

Commodity Price and Index Performance

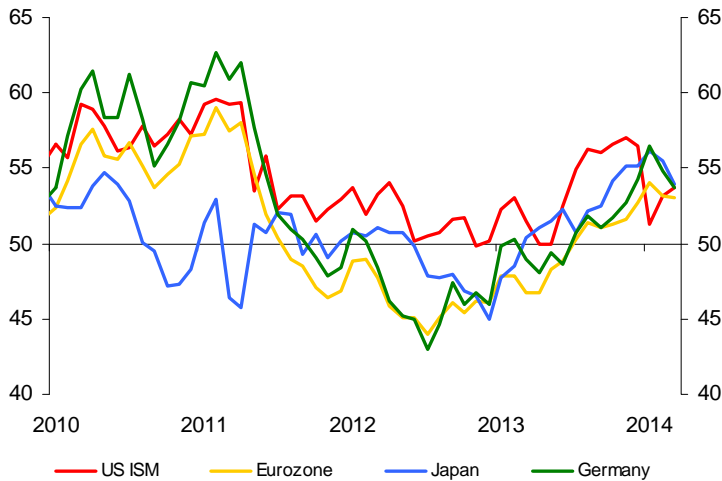
Metals and bulk commodities relative YTD performance



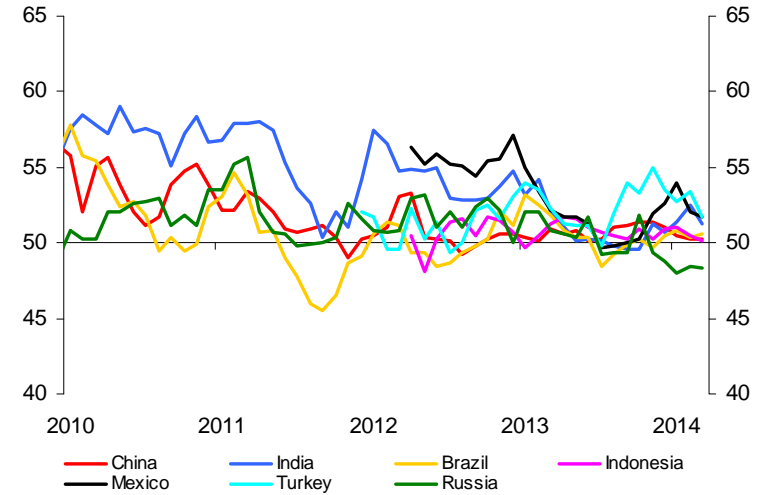
Sector specific equity indices performance



