



North American Mining Shares: August 2014 Chart Book



Global Mining Research

August 20, 2014

Investment Conclusions

- **Non-precious metals mining shares and metal prices rallied strongly in July in response to a modest improvement in global leading economic indicators, but have given up a significant portion of those gains in August.**
- **Commodity market fundamentals remain weak:** Slow economic growth, significant excess inventories and capacity utilization rates well below full effective levels point to a subdued commodity pricing environment.
- **Economic leading indicators and underlying global growth need to improve much more to drive sustained outperformance of commodity and mining share prices.**
- **Changing seasonality.** The seasonally strong period of the year for metal and mining share prices begins to fade in August as we move towards the worst time of the year from a seasonal perspective, September/October.
- **The shares are not cheap.** At a 1.9% discount to NAV at forward curve prices, valuations are at the upper end of their range of the past three years and the shares are fully valued relative to the underlying commodities.
- **Commodity Exposure.** Our preferred commodity exposure based on our 2014 supply/demand balances and price forecasts is nickel, copper, coking coal, and iron ore, and based on our five year forecasts is nickel, uranium, zinc and coking coal.
- **Key stock recommendations: LUN, TCK.B, S, CCO, LIF.**
- **Strategy:** We recommend investors hold an underweight position in non-precious metal mining shares. Focus on companies with strong balance sheets and free cash flow, and high-quality, low-cost assets.
- **Potential catalysts:** Improvement in global leading indicators, strong seasonality in July.

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This report is priced as of market close on August 19, 2014 ET.

All values in U.S. dollars unless otherwise noted.

For Required Non-U.S. Analyst and Conflicts Disclosures, please see page 94.

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Summary Valuation Tables

Symbol & Reporting Exchange Currency Analyst	8/19/14 Current Share Price	Current Price % of 52-week Hi/Lo Range	Rating Risk	12-month Target Price	Total Implied Return	Net Asset Value	Premium (Discount) to NAV	P/E			P/CFPS			EVEBITDA			Market Cap (US\$MM)	Net Debt/ Total Cap.	EBITDA Interest Coverage (trailing)			
								2014E	2015E	2016E	2014E	2015E	2016E	2014E	2015E	2016E						
ALUMINIUM																						
Alcoa	AAN	US\$	HFP	US\$16.43	92%	SP	US\$16.00	-1.89%	US\$13.45	22.2%	26.8x	25.6x	23.8x	8.9x	8.2x	7.9x	10.1x	9.0x	8.4x	\$19,856	36.2%	6.0x
Weighted Average										22.2%	26.8x	25.6x	23.8x	8.9x	8.2x	7.9x	10.1x	9.0x	8.4x	\$19,856	36.2%	6.0x
COPPER																						
Antofagasta	ANT O L	US\$	TH	£8.18	38%	OP	£9.00	17%	£7.60	7.6%	18.5x	17.4x	n/a	7.4x	6.9x	n/a	6.4x	6.1x	n/a	\$13,421	0.7%	42.5x
Capstone Mining	CS T	US\$	HFP	C\$2.62	40%	SP	C\$3.00	15%	C\$3.36	-22.1%	17.8x	21.3x	13.9x	4.4x	5.1x	5.0x	4.8x	4.9x	3.9x	\$912	10.8%	n/a
First Quantum	FM T	US\$	HFP	C\$24.24	72%	SP	C\$27.00	12%	C\$27.12	-10.6%	22.3x	16.8x	10.4x	8.0x	6.5x	4.5x	10.7x	8.7x	6.0x	\$13,090	30.3%	55.4x
Freeport McMoRan	FCX N	US\$	HFP	US\$36.29	67%	SP	US\$42.00	19%	US\$41.57	-12.7%	18.4x	20.2x	10.5x	5.7x	5.5x	3.9x	6.7x	7.0x	4.9x	\$37,742	41.9%	14.6x
HudBay Minerals	HBM T	C\$	HFP	C\$11.13	86%	SP	C\$10.00	-10%	C\$9.82	13.4%	n/a	26.3x	6.3x	46.5x	7.8x	3.2x	18.6x	5.8x	2.3x	\$1,963	3.7%	n/a
Ivanhoe Mines	IVN T	US\$	HFP	C\$1.43	12%	OP SPEC	C\$3.50	145%	C\$7.08	-79.8%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$915	-84.1%	n/a
Lundin Mining	LUN T	US\$	HFP	C\$6.02	78%	OP	C\$8.00	33%	C\$8.68	-30.7%	25.1x	12.0x	9.1x	8.3x	4.9x	4.2x	7.9x	4.8x	4.4x	\$3,223	4.2%	65.9x
Nevsun Resources	NSU T	US\$	HFP	C\$4.36	76%	OP SPEC	C\$4.70	8%	C\$6.43	-32.2%	6.9x	7.2x	19.2x	2.9x	2.9x	5.9x	1.5x	1.5x	3.2x	\$794	-36.8%	n/a
Tiger Resources	TGS A	US\$	CD	C\$0.30	35%	OP SPEC	C\$0.50	67%	C\$0.75	-59.9%	3.9x	4.9x	3.9x	1.6x	1.8x	1.5x	2.3x	2.0x	1.5x	\$224	14.4%	16.3x
Weighted Average										-10.0%	19.3x	18.7x	10.4x	7.6x	5.9x	4.1x	7.6x	6.9x	5.0x	\$72,286	26.5%	30.5x
NICKEL																						
Sherritt International	S T	C\$	HFP	C\$4.00	57%	OP	C\$7.00	76%	C\$10.39	-61.5%	n/a	4.5x	3.7x	10.1x	3.3x	2.8x	14.1x	14.4x	14.5x	\$1,086	32.6%	0.7x
Sirius Resources	SIR A	A\$	CD	A\$3.95	91%	OP SPEC	A\$4.00	1%	A\$3.98	-0.7%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$964	-80.0%	12.5x
Western Areas	WSA A	A\$	CD	A\$4.80	87%	OP	A\$5.50	15%	A\$5.55	-13.5%	62.2x	9.2x	5.7x	9.5x	4.2x	3.6x	7.7x	3.9x	2.8x	\$880	25.8%	4.9x
Weighted Average										-27.1%	62.2x	6.6x	4.6x	9.9x	3.7x	3.2x	11.2x	9.7x	9.3x	\$2,930	-6.5%	5.9x
ZINC																						
Nystar NV	NYR B	EUR	TH	€ 2.92	48%	SP	€ 3.00	8%	€ 4.06	-28.0%	n/a	n/a	9.9x	2.1x	3.5x	1.5x	4.9x	4.5x	2.6x	\$612	33.5%	2.3x
Weighted Average										-28.0%	n/a	n/a	9.9x	2.1x	3.5x	1.5x	4.9x	4.5x	2.6x	\$612	33.5%	2.3x
DIVERSIFIED																						
Anglo American	AAL L	US\$	DK	£15.79	78%	SP	£16.00	5%	£15.36	2.8%	12.7x	10.9x	8.1x	4.8x	4.3x	3.7x	5.9x	5.4x	4.5x	\$33,784	18.4%	16.3x
BHP Billiton	BLT L	US\$	DK	£19.65	65%	SP	£20.00	5%	£22.23	-11.6%	12.9x	13.5x	11.7x	8.1x	7.5x	7.2x	6.3x	6.3x	6.0x	\$174,081	22.5%	24.3x
Glencore plc	GLEN L	US\$	TH	£3.59	79%	OP	£3.75	6%	£4.27	-16.0%	19.2x	13.9x	9.8x	7.8x	6.5x	5.2x	10.2x	8.5x	7.1x	\$78,482	48.3%	9.5x
Rio Tinto	RIO L	US\$	DK	£34.15	69%	OP	£37.00	11%	£38.72	-11.8%	11.1x	9.9x	8.7x	7.4x	6.7x	6.1x	6.4x	5.8x	5.3x	\$104,977	22.1%	41.3x
Teck Resources	TCK.B T	C\$	HFP	C\$24.99	28%	OP	C\$31.00	28%	C\$37.42	-33.2%	28.8x	21.3x	12.7x	7.8x	7.2x	5.9x	8.2x	7.5x	6.0x	\$13,159	21.2%	13.2x
Vale	VALE N	US\$	HFP	US\$13.88	33%	SP	US\$15.00	13%	US\$15.76	-11.9%	7.8x	6.2x	6.0x	5.5x	4.5x	4.3x	5.7x	4.9x	4.7x	\$83,432	22.5%	13.9x
Vedanta Resources	VED L	US\$	TH	£10.17	57%	SP	£10.00	2%	£11.86	-14.2%	23.3x	15.0x	10.6x	4.6x	3.6x	3.2x	5.6x	5.4x	4.3x	\$4,619	24.3%	4.1x
Weighted Average										-12.0%	13.2x	11.6x	9.5x	7.2x	6.4x	5.8x	6.9x	6.3x	5.7x	\$492,534	26.2%	22.8x

R = Restricted

Summary Valuation Tables

Symbol & Reporting Exchange Currency Analyst	8/19/14 Current Share Price	Current Price % of 52-week Hi/Low Range	Rating Risk	12-month Target Price	Total Implied Return	Net Asset Value	Premium (Discount) to NAV	P/E			P/CFPS			EV/EBITDA			Market Cap (US\$MM)	Net Debt/ Total Cap.	EBITDA Interest Coverage (trailing)				
								2014E	2015E	2016E	2014E	2015E	2016E	2014E	2015E	2016E							
MISCELLANEOUS																							
Anglo Pacific Group	APF L	UK£	TH	£1.75	3%	OP		£2.20	29%	£1.97	-11.3%	29.5x	18.9x	11.0x	20.1x	13.0x	7.8x	17.6x	11.4x	6.6x	\$338	-6.6%	n/a
General Moly	GMO U	US\$	HFP	US\$1.02	17%	U	SPEC	US\$1.10	8%	US\$2.46	-58.5%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$94	-3.1%	n/a
Thompson Creek	TCM T	US\$	HFP	C\$3.21	57%	SP		C\$3.50	9%	US\$3.68	-20.3%	7.9x	83.1x	n/a	3.3x	4.7x	7.1x	4.9x	6.0x	7.9x	\$628	37.7%	2.1x
Weighted Average											-20.8%	15.5x	60.6x	11.0x	9.2x	7.6x	7.4x	9.3x	7.9x	7.5x	\$1,059	20.0%	2.1x
COAL																							
Bathurst Resources	BRL A	A\$	CD	A\$0.05	6%	SP		A\$0.10	89%	A\$0.27	-80.7%	n/a	n/a	n/a	n/a	38.3x	17.8x	n/a	34.3x	6.5x	\$41	-1.7%	-0.4x
Walter Energy	WLT N	US\$	HFP	US\$6.19	13%	SP	SPEC	US\$5.00	-19%	(US\$20.56)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	42.9x	18.7x	18.3x	\$407	69.0%	18.1x
Whitehaven Coal	WHC A	A\$	CD	A\$1.88	60%	U		A\$1.50	-20%	A\$2.36	-20.3%	n/a	n/a	21.4x	21.3x	29.6x	7.8x	38.0x	22.4x	7.5x	\$1,796	14.3%	1.3x
Weighted Average											-21.6%	n/a	n/a	21.4x	21.3x	29.8x	8.0x	38.9x	21.9x	9.5x	\$2,244	24.0%	4.3x
IRON ORE																							
Alderon Iron Ore	ADVT	C\$	HFP	C\$1.36	24%	OP	SPEC	C\$2.50	84%	C\$5.05	-73.1%	n/a	n/a	n/a	n/a	n/a	6.4x	n/a	18.6x	1.3x	\$162	-29.5%	n/a
Atlas Iron	AGO A	A\$	CD	A\$0.70	22%	OP		A\$0.80	19%	A\$0.79	-11.7%	34.2x	9.1x	8.2x	2.4x	2.3x	2.3x	2.2x	1.9x	1.9x	\$593	-4.5%	15.7x
BC Iron	BCIA	A\$	CD	A\$3.18	9%	SP		A\$3.80	38%	A\$3.80	-16.3%	4.8x	5.9x	6.0x	2.7x	3.8x	4.2x	1.7x	2.0x	2.1x	\$367	-41.2%	79.4x
Cliffs Natural Resources	CLF N	US\$	HFP	US\$16.66	20%	SP		US\$16.50	3%	US\$16.75	-0.6%	n/a	15.0x	19.8x	4.6x	3.4x	4.4x	8.4x	6.9x	7.9x	\$2,552	37.2%	6.4x
Fortescue Metals	FMG A	US\$	CD	A\$4.62	31%	OP		A\$6.00	35%	A\$5.79	-20.2%	4.8x	5.1x	4.6x	2.7x	3.6x	3.9x	3.9x	3.8x	4.0x	\$13,402	46.9%	8.3x
Gindalbie Metals	GBG A	A\$	CD	A\$0.05	4%	U		A\$0.05	4%	A\$0.05	-5.8%	n/a	n/a	1.5x	n/a	n/a	70.5x	n/a	n/a	n/a	\$67	-1.8%	1.3x
Labrador Iron Ore	LIF T	C\$	HFP	C\$31.49	56%	OP		C\$35.00	17%	C\$34.51	-8.8%	12.2x	10.7x	11.1x	12.2x	10.4x	10.6x	9.8x	8.7x	8.4x	\$1,842	-5.7%	78315.3x
London Mining	LOND L	US\$	TH	£0.40	10%	SP		£0.50	27%	£1.08	-63.3%	n/a	10.5x	2.6x	4.4x	1.3x	3.1x	4.9x	3.1x	2.2x	\$90	42.9%	-0.6x
Mount Gibson Iron	MGX A	A\$	CD	A\$0.75	18%	SP		A\$0.80	12%	A\$0.89	-15.7%	8.9x	8.7x	8.9x	4.0x	6.7x	10.4x	1.6x	1.6x	1.5x	\$762	-36.7%	-40.8x
Northern Iron	NFE A	US\$	CD	A\$0.13	6%	SP	SPEC	A\$0.20	54%	A\$0.48	-73.1%	10.3x	2.7x	2.1x	1.8x	1.1x	1.1x	3.0x	1.9x	1.7x	\$59	18.6%	4.9x
Weighted Average											-16.1%	6.8x	7.0x	7.6x	3.9x	4.3x	5.0x	4.9x	4.6x	4.7x	\$19,895	33.6%	7317.3x
URANIUM																							
Cameco	CCO T	C\$	HFP	C\$22.15	40%	OP		C\$26.00	19%	C\$14.51	52.7%	24.3x	28.8x	24.0x	17.9x	30.3x	24.8x	15.7x	15.6x	14.3x	\$8,012	14.8%	17.6x
Denison Mines	DML T	US\$	HFP	C\$1.49	51%	SP	SPEC	C\$1.50	1%	C\$2.14	-30.3%	n/a	n/a	n/a	n/a	n/a	65.3x	n/a	n/a	n/a	\$529	-15.1%	n/a
Energy Resources Australia	ERA A	A\$	CD	A\$1.35	56%	U	SPEC	A\$1.10	-19%	A\$1.09	23.5%	n/a	n/a	n/a	n/a	41.3x	47.5x	n/a	12.2x	12.0x	\$651	-38.2%	4.1x
Paladin Energy	PDN A	US\$	KT	A\$0.43	40%	U		A\$0.30	-30%	A\$0.37	16.0%	n/a	n/a	n/a	15.9x	n/a	n/a	n/a	35.1x	17.3x	\$386	52.1%	0.3x
Weighted Average											44.6%	24.3x	28.8x	24.0x	17.8x	31.1x	28.7x	15.7x	16.2x	14.3x	\$9,579	11.0%	15.9x
MINERAL SANDS																							
Base Resources	BSE A	A\$	DK	A\$0.31	25%	SP		A\$0.50	61%	A\$0.43	-28.7%	n/a	3.9x	2.2x	32.8x	2.0x	1.4x	23.8x	2.5x	2.0x	\$162	20.3%	n/a
Iluka Resources *	ILU A	A\$	CD	A\$8.58	13%	R															\$3,347	11.5%	19.0x
Kenmare Resources *	KMR L	US\$	DK	£0.12	14%	R															\$555	28.2%	0.7x
Mineral Deposits	MDL A	US\$	CD	A\$1.92	26%	OP		A\$2.50	30%	A\$2.43	-20.9%	n/a	n/a	9.0x	n/a	n/a	n/a	n/a	n/a	7.4x	\$172	-8.0%	-13.3x
Sierra Rutile	SRX L	US\$	DK	£0.37	4%	OP		£0.65	76%	£0.61	-39.4%	13.2x	9.0x	3.6x	8.3x	6.4x	2.8x	8.0x	6.1x	2.8x	\$315	10.7%	6.9x
Weighted Average											-31.8%	13.2x	7.3x	4.7x	16.6x	4.9x	2.4x	13.4x	4.9x	3.8x	\$4,551	13.1%	14.6x
Total Industry Arithmetic Average											-10.1%	22.6x	20.8x	12.7x	10.4x	10.5x	7.4x	12.3x	9.2x	7.1x		21.8%	742.2x

* Currently Restricted

Source: Bloomberg, RBC Capital Markets estimates

Input Assumptions & Forecast Prices

Economic Assumptions		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014E	2015E	2016E	2017E	2018E	Long-term*
Australian Prime		5.5%	5.8%	6.4%	6.7%	3.3%	4.4%	4.7%	5.3%	5.3%	5.3%	5.3%	5.3%	5.3%	5.3%	5.3%
Canadian Prime		4.4%	5.8%	6.3%	4.7%	2.4%	2.6%	3.0%	3.0%	3.0%	3.0%	3.4%	4.5%	5.0%	5.5%	6.0%
U.S. Prime		6.2%	7.9%	8.0%	4.9%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	4.3%	6.1%	7.1%	7.0%
US\$ per A\$		0.7624	0.7541	0.8389	0.8520	0.7923	0.9205	1.0328	1.0358	0.9686	0.9126	0.8982	0.8804	0.8669	0.8521	0.8000
US\$ per C\$		0.8259	0.8817	0.9351	0.9400	0.8763	0.9707	1.0110	1.0004	0.9710	0.9148	0.9125	0.9079	0.9057	0.9053	0.9000
S.A. Rand per US\$		6.3642	6.7700	7.0542	8.2727	8.4187	7.3181	7.2637	8.2079	9.6445	10.5674	10.9925	11.5855	12.1565	12.8974	7.2500
US\$ per British Pound		1.8200	1.8430	2.0023	1.8526	1.5661	1.5457	1.6041	1.5851	1.5647	1.6744	1.6753	1.6654	1.6588	1.6544	1.7500
US\$ per Euro		1.2448	1.2563	1.3702	1.4710	1.3941	1.3269	1.3924	1.2860	1.3283	1.3663	1.3644	1.3696	1.3813	1.4014	1.3500
BRL per US\$			2.1758	1.9475	1.8360	1.9994	1.7599	1.6751	1.9553	2.1573	2.3030	2.4660	2.6613	2.8320	3.0553	2.1000

Base Metal Prices		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014E	2015E	2016E	2017E	2018E	Long-term*
Aluminium	(US\$/lb)	0.86	1.16	1.20	1.17	0.75	0.99	1.09	0.92	0.84	0.81	0.90	1.00	1.10	1.15	1.10
Copper	(US\$/lb)	1.67	3.05	3.23	3.15	2.34	3.42	4.00	3.61	3.32	3.15	3.00	3.25	3.75	4.00	2.75
Lead	(US\$/lb)	0.44	0.58	1.17	0.95	0.78	0.97	1.09	0.94	0.97	0.97	0.99	1.00	1.00	1.00	0.55
Nickel	(US\$/lb)	6.69	11.02	16.91	9.57	6.64	9.89	10.38	7.95	6.81	8.50	11.00	12.00	14.00	15.00	9.50
Uranium - Spot	(US\$/lb)	28.14	47.91	98.68	63.02	46.66	46.46	57.01	48.83	38.44	31.50	40.00	40.00	40.00	45.00	65.00
Zinc	(US\$/lb)	0.63	1.48	1.47	0.85	0.75	0.98	0.99	0.88	0.87	0.95	1.00	1.25	1.50	1.50	1.00
Alumina (Contract)	(US\$/t)	322.68	577.45	279.50	341.00	250.00	348.00	383.00	327.00	304.69	312.50	332.34	341.71	351.63	361.28	339.51
Molybdenum	(US\$/lb)	31.05	24.38	29.91	28.42	10.91	15.60	15.33	12.62	10.26	12.50	12.00	10.00	9.00	10.00	12.50
Cobalt	(US\$/lb)	15.96	17.22	30.55	39.01	17.86	20.85	17.99	14.07	12.89	13.92	13.80	13.84	13.84	12.00	11.50

Precious Metal		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014E	2015E	2016E	2017E	2018E	Long-term*
Gold	(US\$/oz)	445	605	696	872	972	1225	1571	1668	1412	1360	1400	1400	1400	1400	1400
Silver	(US\$/oz)	7.30	11.59	13.38	14.99	14.67	20.16	35.12	31.12	23.85	22.00	23.50	23.50	23.50	23.50	23.50
Platinum	(US\$/oz)	902	1142	1332	1581	1204	1610	1721	1551	1487	1450	1700	1700	1700	1700	1700
Palladium	(US\$/oz)	203.87	321.00	354.00	351.75	263.42	525.97	733.09	643.01	725.09	800.00	850.00	800.00	800.00	800.00	800.00

Bulk Commodities		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014E	2015E	2016E	2017E	2018E	Long-term*
Coal (Coking)	(US\$/t)	108.13	117.50	102.25	249.50	171.75	190.75	288.75	210.00	158.50	129.50	140.00	150.00	160.00	160.00	160.00
Coal (Semi Soft Coking)	(US\$/t)	74.75	64.75	62.50	196.00	118.50	140.00	207.75	147.50	112.25	95.13	100.00	105.00	110.00	110.00	110.00
Coal (PCI)	(US\$/t)			67.13	200.63	128.75	147.25	223.25	152.75	125.38	105.75	110.00	115.00	120.00	120.00	120.00
Coal (Steaming)	(US\$/t)	48.38	52.00	55.38	107.88	84.13	91.25	121.89	118.71	100.00	85.10	84.20	88.75	90.00	90.00	90.00
Iron Ore (Fines CY - 62.0% Fe CFR China)	(US\$/dmt)						141.00	168.75	128.75	135.50	111.50	105.00	100.00	100.00	90.00	80.00

TABLE CONTINUED ON NEXT PAGE

Input Assumptions & Forecast Prices

Other Prices		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014E	2015E	2016E	2017E	2018E	Long-term*
Ferrochrome	(US\$/lb)					0.82	1.27	1.23	1.11	1.01	1.05	1.00	0.95	0.95	0.95	0.94
MAGNESIUM	(US\$/lb)					2.68	2.57	2.40	2.20	1.08	1.08	1.08	1.08	1.08	1.08	1.08
Rutile	(US\$/t)	430.00	485.00	490.00	480.00	560.00	552.50	1050.00	2267.50	1125.00	931.25	1087.50	1250.00	1300.00	1250.00	1250.00
Synthetic Rutile	(US\$/t)	362.50	415.00	420.00	405.00	470.00	457.50	900.00	1712.50	1025.00	833.22	973.03	1118.42	1163.16	1118.42	1000.00
Ilmenite	(US\$/t)	0.00	0.00	0.00	0.00	0.00	91.62	167.50	315.00	216.25	190.00	226.25	245.00	247.50	250.00	250.00
Zircon	(US\$/t)	370.00	740.00	780.00	740.00	862.50	912.50	1875.00	2267.50	1118.75	1075.00	1200.00	1300.00	1400.00	1400.00	1400.00
Oil WTI	(US\$/bbl)	56.44	66.04	72.35	101.44	61.70	79.49	95.07	94.16	97.95	96.00	92.00	92.50	95.00	95.00	95.00
Nymex	(US\$/MMbtu)	8.89	6.74	6.96	8.87	3.94	4.38	4.00	2.75	3.73	4.54	4.50	5.00	5.00	5.00	5.00

TC/RCs		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014E	2015E	2016E	2017E	2018E	Long-term*
Copper																
Actual Contract TCs	US\$/t conc	99.25	77.50	53.50	43.50	62.50	42.75	73.00	63.50	71.50	92.00	100.00	90.00	75.00	75.00	74.35
Actual Contract RCs	US\$/lb Cu	0.10	0.08	0.05	0.04	0.06	0.04	0.07	0.06	0.07	0.09	0.10	0.09	0.08	0.08	0.07
Combined TC / RCs/Plus PP		0.33	0.20	0.14	0.11	0.16	0.11	0.19	0.16	0.18	0.24	0.26	0.23	0.19	0.19	0.19
Zinc																
Actual Contract TCs (exc PP)	US\$/t conc	126.00	128.00	300.00	300.00	195.00	275.00	229.00	191.00	210.50	223.00	210.00	190.00	180.00	150.00	197.43
Base Price	US\$/tonne	1000	1400	3500	2000	1250	2500	2500	2000	2000	2000	2250	2500	2500	2500	2000
Escalator	US\$/t per US\$/t Chg In Price	0.15	0.14	0.10	0.14	0.14	0.08	0.08	0.08	0.08	0.08	0.08	0.14	0.14	0.14	0.14
De-escalator	US\$/t per US\$/t Chg In Price	0.15	0.12	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.12	0.12	0.12	0.12
Lead	T.C. US\$/tonne Concentrate	115.00	115.00	115.00	115.00	115.00	115.00	115.00	115.00	115.00	115.00	115.00	115.00	115.00	115.00	115.00
Gold	R.C. US\$/oz	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Silver	R.C. US\$/oz	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30

Forward Curves		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014E	2015E	2016E	2017E	2018E	Long-term*
Aluminium	(US\$/lb)									0.84	0.85	0.94	0.96	0.99	1.01	1.10
Copper	(US\$/lb)									3.32	3.14	3.12	3.11	3.10	3.07	2.75
Lead	(US\$/lb)									0.97	0.98	1.02	1.02	1.03	1.03	0.55
Nickel	(US\$/lb)									6.81	7.98	8.46	8.42	8.34	8.29	9.50
Zinc	(US\$/lb)									0.87	0.98	1.04	1.04	1.03	1.03	1.00
Alumina (Contract)	(US\$/t)									304.69	329.01	346.24	328.66	315.38	317.70	339.51
Gold	(US\$/oz)									1412.25	1301.13	1317.42	1325.70	1350.75	1381.90	1400.00
Silver	(US\$/oz)									23.85	20.06	20.03	20.29	20.85	21.35	23.50
Oil WTI	(US\$/bbl)									97.95	99.37	94.10	91.13	89.62	89.02	95.00
Coal (Coking)	(US\$/t)									158.50	120.29	121.50	127.56	132.33	136.68	160.00
Coal (Semi Soft Coking)	(US\$/t)									112.25	79.22	80.01	84.01	87.15	90.01	110.00
Coal (PCI)	(US\$/t)									125.38	96.82	97.79	102.67	106.51	110.01	120.00
Coal (Steaming)	(US\$/t)									100.00	73.40	74.14	77.84	80.75	83.40	90.00
Iron Ore (Fines CY - 62.0% Fe CFR China)	(US\$/dmt)									130.35	102.58	92.72	93.89	96.00	97.22	80.00

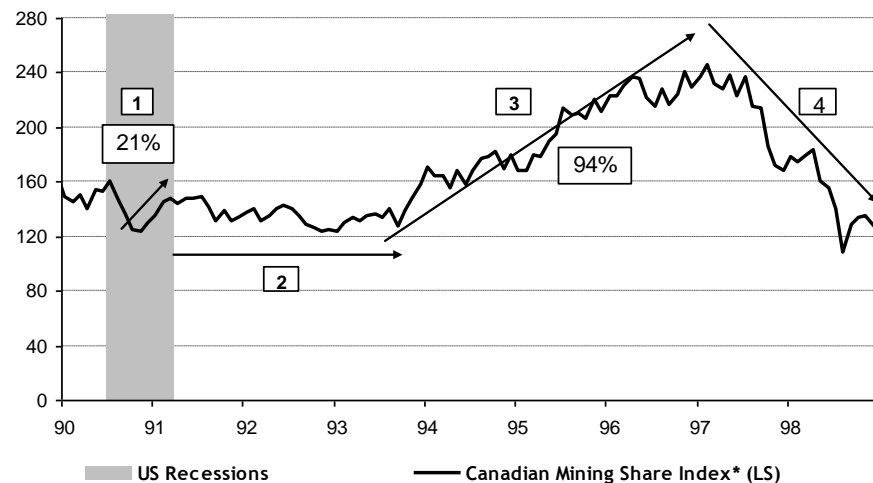
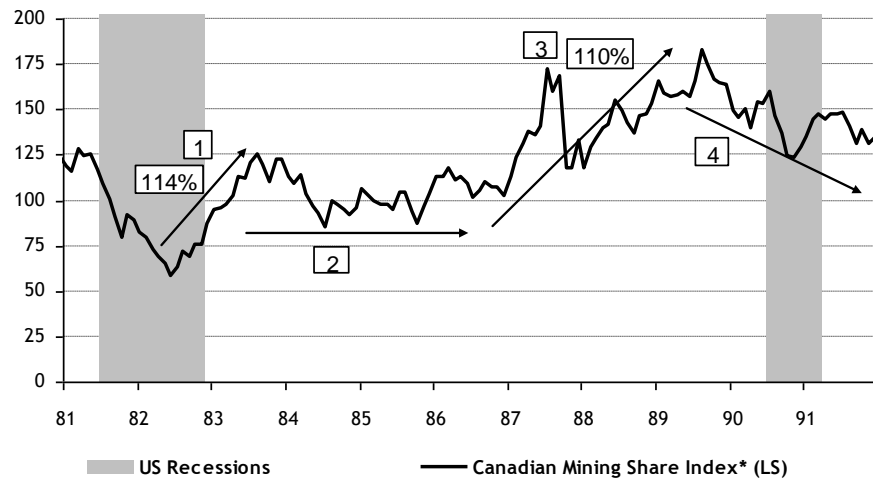
*Long-term values are real (not nominal) in 2014\$
Source: RBC Capital Markets estimates, Platt's Metal

Mining Share Analysis



RBC Capital Markets

The Mining Share Cycle



We think of the mining share cycle in four phases:

1. Early Cycle Move:

Begins during the recession in response to stimulative economic policy and a bottoming and/or upturn in leading economic indicators. Occurs despite large excess inventories and low capacity utilization rates.

2. Consolidation Phase:

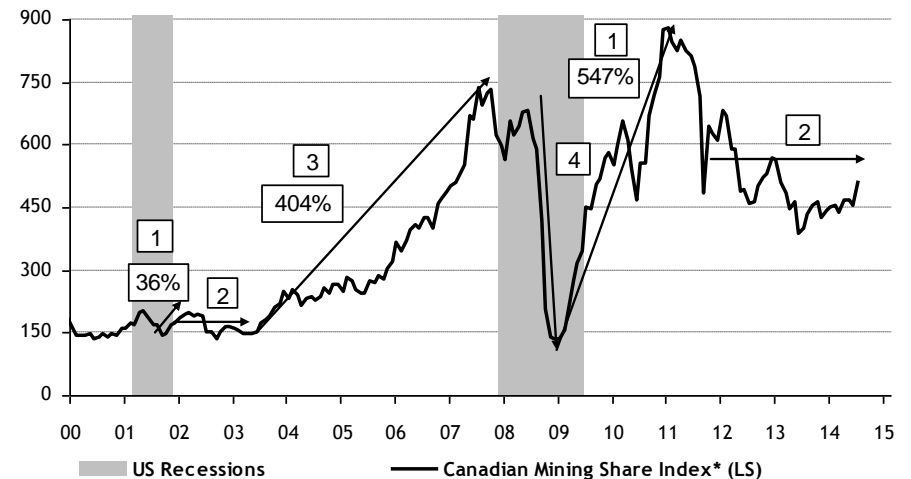
Upside potential is capped by excess inventories and capacity, and commodity and share prices give back some or all of their gains. Continued demand growth draws inventories down toward critical levels, and idled capacity is restarted, pushing capacity utilization rates up to full effective levels.

3. Earnings Driven Phase:

Begins when excess inventories have been eliminated and capacity utilization has reached full effective levels, creating shortages of the commodities as demand continues to grow. Mining shares are driven to their cycle highs as commodity prices and earnings increase dramatically.

4. Contraction:

Begins as slowing economic and demand growth combines with rising production to result in growing surpluses and rising inventories.

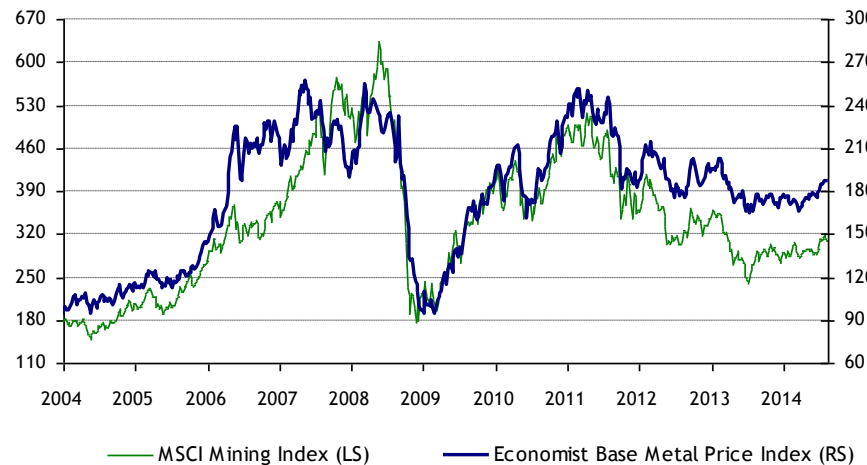


* Market cap-weighted average of aluminum and diversified mining & metals, calculated by RBC Capital Markets Quantitative Research

Source: Bloomberg, RBC Capital Markets

Commodity and Share Price Performance

MSCI Mining Index vs. Metal Prices



- Mining shares significantly underperformed the overall equity market from early 2011 through 2013. The low in mid-2013 corresponded to trough of cycle valuations. We believe the shares have bottomed, though we see only modest upside potential over the next 12 months.
- Strong performance of the base metals supported a rally in mining share prices and outperformance versus the overall equity market in July.

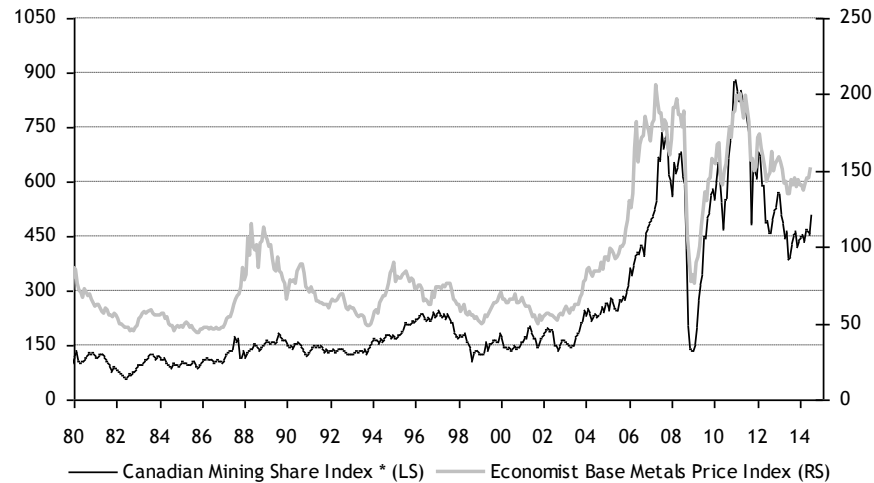
MSCI Mining Index Relative to MSCI World Index



Source: MSCI, The Economist

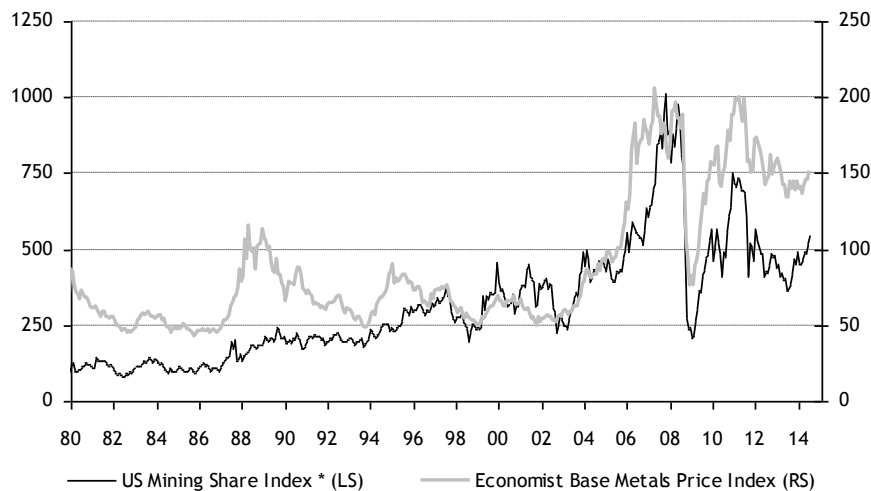
Commodity and Share Price Performance

Canadian Mining Share Index vs. Metal Prices



- Mining share price performance is typically dependent on spot commodity prices.

U.S. Mining Share Index vs. Metal Prices

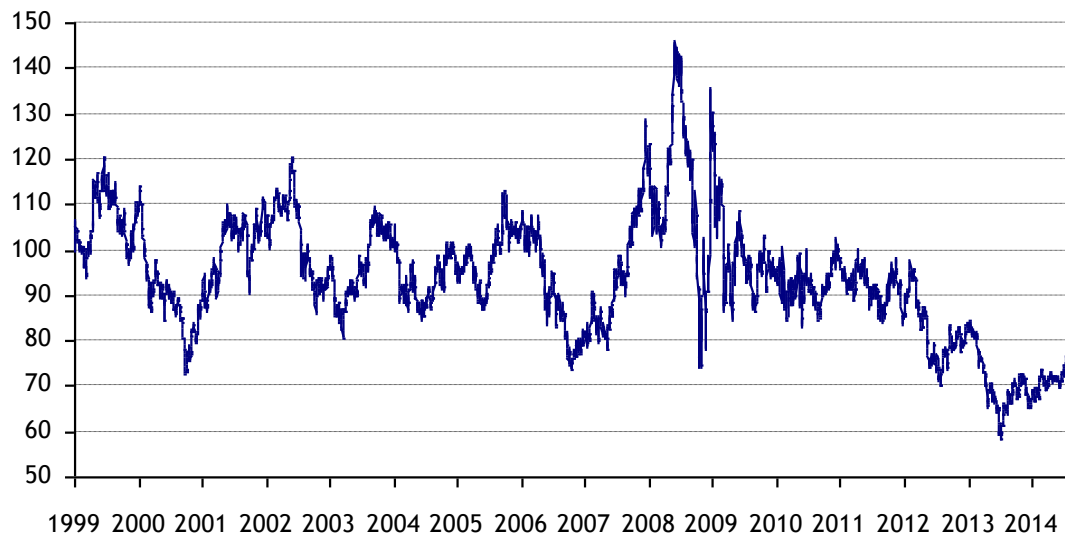


* Market cap-weighted average of aluminum and diversified mining & metals, calculated by RBC Capital Markets Quantitative Research

Source: RBC Capital Markets, The Economist,

Commodity and Share Price Performance

Mining Shares Relative to Metal Prices



— MSCI Mining Index Rel. to RBC Base Metal Index

- Mining shares remain near recent lows in their historical trading range relative to metal prices despite the rally in July.