DM manufacturing PMIs

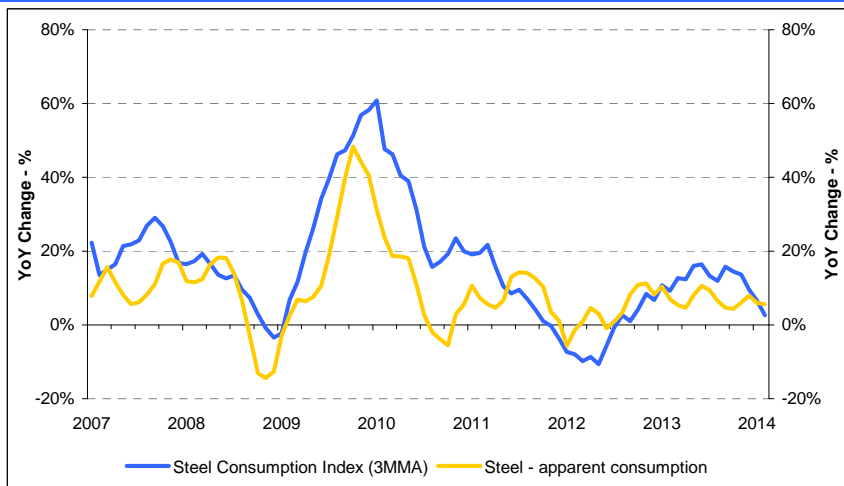


EM manufacturing PMIs

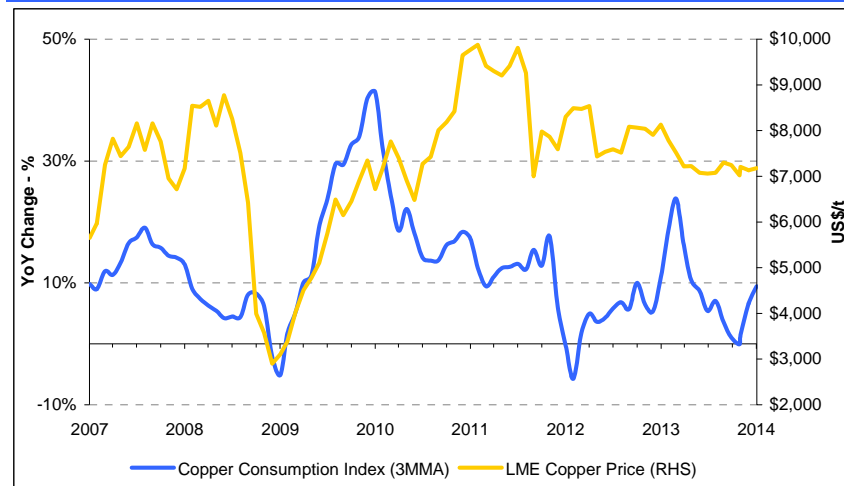


Morgan Stanley's China Metals Consumption Indices

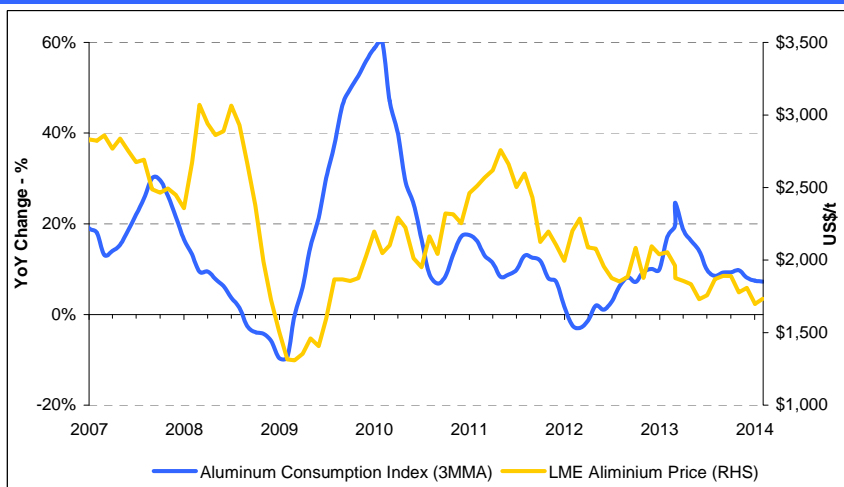
Steel



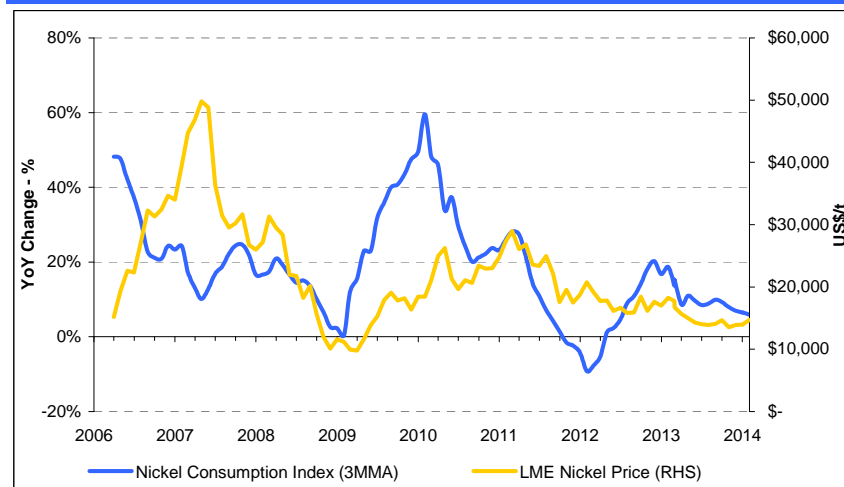
Copper



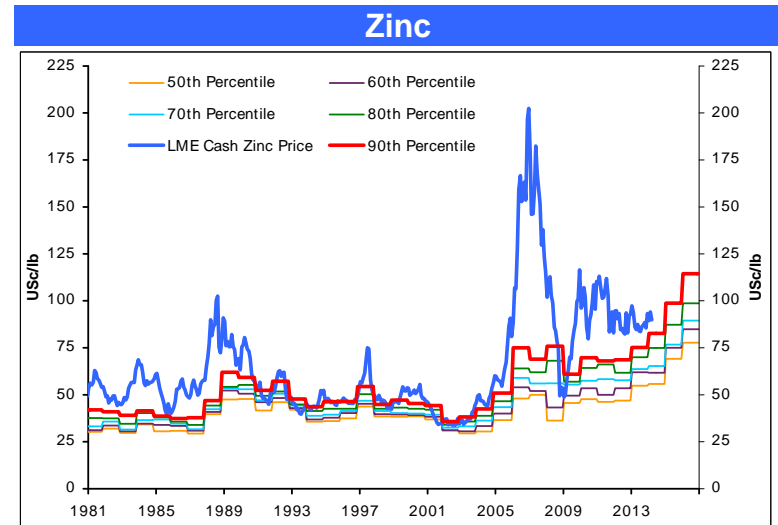
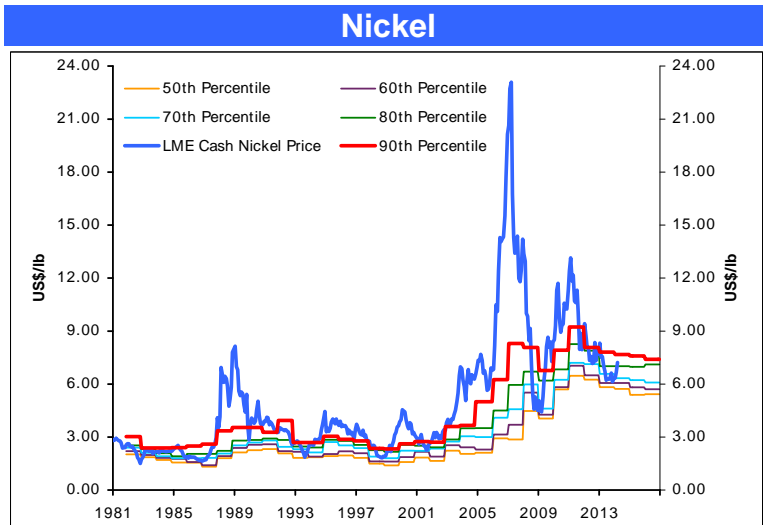
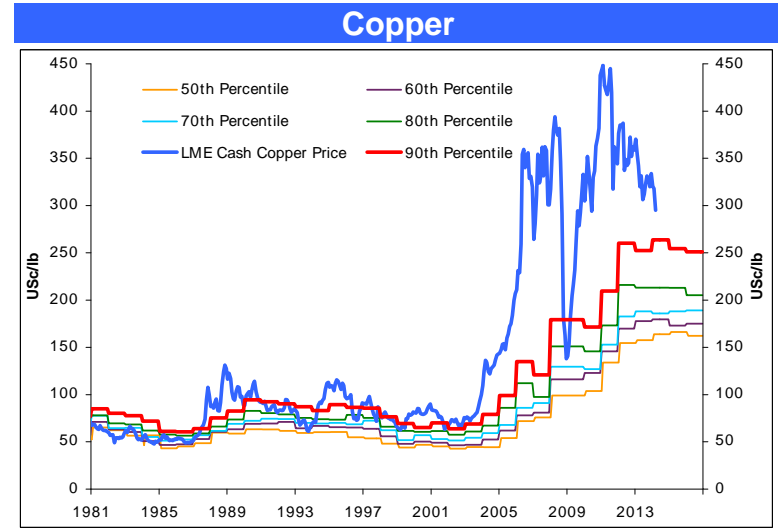
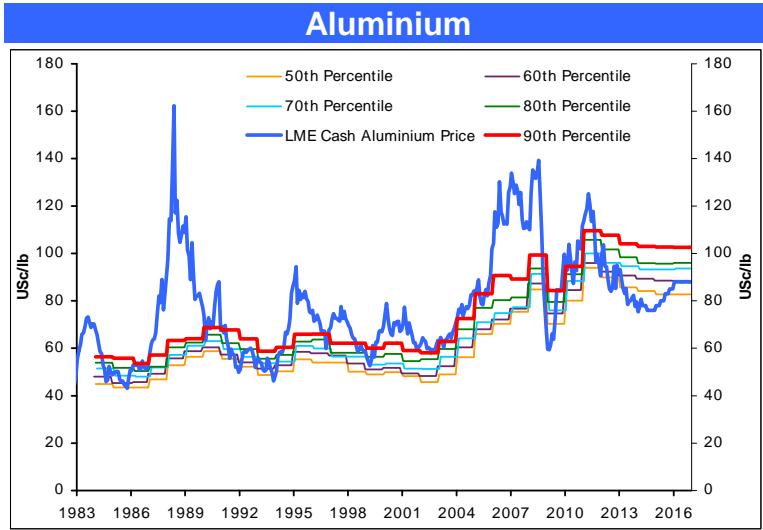
Aluminium



Nickel



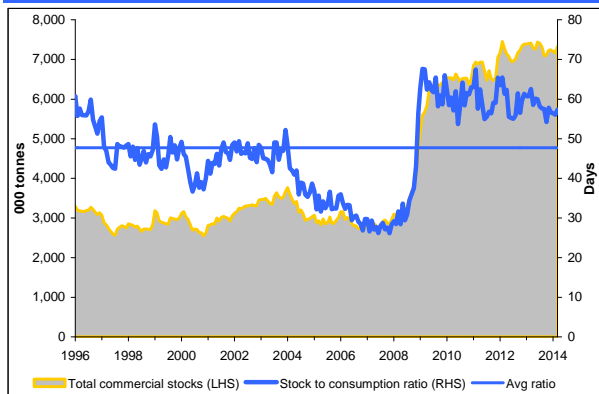
Sequential Trend in LME Metals Costs vs Price