Source: MSCI, RBC Capital Markets

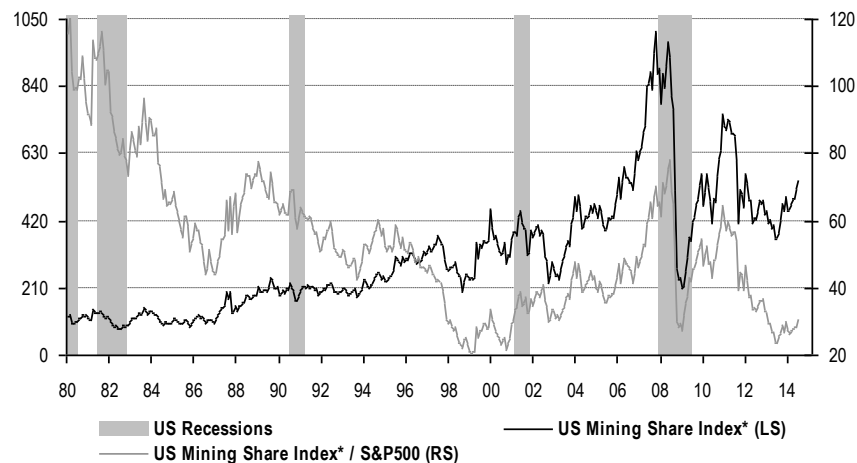
Relative Share Price Performance

Canadian Mining Share Index Relative to TSX



- After years of underperformance, mining shares outperformed the overall equity market from 2000 to mid-2007. Mining shares also outperformed the overall equity market from the bottom of the 2008/2009 recession to early 2011.
- The shares have struggled since the beginning of 2011, correcting sharply from their peak.
- We expect the shares to settle into a broad sideways trading pattern analogous to the phase 2 consolidation phase of our mining share cycle model.

U.S. Mining Share Index Relative to S&P 500

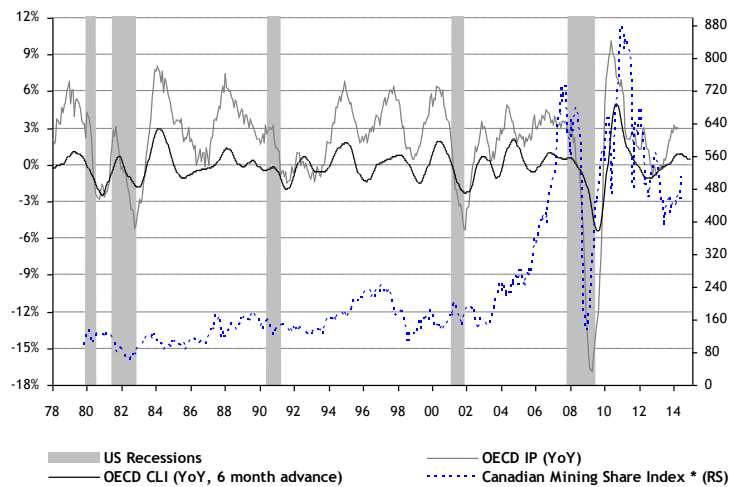


* Market cap-weighted average of aluminum and diversified mining & metals, calculated by RBC Capital Markets Quantitative Research

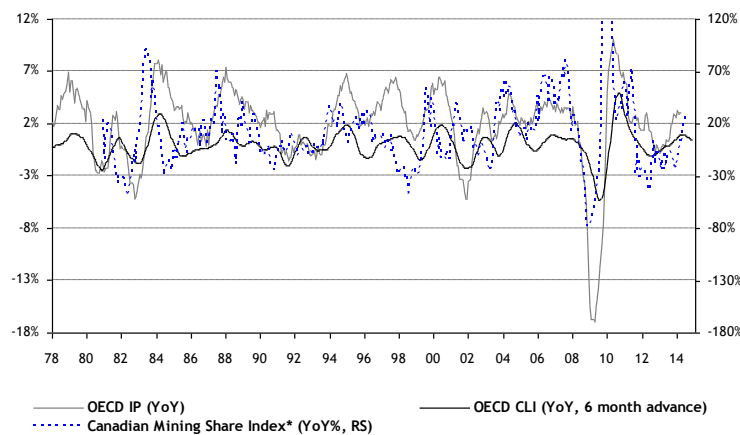
Source: Bloomberg, RBC Capital Markets

Mining Shares and Economic Activity

Canadian Mining Share Index, Industrial Production, and Composite Leading Indicator



Canadian Mining Share Index (YoY), Industrial Production (YoY), and Composite Leading Indicator (YoY)



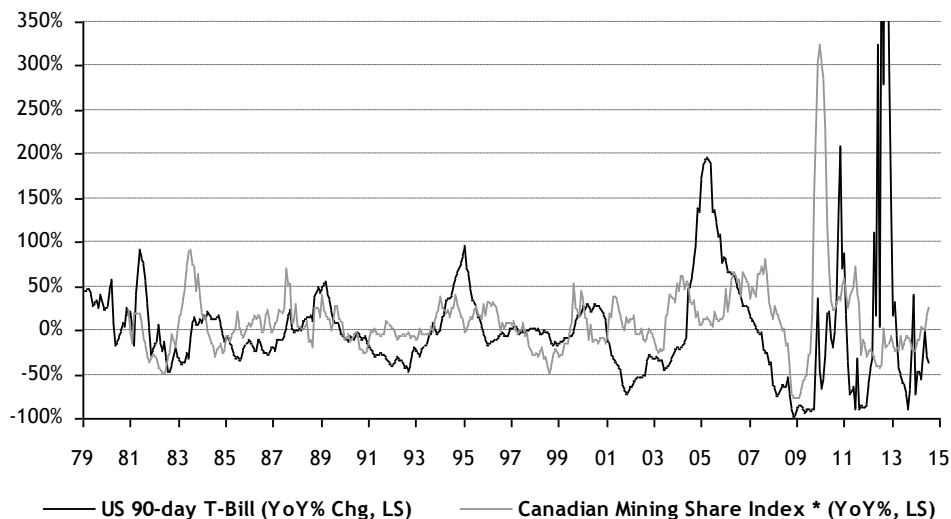
- Global economic leading indicators have performed poorly, pointing to a risk to demand over the next 6 to 12 months.
- The OECD Composite Leading Indicator peaked in October 2013 on a year-over-year rate of change basis and continues to decline, pointing to a risk to economic growth over the next 6 to 12 months. Some of the weakness is likely attributable to the harsh North American winter and should be reversed.
- Global manufacturing PMIs strengthened in July (see page 24 for details).

* Market cap-weighted average of aluminum and diversified mining & metals, calculated by RBC Capital Markets Quantitative Research

Source: Bloomberg, OECD, RBC Capital Markets

Mining Shares and Interest Rates

U.S. 90-Day T-Bill Rate (YoY) vs. Mining Share Prices (YoY)



Correlations Between Canadian Mining Shares & US Interest Rates

Correlation Between		Period			
		1980 - 1989	1990 - 1999	2000 - 2009	2010 - Present
Canadian Mining Share Index	& US 10-Yr Bond Yield	-0.081	0.398	0.582	0.183
Canadian Mining Share Index	& US 90-Day T-Bill Yield	0.111	0.363	0.199	-0.167
Economist Base Metals Price Index	& US 10-Yr Bond Yield	0.244	0.635	0.702	0.153
Economist Base Metals Price Index	& US 90-Day T-Bill Yield	0.172	0.749	0.527	-0.139

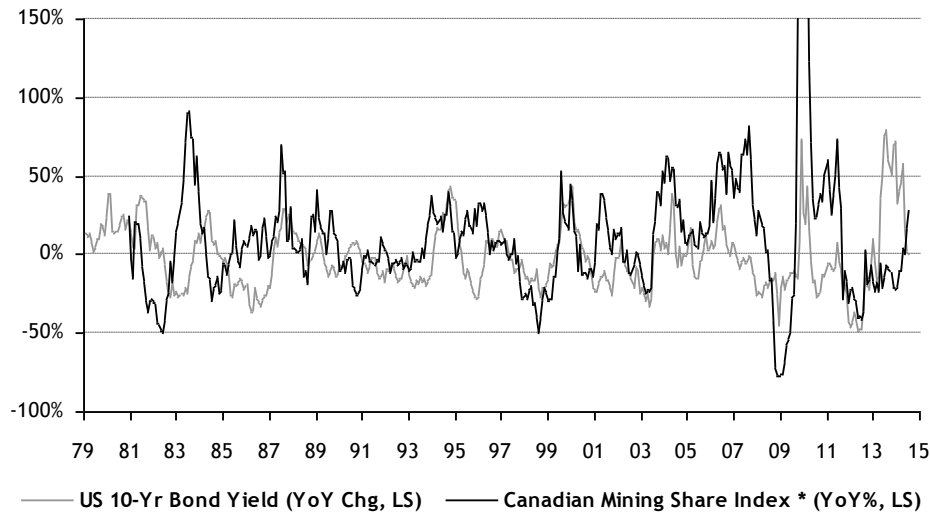
- Mining share prices are positively correlated with interest rates. The correlation is stronger with the long end of the yield curve than with the short end. Within individual economic and mining share price cycles, defined from recession to recession, the correlations tend to be higher in the latter part of the cycle when rising commodity prices are typically a major contributor to rising inflation.
- The correlation of the share prices with both the short and long end of the curve has broken down significantly since 2010 and has even been negative for the short end as long-term interest rates fell below 1.5% before recovering and short-term interest rates neared zero.

* Market cap-weighted average of aluminum and diversified mining & metals, calculated by RBC Capital Markets Quantitative Research

Source: Bloomberg, The Economist, RBC Capital Markets

Mining Shares and Interest Rates

U.S. 10-Year Bond (YoY) vs. Mining Share Prices (YoY)



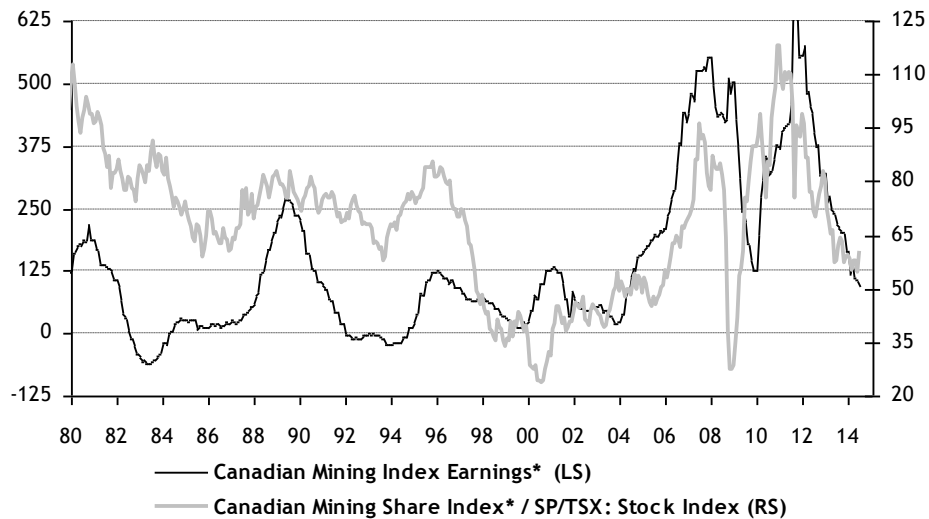
- On balance, we expect non-precious metals mining share prices to rise in a rising interest rate environment. However, we would only expect significant absolute and relative outperformance to occur in the latter half of the mining share cycle when commodity markets are tight and rising commodity prices are a meaningful contributor to rising inflation.

* Market cap-weighted average of aluminum and diversified mining & metals, calculated by RBC Capital Markets Quantitative Research

Source: Bloomberg, RBC Capital Markets

Mining Shares and Earnings

Canadian Mining Share Earnings and Index vs. TSX



- Mining shares tend to underperform the overall equity market when earnings are falling and outperform when earnings are rising.
- A bottoming in earnings would be positive for mining share price performance over the next 12–24 months.

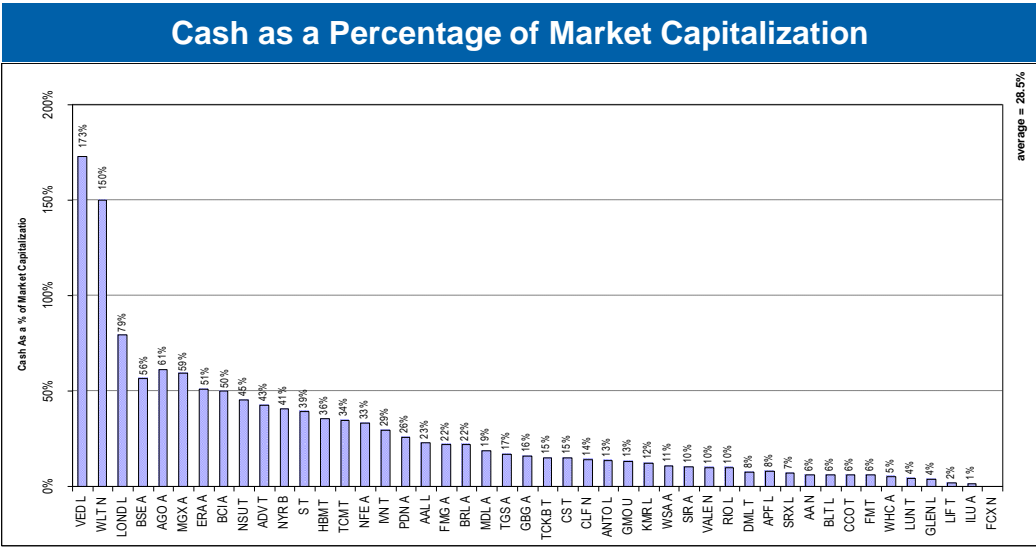
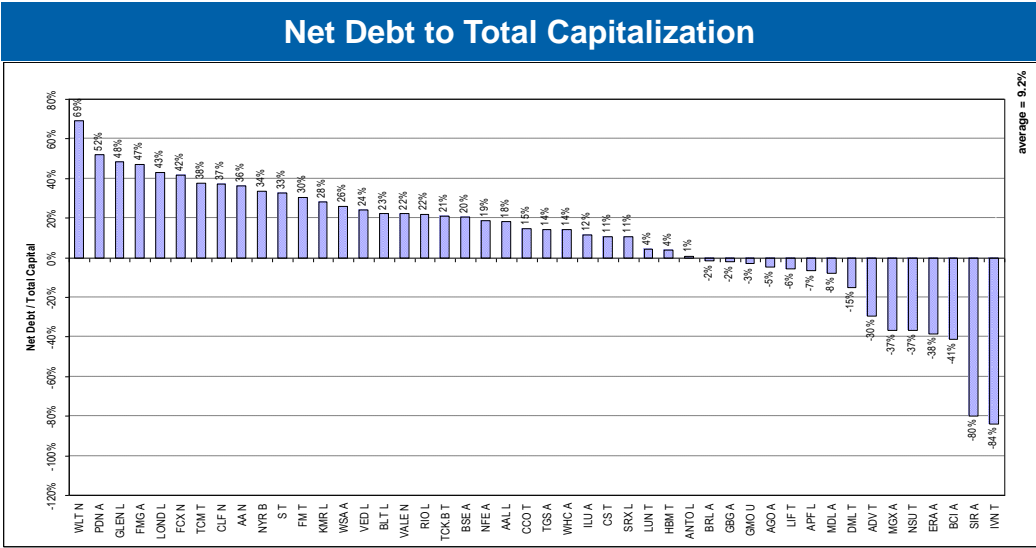
U.S. Mining Share Earnings and Index vs. S&P 500



* Market cap-weighted average of aluminum and diversified mining & metals, calculated by RBC Capital Markets Quantitative Research

Source: Bloomberg, RBC Capital Markets

Balance Sheets

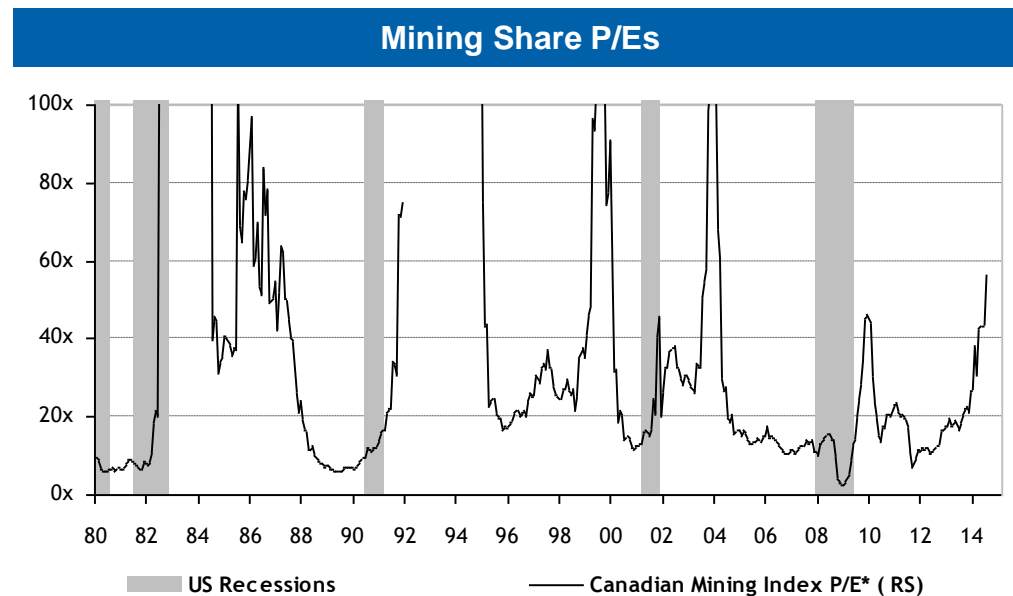


- In general, the mid- to large-cap companies in the industry remain in a strong financial position with low debt levels and large cash balances. However, the drop in commodity prices has significantly reduced free cash flows and resulted in the companies adopting a conservative approach, adjusting project development and spending plans, selling assets, closing high-cost operations, and reducing costs to reflect market realities and to conserve cash.
- At the same time, junior companies have found it very difficult to raise capital and are starved for cash as a result.

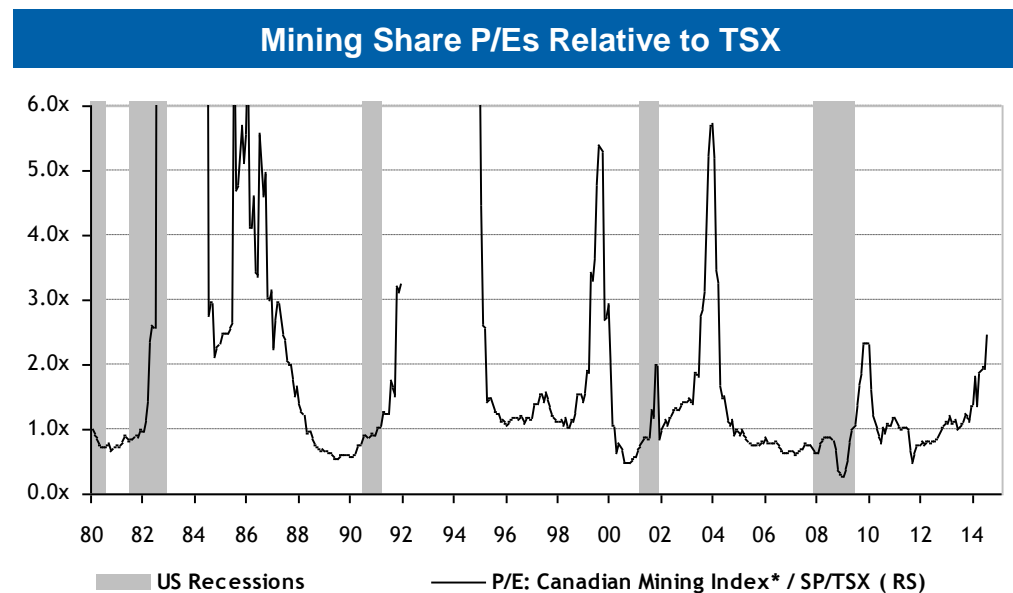
Note: Actual balance sheet figures based on most recent reported quarter.

Source: Company reports

Valuation



- Mining share P/E multiples have expanded towards trough of cycle levels – peak multiples of trough earnings.

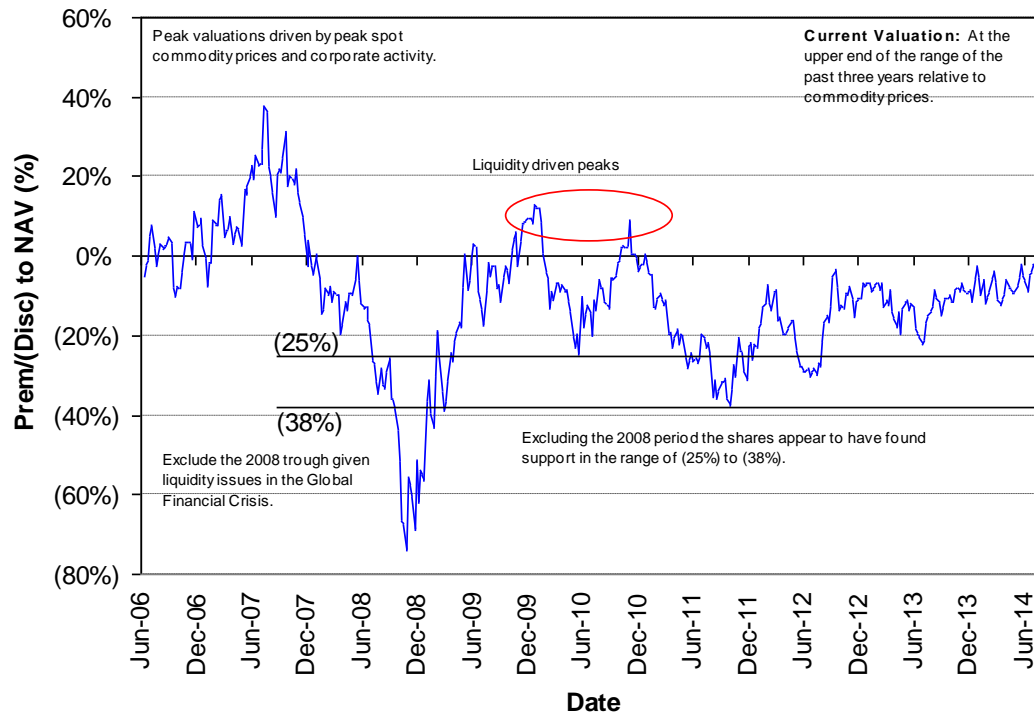


* Market cap-weighted average of aluminum and diversified mining & metals, calculated by RBC Capital Markets Quantitative Research

Source: Bloomberg, RBC Capital Markets

Valuation

Mining Shares – Premium/(Discount) to Forward NAV

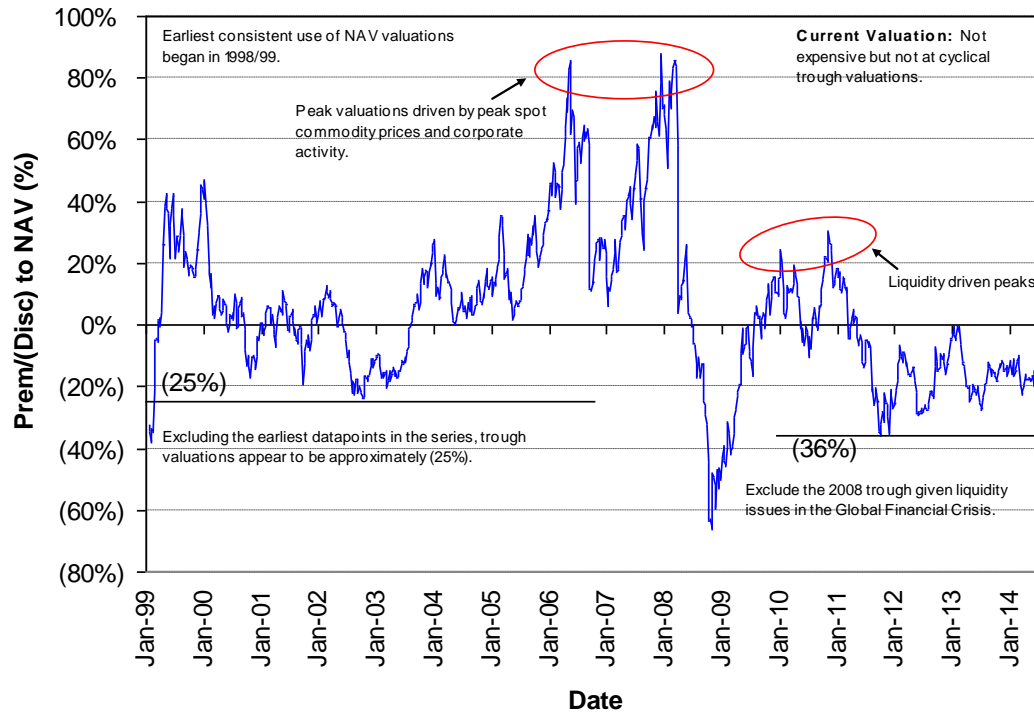


- Non-precious metal mining shares are currently trading at a 1.9% discount to NAV at forward curve prices, versus a 2.2% discount in July 2014.

Source: Bloomberg, RBC Capital Markets

Valuation

Mining Shares – Premium/(Discount) to NAV

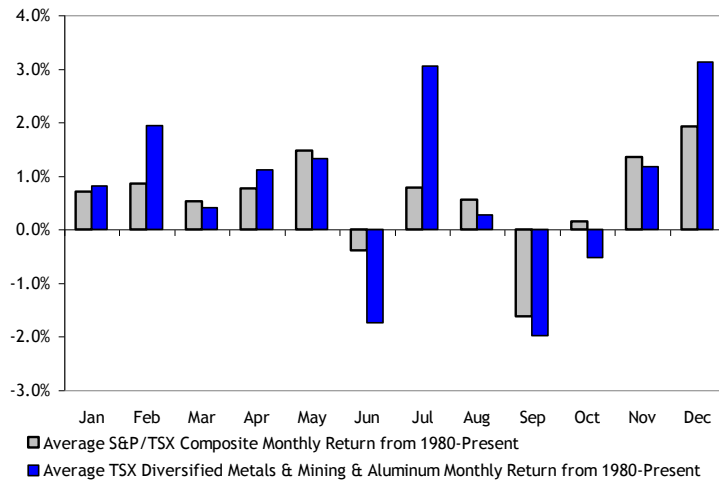


- Non-precious metal mining shares are currently trading at a 9.4% discount to NAV at our forecast prices, versus an 8.9% discount in July 2014.

Source: Bloomberg, RBC Capital Markets

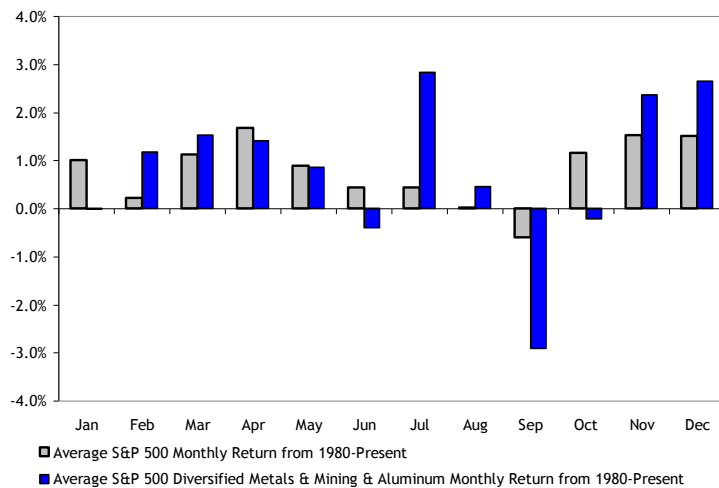
Seasonality

**Canadian Mining Shares
Average Monthly Returns (1980–Present)**

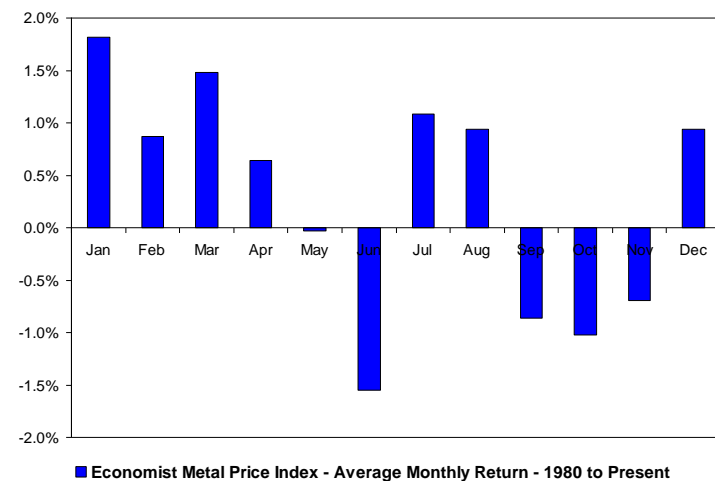


- We are approaching the seasonally weakest period of the year, the autumn.

**U.S. Mining Shares
Average Monthly Returns (1980–Present)**



**Metal Prices
Average Monthly Returns (1980–Present)**



Source: Bloomberg

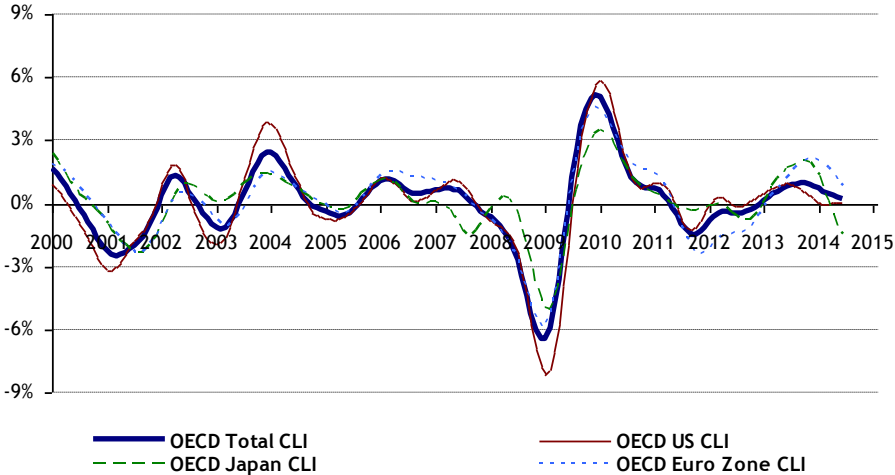
Commodity Analysis



RBC Capital Markets

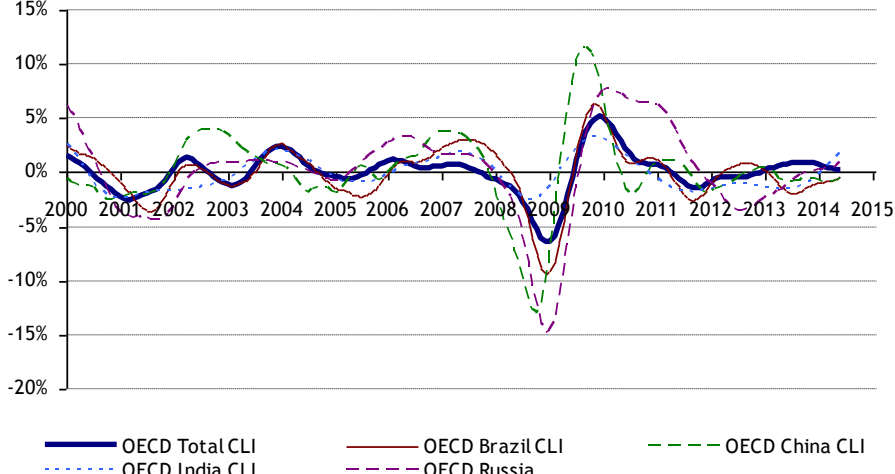
Economic Activity

OECD Composite Leading Indicators – Six-Month Rate of Change



- Performance of the OECD Composite Leading Indicators for the developed economies are showing little if any improvement.
- The Composite Leading Indicators for the developing economies are showing some quite promising improvement.

OECD Composite Leading Indicators – Six-Month Rate of Change



Source: OECD



Economic Activity

Global Purchasing Manager's Indices

Global Manufacturing PMIs					
	Jul-14	Jun-14	Apr-14	Jan-14	Jul-13
Global	52.5	52.6	51.9	53.0	50.6
US	57.1	55.3	54.9	51.3	54.9
Canada	54.3	53.5	52.9	51.7	52.0
Euro Area	51.8	51.8	53.4	54.0	50.3
Austria	50.9	50.4	51.4	54.1	49.1
France	47.8	48.2	51.2	49.3	49.7
Germany	52.4	52.0	54.1	56.5	50.7
Greece	48.7	49.4	51.2	51.2	47.0
Ireland	55.4	55.3	56.1	52.8	51.0
Italy	51.9	52.6	54.0	53.1	50.4
Netherlands	53.5	52.3	53.4	54.8	50.8
Spain	53.9	54.6	52.7	52.2	49.8
Denmark	50.7	51.6	59.4	56.8	59.8
Hungary	56.7	51.7	54.7	57.9	48.9
Norway	50.6	49.6	51.1	52.7	49.4
Switzerland	54.3	54.0	55.8	56.1	55.9
UK	55.4	57.2	57.2	56.5	55.0
Australia	50.7	48.9	44.8	46.7	42.0
New Zealand	53.0	53.5	54.3	56.3	59.0
Japan	50.5	51.5	49.4	56.6	50.7
Singapore	51.5	50.5	51.1	50.5	51.8
Israel	46.8	48.9	51.4	50.2	48.1
Emerging Markets	51.5	50.8	49.8	50.9	48.7
Brazil	49.2	48.7	49.3	50.8	48.5
Mexico	51.5	51.8	51.8	54.0	49.7
Czech	56.5	54.7	56.5	55.9	52.0
Poland	49.4	50.3	52.0	55.4	51.1
Russia	51.0	49.1	48.5	48.0	49.2
Turkey	48.5	48.8	51.1	52.7	49.8
China	51.7	50.7	48.1	49.5	47.7
Hong Kong*	50.4	50.1	49.7	52.7	49.7
India	53.0	51.5	51.3	51.4	50.1
Indonesia	52.7	52.7	51.1	51.0	50.7
Korea	49.3	48.4	50.2	50.9	47.2
Taiwan	55.8	54.0	52.3	55.5	48.6
Vietnam	51.7	52.3	53.1	52.1	48.5
Egypt	49.0	51.5	49.5	48.7	41.7
Saudi Arabia*	60.1	59.2	58.5	59.7	56.6
South Africa	45.9	46.6	47.4	49.9	52.5
UAE*	58.0	58.2	58.3	57.1	54.5
Expanding	43%	43%	49%	59%	27%
Neutral	32%	30%	30%	24%	24%
Contracting	24%	27%	22%	16%	49%
MoM Increase	55%	45%	53%	63%	61%

⁽¹⁾ uses ISM US Mfg Index, instead of Markit; ⁽²⁾ total economy.

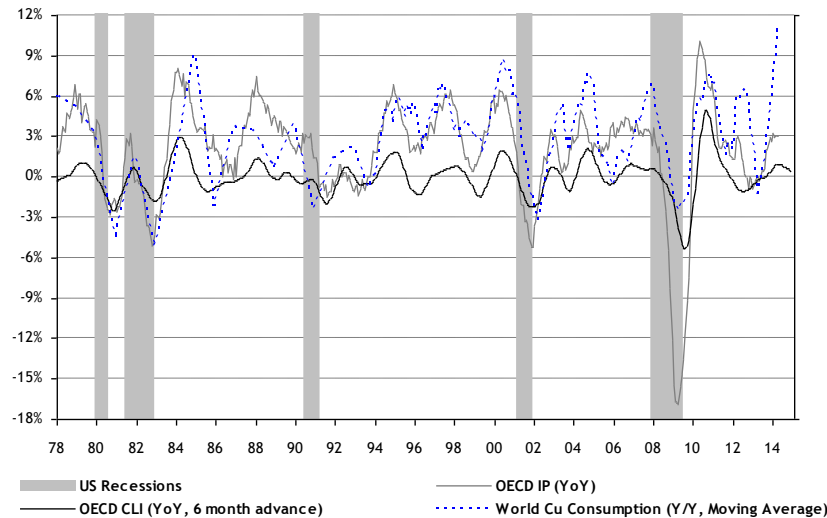
Note: Expanding ≥ 52; 52 > Neutral ≥ 50; Contracting < 50.

Source: RBC Capital Markets, Haver Analytics, Markit

- The overall performance of the Purchasing Manager's Indices from around the globe strengthened in July.
- 76% of the PMIs we track are above 50 up from 73% one month ago, and 24% are pointing to contraction down from 27% last month.
- 55% of the PMIs showed improvement in July versus 45% in June.
- The Chinese PMI improved in July and remains in neutral territory.

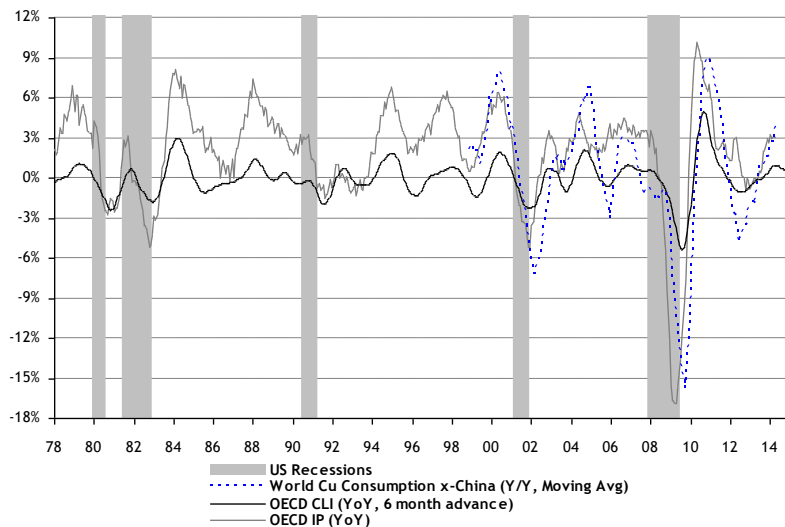
Metal Demand and Economic Activity

Leading Indicators, Industrial Production, and World Copper Consumption



- The OECD CLI peaked in October 2013 on a 12-month rate-of-change basis and continues to decline, pointing to risk to both economic growth and commodity demand over the next 6 to 12 months.

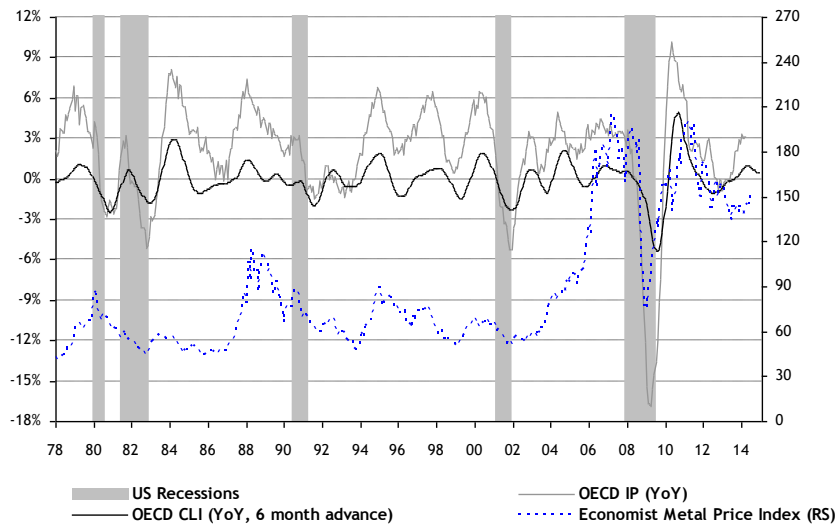
Composite Leading Indicators, Industrial Prod., & Cu Consumption Ex-China



Source: ICSG, OECD

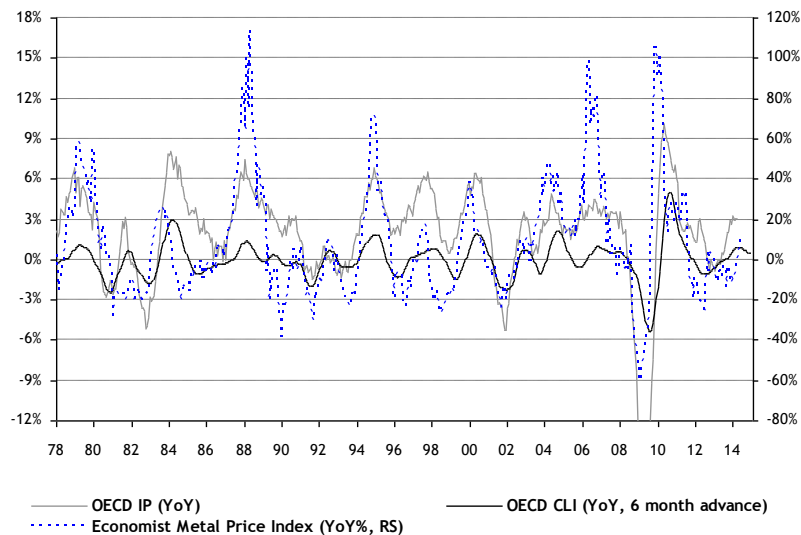
Metal Prices and Economic Activity

OECD Composite Leading Indicator and Industrial Production vs. Metal Prices



- The decline in the CLI points to a weak commodity price environment, though a significant portion of the decline may have been due to the harsh North American winter which should reverse in H2/14.

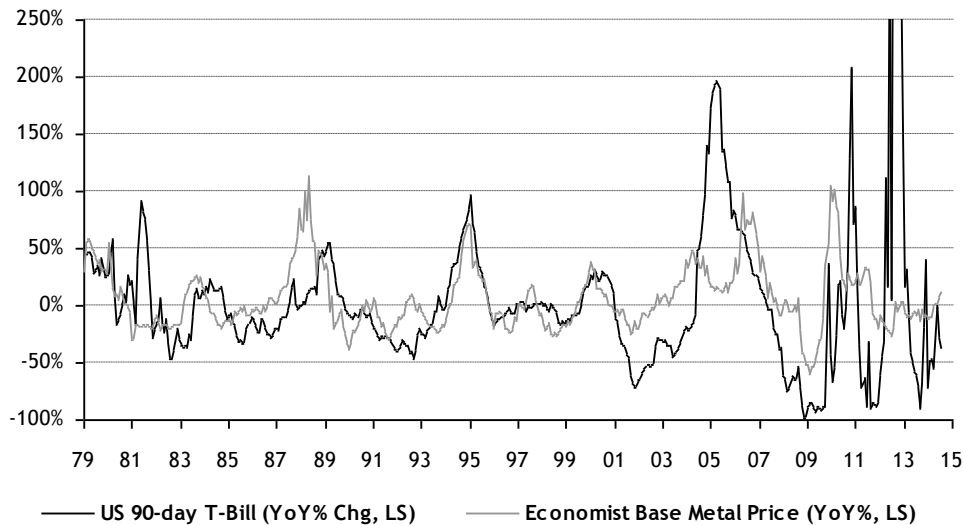
OECD Composite Leading Indicator and Industrial Production vs. Metal Prices



Source: Bloomberg, OECD, The Economist

Metal Prices and Interest Rates

U.S. 90-Day T-Bill Rate (YoY) vs. Metal Prices (YoY)



Correlations Between Base Metals Prices and US Interest Rates

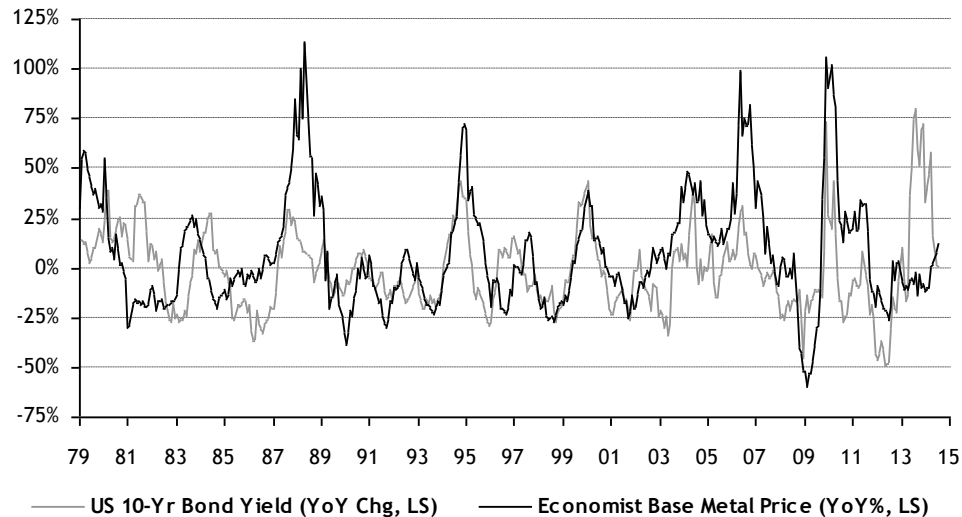
Correlation Between		Period			
		1980 - 1989	1990 - 1999	2000 - 2009	2010 - Present
Canadian Mining Share Index	& US 10-Yr Bond Yield	-0.081	0.398	0.582	0.183
Canadian Mining Share Index	& US 90-Day T-Bill Yield	0.111	0.363	0.199	-0.167
Economist Base Metals Price Index	& US 10-Yr Bond Yield	0.244	0.635	0.702	0.153
Economist Base Metals Price Index	& US 90-Day T-Bill Yield	0.172	0.749	0.527	-0.139

- Commodity prices are positively correlated with interest rates. The correlation is stronger with the long end of the yield curve than with the short end. Within individual economic and mining share price cycles, defined from recession to recession, the correlations tend to be higher in the latter part of the cycle when rising commodity prices are typically a major contributor to rising inflation.
- The correlation of the commodity prices with both the short and long end of the curve has broken down significantly since 2010 and has even been negative for the short end as long-term interest rates fell below 1.5% before recovering and short-term interest rates neared zero.

Source: Bloomberg, The Economist, RBC Capital Markets

Metal Prices and Interest Rates

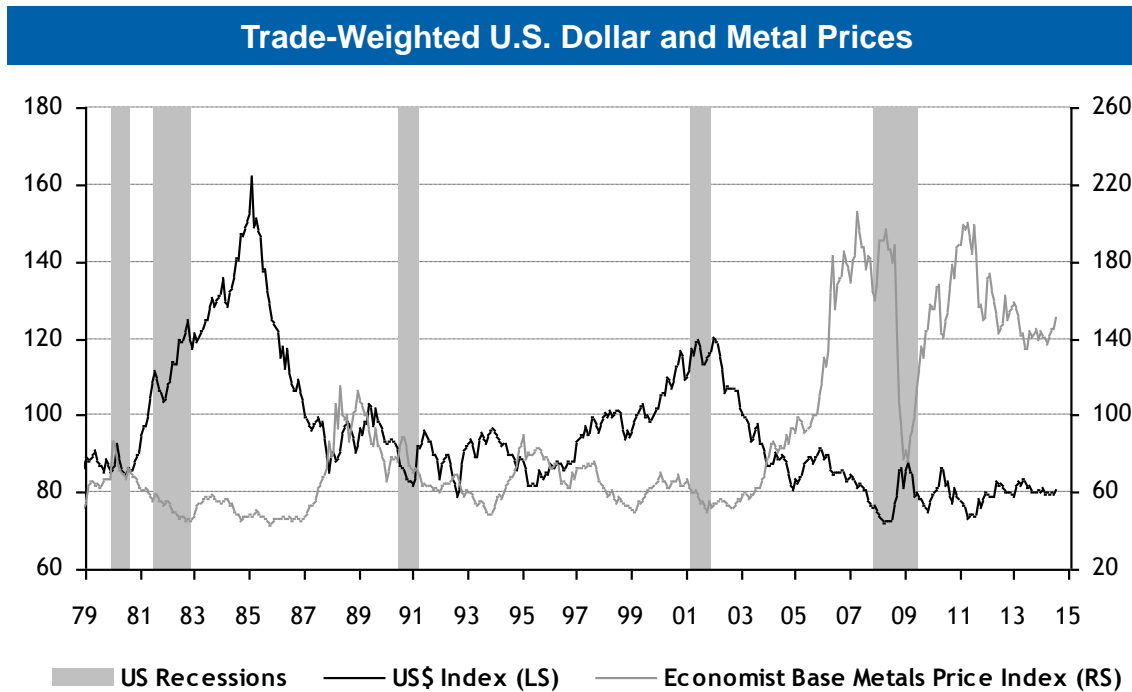
U.S. 10-Year Bond (YoY) vs. Metal Prices (YoY)



- On balance, we expect commodity prices to rise in a rising interest rate environment. However, we would only expect significant outperformance to occur in the latter half of the mining share cycle when commodity markets are tight and rising commodity prices are a meaningful contributor to rising inflation.

Source: Bloomberg, The Economist

Metal Prices and the U.S. Dollar

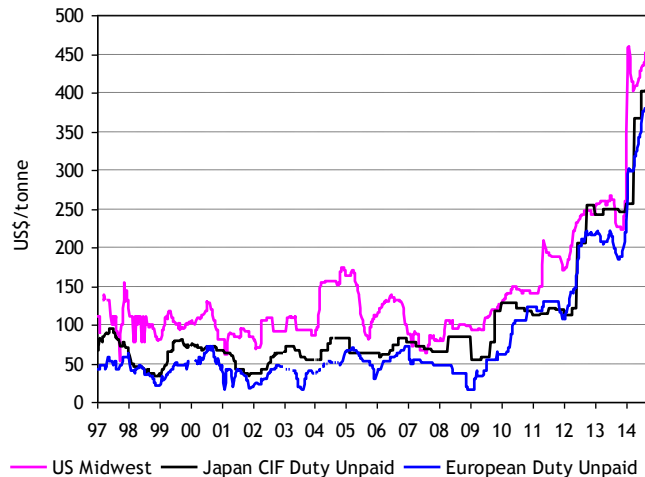


- The U.S. dollar is negatively correlated with commodity prices.

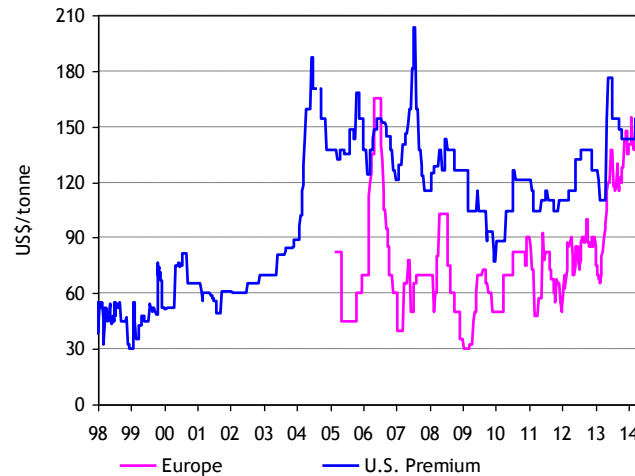
Source: Bloomberg, NBER

Physical Premia

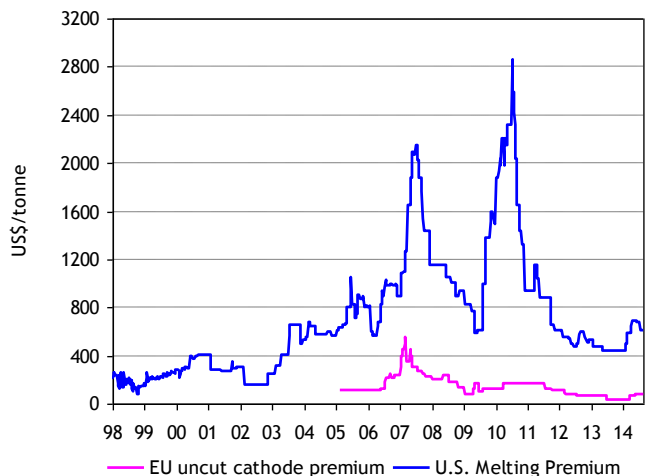
Aluminium Physical Premia



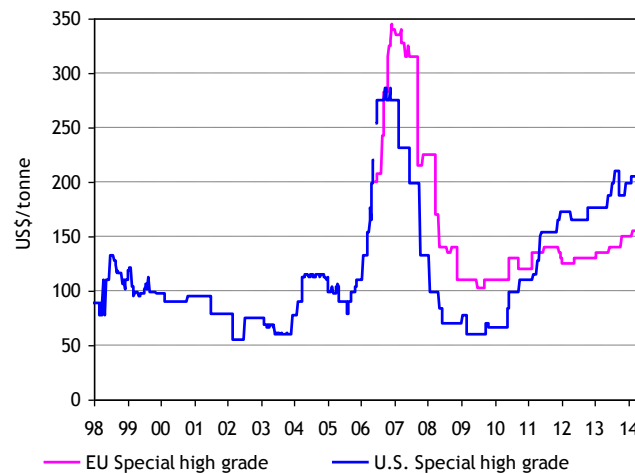
Copper Physical Premia



Nickel Physical Premia



Zinc Physical Premia

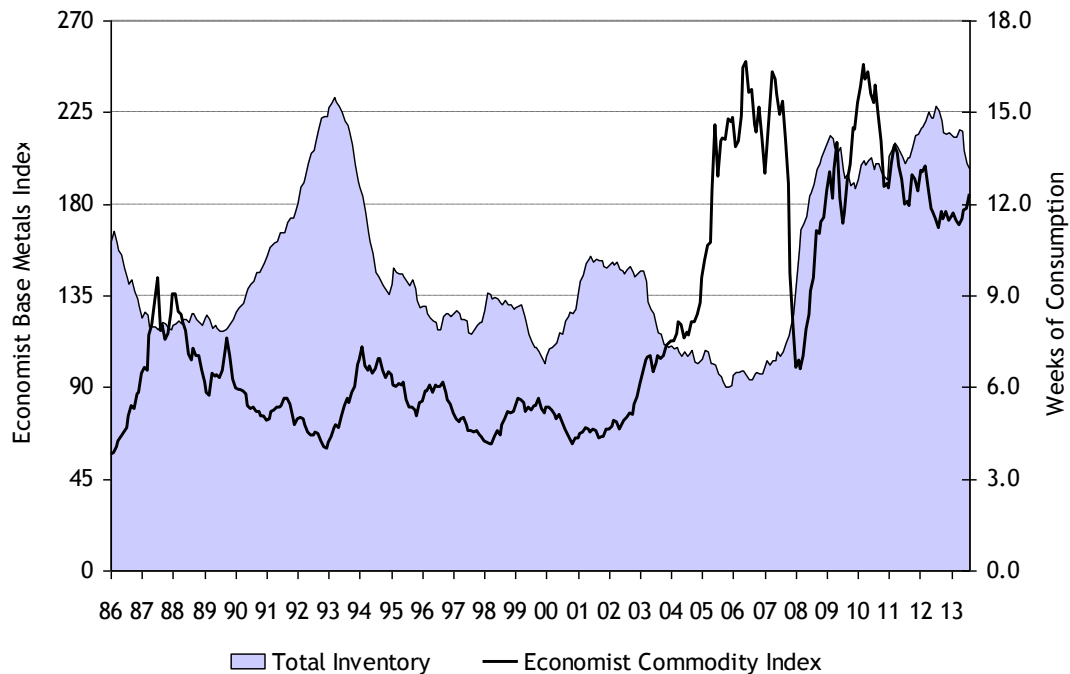


- Physical premia are the premia that consumers must pay over LME prices to receive physical delivery of metal at specified locations and are indicators of underlying regional demand.
- We believe that the significant increases in aluminium, copper, and zinc premiums over the past three years has more to do with a lack of liquidity in LME inventories due to financing deals and warehouse load-out rates than it does strengthening physical demand.
- The recent decline in nickel, zinc and in particular copper premiums points to somewhat softer market conditions in the near term.

Source: Bloomberg

Inventory and Price

Total Al, Cu, Ni, and Zn Inventories in Weeks of Consumption vs. Economist Base Metal Price Index

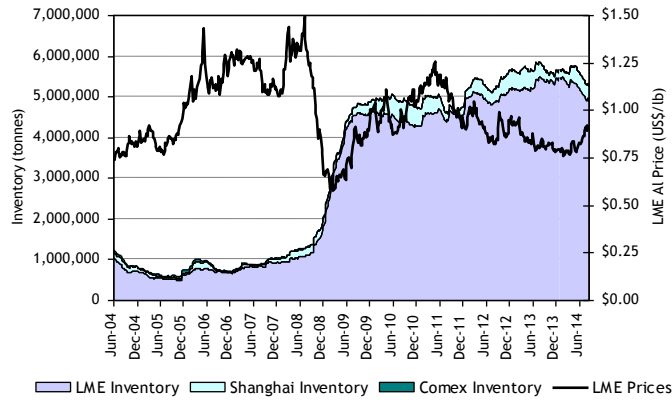


Source: Bloomberg, The Economist

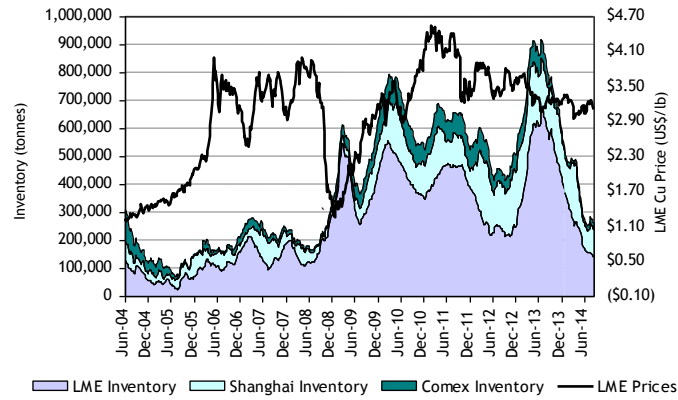
- While total inventories of aluminium, copper, nickel, and zinc remain at historically high levels, they have been declining.
- Total inventories decreased in July versus June levels.

Exchange Inventories

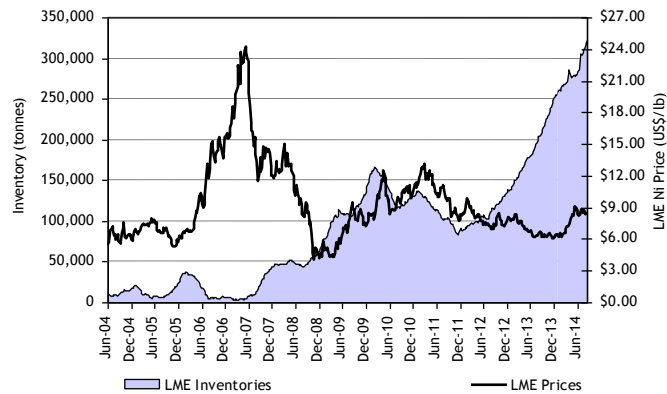
Al Weekly Inventory and LME Prices



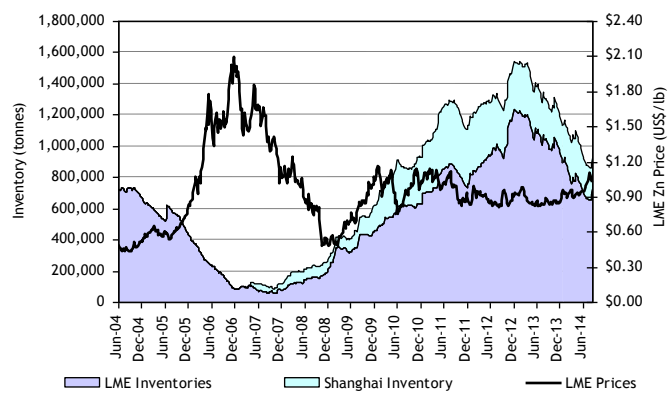
Copper Weekly Inventory and LME Prices



Nickel Weekly Inventory and LME Prices



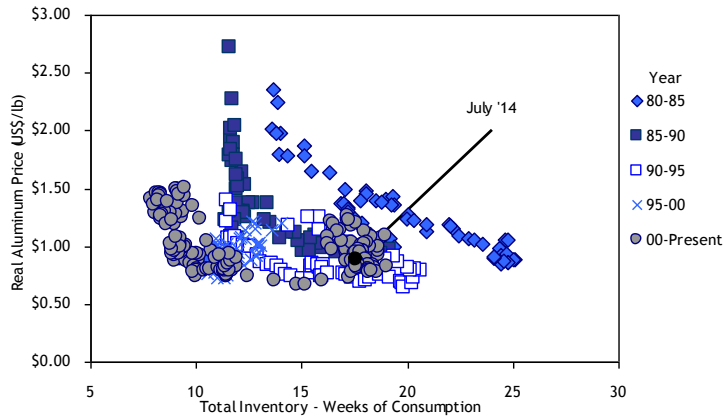
Zinc Weekly Inventory and LME Prices



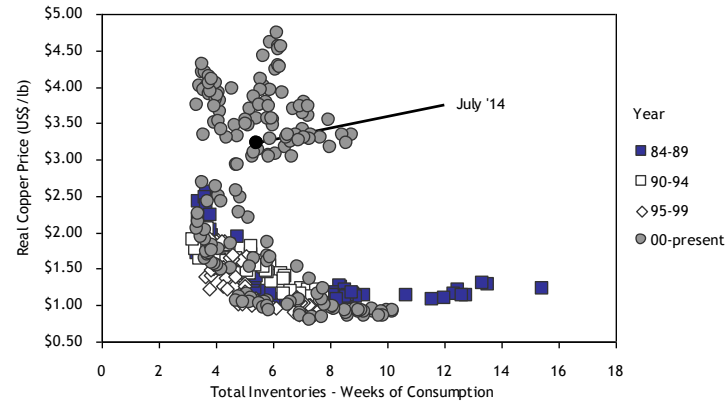
Source: Bloomberg, Brook Hunt

Total Inventories and Prices

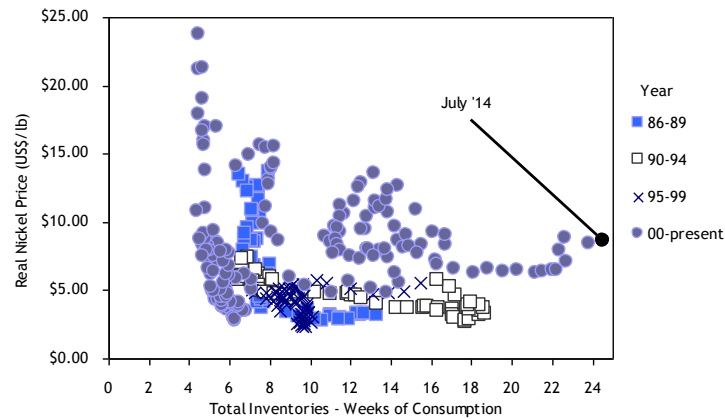
Total Aluminium Inventories vs. Real Price



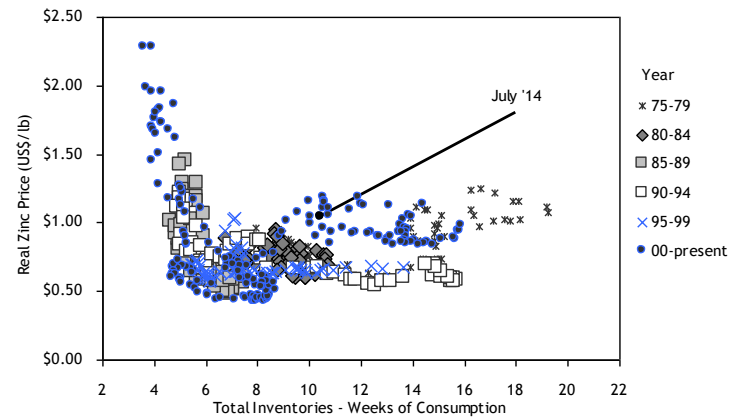
Total Copper Inventories vs. Real Price



Total Nickel Inventories vs. Real Price



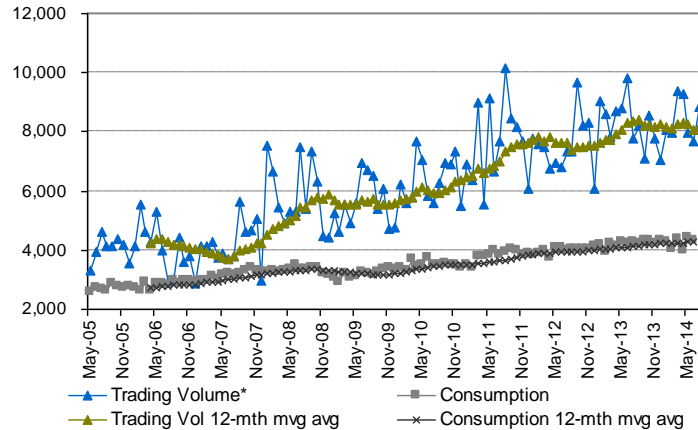
Total Zinc Inventories vs. Real Price



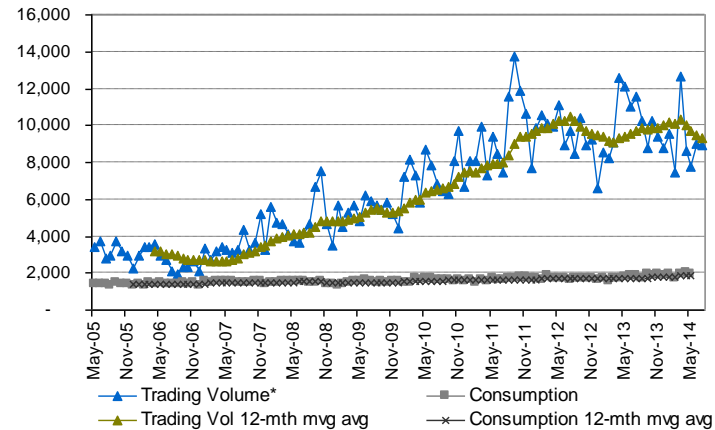
Source: Bloomberg, Brook Hunt

Investment Demand

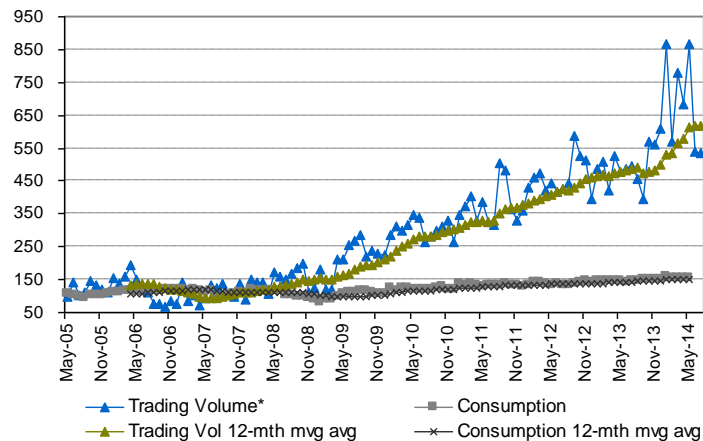
Aluminium Trading Volume vs. Global Aluminium Consumption



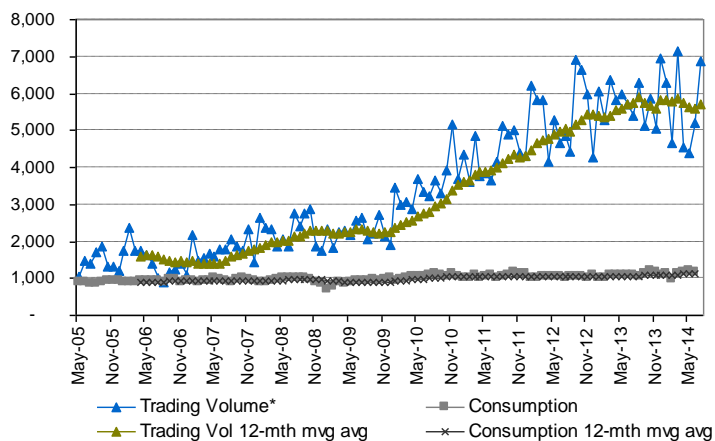
Copper Trading Volume vs. Global Copper Consumption



Nickel Trading Volume vs. Global Nickel Consumption



Zinc Trading Volume vs. Global Zinc Consumption



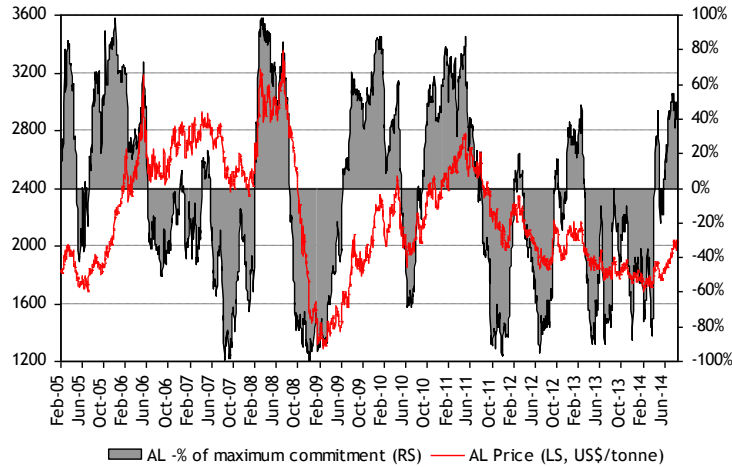
- The trading volumes of the metals have increased significantly over the past ten years and now substantially exceed underlying global demand, highlighting the importance of investment demand in the markets.

*Trading volume is based on the 3 month contract on the LME.

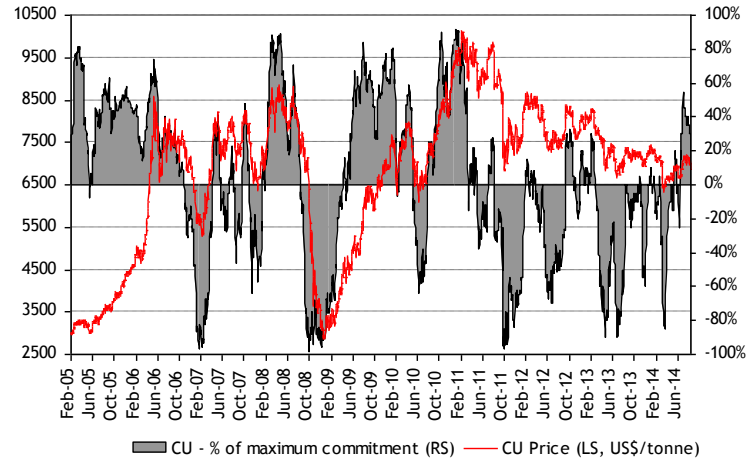
Source: Brook Hunt, Reuters

Investment Demand

LME Aluminium Price vs. RBCCM Systematic Commitment (Net Long/Short)

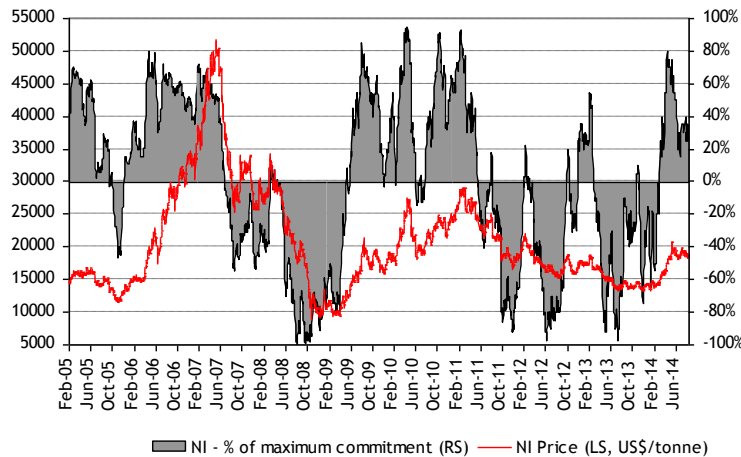


LME Copper Price vs. RBCCM Systematic Commitment (Net Long/Short)

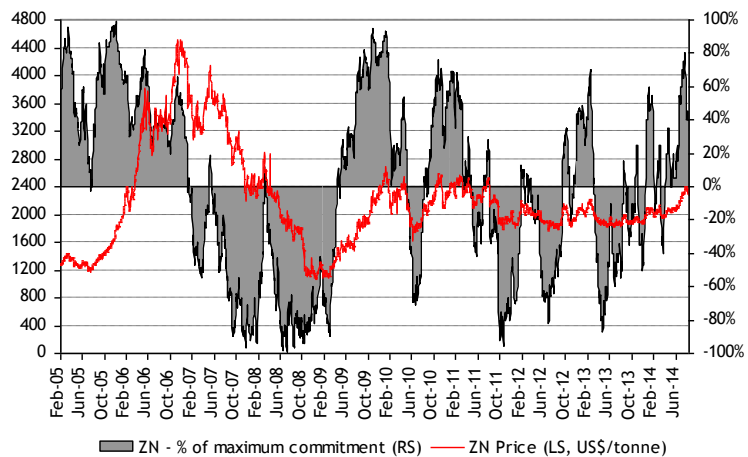


- RBC Capital Markets' proprietary data shows the net long or short position of systematic traders on the LME.