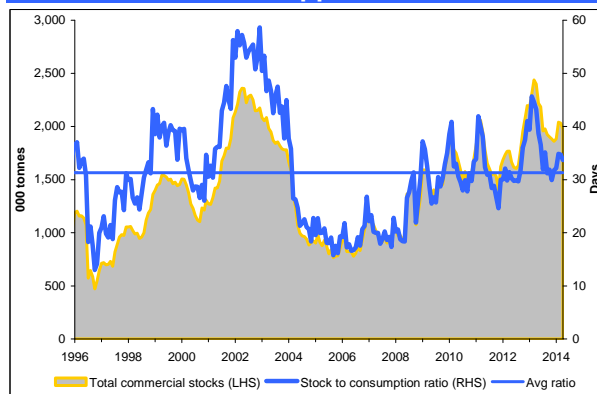
Source: Wood Mackenzie, Morgan Stanley Research.

Sequential Trend in Stock-to-Consumption Ratios of LME metals

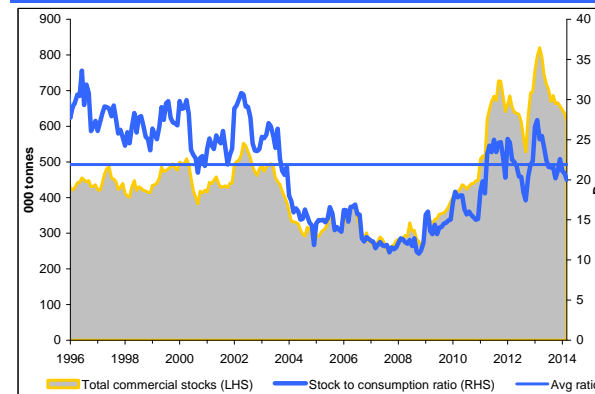
Aluminium



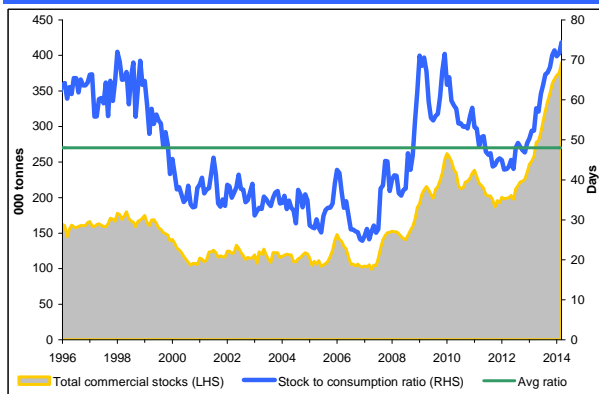
Copper



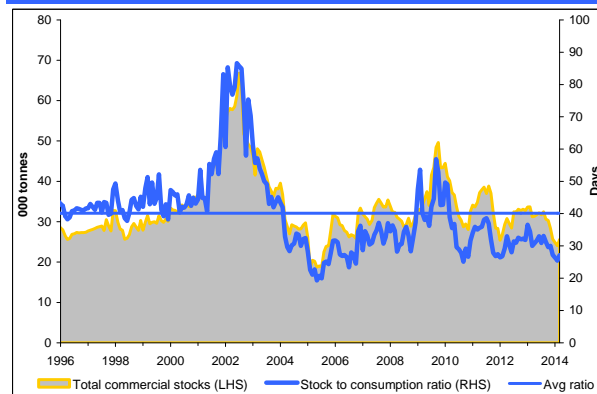
Lead



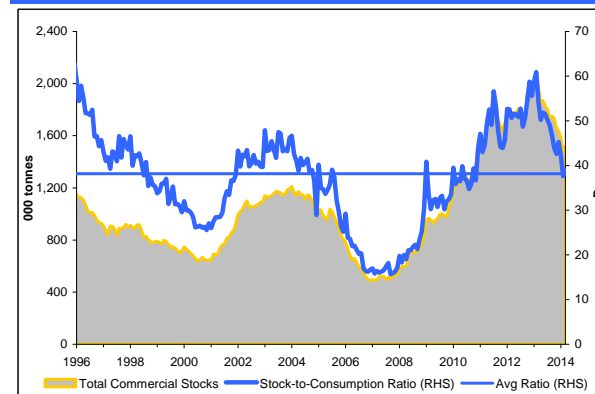
Nickel



Tin



Zinc





Morgan Stanley ModelWare is a proprietary analytic framework that helps clients uncover value, adjusting for distortions and ambiguities created by local accounting regulations. For example, ModelWare EPS adjusts for one-time events, capitalizes operating leases (where their use is significant), and converts inventory from LIFO costing to a FIFO basis. ModelWare also emphasizes the separation of operating performance of a company from its financing for a more complete view of how a company generates earnings.

Disclosures Section

The information and opinions in Morgan Stanley Research were prepared or are disseminated by Morgan Stanley Asia Limited (which accepts the responsibility for its contents) and/or Morgan Stanley Asia (Singapore) Pte. (Registration number 199206298Z) and/or Morgan Stanley Asia (Singapore) Securities Pte Ltd (Registration number 200008434H), regulated by the Monetary Authority of Singapore (which accepts legal responsibility for its contents and should be contacted with respect to any matters arising from, or in connection with, Morgan Stanley Research), and/or Morgan Stanley Taiwan Limited and/or Morgan Stanley & Co International plc, Seoul Branch, and/or Morgan Stanley Australia Limited (A.B.N. 67 003 734 576, holder of Australian financial services license No. 233742, which accepts responsibility for its contents), and/or Morgan Stanley Wealth Management Australia Pty Ltd (A.B.N. 19 009 145 555, holder of Australian financial services license No. 240813, which accepts responsibility for its contents), and/or Morgan Stanley India Company Private Limited, and/or PT Morgan Stanley Asia Indonesia and their affiliates (collectively, "Morgan Stanley").

For important disclosures, stock price charts and equity rating histories regarding companies that are the subject of this report, please see the Morgan Stanley Research Disclosure Website at www.morganstanley.com/researchdisclosures, or contact your investment representative or Morgan Stanley Research at 1585 Broadway, (Attention: Research Management), New York, NY, 10036 USA.

For valuation methodology and risks associated with any price targets referenced in this research report, please contact the Client Support Team as follows: US/Canada +1 800 303-2495; Hong Kong +852 2848-5999; Latin America +1 718 754-5444 (U.S.); London +44 (0)20-7425-8169; Singapore +65 6834-6860; Sydney +61 (0)2-9770-1505; Tokyo +81 (0)3-6836-9000. Alternatively you may contact your investment representative or Morgan Stanley Research at 1585 Broadway, (Attention: Research Management), New York, NY 10036 USA.

Analyst Certification

The following analysts hereby certify that their views about the companies and their securities discussed in this report are accurately expressed and that they have not received and will not receive direct or indirect compensation in exchange for expressing specific recommendations or views in this report: Joel Crane.

Unless otherwise stated, the individuals listed on the cover page of this report are research analysts.

Global Research Conflict Management Policy

Morgan Stanley Research has been published in accordance with our conflict management policy, which is available at www.morganstanley.com/institutional/research/conflictolicies.

Important US Regulatory Disclosures on Subject Companies

The equity research analysts or strategists principally responsible for the preparation of Morgan Stanley Research have received compensation based upon various factors, including quality of research, investor client feedback, stock picking, competitive factors, firm revenues and overall investment banking revenues.

Morgan Stanley and its affiliates do business that relates to companies/instruments covered in Morgan Stanley Research, including market making, providing liquidity and specialized trading, risk arbitrage and other proprietary trading, fund management, commercial banking, extension of credit, investment services and investment banking. Morgan Stanley sells to and buys from customers the securities/instruments of companies covered in Morgan Stanley Research on a principal basis. Morgan Stanley may have a position in the debt of the Company or instruments discussed in this report.

Certain disclosures listed above are also for compliance with applicable regulations in non-US jurisdictions.

Disclosure section (cont.)

STOCK RATINGS

Morgan Stanley uses a relative rating system using terms such as Overweight, Equal-weight, Not-Rated or Underweight (see definitions below). Morgan Stanley does not assign ratings of Buy, Hold or Sell to the stocks we cover. Overweight, Equal-weight, Not-Rated and Underweight are not the equivalent of buy, hold and sell. Investors should carefully read the definitions of all ratings used in Morgan Stanley Research. In addition, since Morgan Stanley Research contains more complete information concerning the analyst's views, investors should carefully read Morgan Stanley Research, in its entirety, and not infer the contents from the rating alone. In any case, ratings (or research) should not be used or relied upon as investment advice. An investor's decision to buy or sell a stock should depend on individual circumstances (such as the investor's existing holdings) and other considerations.

Global Stock Ratings Distribution

(as of March 31, 2014)

For disclosure purposes only (in accordance with NASD and NYSE requirements), we include the category headings of Buy, Hold, and Sell alongside our ratings of Overweight, Equal-weight, Not-Rated and Underweight. Morgan Stanley does not assign ratings of Buy, Hold or Sell to the stocks we cover. Overweight, Equal-weight, Not-Rated and Underweight are not the equivalent of buy, hold, and sell but represent recommended relative weightings (see definitions below). To satisfy regulatory requirements, we correspond Overweight, our most positive stock rating, with a buy recommendation; we correspond Equal-weight and Not-Rated to hold and Underweight to sell recommendations, respectively.