LME Nickel Price vs. RBCCM Systematic Commitment (Net Long/Short)



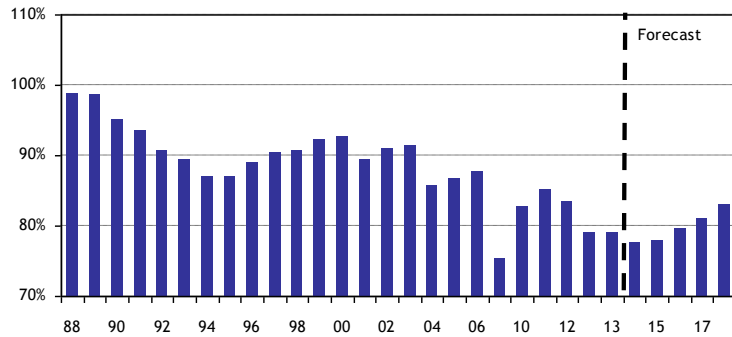
LME Zinc Price vs. RBCCM Systematic Commitment (Net Long/Short)



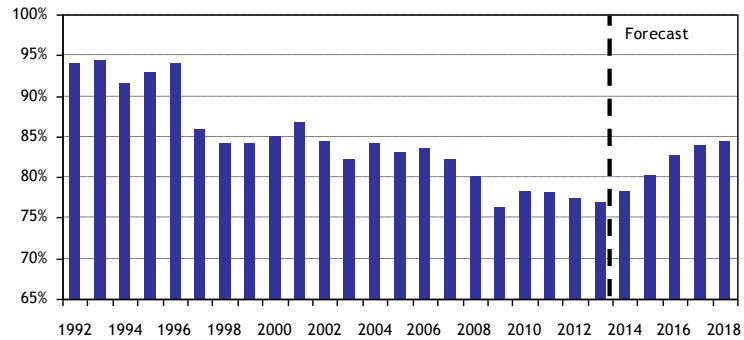
Source: Bloomberg, RBC Capital Markets

Capacity Utilization

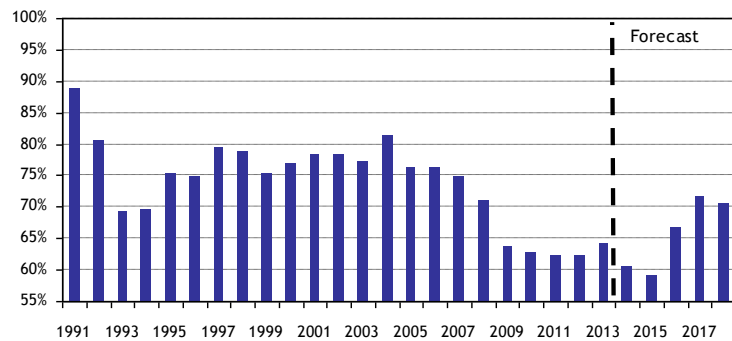
Global Aluminium Smelter Capacity Utilization



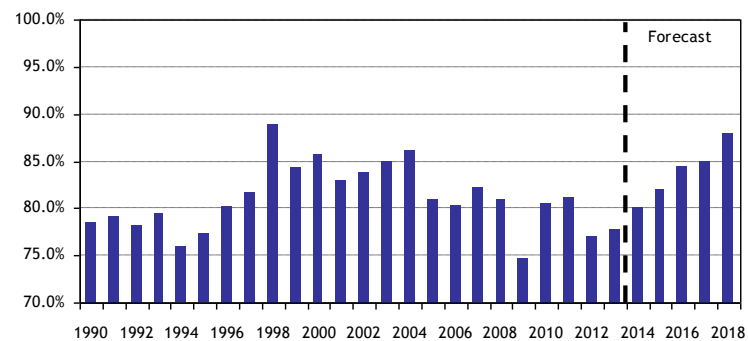
Global Refined Copper Capacity Utilization



Global Refined Nickel Capacity Utilization



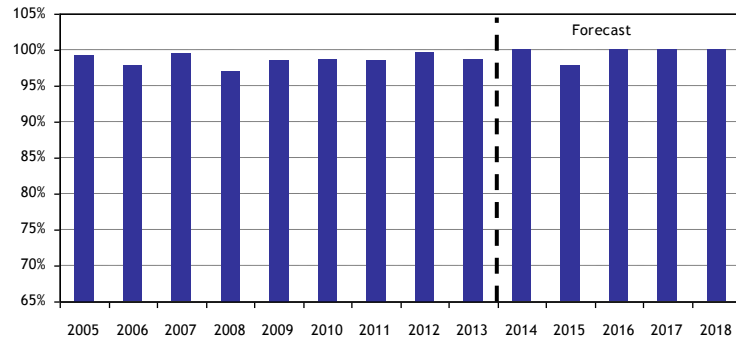
Global Refined Zinc Capacity Utilization



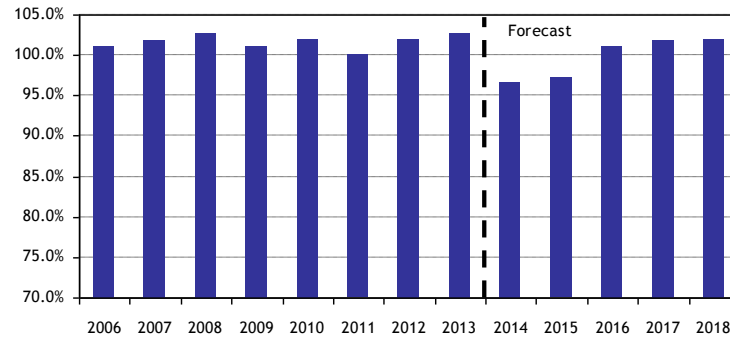
Source: Brook Hunt, RBC Capital Markets estimates

Capacity Utilization

Global Copper Mine Capacity Utilization



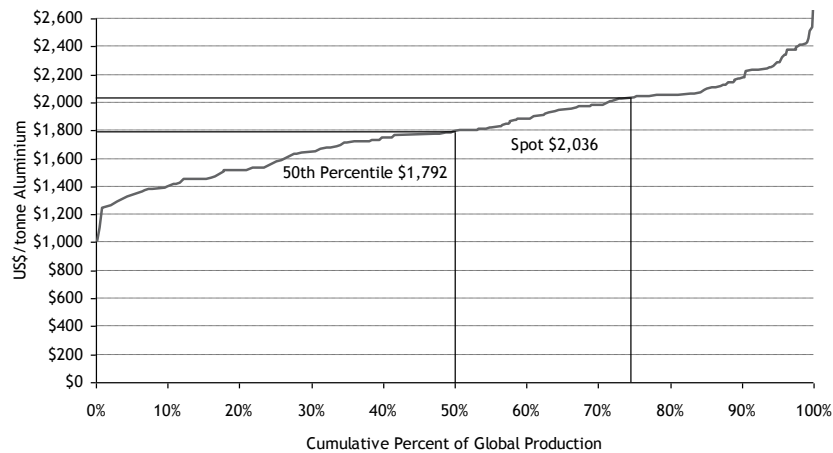
Global Zinc Mine Capacity Utilization



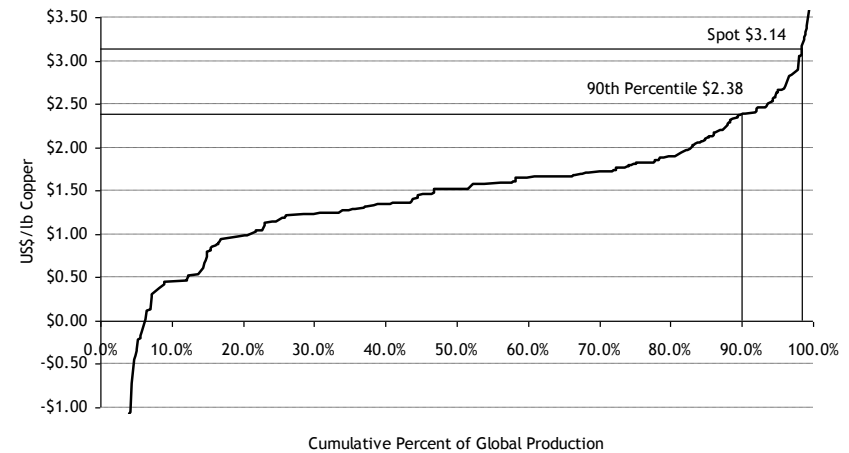
Source: Brook Hunt, RBC Capital Markets estimates

Metal Prices and Production Costs

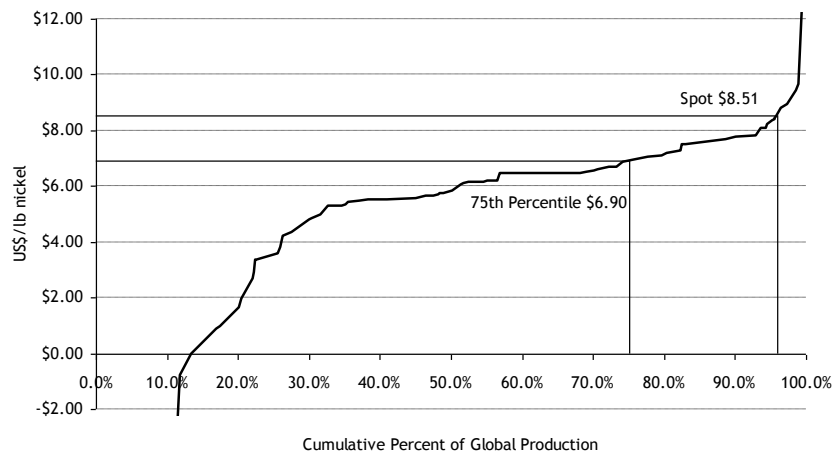
2014E Aluminium Cash Cost Curve (C1)



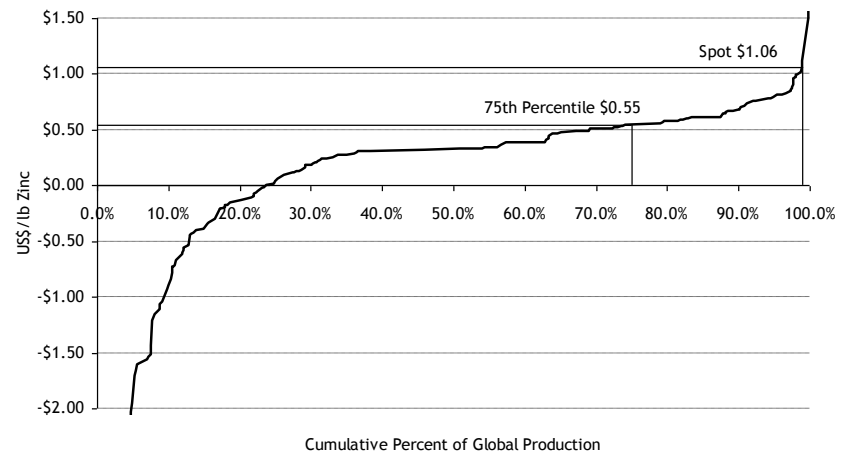
2014E Copper Cash Cost Curve (C1)



2014E Nickel Cash Cost Curve (C1)



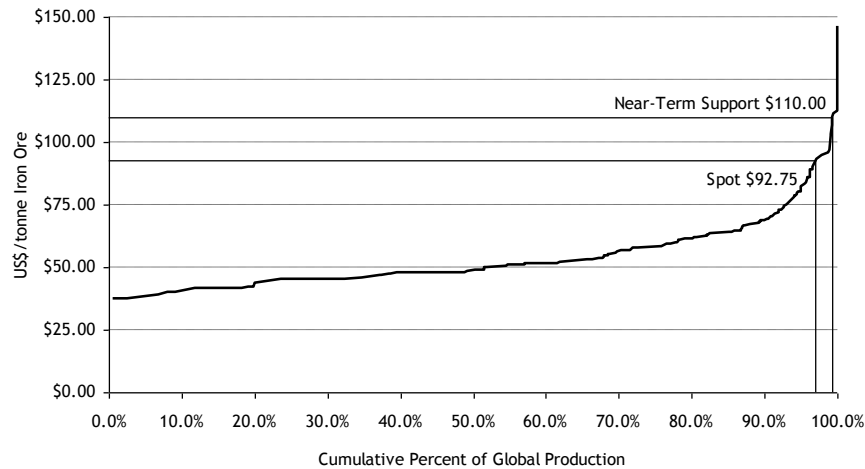
2014E Zinc Cash Cost Curve (C1)



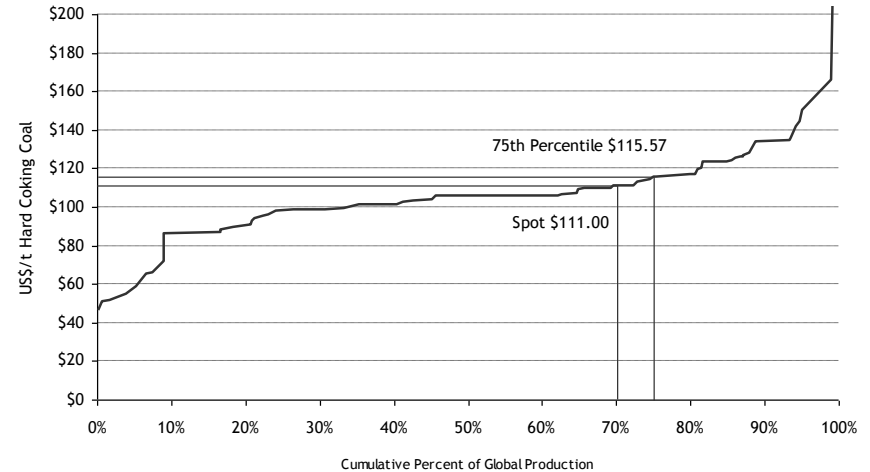
Source: Brook Hunt, RBC Capital Markets estimates

Metal Prices and Production Costs

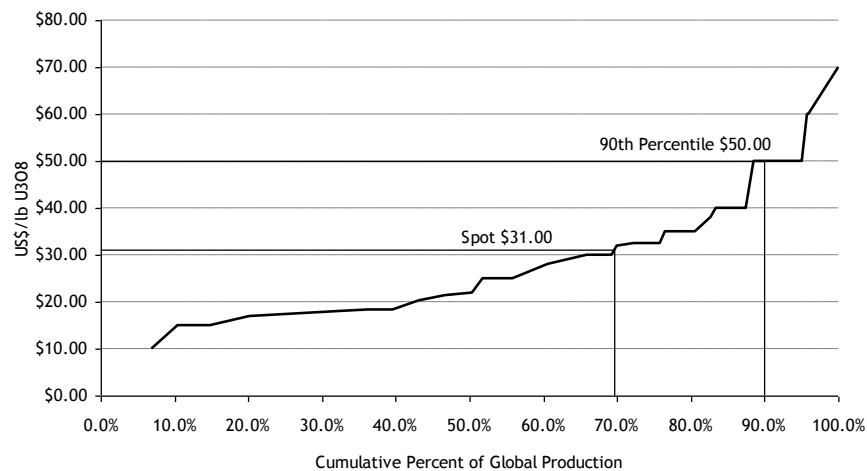
2014E Iron Ore Cost Curve – CFR US\$/t



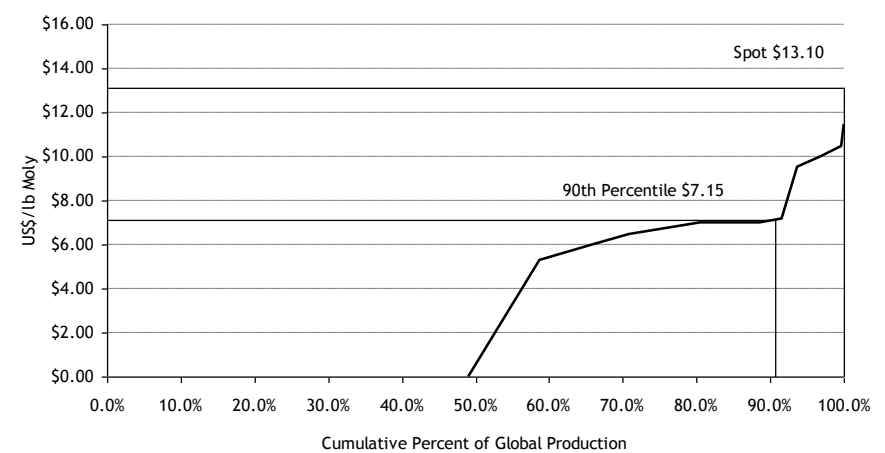
2014E Coking Coal Mine Cash Costs – FOB US\$/t



2014E Uranium Cash Cost Curve



2014E Molybdenum Cash Cost Curve (C1)



Source: Brook Hunt, RBC Capital Markets estimates

Commodity Market Outlook



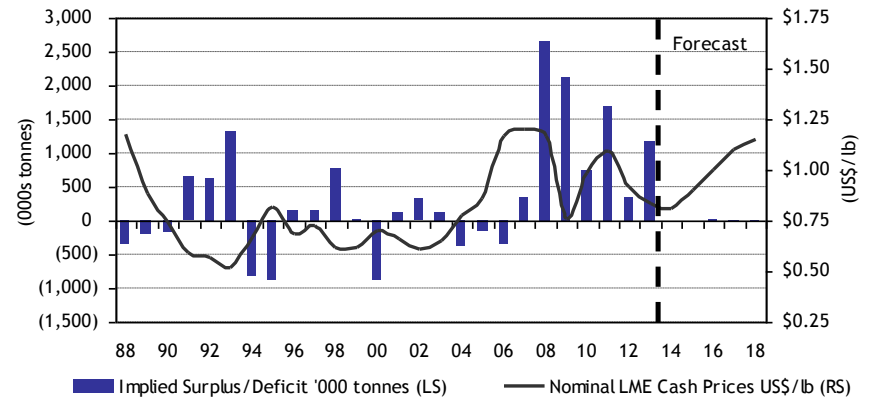
RBC Capital Markets

Aluminium Market Outlook

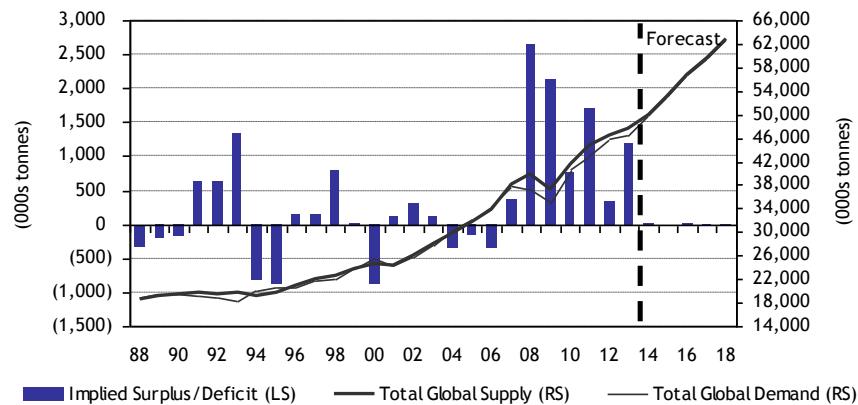
Aluminium Supply/Demand Balance

		2010	2011	2012	2013	2014E	2015E	2016E	2017E	2018E
Supply	'000 tonnes	41,514	44,800	46,340	47,703	49,787	53,169	56,687	59,602	62,784
% change		11.7%	7.9%	3.4%	2.9%	4.4%	6.8%	6.6%	5.1%	5.3%
Total Global Primary Demand	'000 tonnes	40,758	43,100	45,989	46,525	49,780	53,169	56,670	59,639	62,810
% change		16.3%	5.7%	6.7%	1.2%	7.0%	6.8%	6.6%	5.2%	5.3%
Implied Surplus / (Deficit)	'000 tonnes	756	1,700	351	1,178	7	(0)	16	(37)	(26)
Total Reported Stocks	'000 tonnes	7,079	7,578	7,921	7,805	7,813	7,813	7,829	7,792	7,766
Weeks of Consumption (Western World)		16.1	16.7	17.1	17.5	16.9	16.4	15.9	15.5	15.1
Nominal LME Cash Price	US\$/lb	\$0.99	\$1.09	\$0.92	\$0.84	\$0.81	\$0.90	\$1.00	\$1.10	\$1.15
Long Term Price (2019 and beyond) 2014 US\$	US\$/lb									\$1.10

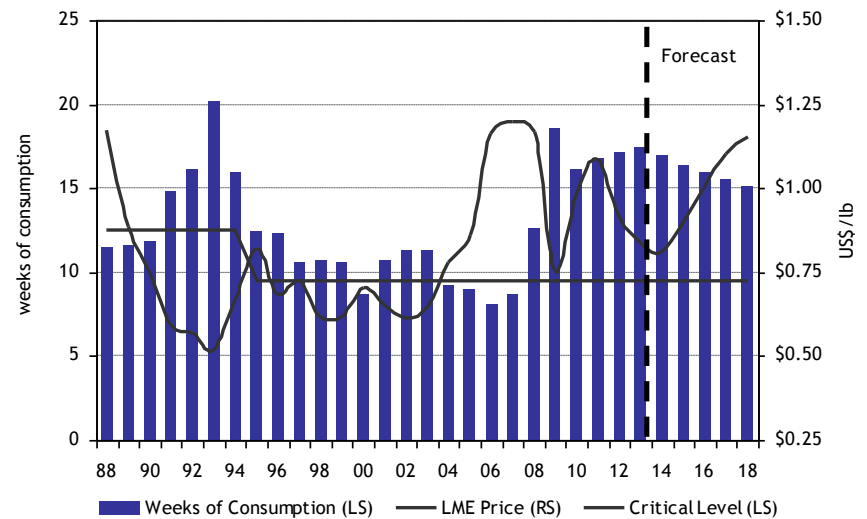
Global Aluminium Supply/Demand and Prices



Global Aluminium Supply/Demand



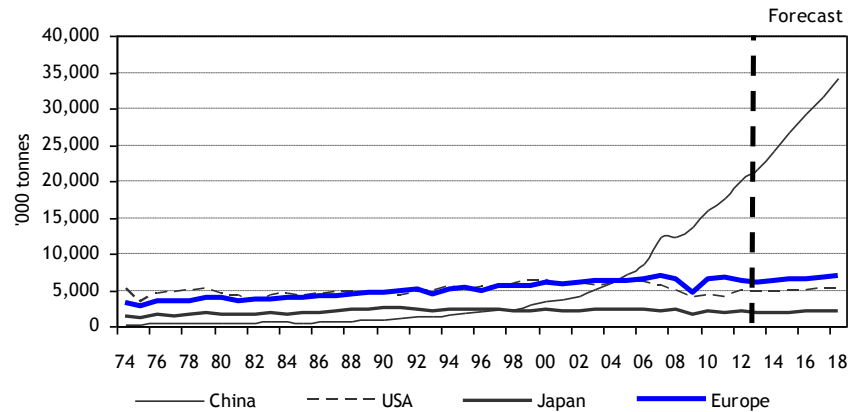
Total Aluminium Inventories and Price



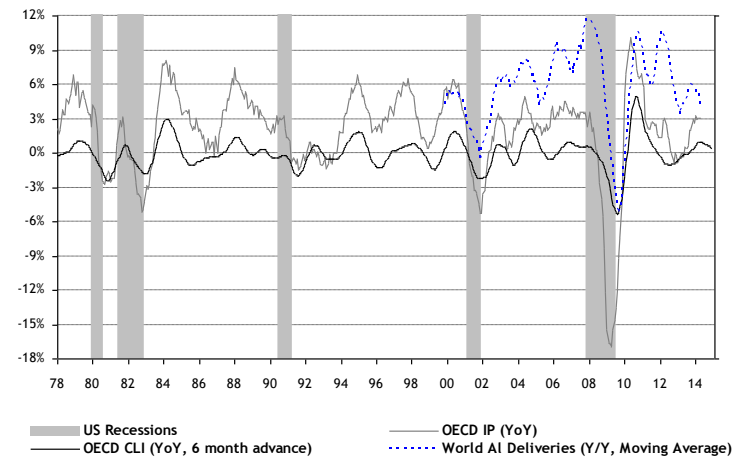
Source: Bloomberg, Brook Hunt, RBC Capital Markets estimates

Aluminium Market Outlook

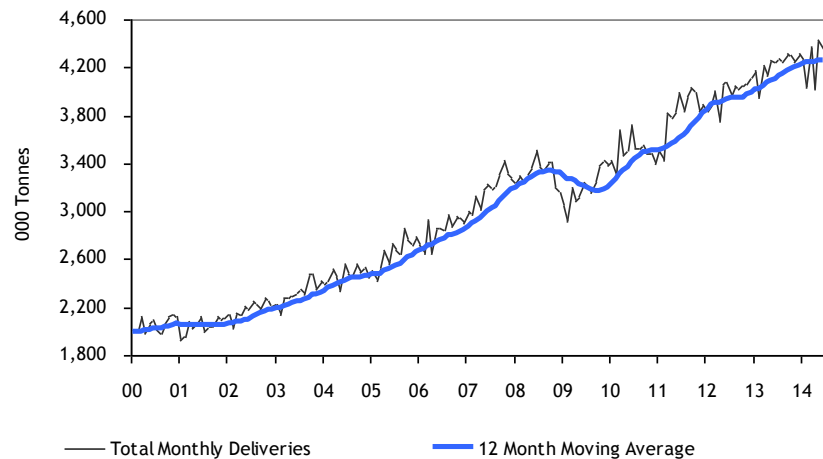
Aluminium Consumption by Major Region



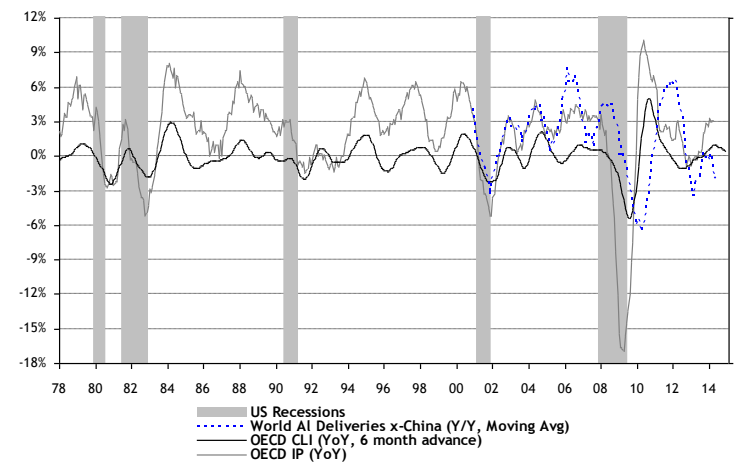
World Aluminium Deliveries and Economic Growth



Aluminium Deliveries



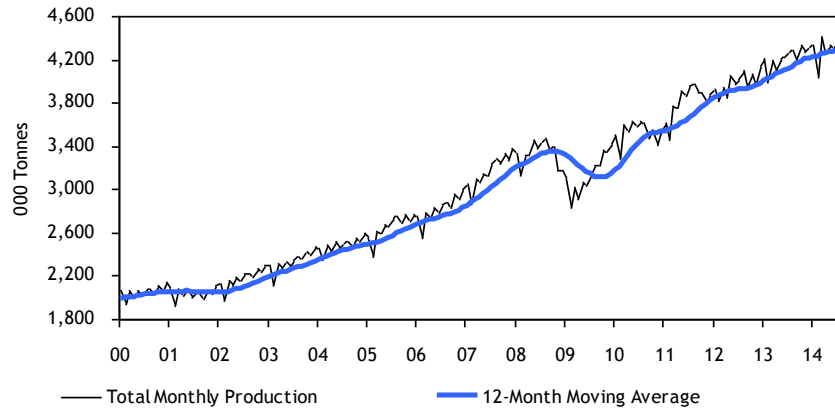
World Aluminium Deliveries ex-China and Economic Growth



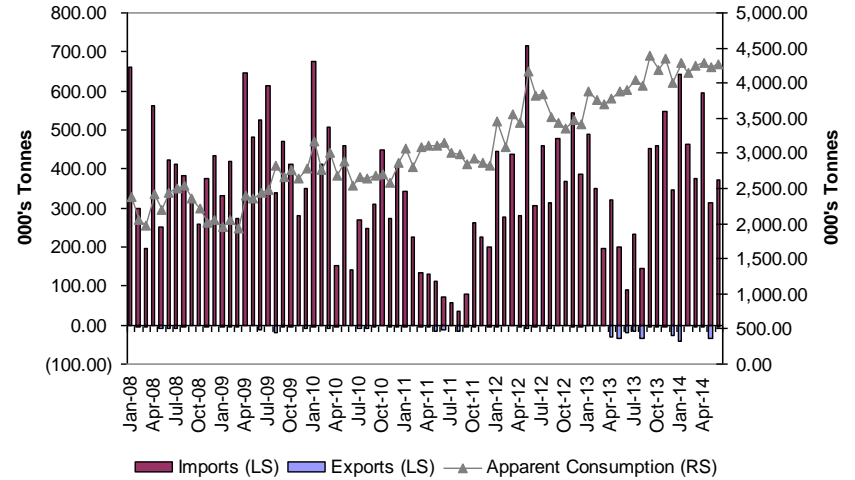
Source: Bloomberg, Brook Hunt, IAI, OECD, RBC Capital Markets estimates

Aluminium Market Outlook

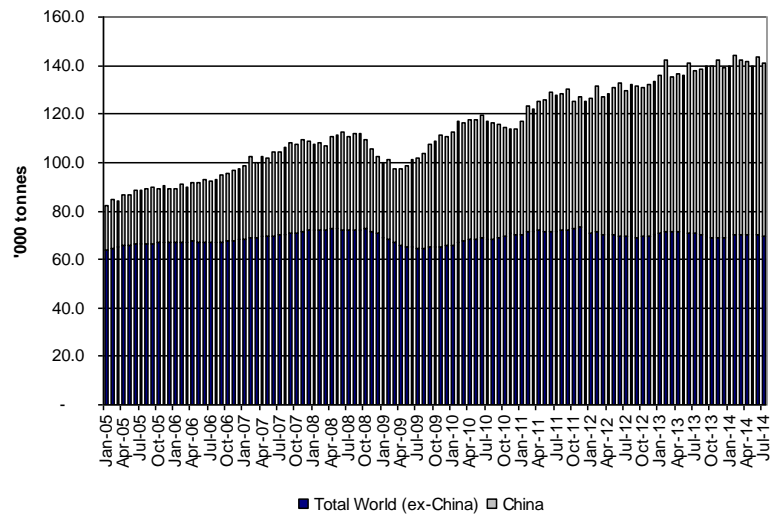
Aluminium Production



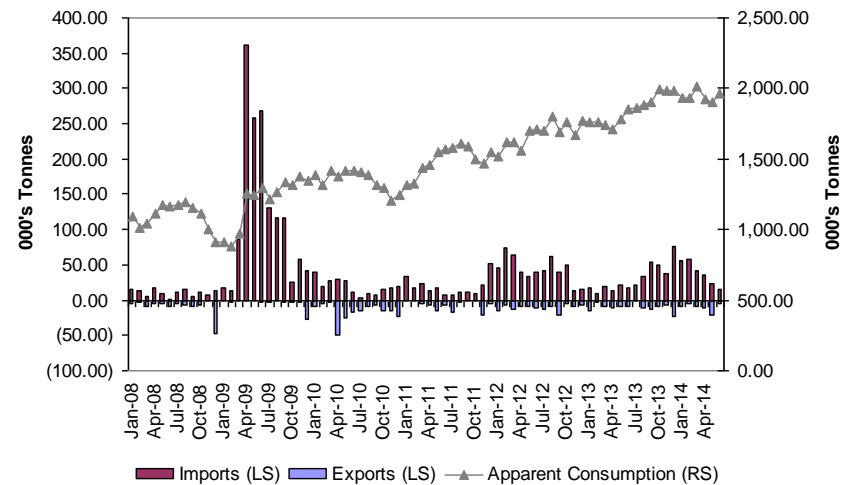
Chinese Alumina Net Imports and Consumption



Global Daily Aluminium Production (kt/d)



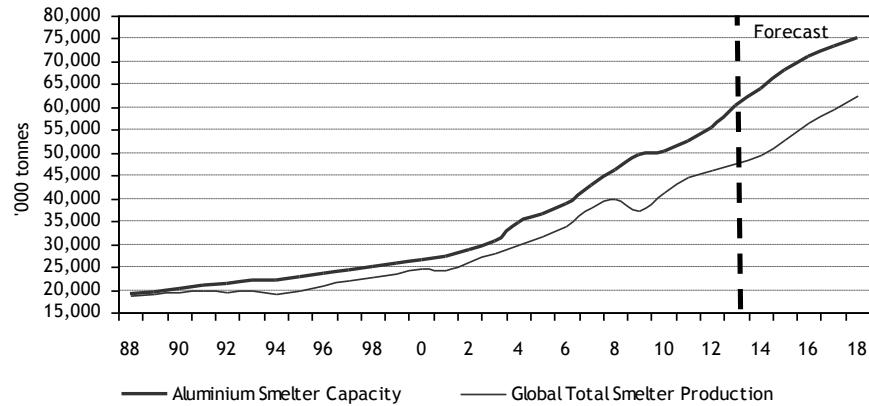
Chinese Aluminum Net Imports and Consumption



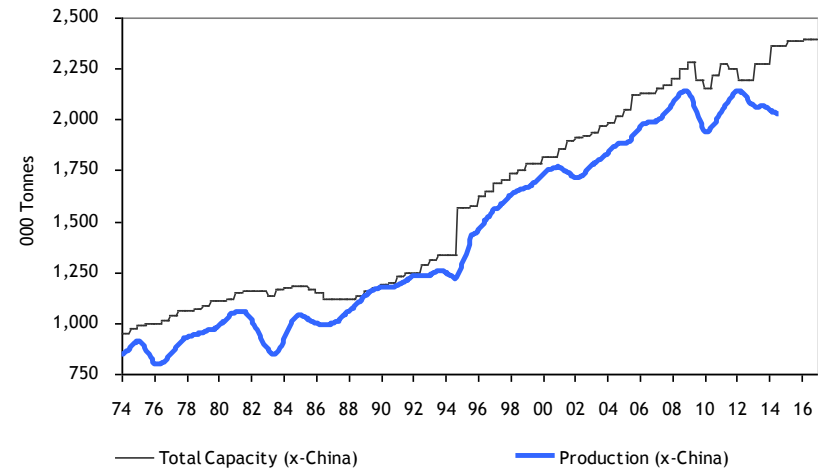
Source: Bloomberg, Brook Hunt, IAI

Aluminium Market Outlook

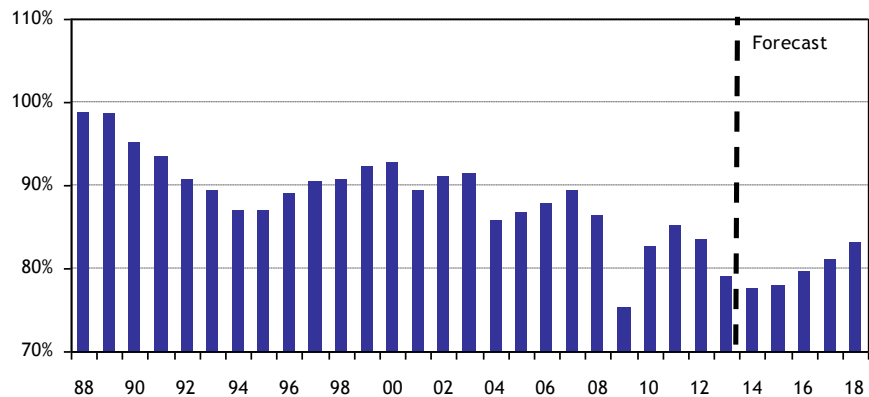
Global Aluminium Smelter Capacity and Production



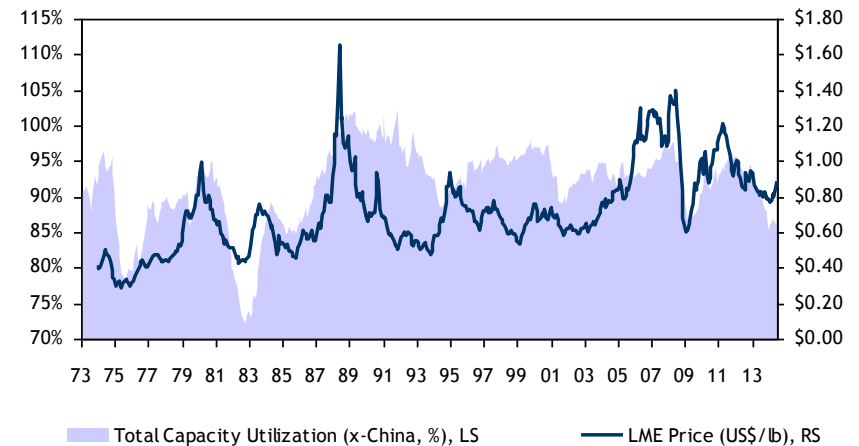
Global Aluminium Capacity and Production (ex-China)



Global Aluminium Smelter Capacity Utilization



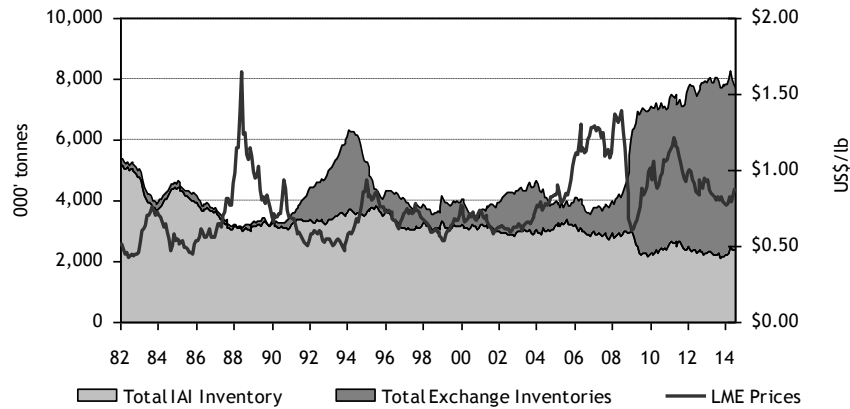
Global Aluminium Smelter Capacity Utilization (ex-China)



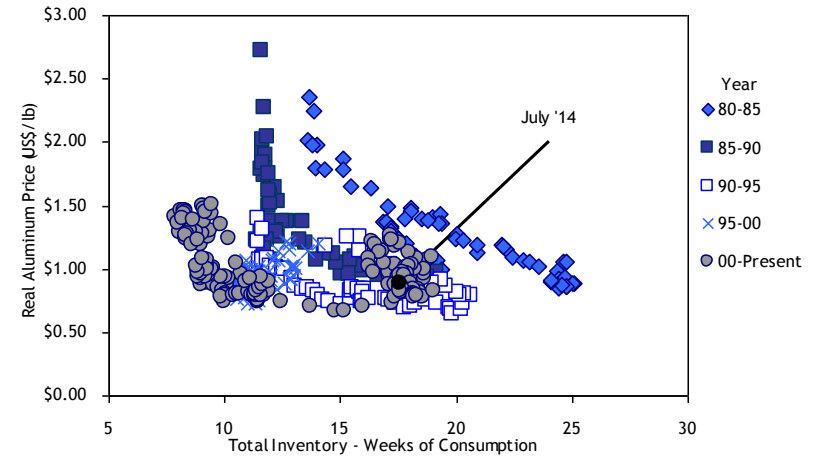
Source: Brook Hunt, IAI, RBC Capital Markets estimates

Aluminium Market Outlook

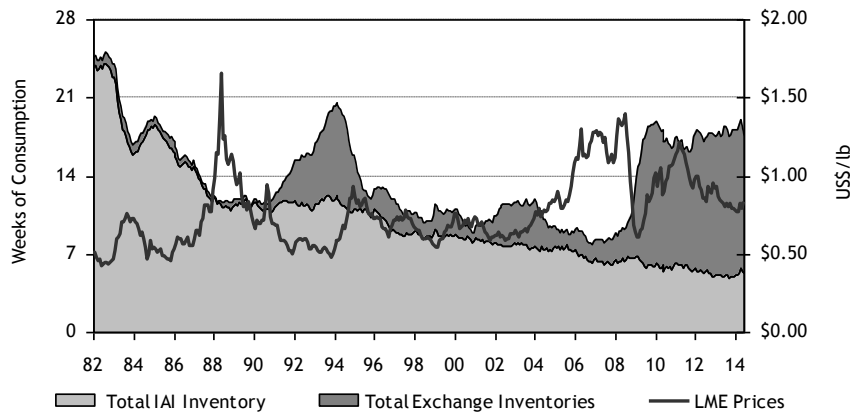
Total Aluminium Inventories and Price



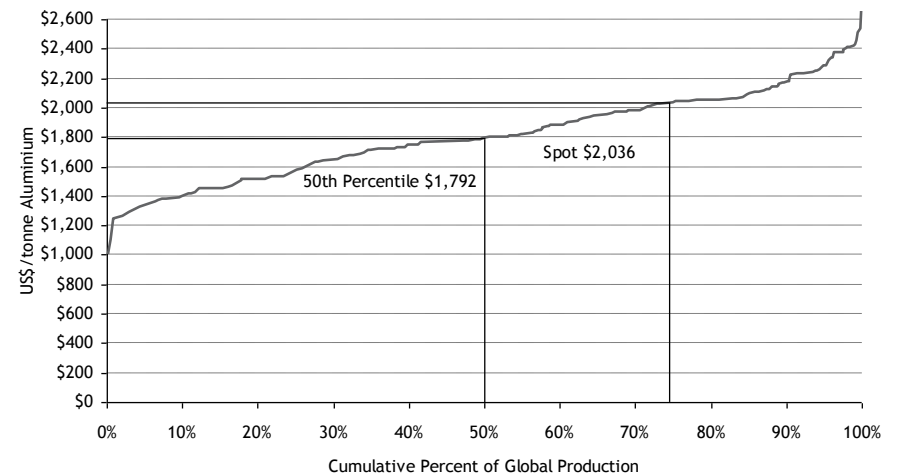
Total Aluminium Inventories vs. Real Price



Total Aluminium Inventories as Weeks Consumption and Price



2014E Aluminium Cash Costs (C1)



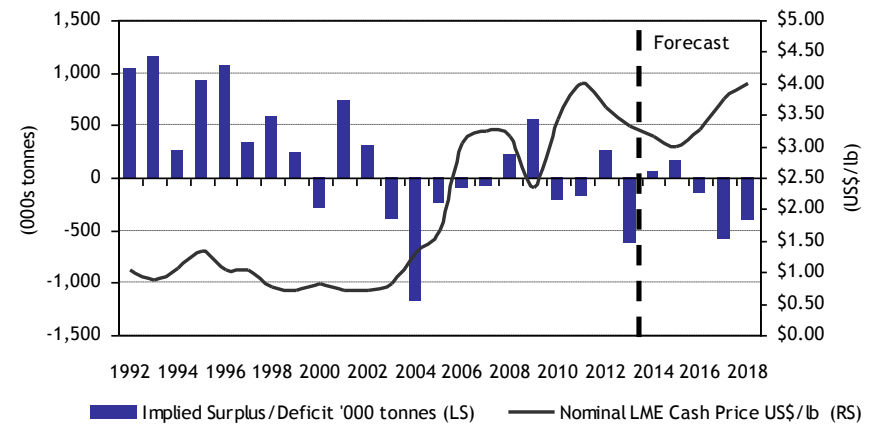
Source: Bloomberg, Brook Hunt, RBC Capital Markets estimates