Stock Rating Category	Coverage Universe		Investment Banking Clients (IBC)		
	Count	% of Total	Count	% of Total IBC	% of Rating Category
Overweight/Buy	1035	35%	354	38%	34%
Equal-weight/Hold	1286	43%	446	48%	35%
Not-Rated/Hold	99	3%	24	3%	24%
Underweight/Sell	539	18%	105	11%	19%
Total	2,959		929		

Data include common stock and ADRs currently assigned ratings. Investment Banking Clients are companies from whom Morgan Stanley received investment banking compensation in the last 12 months.

Analyst Stock Ratings

Overweight (O). The stock's total return is expected to exceed the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Equal-weight (E). The stock's total return is expected to be in line with the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Not-Rated (NR). Currently the analyst does not have adequate conviction about the stock's total return relative to the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Underweight (U). The stock's total return is expected to be below the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Unless otherwise specified, the time frame for price targets included in Morgan Stanley Research is 12 to 18 months.

Analyst Industry Views

Attractive (A): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be attractive vs. the relevant broad market benchmark, as indicated below.

In-Line (I): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be in line with the relevant broad market benchmark, as indicated below.

Cautious (C): The analyst views the performance of his or her industry coverage universe over the next 12-18 months with caution vs. the relevant broad market benchmark, as indicated below.

Benchmarks for each region are as follows: North America - S&P 500; Latin America - relevant MSCI country index or MSCI Latin America Index; Europe - MSCI Europe; Japan - TOPIX; Asia - relevant MSCI country index or MSCI sub-regional index or MSCI AC Asia Pacific ex Japan Index.

Disclosure section (cont.)

Important Disclosures for Morgan Stanley Smith Barney LLC Customers

Important disclosures regarding the relationship between the companies that are the subject of Morgan Stanley Research and Morgan Stanley Smith Barney LLC or Morgan Stanley or any of their affiliates, are available on the Morgan Stanley Wealth Management disclosure website at www.morganstanley.com/online/researchdisclosures. For Morgan Stanley specific disclosures, you may refer to www.morganstanley.com/researchdisclosures.

Each Morgan Stanley Equity Research report is reviewed and approved on behalf of Morgan Stanley Smith Barney LLC. This review and approval is conducted by the same person who reviews the Equity Research report on behalf of Morgan Stanley. This could create a conflict of interest.

Other Important Disclosures

Morgan Stanley is not acting as a municipal advisor and the opinions or views contained herein are not intended to be, and do not constitute, advice within the meaning of Section 975 of the Dodd-Frank Wall Street Reform and Consumer Protection Act.

Morgan Stanley produces an equity research product called a "Tactical Idea." Views contained in a "Tactical Idea" on a particular stock may be contrary to the recommendations or views expressed in research on the same stock. This may be the result of differing time horizons, methodologies, market events, or other factors. For all research available on a particular stock, please contact your sales representative or go to Matrix at <http://www.morganstanley.com/matrix>.

Morgan Stanley Research is provided to our clients through our proprietary research portal on Matrix and also distributed electronically by Morgan Stanley to clients. Certain, but not all, Morgan Stanley Research products are also made available to clients through third-party vendors or redistributed to clients through alternate electronic means as a convenience. For access to all available Morgan Stanley Research, please contact your sales representative or go to Matrix at <http://www.morganstanley.com/matrix>.

Any access and/or use of Morgan Stanley Research is subject to Morgan Stanley's Terms of Use (<http://www.morganstanley.com/terms.html>). By accessing and/or using Morgan Stanley Research, you are indicating that you have read and agree to be bound by our Terms of Use (<http://www.morganstanley.com/terms.html>). In addition you consent to Morgan Stanley processing your personal data and using cookies in accordance with our Privacy Policy and our Global Cookies Policy (http://www.morganstanley.com/privacy_pledge.html), including for the purposes of setting your preferences and to collect readership data so that we can deliver better and more personalized service and products to you. To find out more information about how Morgan Stanley processes personal data, how we use cookies and how to reject cookies see our Privacy Policy and our Global Cookies Policy (http://www.morganstanley.com/privacy_pledge.html).

If you do not agree to our Terms of Use and/or if you do not wish to provide your consent to Morgan Stanley processing your personal data or using cookies please do not access our research.