Copper Market Outlook

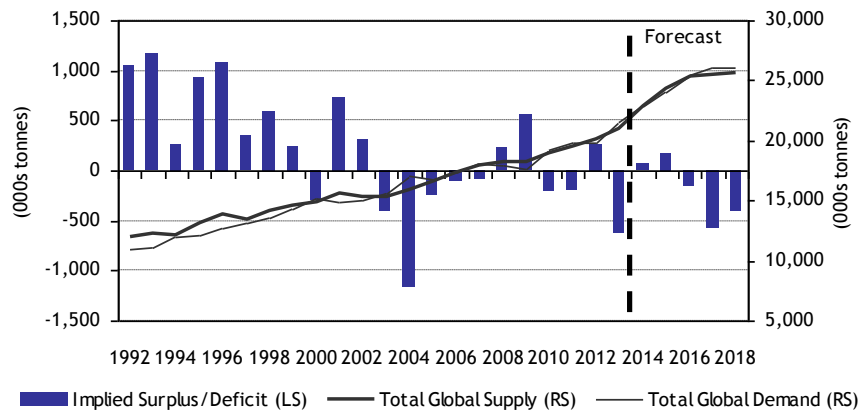
Copper Supply/Demand Balance

		2010	2011	2012	2013	2014E	2015E	2016E	2017E	2018E
Supply	'000 tonnes	18,984	19,596	20,128	20,962	22,873	24,277	25,320	25,512	25,685
Inventory Movements	'000 tonnes	-	-	-	-	-	-	-	-	-
Base Case Supply	'000 tonnes	18,984	19,596	20,128	20,962	22,873	24,277	25,320	25,512	25,685
% change		4.0%	3.2%	2.7%	4.1%	9.1%	6.1%	4.3%	0.8%	0.7%
Total Global Demand	'000 tonnes	19,193	19,783	19,859	21,584	22,811	24,110	25,469	26,092	26,092
% change		8.5%	3.1%	0.4%	8.7%	5.7%	5.7%	5.6%	2.4%	0.0%
Implied Surplus / (Deficit)	'000 tonnes	(209)	(187)	269	(622)	61	167	(149)	(580)	(407)
Total Reported Stocks	'000 tonnes	1,199	1,205	1,360	1,336	1,397	1,564	1,415	835	428
Weeks of Consumption (Western World)		5.7	5.9	6.8	6.5	6.6	7.2	6.3	3.7	1.9
Nominal LME Cash Price	US\$/lb	\$3.42	\$4.00	\$3.61	\$3.32	\$3.15	\$3.00	\$3.25	\$3.75	\$4.00
Long Term Price (2019 and beyond) 2014 US\$	US\$/lb									\$2.75

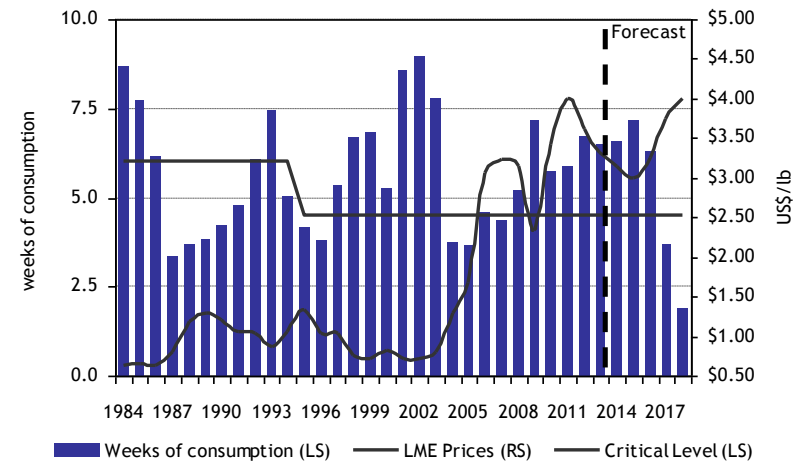
Global Copper Supply/Demand and Prices



Global Copper Supply/Demand



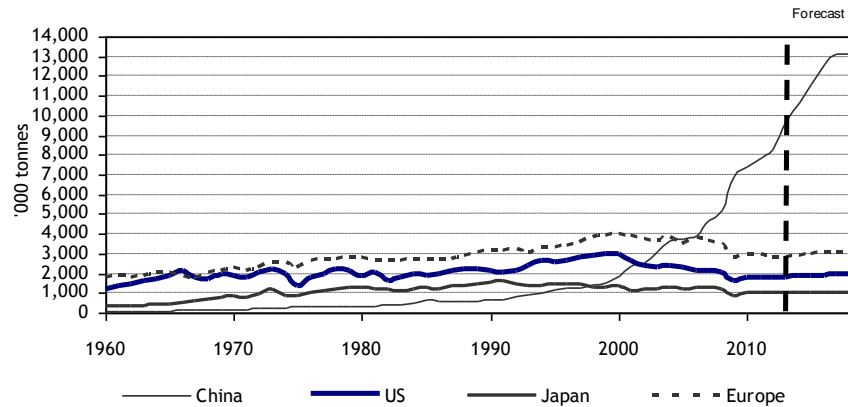
Total Copper Inventories and Price



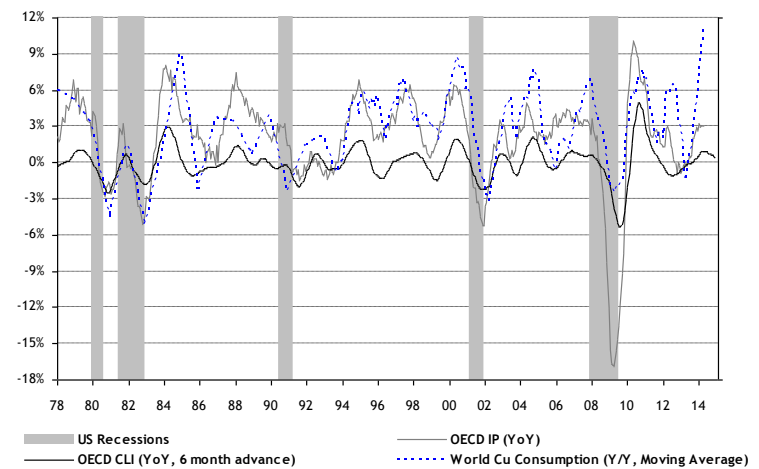
Source: Bloomberg, Brook Hunt, RBC Capital Markets estimates

Copper Market Outlook

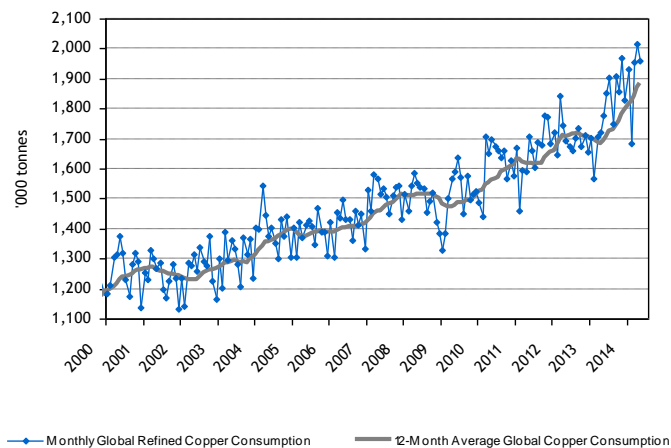
Copper Consumption by Major Region



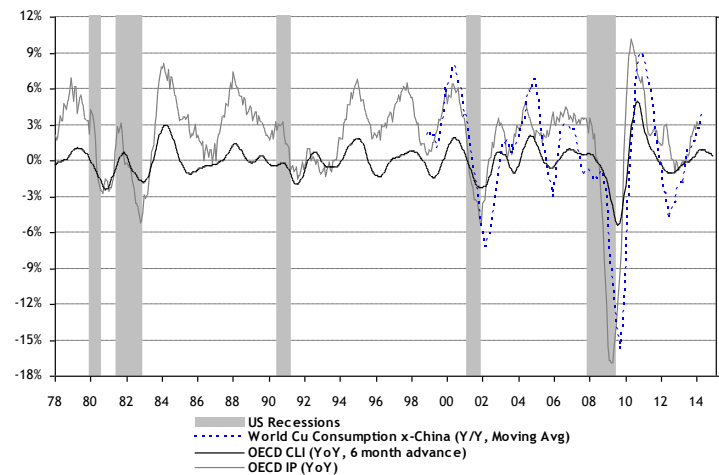
World Copper Consumption and Economic Growth



Refined Copper Consumption



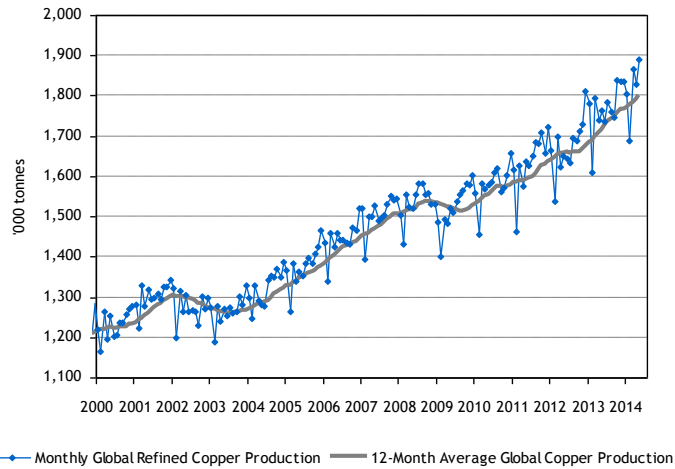
World Copper Consumption ex-China and Economic Growth



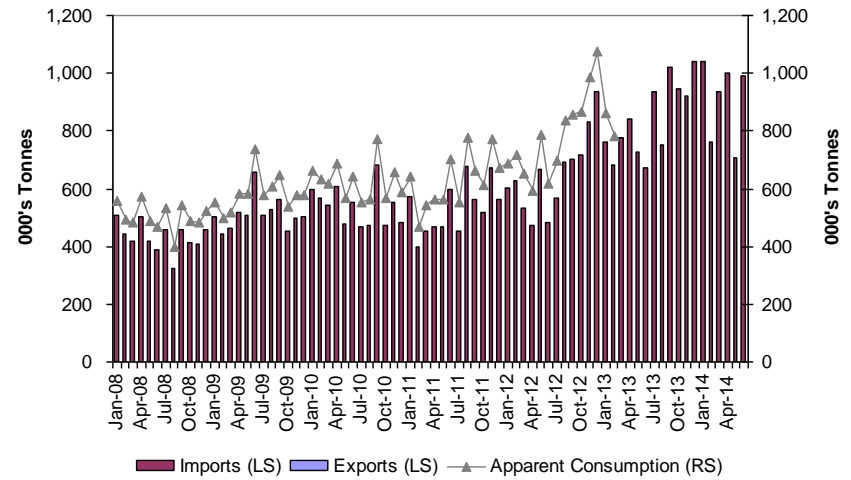
Source: Bloomberg, Brook Hunt, OECD, RBC Capital Markets estimates

Copper Market Outlook

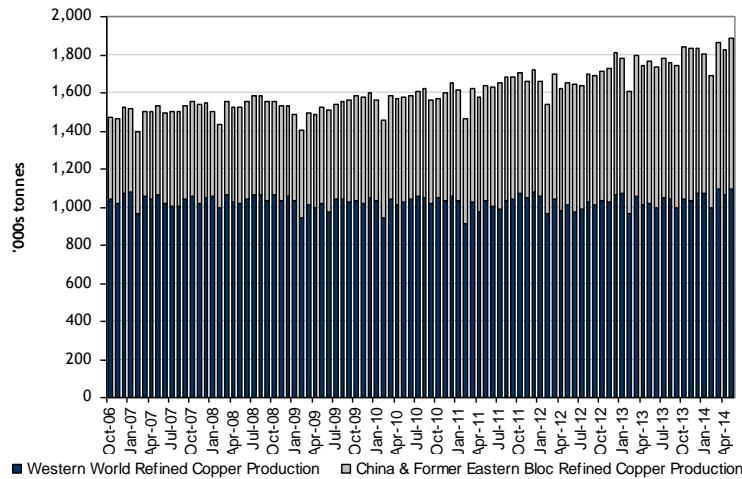
Refined Copper Production



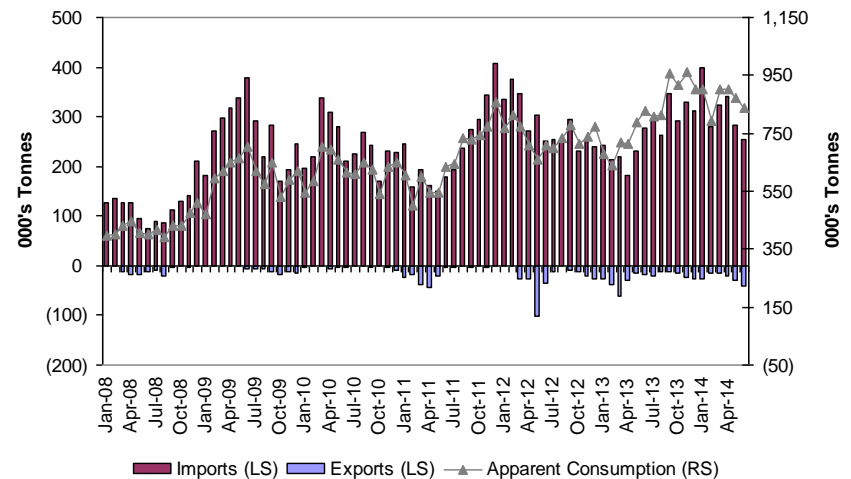
Chinese Copper Concentrate Net Imports and Consumption



Refined Copper Production



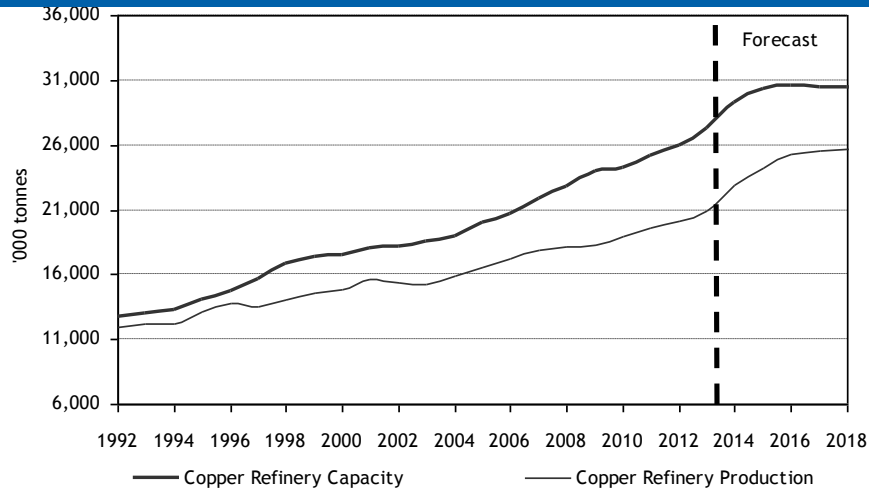
Chinese Refined Copper Net Imports and Consumption



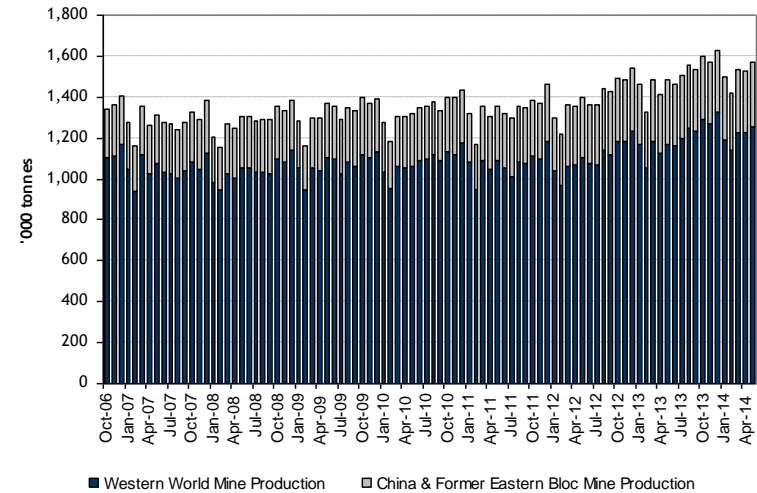
Source: Bloomberg, Brook Hunt

Copper Market Outlook

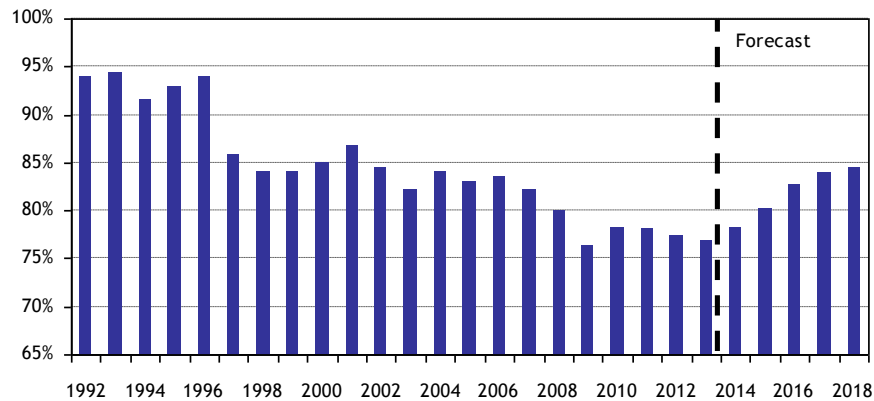
Global Copper Refining Capacity and Production



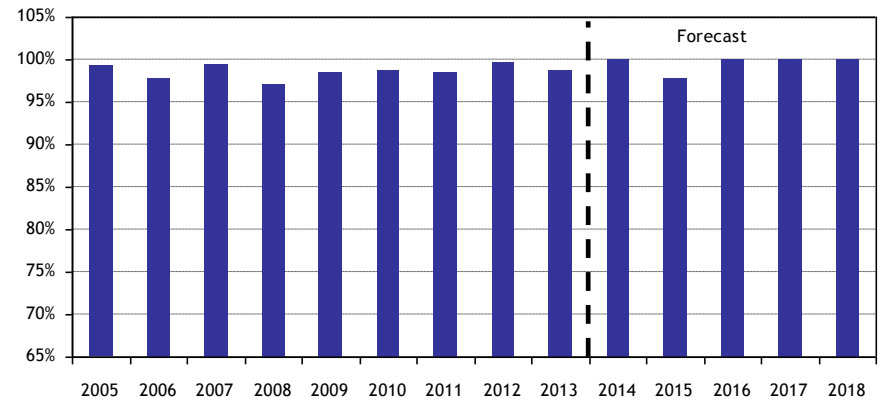
Copper Mine Production



Global Copper Refining Capacity Utilization



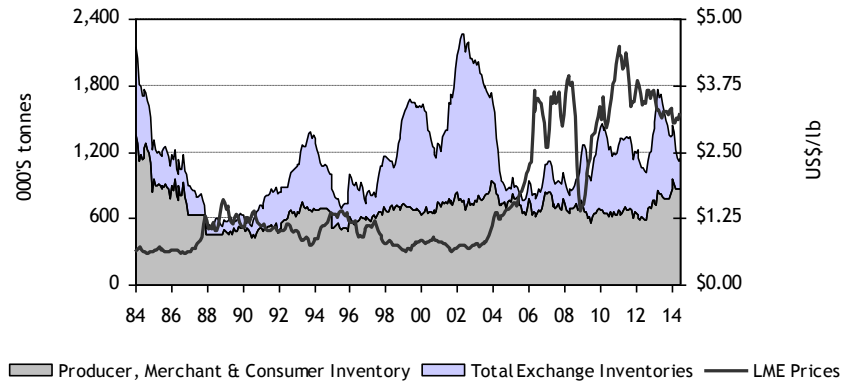
Global Copper Mine Capacity Utilization



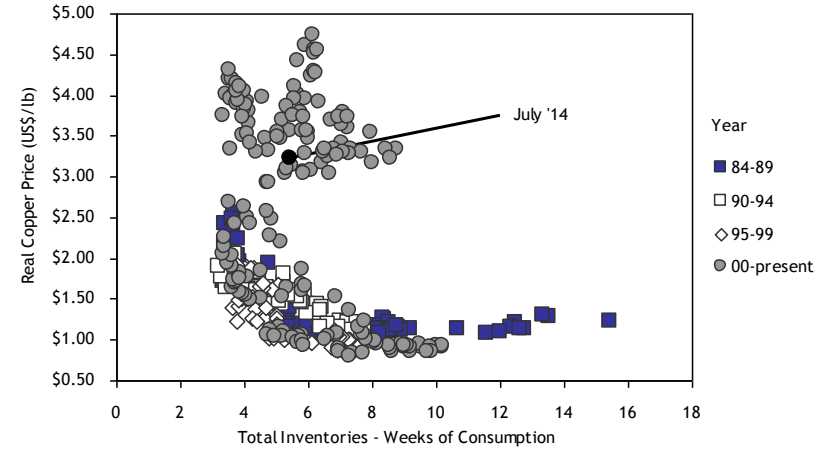
Source: Bloomberg, Brook Hunt, RBC Capital Markets estimates

Copper Market Outlook

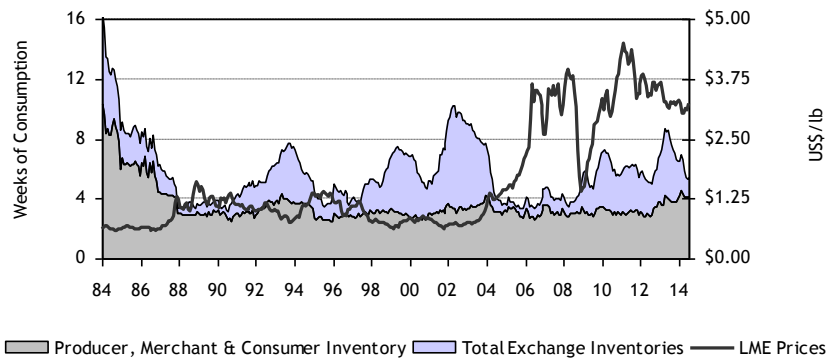
Total Copper Inventories and Price



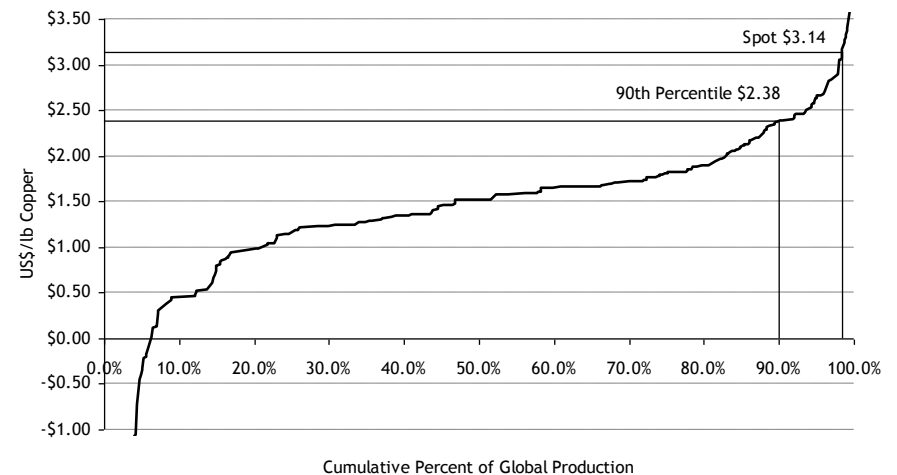
Total Copper Inventories vs. Real Price



Total Copper Inventories as Weeks Consumption and Price



2014E Copper Cash Costs (C1)



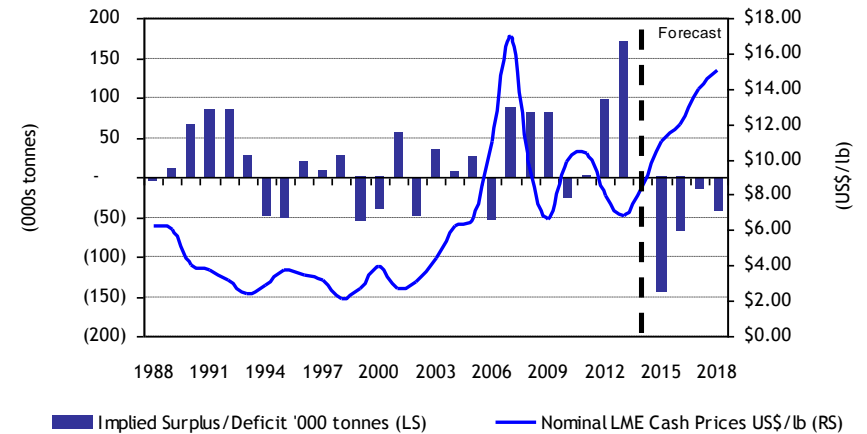
Source: Bloomberg, Brook Hunt, RBC Capital Markets estimates

Nickel Market Outlook

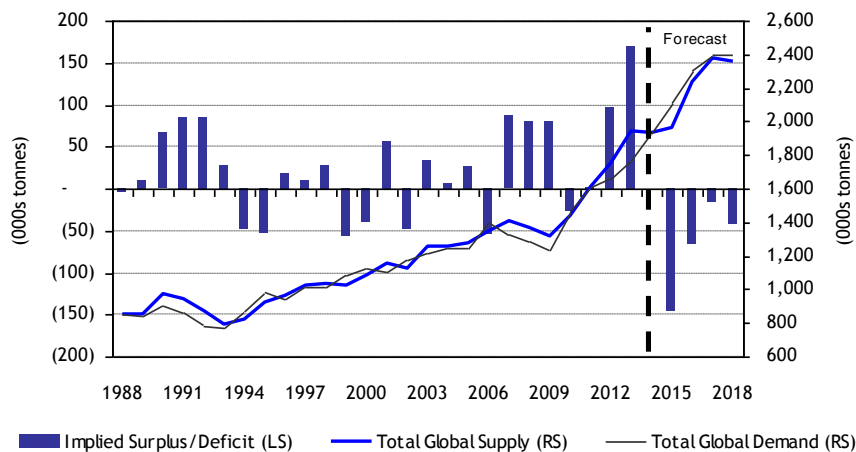
Nickel Supply/Demand Balance

		2010	2011	2012	2013	2014E	2015E	2016E	2017E	2018E
Supply	'000 tonnes	1,440	1,608	1,753	1,944	1,935	1,967	2,240	2,381	2,354
Inventory Movements	'000 tonnes	-	-	-	-	-	-	-	-	-
Base Case Supply	'000 tonnes	1,440	1,608	1,753	1,944	1,935	1,967	2,240	2,381	2,354
% change		9.5%	11.7%	9.0%	10.9%	-0.5%	1.7%	13.9%	6.3%	-1.1%
Total Global Demand	'000 tonnes	1,465	1,607	1,656	1,775	1,935	2,112	2,308	2,396	2,396
% change		18.7%	9.7%	3.0%	7.2%	9.0%	9.1%	9.3%	3.8%	0.0%
Implied Surplus / (Deficit)	'000 tonnes	(26)	1	98	169	(0)	(145)	(68)	(16)	(43)
Total Reported Stocks	'000 tonnes	225	182	223	346	346	201	133	118	75
Weeks of Consumption (Western World)		13.7	10.9	13.6	21.4	21.0	12.0	7.9	6.9	4.4
Nominal LME Cash Price	US\$/lb	\$9.89	\$10.38	\$7.95	\$6.81	\$8.50	\$11.00	\$12.00	\$14.00	\$15.00
Long Term Price (2019 and beyond) 2014 US\$	US\$/lb									\$9.50

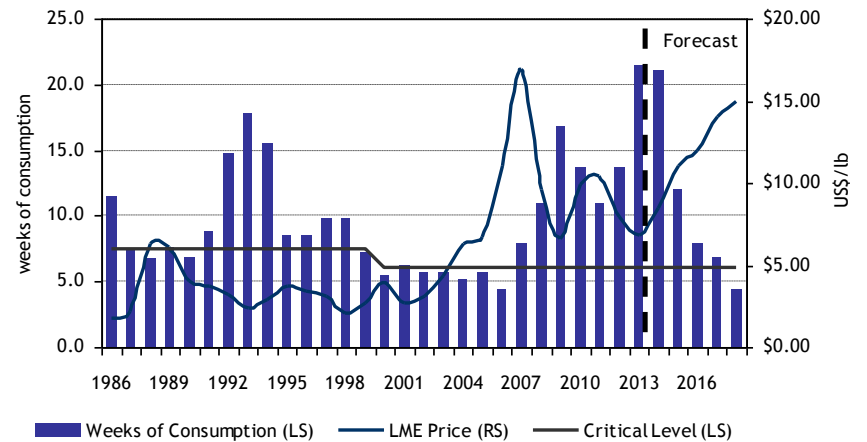
Global Nickel Supply/Demand and Prices



Global Nickel Supply/Demand



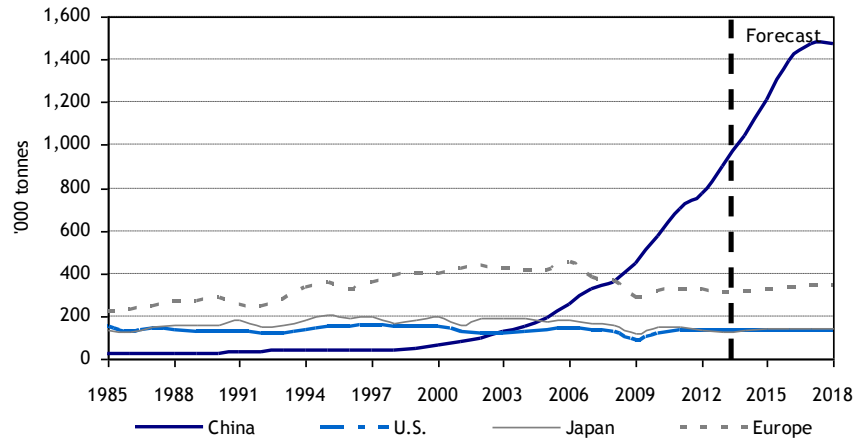
Total Nickel Inventories and Price



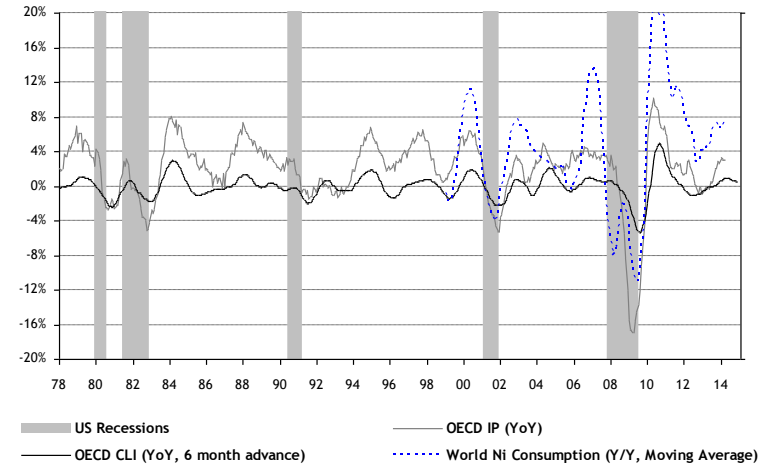
Source: Bloomberg, Brook Hunt, RBC Capital Markets estimates

Nickel Market Outlook

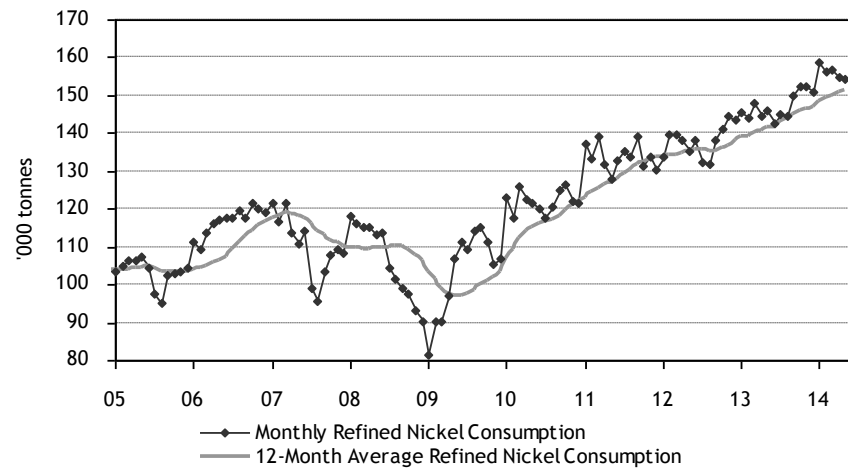
Nickel Consumption by Major Region



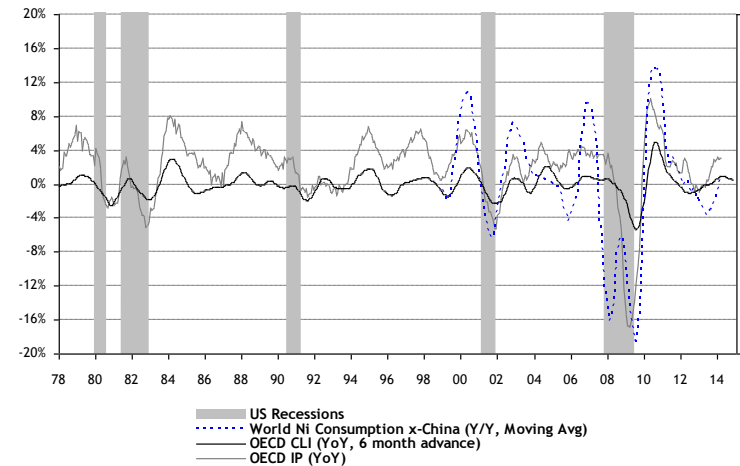
World Nickel Consumption and Economic Growth



Refined Nickel Consumption



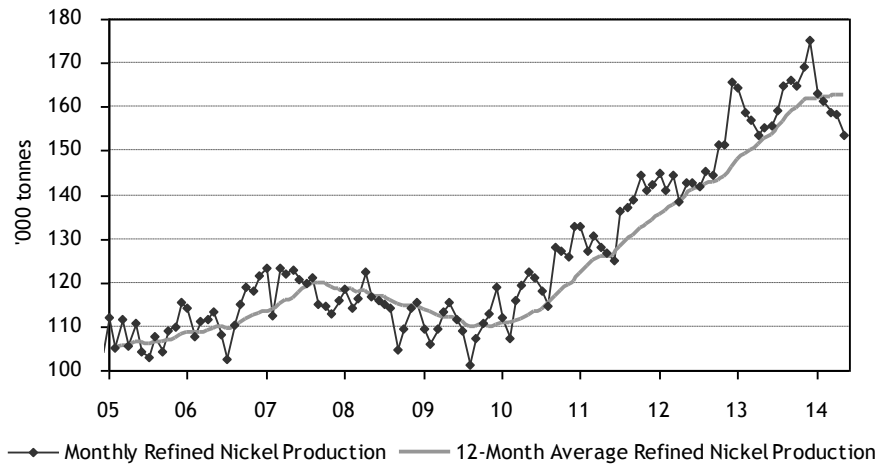
World Nickel Consumption ex-China and Economic Growth



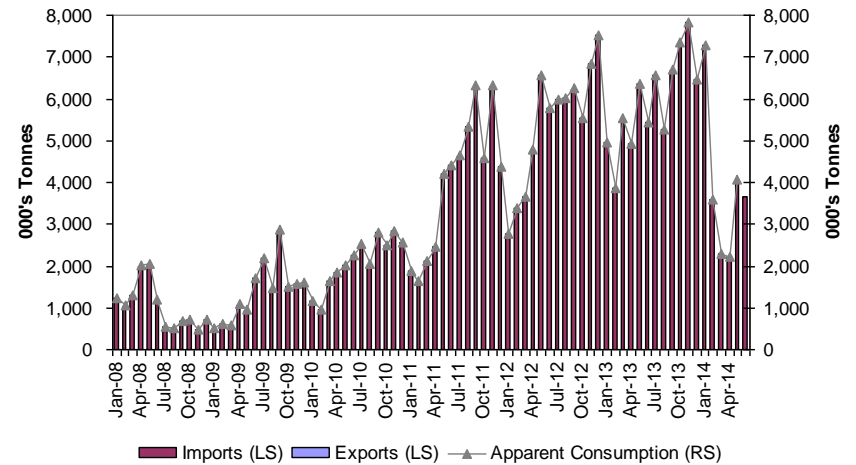
Source: Bloomberg, Brook Hunt, OECD, RBC Capital Markets estimates

Nickel Market Outlook

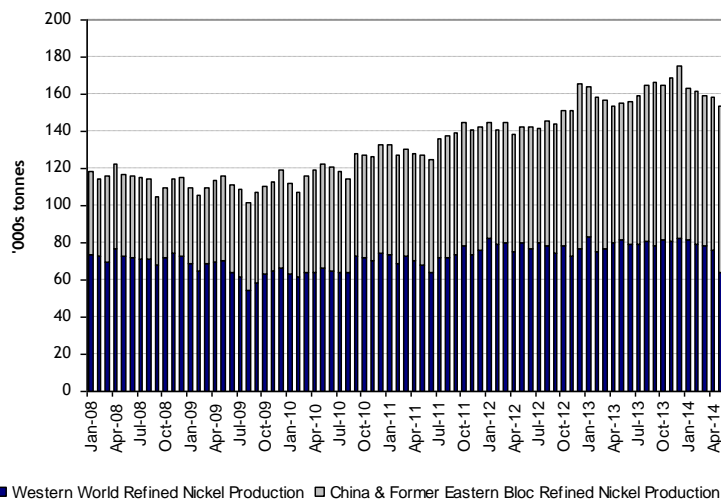
Refined Nickel Production



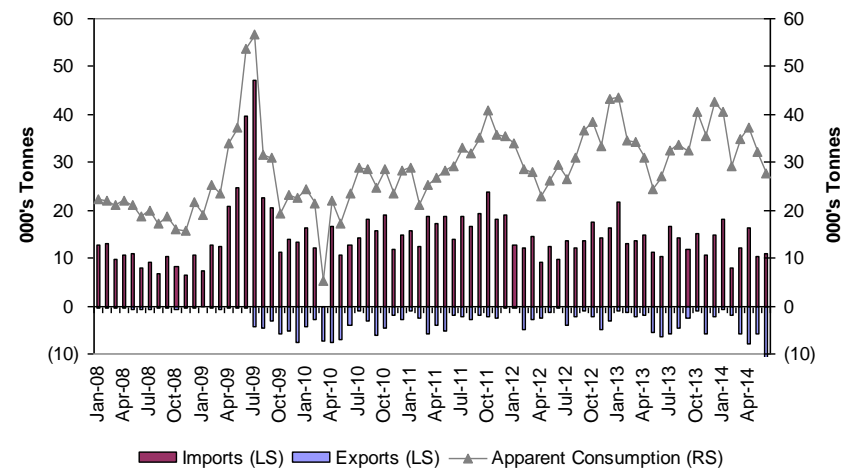
Chinese Nickel Ore Net Imports and Consumption



Refined Nickel Production



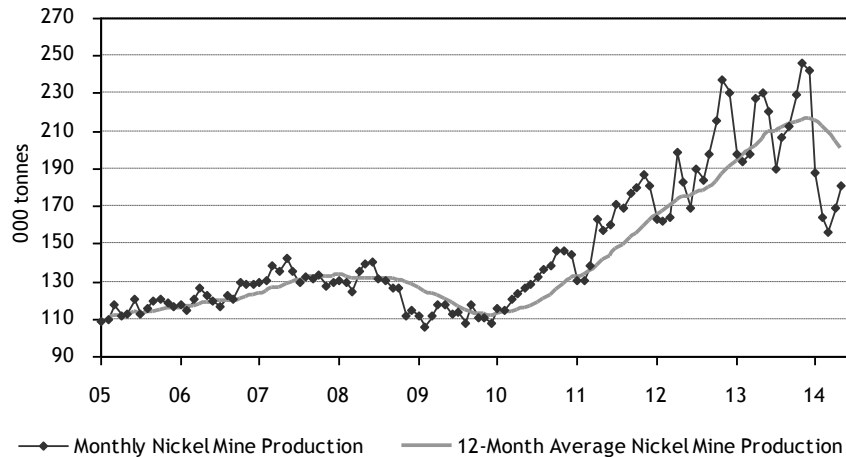
Chinese Refined Nickel Net Imports and Consumption