Morgan Stanley Research does not provide individually tailored investment advice. Morgan Stanley Research has been prepared without regard to the circumstances and objectives of those who receive it. Morgan Stanley recommends that investors independently evaluate particular investments and strategies, and encourages investors to seek the advice of a financial adviser. The appropriateness of an investment or strategy will depend on an investor's circumstances and objectives. The securities, instruments, or strategies discussed in Morgan Stanley Research may not be suitable for all investors, and certain investors may not be eligible to purchase or participate in some or all of them. Morgan Stanley Research is not an offer to buy or sell or the solicitation of an offer to buy or sell any security/instrument or to participate in any particular trading strategy. The value of and income from your investments may vary because of changes in interest rates, foreign exchange rates, default rates, prepayment rates, securities/instruments prices, market indexes, operational or financial conditions of companies or other factors. There may be time limitations on the exercise of options or other rights in securities/instruments transactions. Past performance is not necessarily a guide to future performance. Estimates of future performance are based on assumptions that may not be realized. If provided, and unless otherwise stated, the closing price on the cover page is that of the primary exchange for the subject company's securities/instruments.

The fixed income research analysts, strategists or economists principally responsible for the preparation of Morgan Stanley Research have received compensation based upon various factors, including quality, accuracy and value of research, firm profitability or revenues (which include fixed income trading and capital markets profitability or revenues), client feedback and competitive factors. Fixed Income Research analysts', strategists' or economists' compensation is not linked to investment banking or capital markets transactions performed by Morgan Stanley or the profitability or revenues of particular trading desks.

The "Important US Regulatory Disclosures on Subject Companies" section in Morgan Stanley Research lists all companies mentioned where Morgan Stanley owns 1% or more of a class of common equity securities of the companies. For all other companies mentioned in Morgan Stanley Research, Morgan Stanley may have an investment of less than 1% in securities/instruments or derivatives of securities/instruments of companies and may trade them in ways different from those discussed in Morgan Stanley Research. Employees of Morgan Stanley not involved in the preparation of Morgan Stanley Research may have investments in securities/instruments or derivatives of securities/instruments of companies mentioned and may trade them in ways different from those discussed in Morgan Stanley Research. Derivatives may be issued by Morgan Stanley or associated persons.

Disclosure section (cont.)

With the exception of information regarding Morgan Stanley, Morgan Stanley Research is based on public information. Morgan Stanley makes every effort to use reliable, comprehensive information, but we make no representation that it is accurate or complete. We have no obligation to tell you when opinions or information in Morgan Stanley Research change apart from when we intend to discontinue equity research coverage of a subject company. Facts and views presented in Morgan Stanley Research have not been reviewed by, and may not reflect information known to, professionals in other Morgan Stanley business areas, including investment banking personnel.

Morgan Stanley Research personnel may participate in company events such as site visits and are generally prohibited from accepting payment by the company of associated expenses unless pre-approved by authorized members of Research management.

Morgan Stanley may make investment decisions or take proprietary positions that are inconsistent with the recommendations or views in this report.

To our readers in Taiwan: Information on securities/instruments that trade in Taiwan is distributed by Morgan Stanley Taiwan Limited ("MSTL"). Such information is for your reference only. The reader should independently evaluate the investment risks and is solely responsible for their investment decisions. Morgan Stanley Research may not be distributed to the public media or quoted or used by the public media without the express written consent of Morgan Stanley. Information on securities/instruments that do not trade in Taiwan is for informational purposes only and is not to be construed as a recommendation or a solicitation to trade in such securities/instruments. MSTL may not execute transactions for clients in these securities/instruments.

To our readers in Hong Kong: Information is distributed in Hong Kong by and on behalf of, and is attributable to, Morgan Stanley Asia Limited as part of its regulated activities in Hong Kong. If you have any queries concerning Morgan Stanley Research, please contact our Hong Kong sales representatives.

Certain information in Morgan Stanley Research was sourced by employees of the Shanghai Representative Office of Morgan Stanley Asia Limited for the use of Morgan Stanley Asia Limited.

Morgan Stanley is not incorporated under PRC law and the research in relation to this report is conducted outside the PRC. Morgan Stanley Research does not constitute an offer to sell or the solicitation of an offer to buy any securities in the PRC. PRC investors shall have the relevant qualifications to invest in such securities and shall be responsible for obtaining all relevant approvals, licenses, verifications and/or registrations from the relevant governmental authorities themselves.

Morgan Stanley Research is disseminated in Brazil by Morgan Stanley C.T.V.M. S.A.; in Japan by Morgan Stanley MUFG Securities Co., Ltd. and, for Commodities related research reports only, Morgan Stanley Capital Group Japan Co., Ltd; in Hong Kong by Morgan Stanley Asia Limited (which accepts responsibility for its contents); in Singapore by Morgan Stanley Asia (Singapore) Pte. (Registration number 199206298Z) and/or Morgan Stanley Asia (Singapore) Securities Pte Ltd (Registration number 200008434H), regulated by the Monetary Authority of Singapore (which accepts legal responsibility for its contents and should be contacted with respect to any matters arising from, or in connection with, Morgan Stanley Research); in Australia to "wholesale clients" within the meaning of the Australian Corporations Act by Morgan Stanley Australia Limited A.B.N. 67 003 734 576, holder of Australian financial services license No. 233742, which accepts responsibility for its contents; in Australia to "wholesale clients" and "retail clients" within the meaning of the Australian Corporations Act by Morgan Stanley Wealth Management Australia Pty Ltd (A.B.N. 19 009 145 555, holder of Australian financial services license No. 240813, which accepts responsibility for its contents; in Korea by Morgan Stanley & Co International plc, Seoul Branch; in India by Morgan Stanley India Company Private Limited; in Indonesia by PT Morgan Stanley Asia Indonesia; in Canada by Morgan Stanley Canada Limited, which has approved of and takes responsibility for its contents in Canada; in Germany by Morgan Stanley Bank AG, Frankfurt am Main and Morgan Stanley Private Wealth Management Limited, Niederlassung Deutschland, regulated by Bundesanstalt fuer Finanzdienstleistungsaufsicht (BaFin); in Spain by Morgan Stanley, S.V., S.A., a Morgan Stanley group company, which is supervised by the Spanish Securities Markets Commission (CNMV) and states that Morgan Stanley Research has been written and distributed in accordance with the rules of conduct applicable to financial research as established under Spanish regulations; in the US by Morgan Stanley & Co. LLC, which accepts responsibility for its contents. Morgan Stanley & Co. International plc, authorized by the Prudential Regulatory Authority and regulated by the Financial Conduct Authority and the Prudential Regulatory Authority, disseminates in the UK research that it has prepared, and approves solely for the purposes of section 21 of the Financial Services and Markets Act 2000, research which has been prepared by any of its affiliates. Morgan Stanley Private Wealth Management Limited, authorized and regulated by the Financial Conduct Authority, also disseminates Morgan Stanley Research in the UK. Private UK investors should obtain the advice of their Morgan Stanley & Co. International plc or Morgan Stanley Private Wealth Management representative about the investments concerned. RMB Morgan Stanley (Proprietary) Limited is a member of the JSE Limited and regulated by the Financial Services Board in South Africa. RMB Morgan Stanley (Proprietary) Limited is a joint venture owned equally by Morgan Stanley International Holdings Inc. and RMB Investment Advisory (Proprietary) Limited, which is wholly owned by FirstRand Limited.

The information in Morgan Stanley Research is being communicated by Morgan Stanley & Co. International plc (DIFC Branch), regulated by the Dubai Financial Services Authority (the DFSA), and is directed at Professional Clients only, as defined by the DFSA. The financial products or financial services to which this research relates will only be made available to a customer who we are satisfied meets the regulatory criteria to be a Professional Client.

The information in Morgan Stanley Research is being communicated by Morgan Stanley & Co. International plc (QFC Branch), regulated by the Qatar Financial Centre Regulatory Authority (the QFCRA), and is directed at business customers and market counterparties only and is not intended for Retail Customers as defined by the QFCRA.

Disclosure section (cont.)

As required by the Capital Markets Board of Turkey, investment information, comments and recommendations stated here, are not within the scope of investment advisory activity. Investment advisory service is provided in accordance with a contract of engagement on investment advisory concluded between brokerage houses, portfolio management companies, non-deposit banks and clients. Comments and recommendations stated here rely on the individual opinions of the ones providing these comments and recommendations. These opinions may not fit to your financial status, risk and return preferences. For this reason, to make an investment decision by relying solely to this information stated here may not bring about outcomes that fit your expectations.

The trademarks and service marks contained in Morgan Stanley Research are the property of their respective owners. Third-party data providers make no warranties or representations relating to the accuracy, completeness, or timeliness of the data they provide and shall not have liability for any damages relating to such data. The Global Industry Classification Standard (GICS) was developed by and is the exclusive property of MSCI and S&P. Morgan Stanley Research or portions of it may not be reprinted, sold or redistributed without the written consent of Morgan Stanley.

Morgan Stanley Research, or any portion thereof may not be reprinted, sold or redistributed without the written consent of Morgan Stanley.

The Americas

1585 Broadway
New York, NY 10036-8293

United States

Tel: +1 (1) 212 761 4000

Europe

20 Bank Street, Canary Wharf
London E14 4AD

United Kingdom

Tel: +44 (0) 20 7 425 8000

Japan

1-9-7 Otemachi, Chiyoda-ku
Tokyo 100-8104

Japan

Tel: +81 (0) 3 6836 5000

Asia/Pacific

1 Austin Road West
Kowloon

Hong Kong

Tel: +852 2848 5200