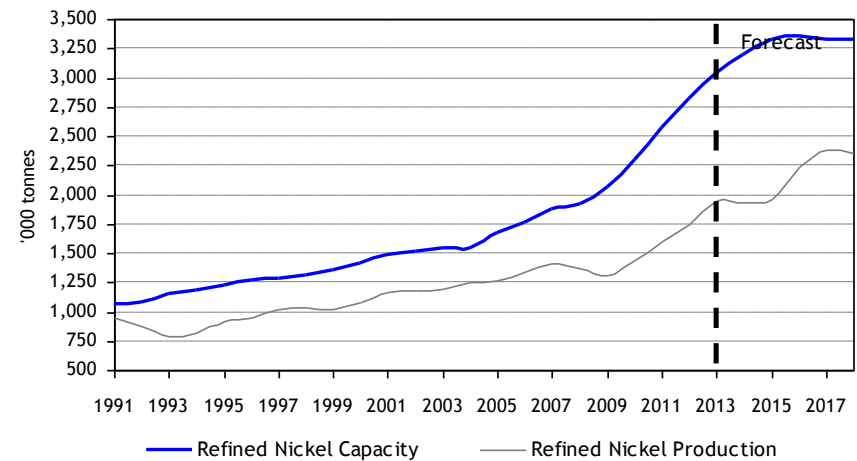
Source: Bloomberg, Brook Hunt

Nickel Market Outlook

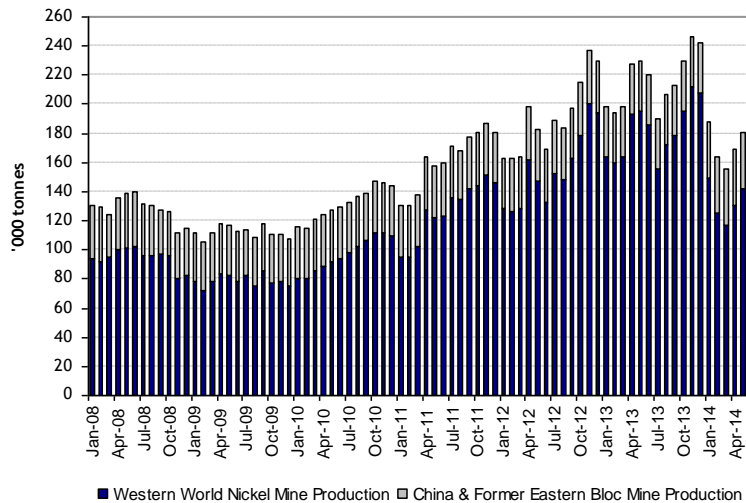
Nickel Mine Production



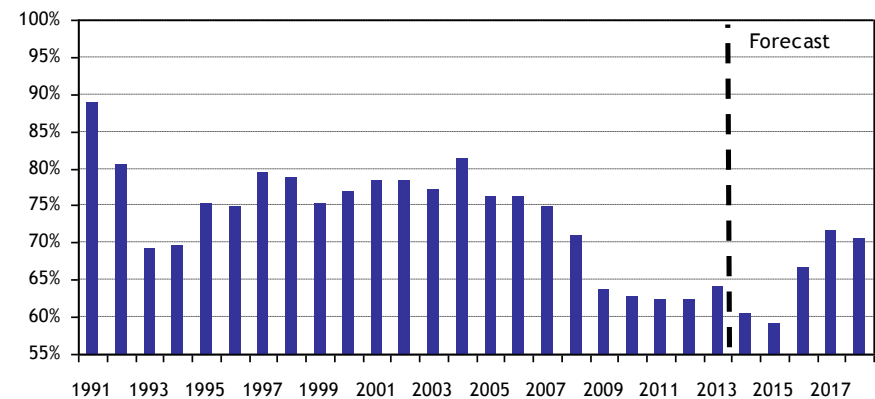
Global Nickel Smelter Capacity and Production



Nickel Mine Production



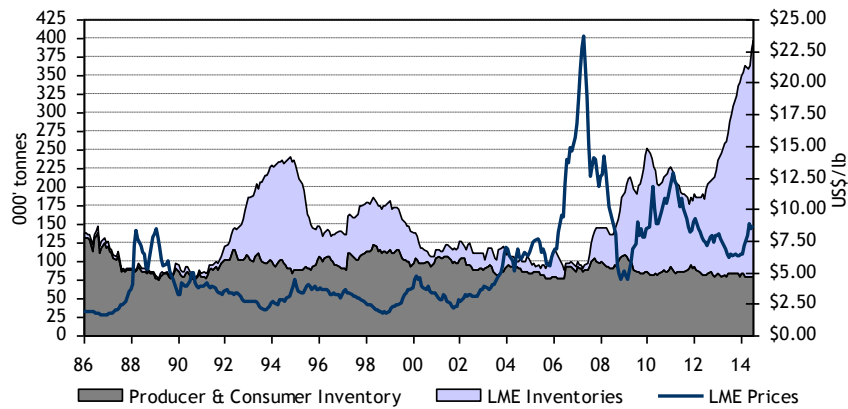
Global Nickel Smelter Capacity Utilization



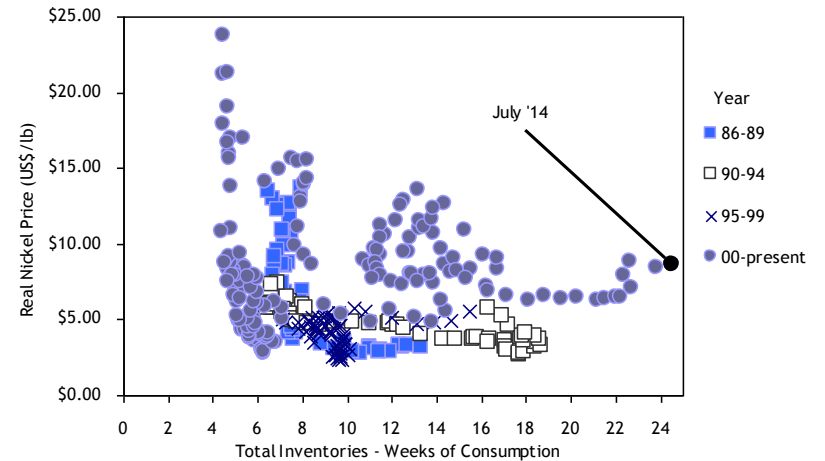
Source: Bloomberg, Brook Hunt, RBC Capital Markets estimates

Nickel Market Outlook

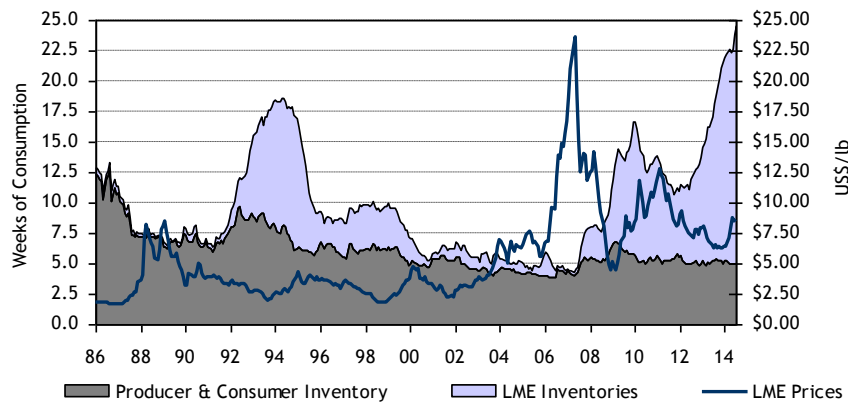
Nickel Inventory and Price



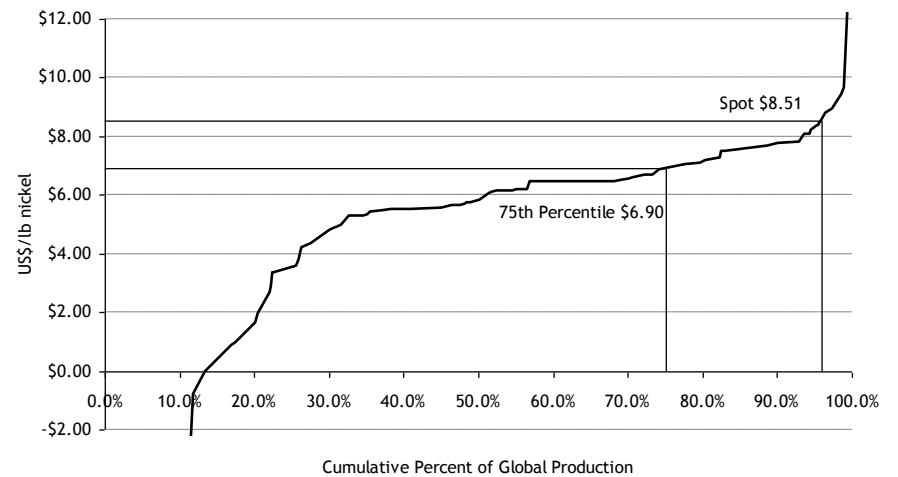
Total Nickel Inventories vs. Real Price



Nickel Inventory in Weeks of Consumption and Price



2014E Nickel Cash Costs (C1)



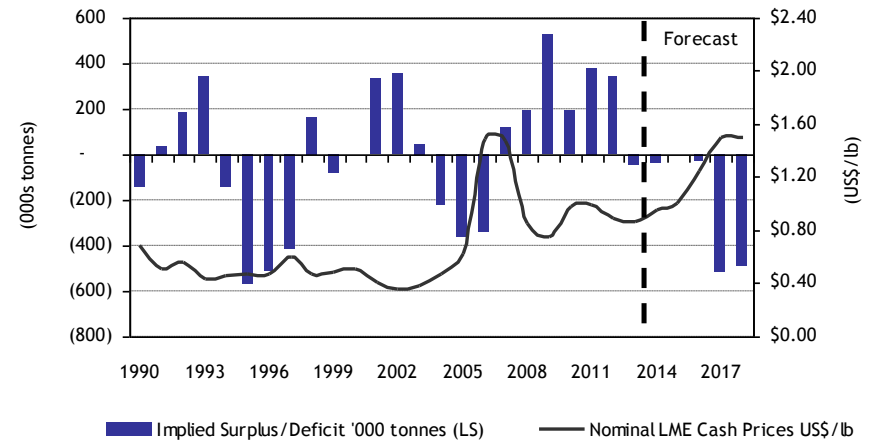
Source: Bloomberg, Brook Hunt, RBC Capital Markets estimates

Zinc Market Outlook

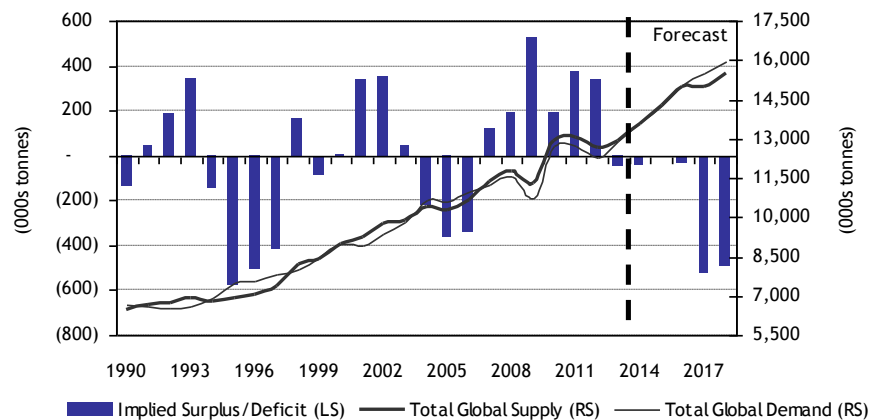
Zinc Supply/Demand Balance

	2010	2011	2012	2013	2014E	2015E	2016E	2017E	2018E
Supply	12,896	13,076	12,630	12,892	13,563	14,295	14,991	14,963	15,474
DLA Sales	-	-	-	-	-	-	-	-	-
Base Case Supply	12,896	13,076	12,630	12,892	13,563	14,295	14,991	14,963	15,474
% change	14.3%	1.4%	-3.4%	2.1%	5.2%	5.4%	4.9%	-0.2%	3.4%
Total Global Demand	12,701	12,700	12,290	12,939	13,603	14,298	15,020	15,483	15,966
YoY % Change	18.1%	0.0%	-3.2%	5.3%	5.1%	5.1%	5.0%	3.1%	3.1%
Implied Surplus / (Deficit)	195	376	340	(47)	(40)	(3)	(29)	(520)	(493)
Total Reported Stocks	1,472	1,703	1,996	1,643	1,602	1,599	1,571	1,050	558
Weeks of Consumption (Western World)	11.3	13.2	16.0	12.8	12.2	11.9	11.5	7.6	4.0
Nominal LME Cash Price	\$0.98	\$0.99	\$0.88	\$0.87	\$0.95	\$1.00	\$1.25	\$1.50	\$1.50
Long Term Price (2019 and beyond) 2014 US\$									\$1.00

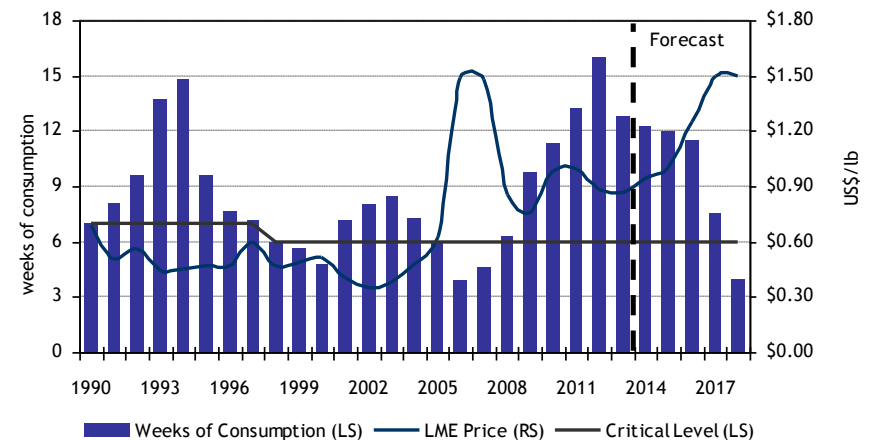
Global Zinc Supply/Demand and Prices



Global Zinc Supply/Demand



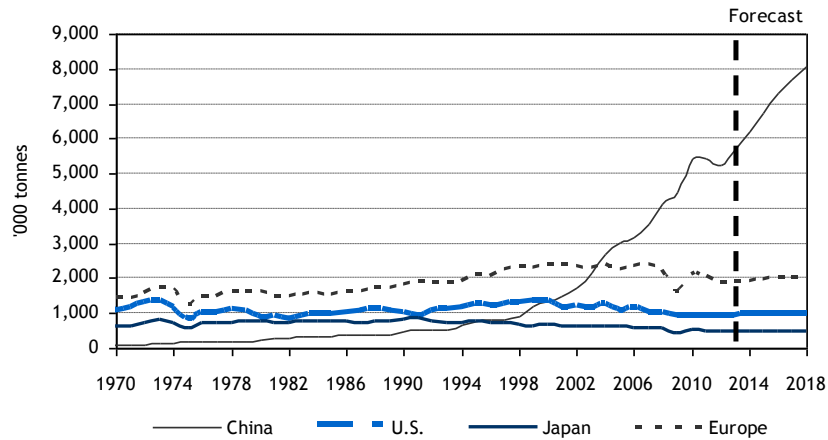
Total Zinc Inventories and Price



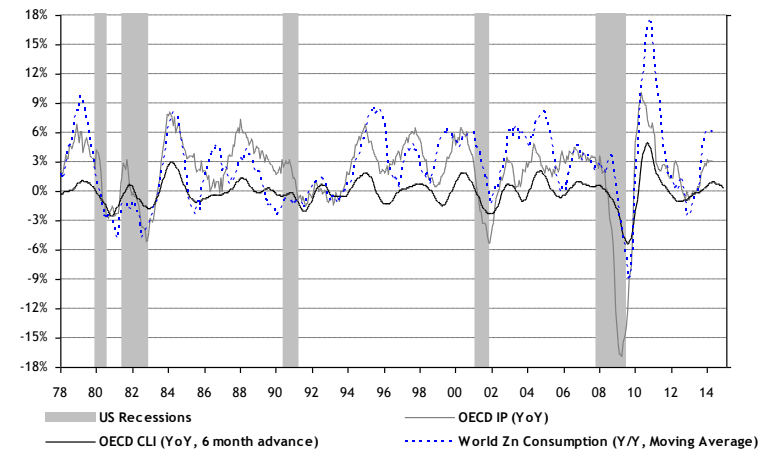
Source: Bloomberg, Brook Hunt, RBC Capital Markets estimates

Zinc Market Outlook

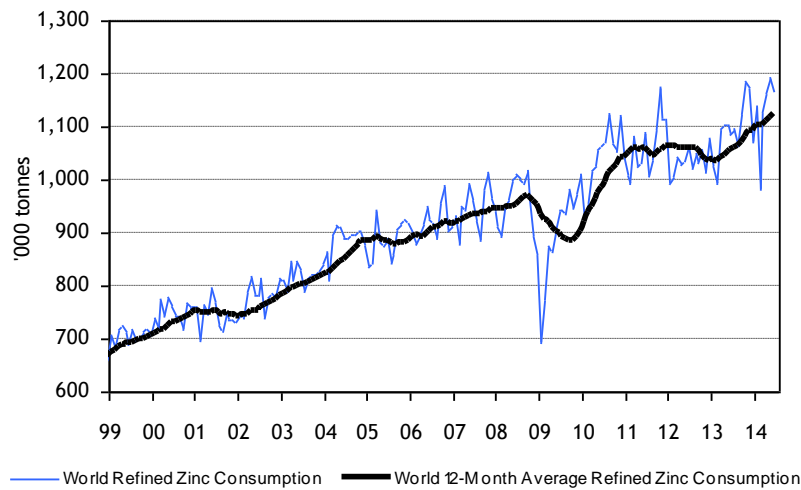
Zinc Consumption by Major Region



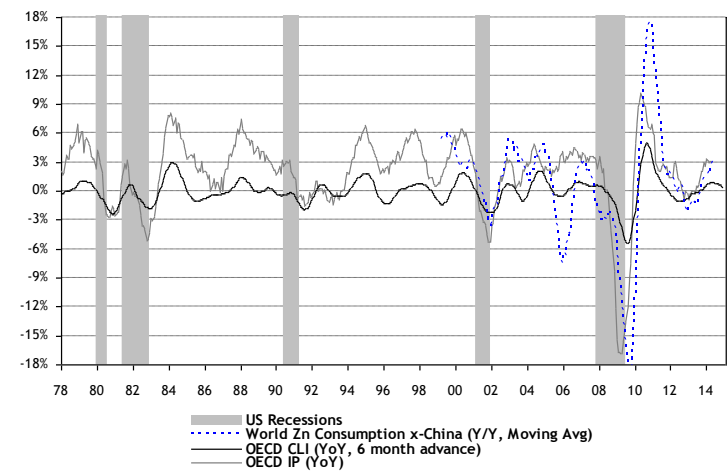
World Zinc Consumption and Economic Growth



Zinc Consumption



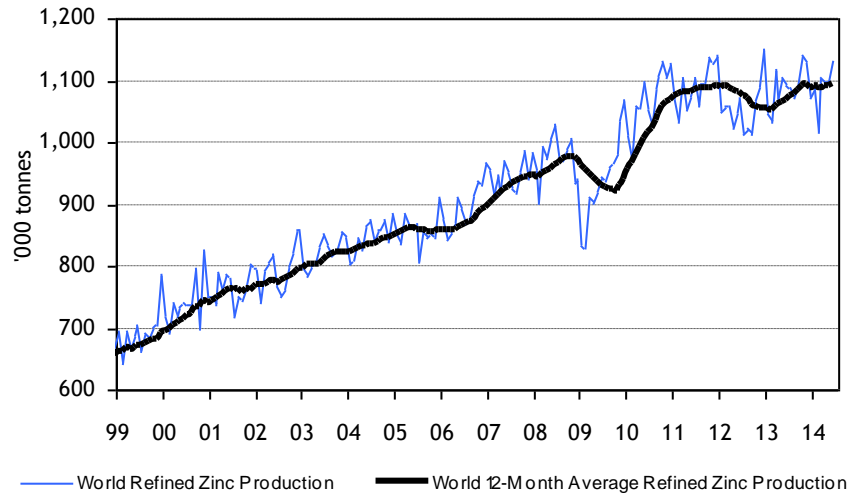
World Zinc Consumption ex-China and Economic Growth



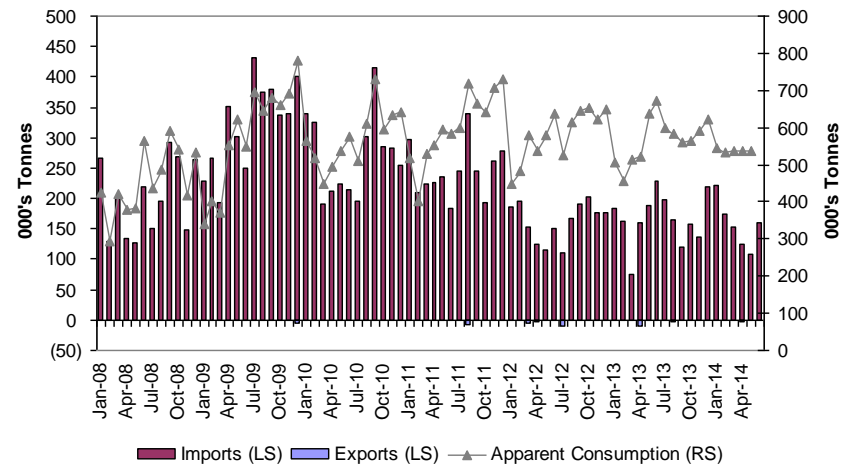
Source: Bloomberg, Brook Hunt, RBC Capital Markets estimates

Zinc Market Outlook

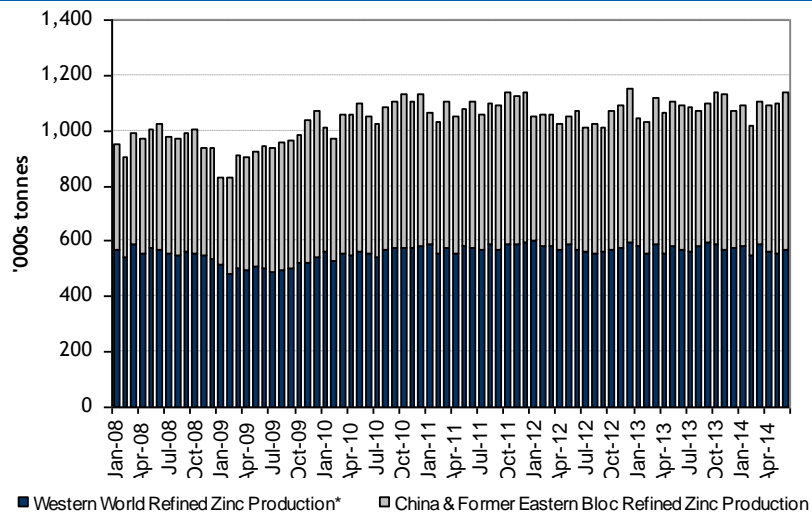
Refined Zinc Production



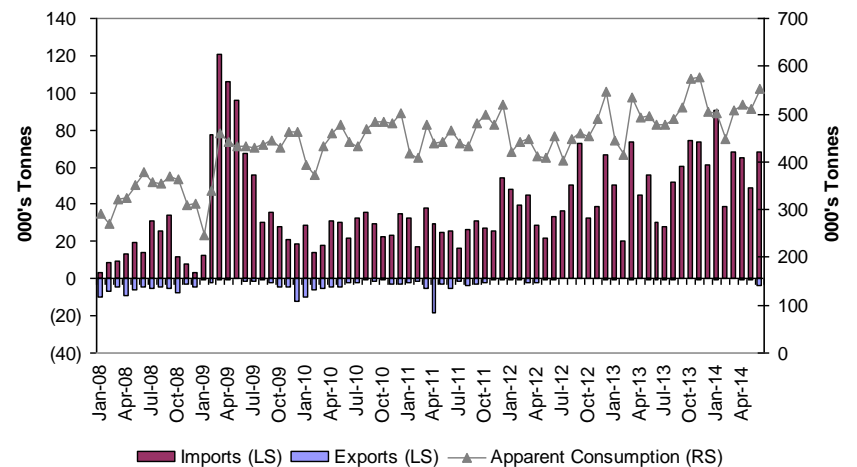
Chinese Zinc Concentrate Net Imports and Consumption



Refined Zinc Production



Chinese Refined Zinc Net Imports and Consumption

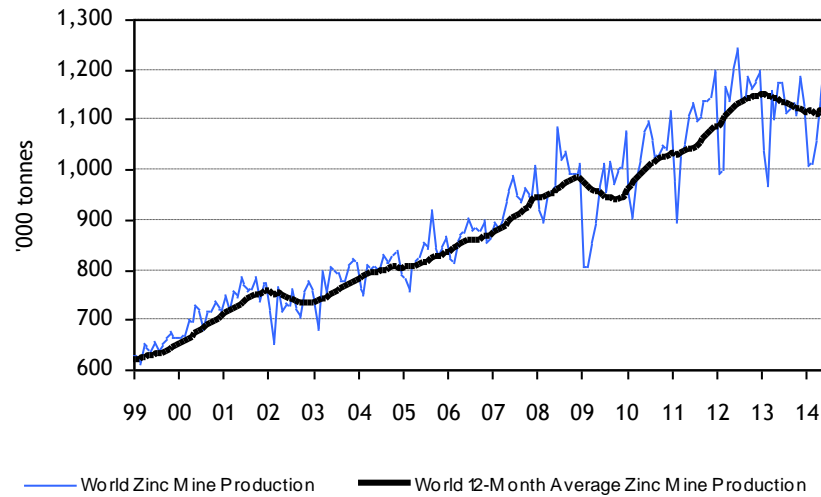


*Western World not reported in July and Aug 2011. Only World production.

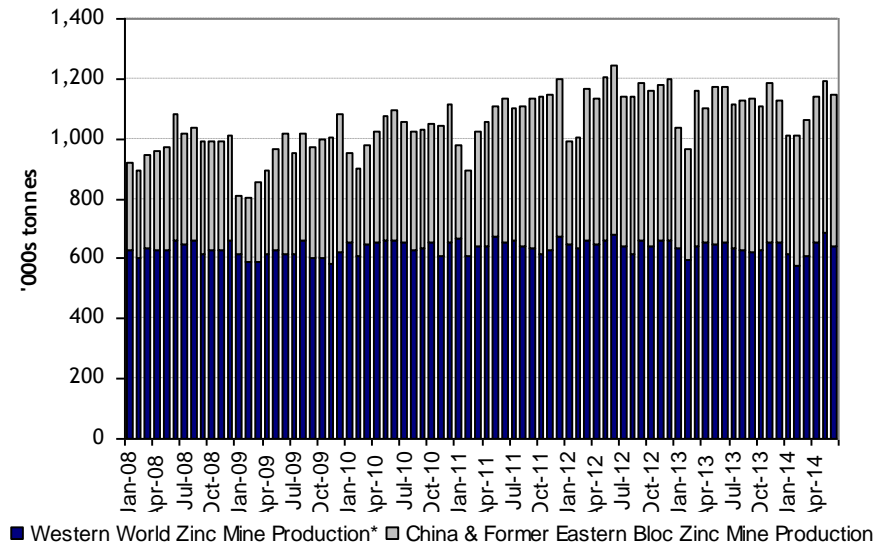
Source: Bloomberg, Brook Hunt

Zinc Market Outlook

Zinc Mine Production



Zinc Mine Production (kt/month)

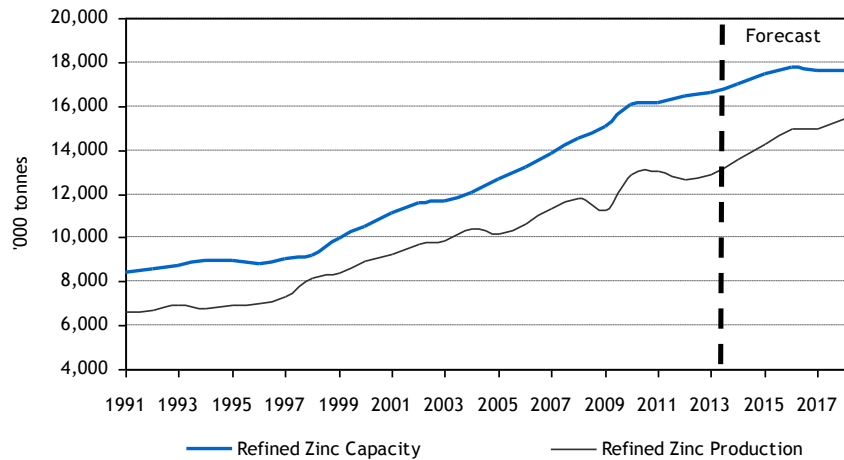


Source: Bloomberg, Brook Hunt

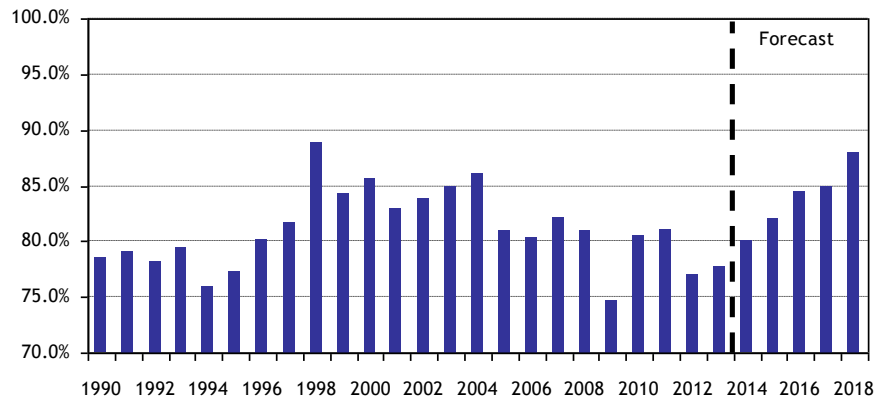
*Western World not reported in July and Aug 2011. Only World production.

Zinc Market Outlook

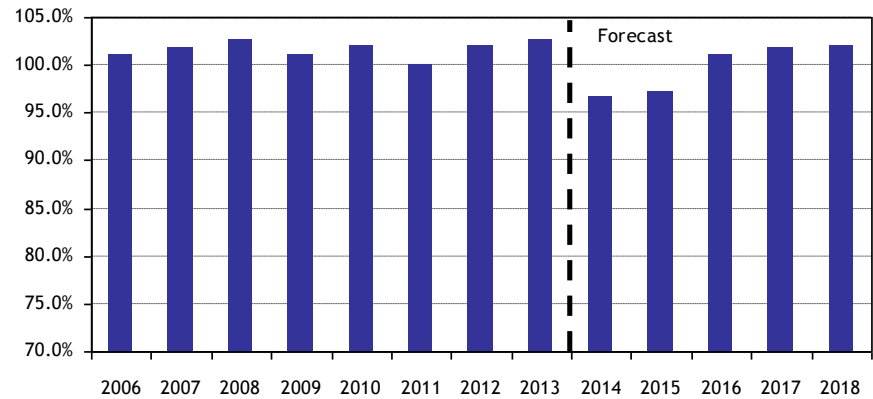
Global Zinc Smelter Capacity and Production



Global Zinc Smelter Capacity Utilization



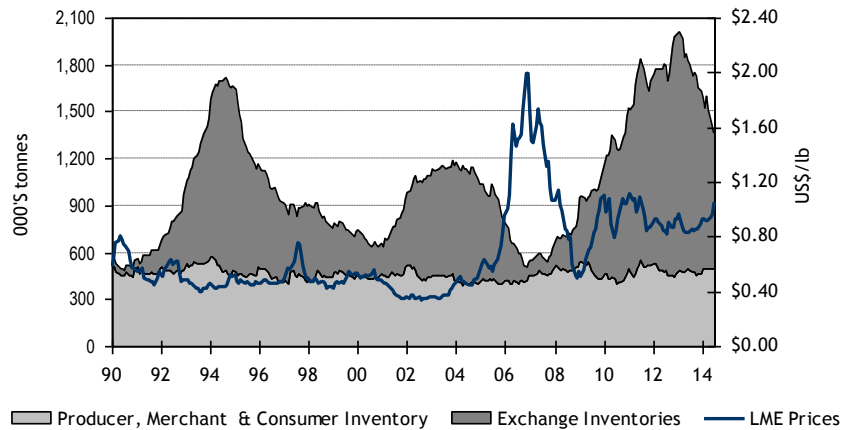
Global Zinc Mine Capacity Utilization



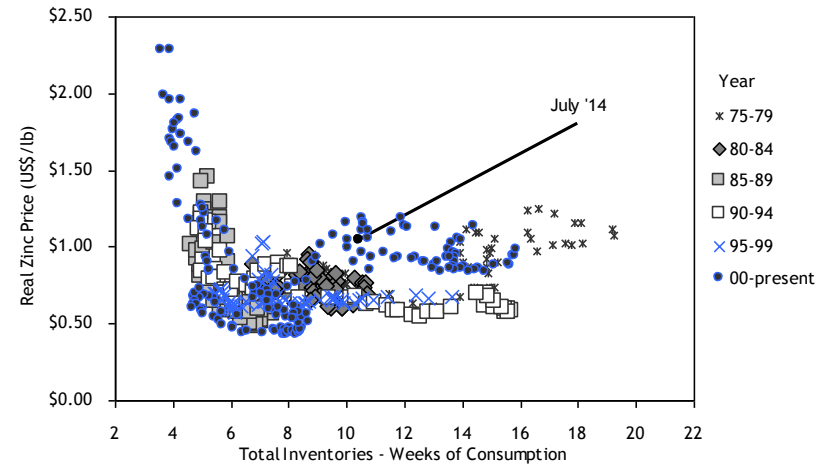
Source: Bloomberg, Brook Hunt, RBC Capital Markets estimates

Zinc Market Outlook

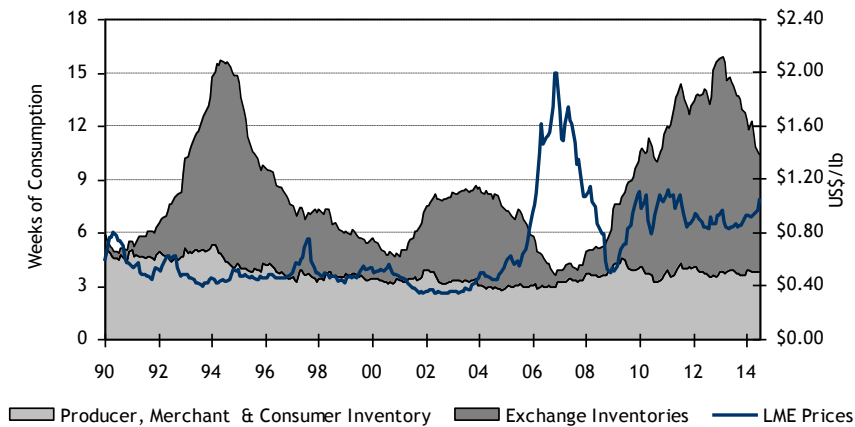
Zinc Inventory and Price



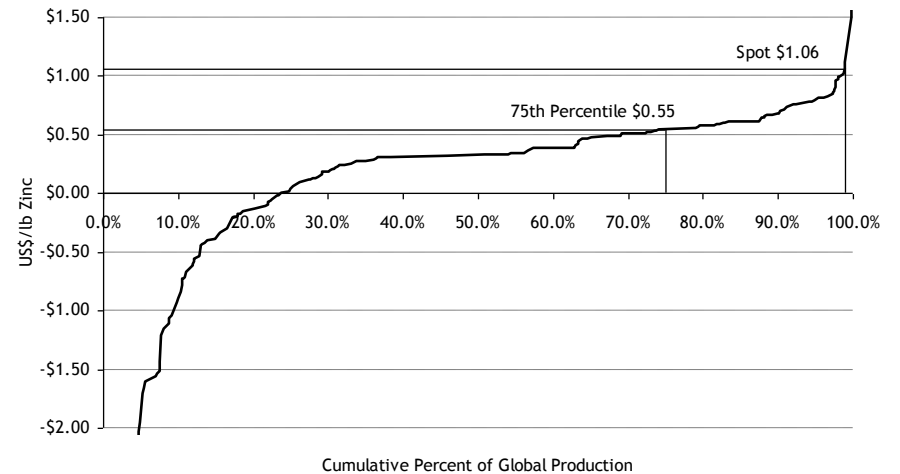
Total Zinc Inventories vs. Real Price



Zinc Inventory in Weeks of Consumption and Price



2014E Zinc Cash Costs (C1)



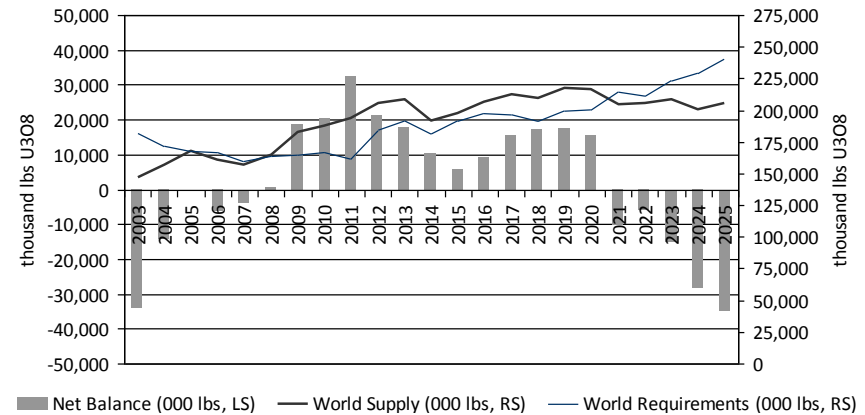
Source: Bloomberg, Brook Hunt, RBC Capital Markets estimates

Uranium Market Outlook

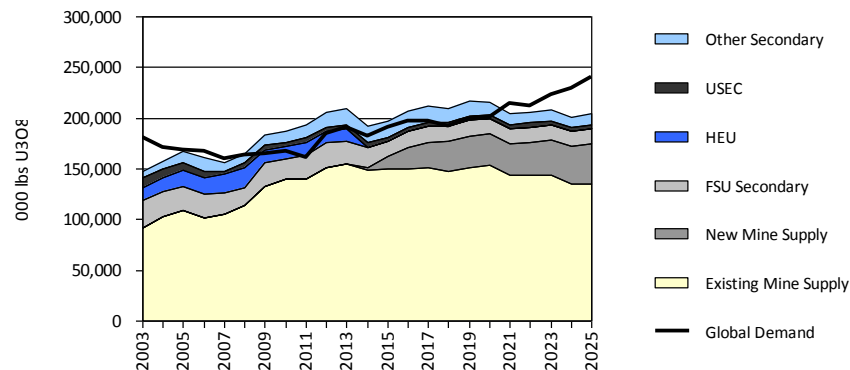
Uranium Supply/Demand Balance

	2012	2013	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E
Supply:										
Mine Supply	151.82	154.34	151.81	162.82	171.36	175.56	177.47	182.36	185.08	175.11
Non-Mine Supply	54.07	54.63	40.14	34.33	35.37	36.83	31.59	34.70	31.06	29.10
Total U₃O₈ Supply	205.89	208.97	191.95	197.15	206.73	212.40	209.06	217.06	216.15	204.20
% Change year/year	6.2%	1.5%	-8.1%	2.7%	4.9%	2.7%	-1.6%	3.8%	-0.4%	-5.5%
Demand:										
Reactor Demand	184.87	191.25	181.76	191.47	197.38	197.02	191.84	199.71	200.87	214.64
Total U₃O₈ Demand	184.87	191.25	181.76	191.47	197.38	197.02	191.84	199.71	200.87	214.64
% Change year/year	14.4%	3.5%	-5.0%	5.3%	3.1%	-0.2%	-2.6%	4.1%	0.6%	6.9%
Market Balance (World Basis)	21.0	17.7	10.2	5.7	9.4	15.4	17.2	17.3	15.3	-10.4
Average Spot Price (US\$/lb U ₃ O ₈)	\$48.83	\$38.44	\$31.50	\$40.00	\$40.00	\$40.00	\$45.00	\$50.00	\$70.00	\$80.00
Average Term Price (US\$/lb U ₃ O ₈)	\$60.72	\$54.46	\$45.00	\$50.00	\$50.00	\$50.00	\$55.00	\$60.00	\$75.00	\$85.00

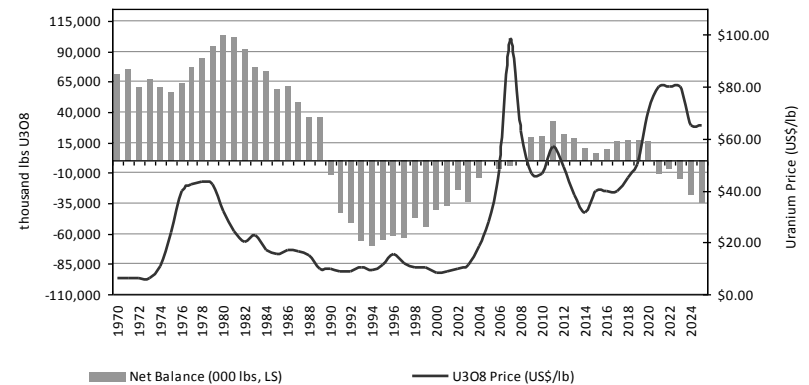
Uranium Supply/Demand Balance



Global U3O8 Supply Versus Demand



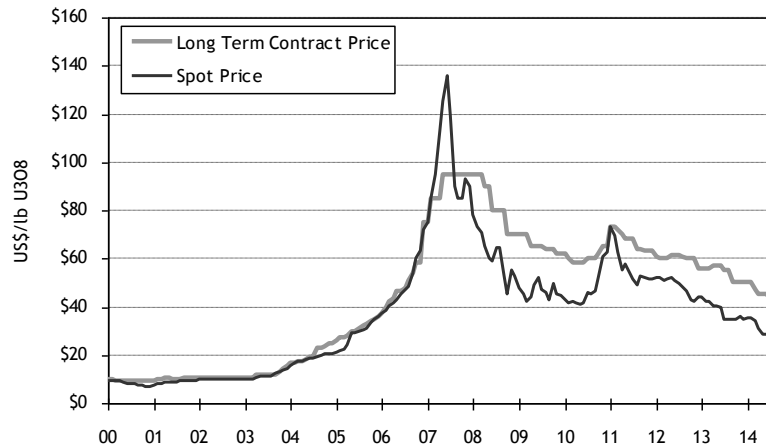
Uranium Market Balance and Price



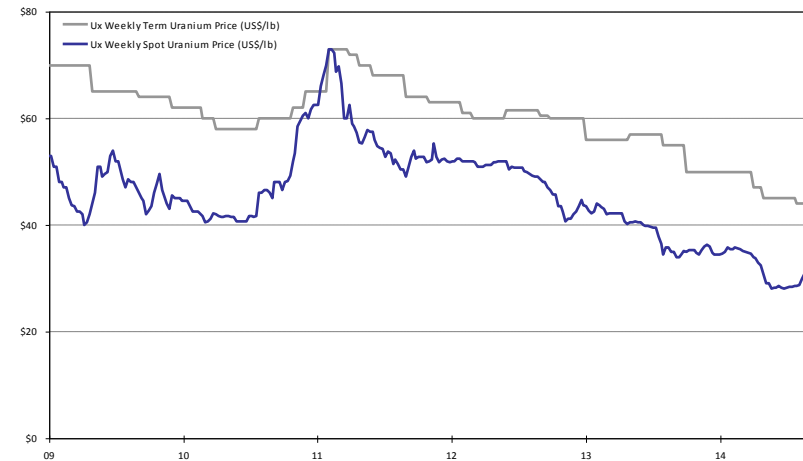
Source: RBC Capital Markets estimates, Ux Consulting, World Nuclear Association

Uranium Market Outlook

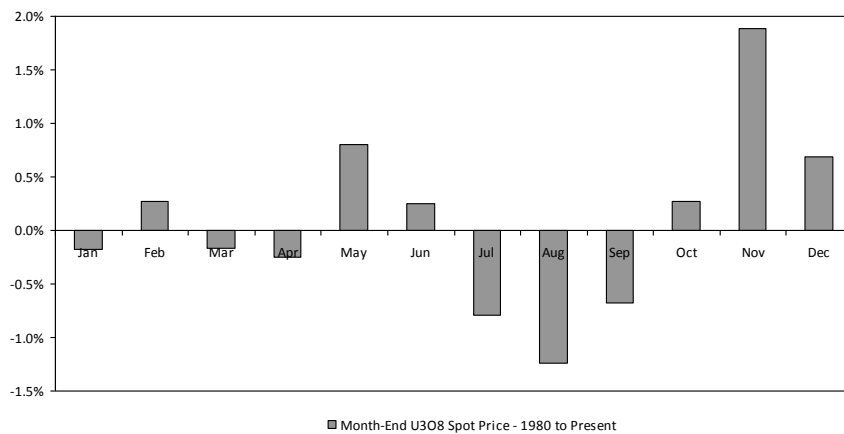
Uranium Spot and Term Contract Price



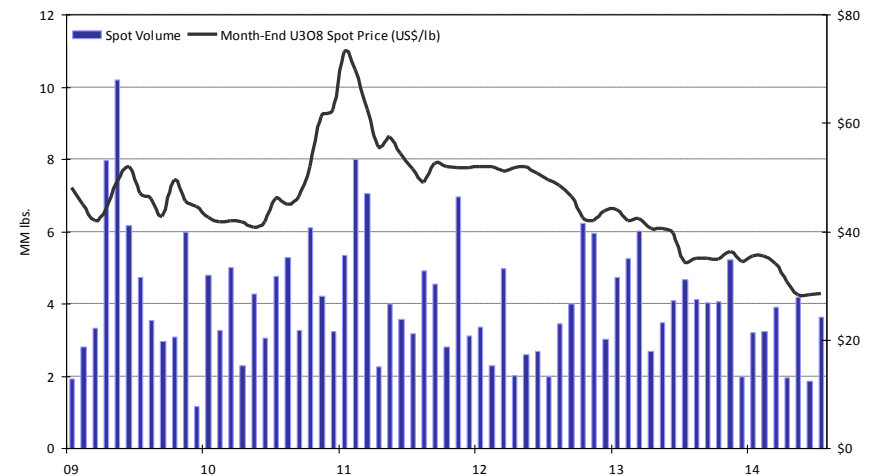
Spot vs. Term Contract Prices (2009 – 2014)



Uranium Spot Price Average Monthly Returns (1980 – 2014)



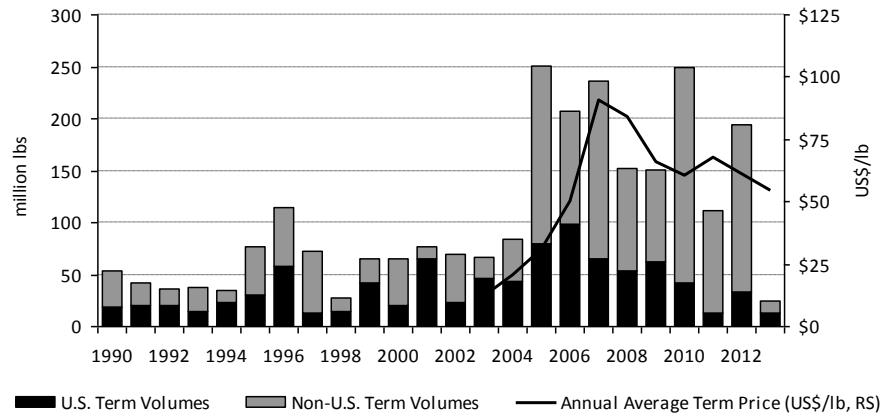
Monthly Spot Volume vs. Price (2009 – 2014)



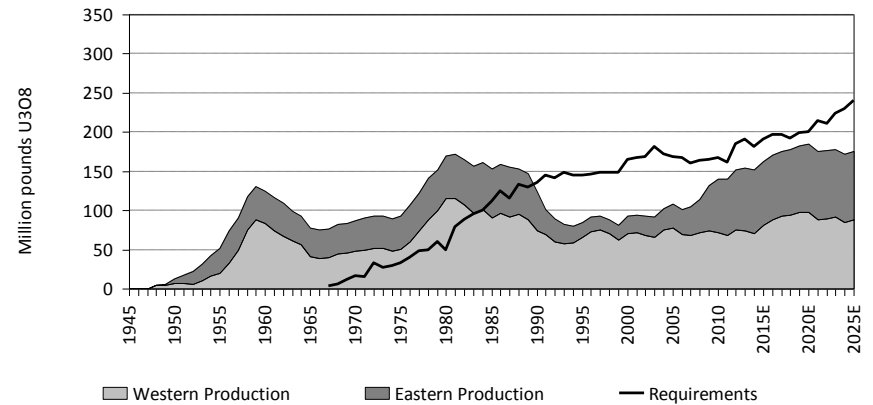
Source: RBC Capital Markets estimates, Ux Consulting

Uranium Market Outlook

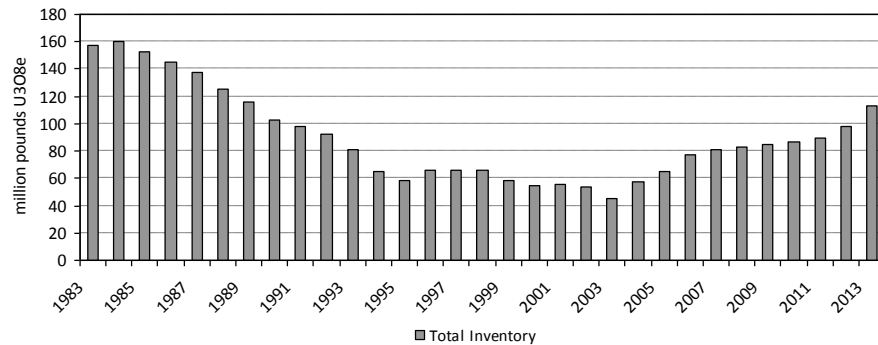
Annual Term Volume vs. Price



Long-Term Uranium Production and Requirements



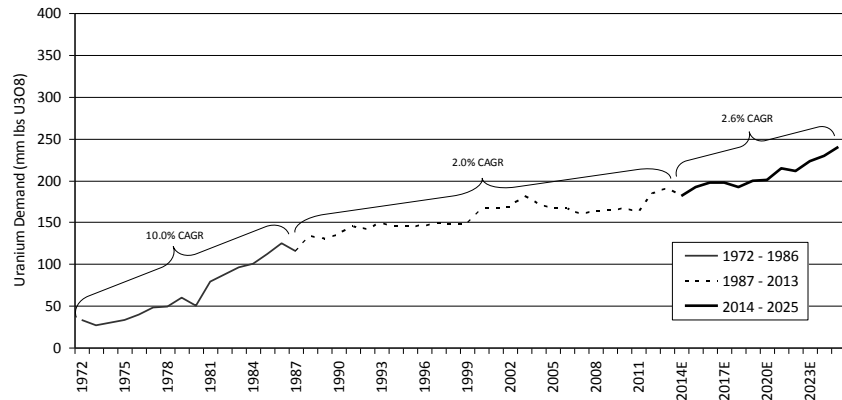
US Utility Annual Inventory Levels



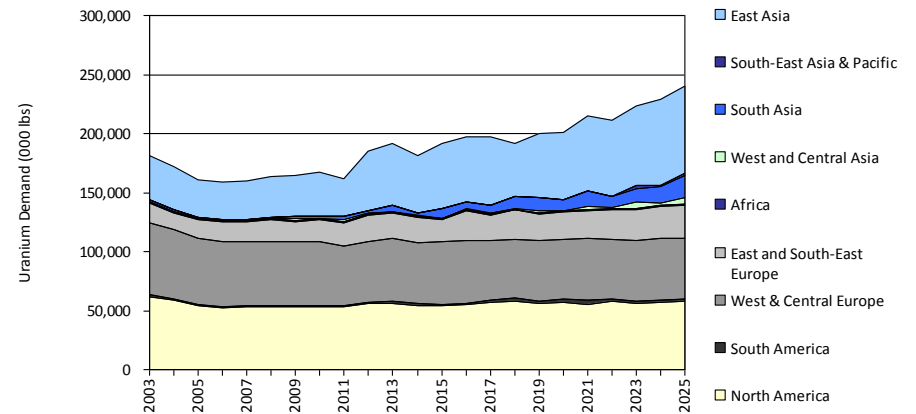
Source: RBC Capital Markets estimates, Ux Consulting, World Nuclear Association, US DOE EIA

Uranium Market Outlook

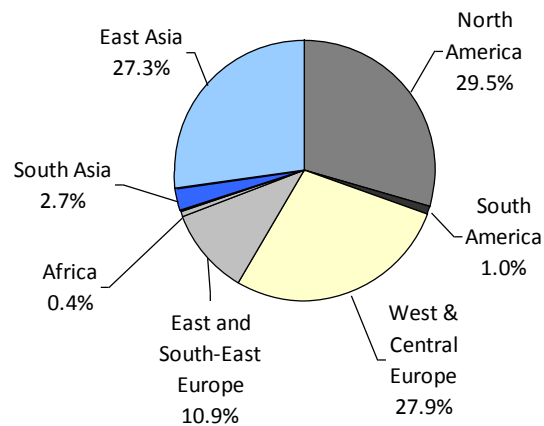
Uranium Demand Growth



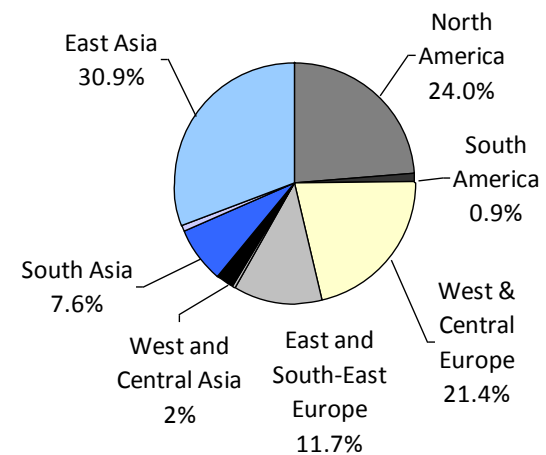
Forecast Uranium Demand by Region



Uranium Demand by Region – 2013A



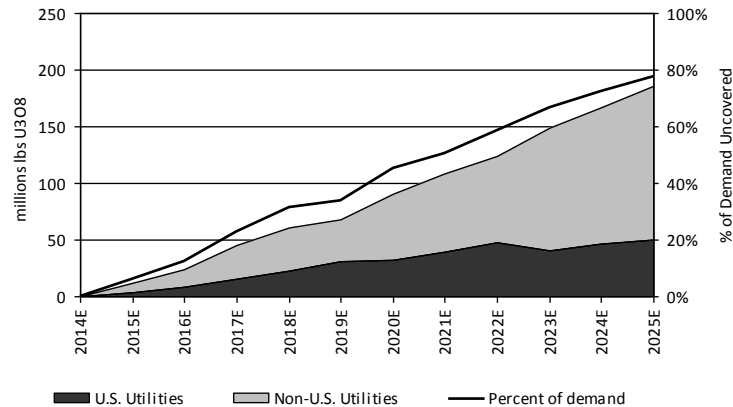
Uranium Demand by Region – 2025E



Source: Company reports, RBC Capital Markets estimates, Ux Consulting, World Nuclear Association

Uranium Market Outlook

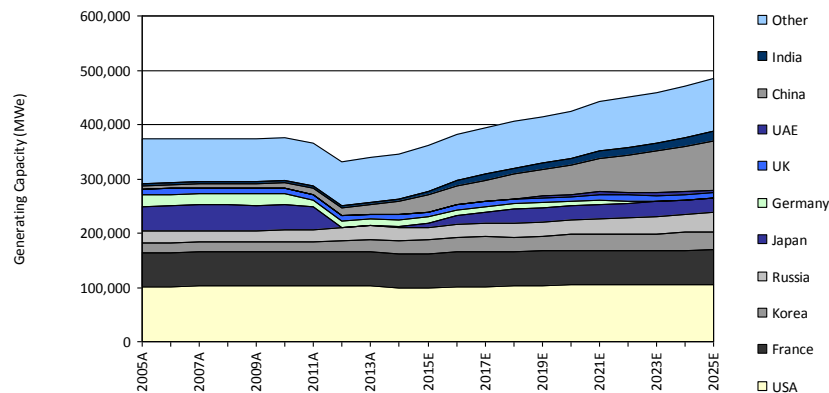
Global Uncovered Utility Requirements



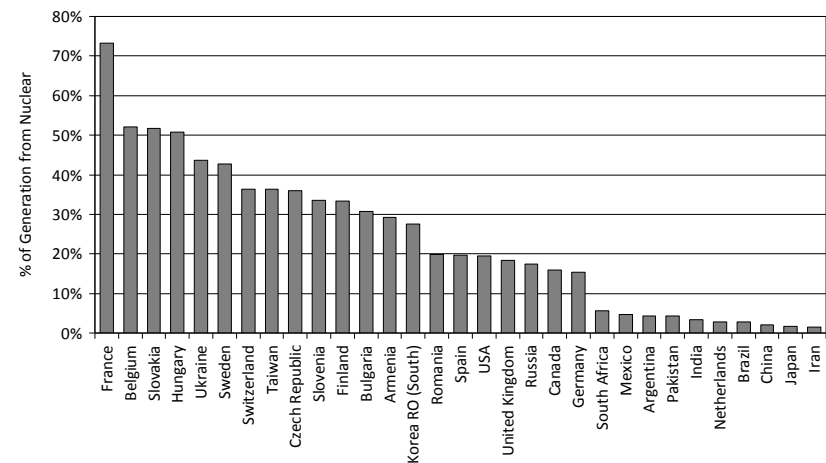
Nuclear Power Generation Current, Under Construction, and Planned

	NUCLEAR ELECTRICITY GENERATION 2013		REACTORS OPERABLE June 2014		REACTORS UNDER CONSTRUCTION June 2014		REACTORS PLANNED June 2014		REACTORS PROPOSED June 2014		TOTAL REACTORS Oper, Const, Planned, Prop	
	billion kWh	% total generation	No.	MWe	No.	MWe	No.	MWe	No.	MWe	No.	MWe
OECD North America	896	18	121	114,514	5	6,018	7	7,563	22	31,800	155	159,895
OECD Europe	829	27	131	121,573	4	4,362	19	24,000	30	41,620	184	191,555
Japan & Korea	146	11	71	63,225	8	9,906	15	21,677	3	4,145	97	98,953
China	105	2	20	17,055	29	33,035	57	61,235	118	122,000	224	233,325
India	30	3	21	5,302	6	4,300	22	21,300	35	40,000	84	70,902
Rest of World	352	9	70	52,942	21	19,917	52	51,780	101	106,805	244	231,444
TOTAL	2,359	12	434	374,611	73	77,538	172	187,555	309	346,370	988	986,074

Nuclear Generating Capacity by Country



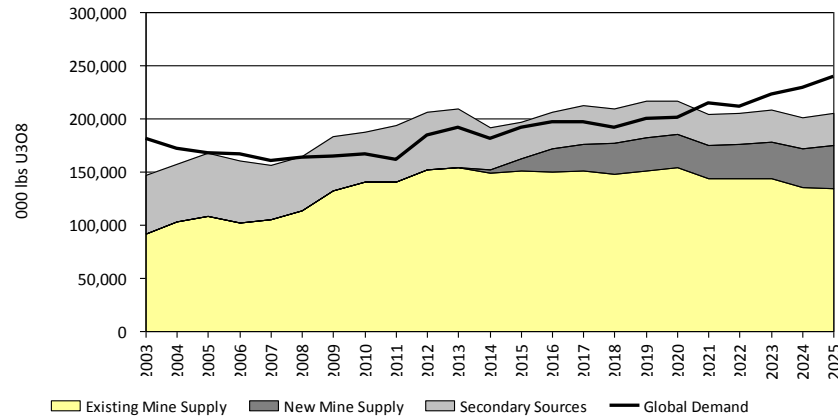
Nuclear Contribution to Electricity Generation



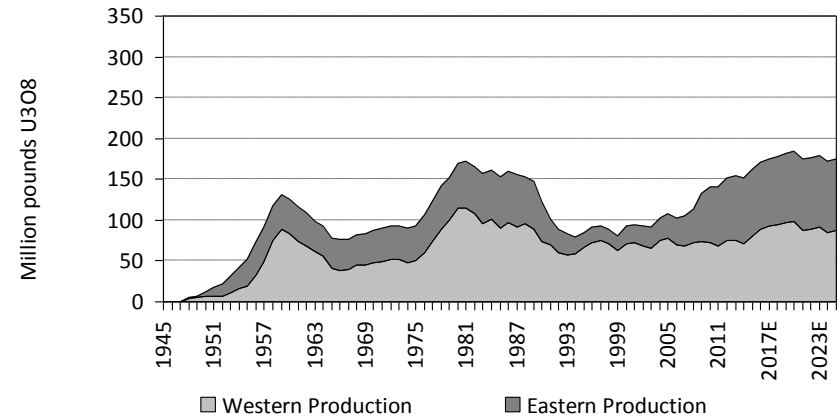
Source: Company reports, RBC Capital Markets estimates, Ux Consulting, World Nuclear Association

Uranium Market Outlook

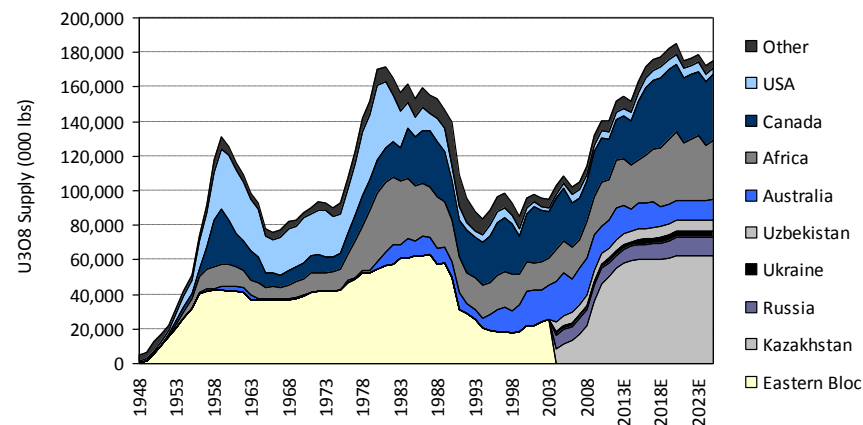
Mine Supply, Non-Mine Supply and Demand



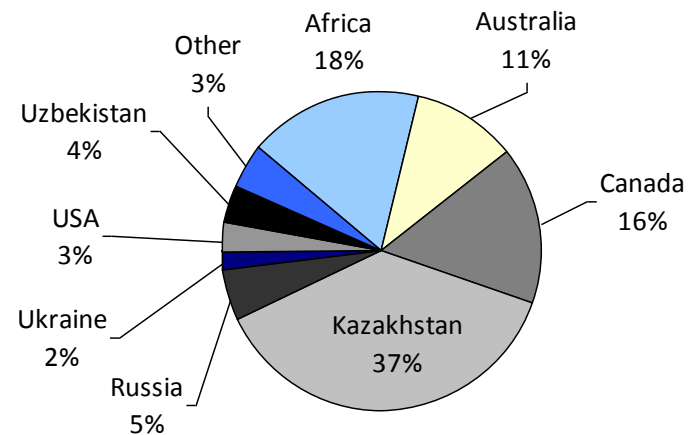
Long-Term Uranium Production – 1945 to 2025E



Production by Region – 1948 to 2025E



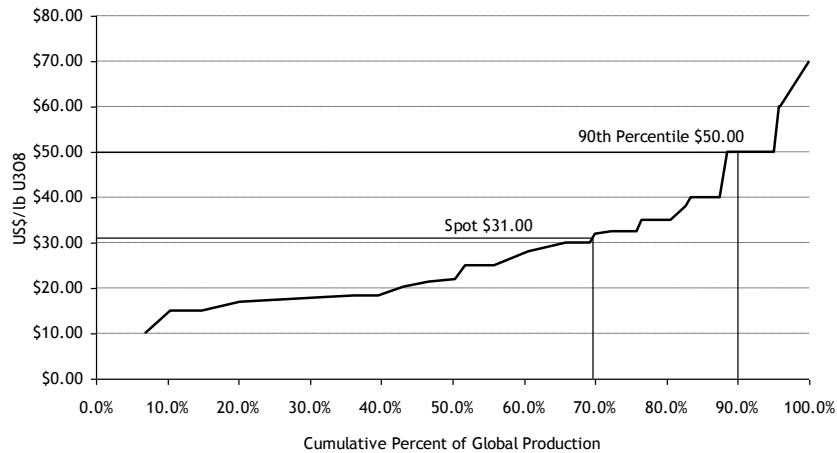
Production by Region – 2013A



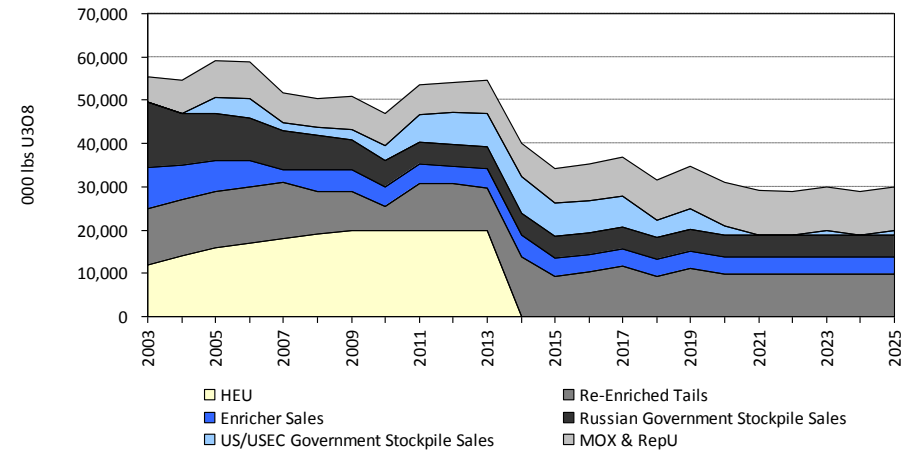
Source: Company reports, RBC Capital Markets estimates, Ux Consulting, World Nuclear Association

Uranium Market Outlook

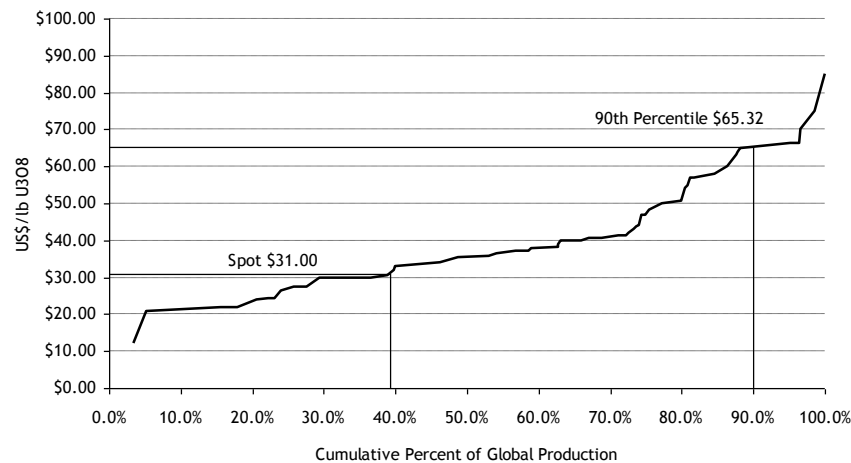
2014E Uranium Cash Cost Curve



Secondary Uranium Supply



Long-Term Uranium Cash Cost Curve



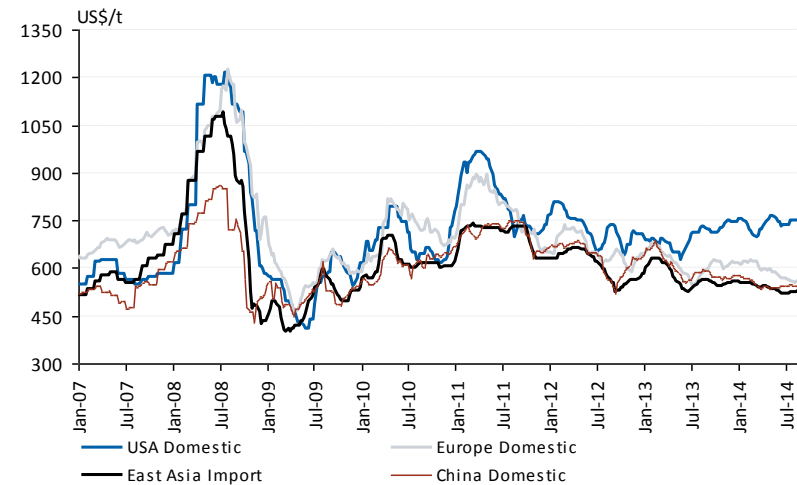
Source: Company reports, RBC Capital Markets estimates, Ux Consulting, World Nuclear Association

Steel Market Outlook

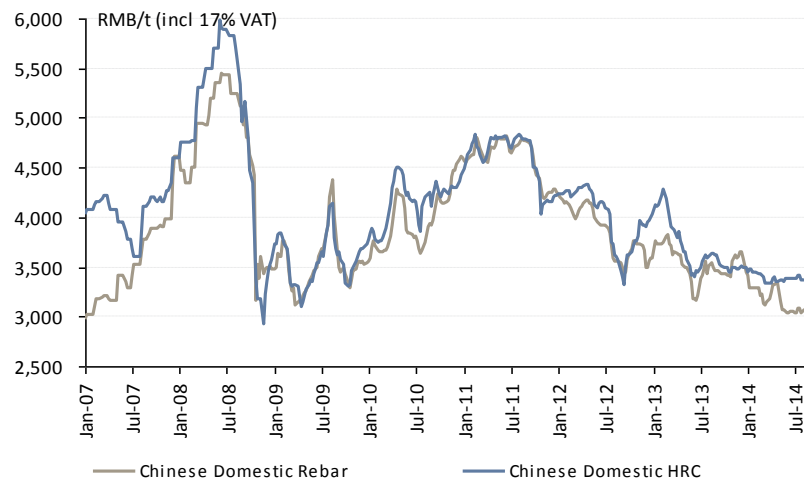
Global Steel Production

Global Steel Production (mt)	2009	2010	2011	2012	2013	2014E	2015E	2016E	2017E
China	568	639	683	709	779	802	826	851	868
<i>Chinese production growth rate</i>	13%	12%	7%	4%	10%	3%	3%	3%	2%
Japan	88	110	108	107	111	113	115	117	120
India	57	67	72	77	81	84	88	91	95
Other Asia	64	78	91	90	88	90	94	97	101
European Union (27)	139	173	178	169	166	172	178	181	185
Other Europe	29	32	37	38	36	38	38	39	40
North America	82	111	119	122	119	122	124	127	129
South America	38	44	48	47	46	49	52	55	58
CIS	97	108	112	111	109	112	115	119	122
Africa, Middle East, Oceania	59	43	42	40	47	48	50	51	53
Total	1220	1405	1490	1510	1582	1631	1680	1729	1771
<i>Global growth</i>	-8%	15%	6%	1%	5%	3%	3%	3%	2%
<i>World ex-China (mt)</i>	652	766	807	801	803	828	853	878	903
<i>World ex-China growth</i>	-21%	17%	5%	-1%	0%	3%	3%	3%	3%

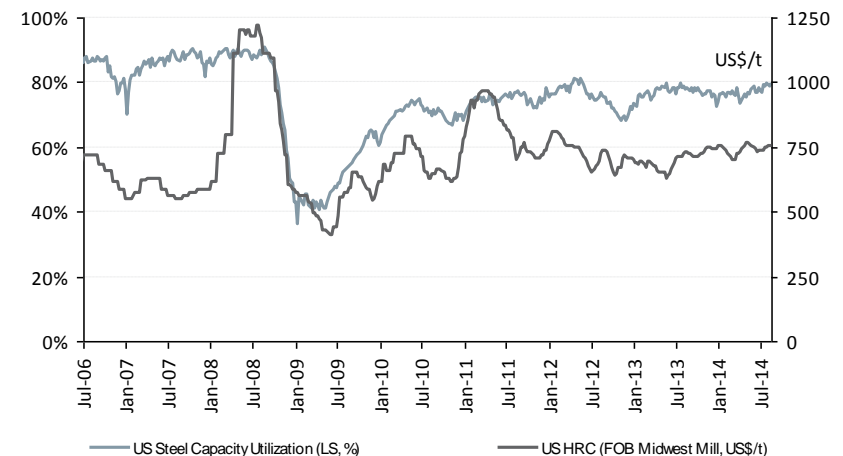
Regional HRC Prices



Chinese Steel Prices



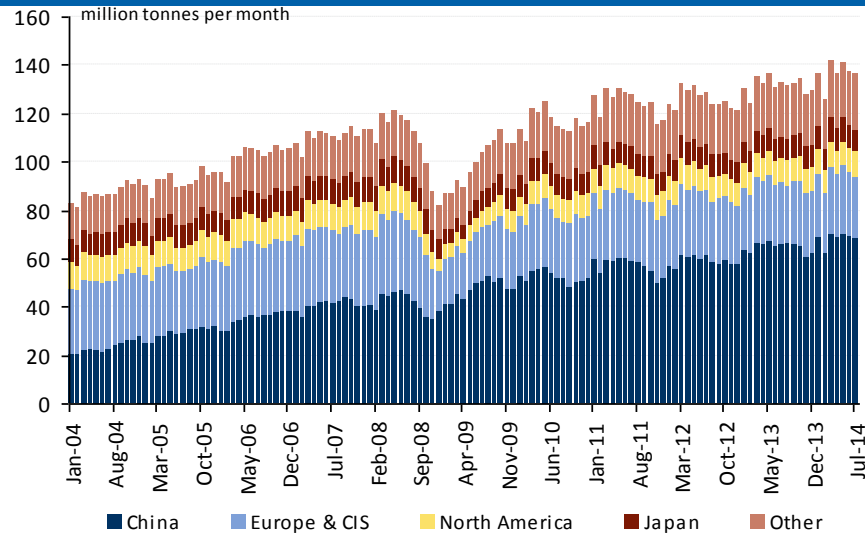
US Utilization and Prices



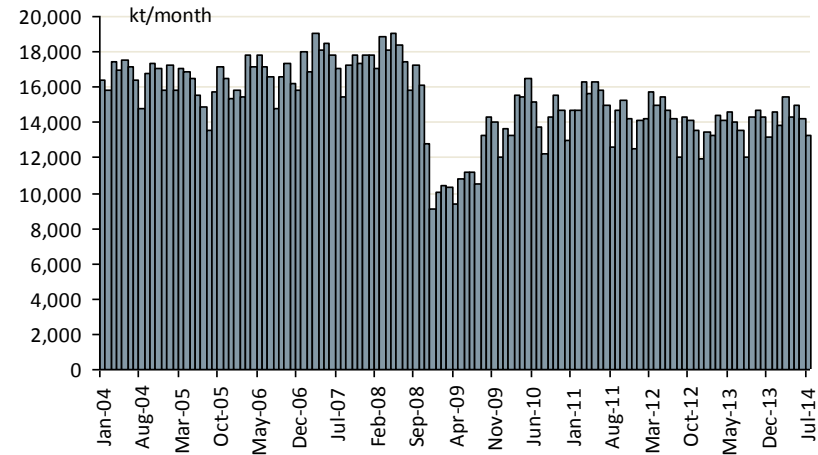
Source: CRU, Steel Business Briefing, WSA

Steel Market Outlook

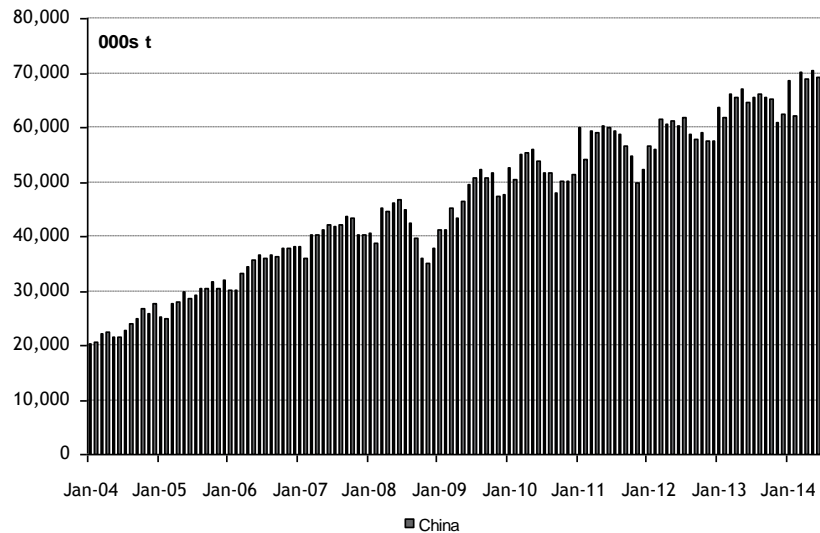
Global Steel Production



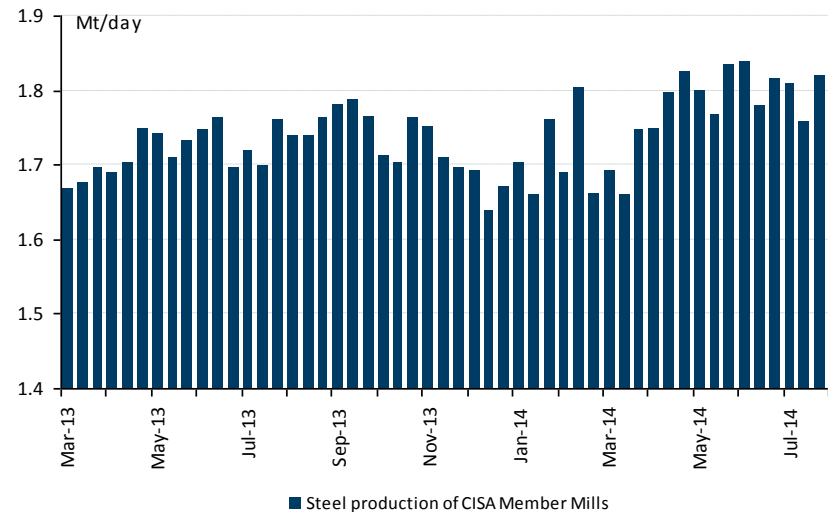
EU Steel Production



Chinese Steel Production



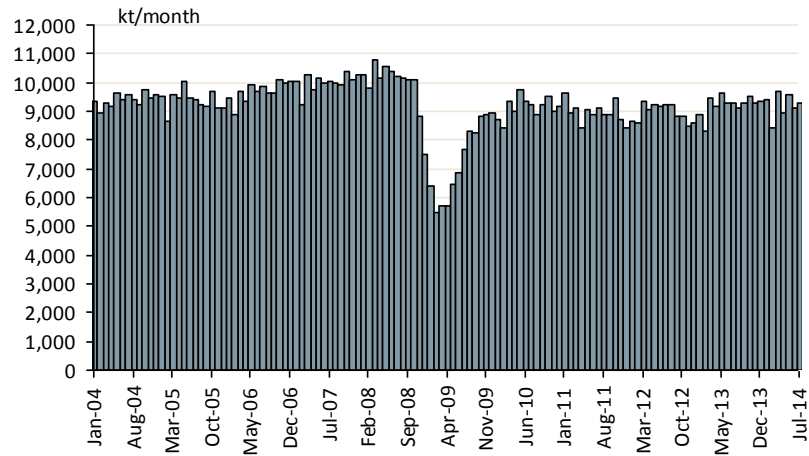
Chinese Average Daily Steel Production



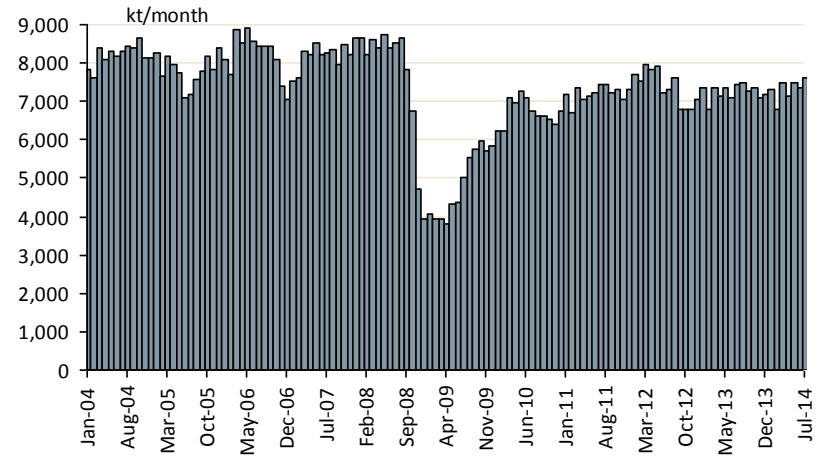
Source: CRU, Steel Business Briefing, WSA

Steel Market Outlook

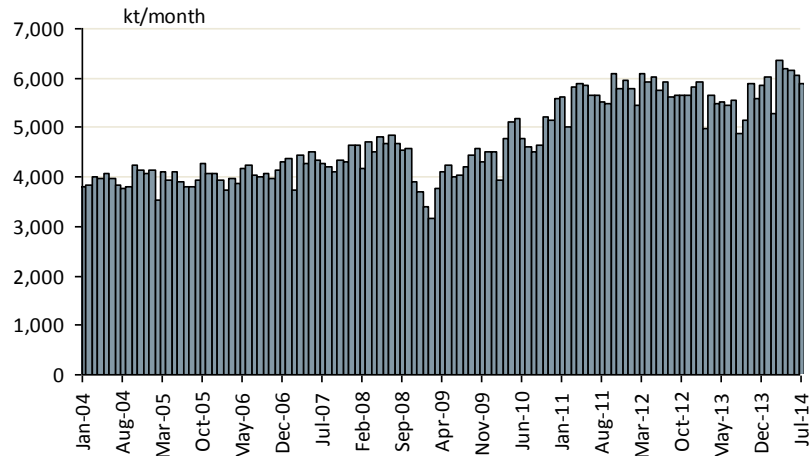
Japanese Steel Production



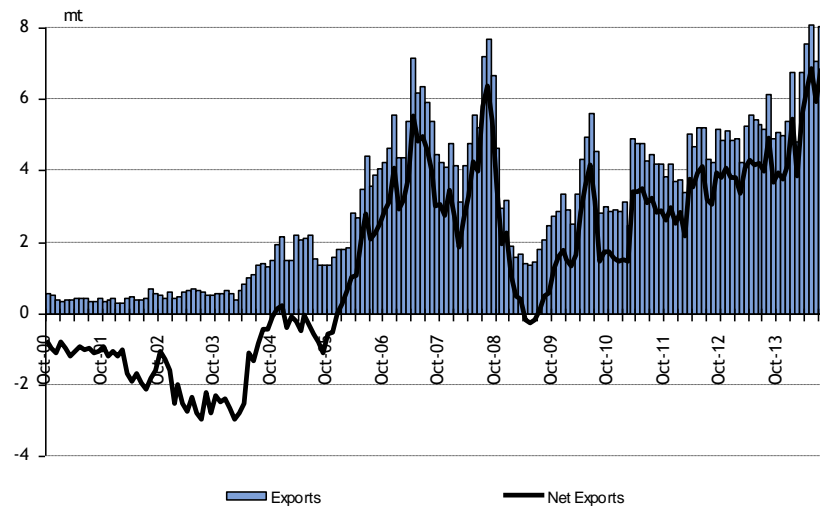
United States Steel Production



South Korean Steel Production



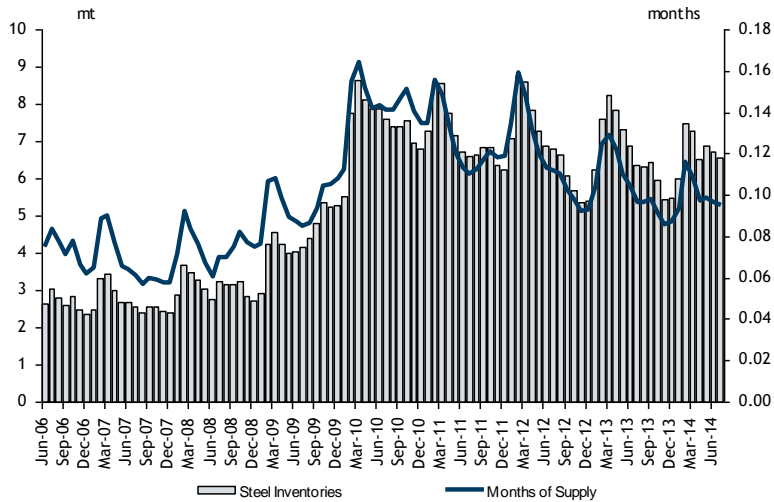
Chinese Steel Net Exports



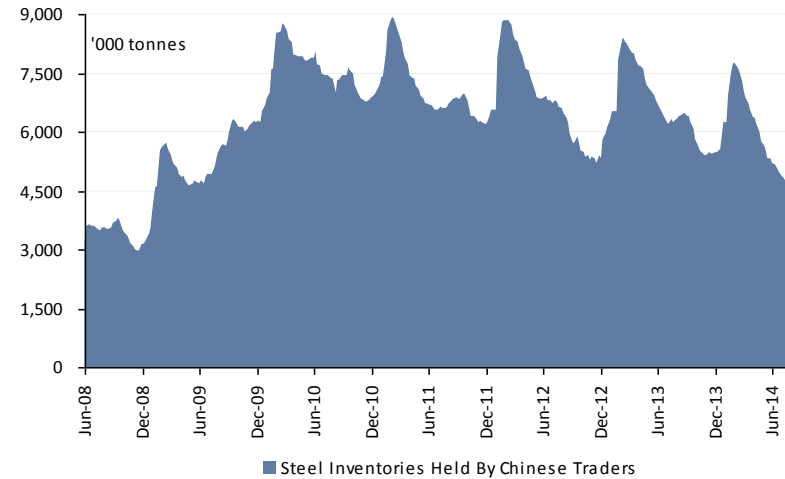
Source: CRU, Steel Business Briefing, WSA

Steel Market Outlook

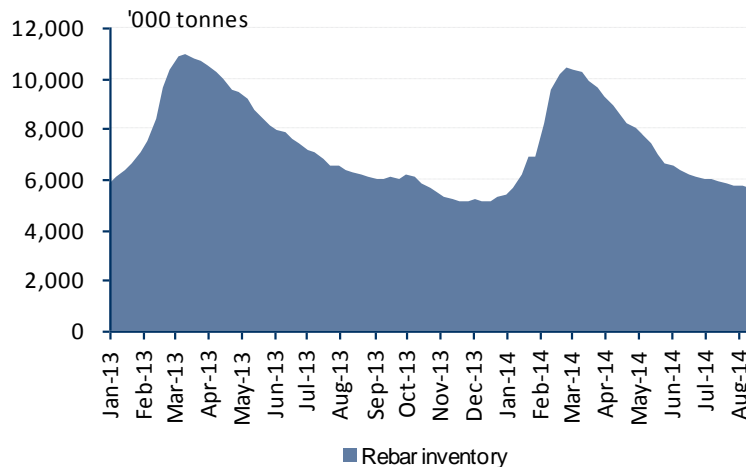
Chinese Steel Inventories



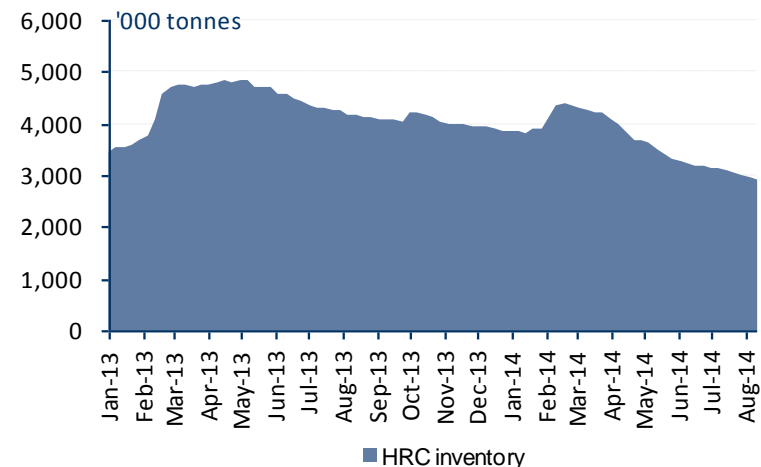
Chinese Steel Inventories Held at Ports



Rebar Inventory at Major Chinese Cities



HRC Inventory at Major Chinese Cities



Source: CRU, Steel Business Briefing, WSA

Iron Ore Market Outlook

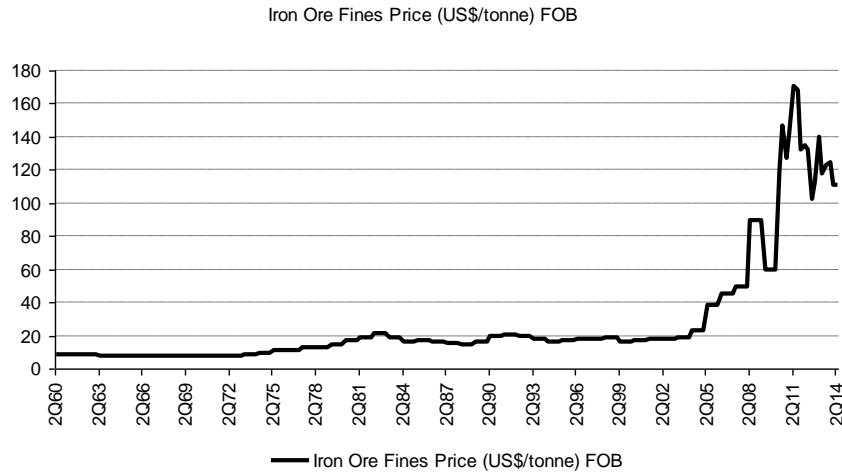
Iron Ore Supply/Demand

Iron Ore Supply (Mt)	2009	2010	2011	2012	2013	2014E	2015E	2016E	2017E		
Australia	393	430	461	494	586	710	763	814	844		
Brazil	273	306	336	340	346	358	395	405	439		
India	114	103	85	37	21	30	41	40	39		
Canada	30	30	35	36	45	55	60	60	61		
South Africa	45	50	50	54	59	59	58	58	58		
Sweden	15	20	25	25	25	25	25	25	25		
Rest of World	87	66	60	80	85	90	100	100	100		
Total Seaborne Supply	958	1,005	1,052	1,066	1,166	1,327	1,442	1,501	1,566		
Iron Ore Demand (Mt)	2009	2010	2011	2012	2013	2014E	2015E	2016E	2017E		
China	628	619	687	745	820	884	921	960	999		
Japan	99	131	128	131	135	138	141	143	146		
Korea	41	53	65	66	65	66	69	71	74		
Taiwan	12	19	21	21	20	21	22	22	23		
Europe	110	138	141	135	132	137	141	144	147		
Rest of World	67	45	46	47	47	48	50	51	53		
Total Seaborne Demand	958	1,005	1,088	1,144	1,219	1,294	1,343	1,392	1,442		
Implied balance (Mt)	0	1	(36)	(79)	(52)	33	99	110	123		
Price Forecast	2009	2010	2011	2012	2013	2014E	2015E	2016E	2017E	2018E	Long Term
Iron Ore Fines Spot (USD/dmt, 62% Fe, CFR China)	\$56.00	\$141.00	\$168.75	\$128.75	\$135.50	\$111.50	\$105.00	\$100.00	\$100.00	\$90.00	\$80.00
Iron Ore Fines (USD/dmt, 62% Fe, FOB Aus)	\$67.53	\$113.61	\$161.60	\$121.05	\$127.10	\$103.28	\$97.00	\$90.00	\$90.00	\$80.00	\$70.00
Freight Aus-China (US\$/t)	\$12.78	\$10.36	\$8.87	\$7.70	\$8.40	\$8.23	\$8.00	\$10.00	\$10.00	\$10.00	\$10.00
Freight Brazil-China (US\$/t)	\$31.55	\$26.29	\$22.29	\$19.65	\$20.58	\$20.58	\$20.00	\$22.00	\$22.00	\$22.00	\$20.00
1% Fe Differential Spot (US\$/dmt/%Fe)	\$3.99	\$5.31	\$4.92	\$2.91	\$2.36	\$2.00	\$2.50	\$2.50	\$2.50	\$2.50	\$3.00

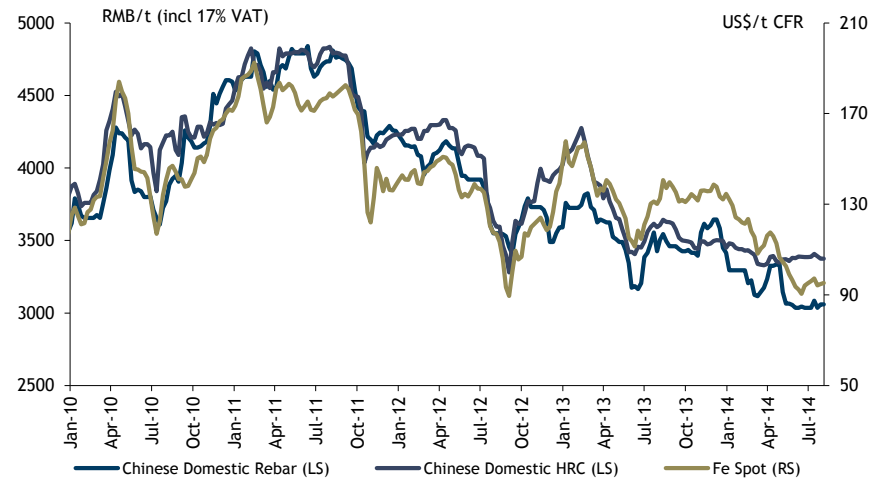
Source: CRU, Tex, RBC Capital Markets estimates, WSA

Iron Ore Market Outlook

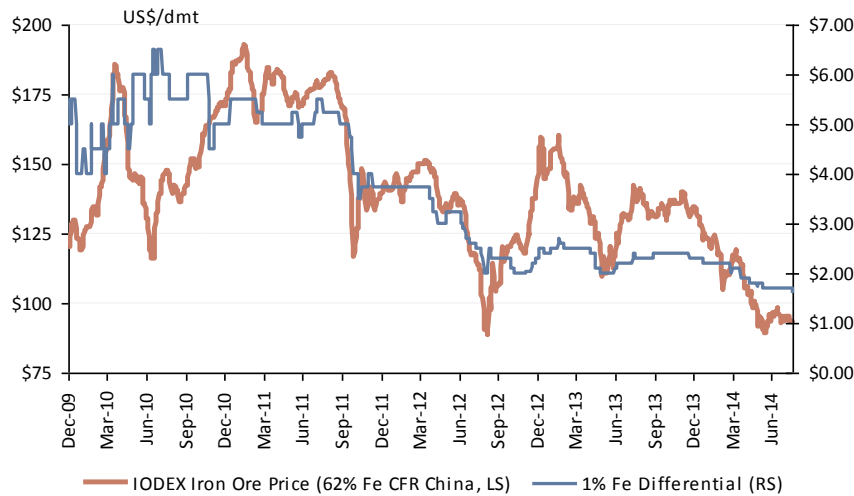
Historical Iron Ore Pricing



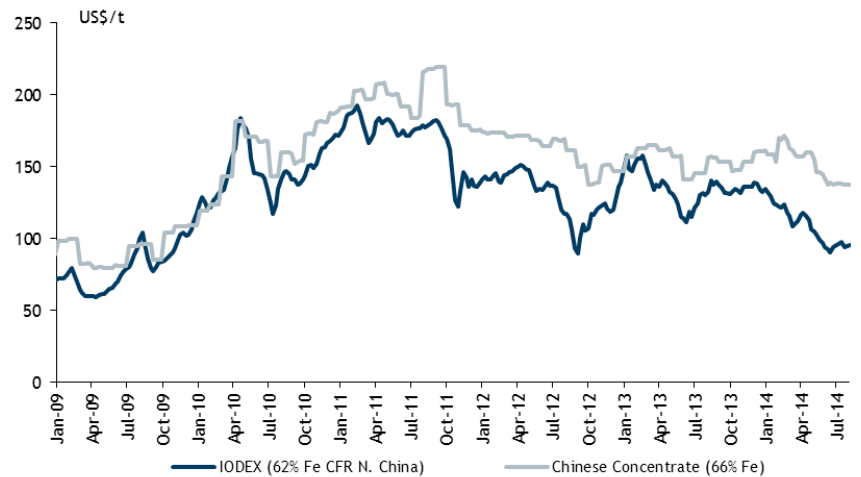
Chinese Steel vs. Spot Iron Ore Prices



Iron Ore Prices



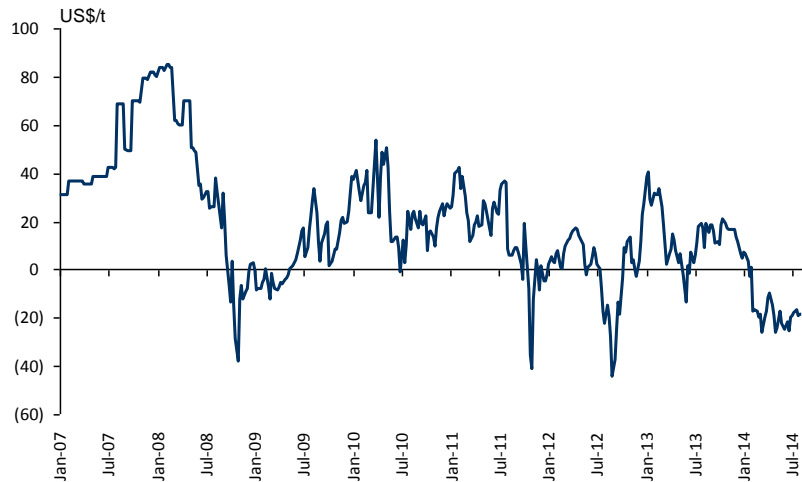
Seaborne vs. Chinese Domestic Iron Ore Prices



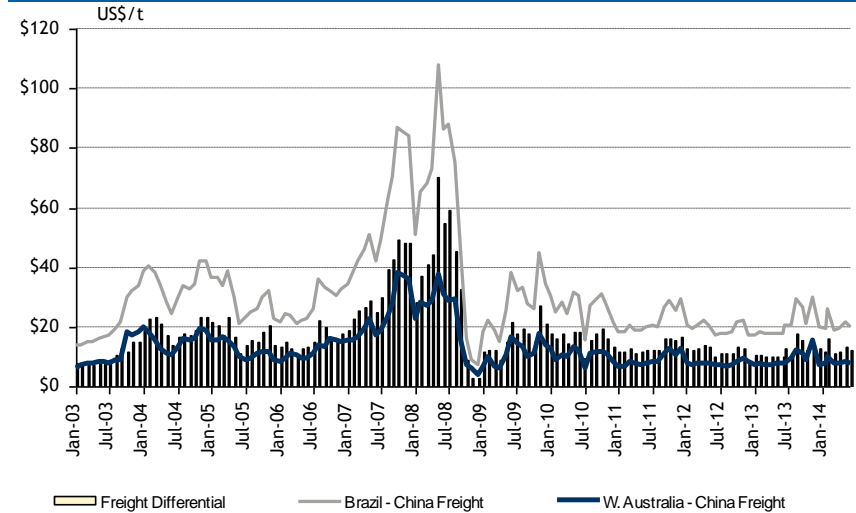
Source: RBC Capital Markets, WSA

Iron Ore Market Outlook

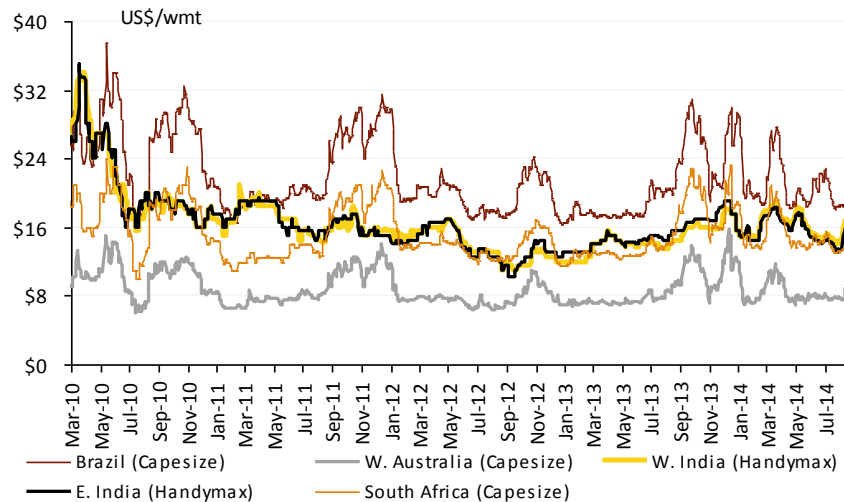
Seaborne vs. Chinese Domestic Price Spread



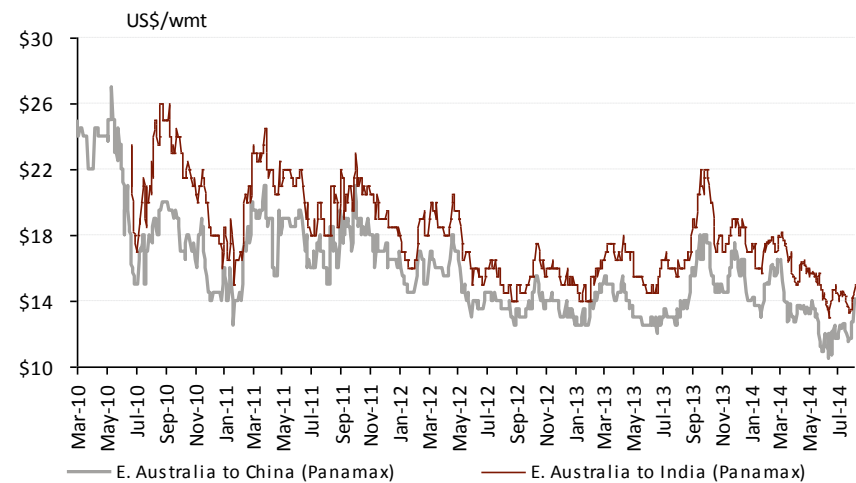
Iron Ore Freight Rates



Freight Rates to China



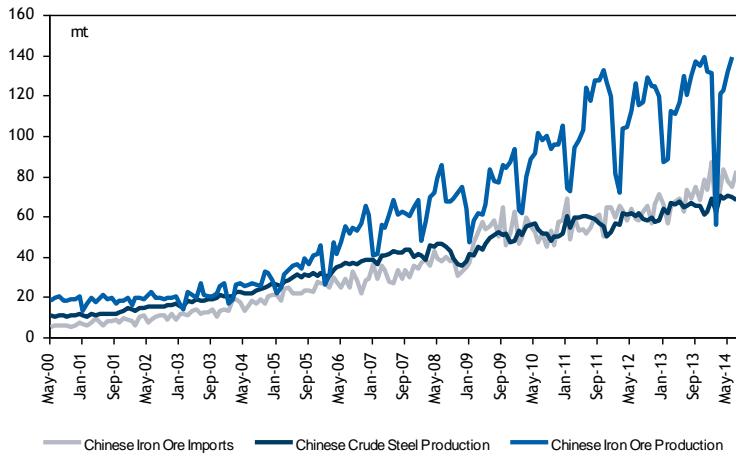
Freight Rates to China



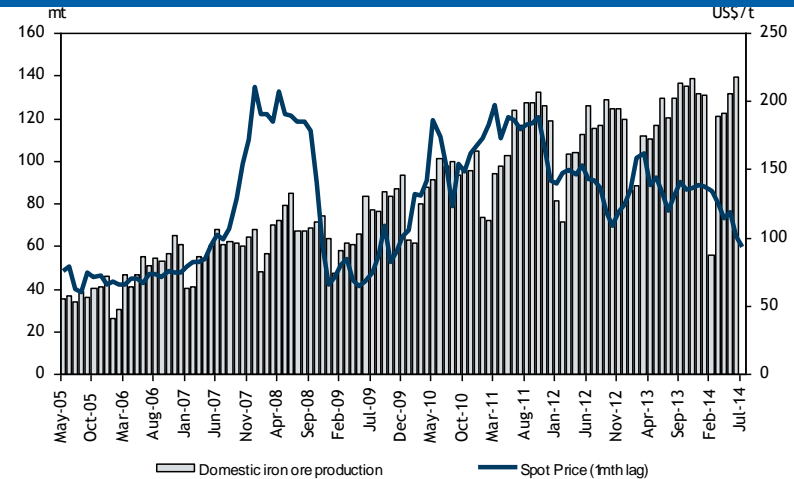
Source: RBC Capital Markets, WSA

Iron Ore Market Outlook

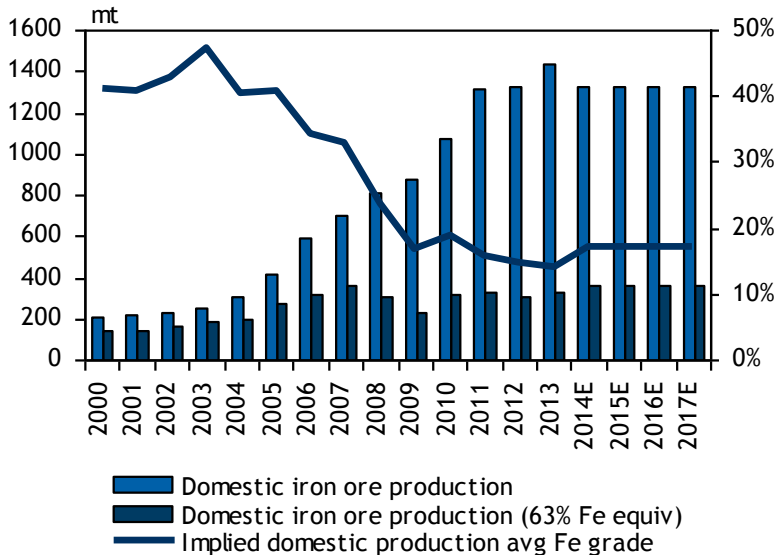
Chinese Iron Ore Production, Imports, and Steel Production



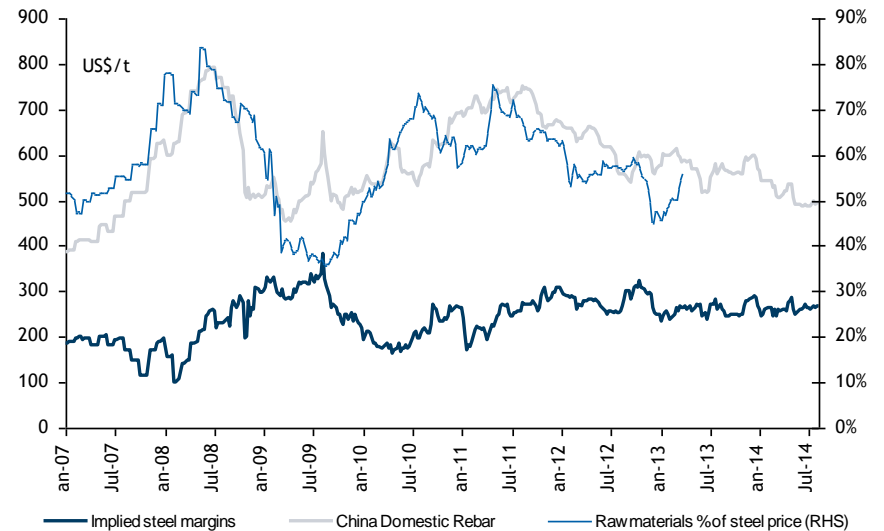
Chinese Iron Ore Production vs. Spot Fe Price



Implied Grades in China



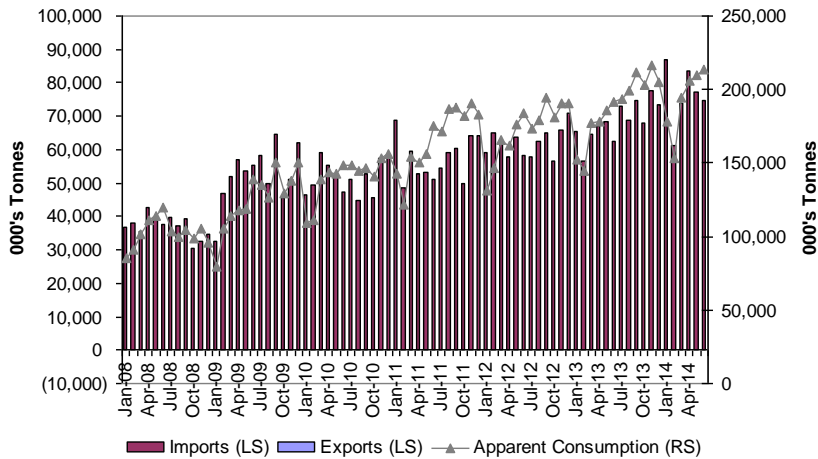
Chinese Steel Producer Margins



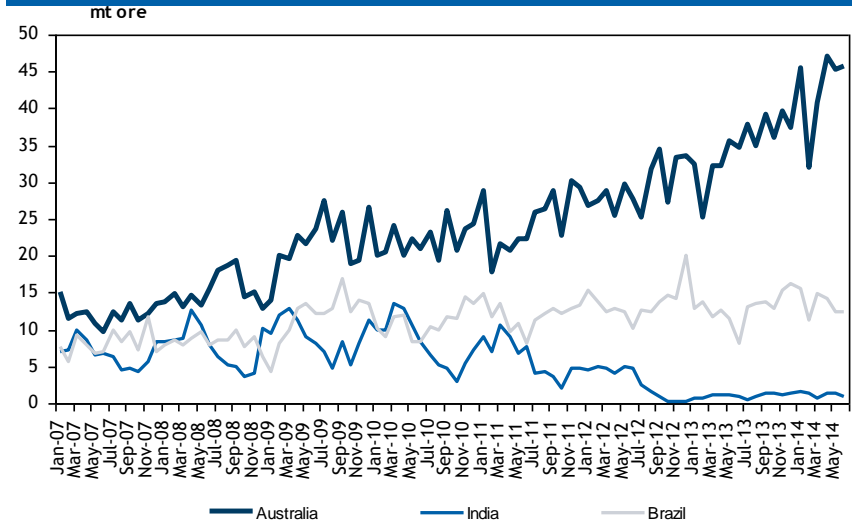
Source: RBC Capital Markets, WSA

Iron Ore Market Outlook

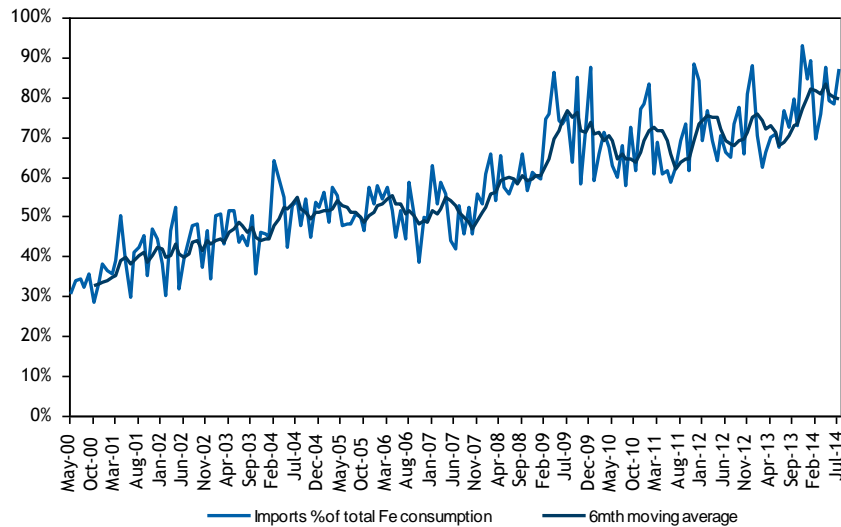
Chinese Iron Ore Net Imports and Consumption



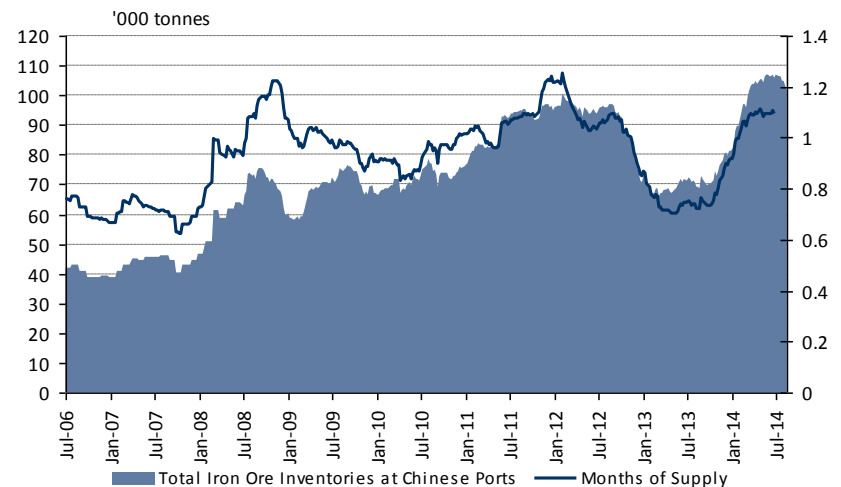
Chinese Iron Ore Imports by Country of Origin



Chinese Imports as % of Iron Ore Consumption



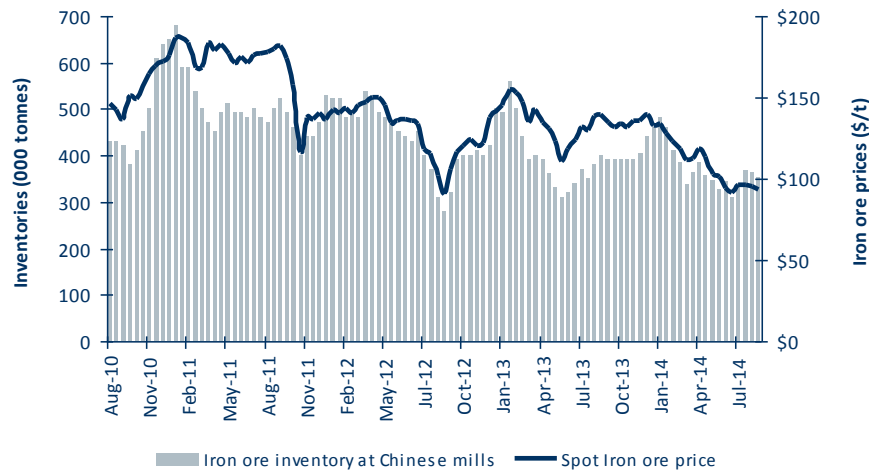
Iron Ore Inventories at Chinese Ports



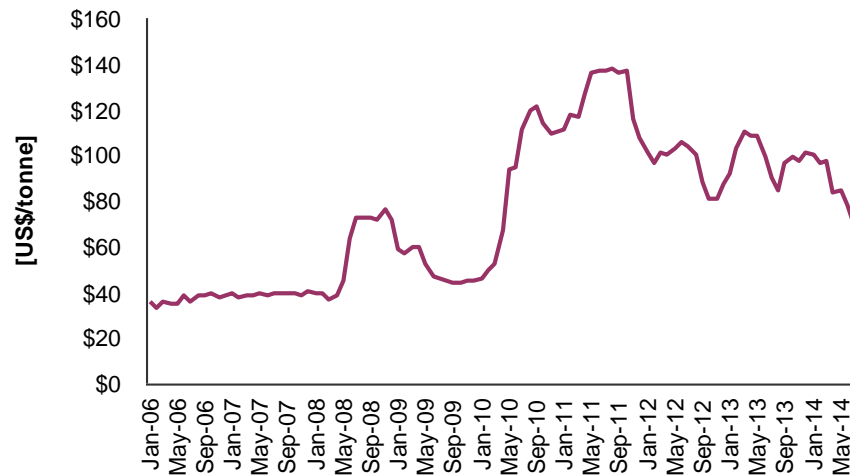
Source: RBC Capital Markets, WSA

Iron Ore Market Outlook

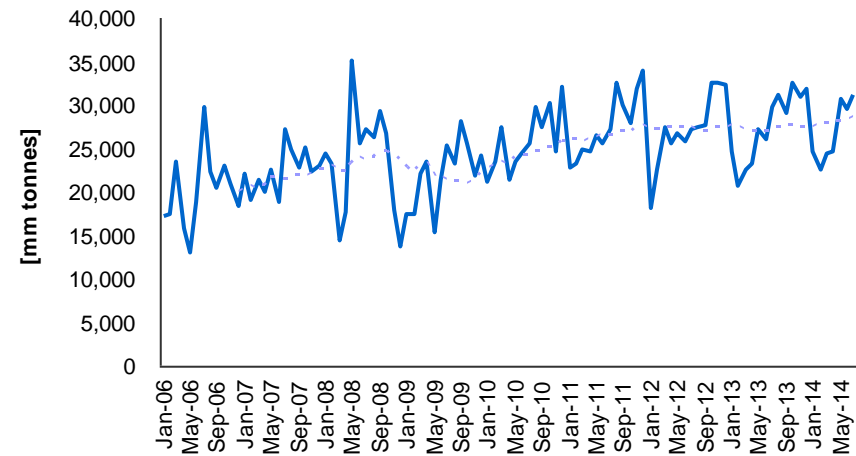
Iron Ore Inventories at Chinese Mills



Brazilian Iron Ore and Pellet Export Value per Tonne



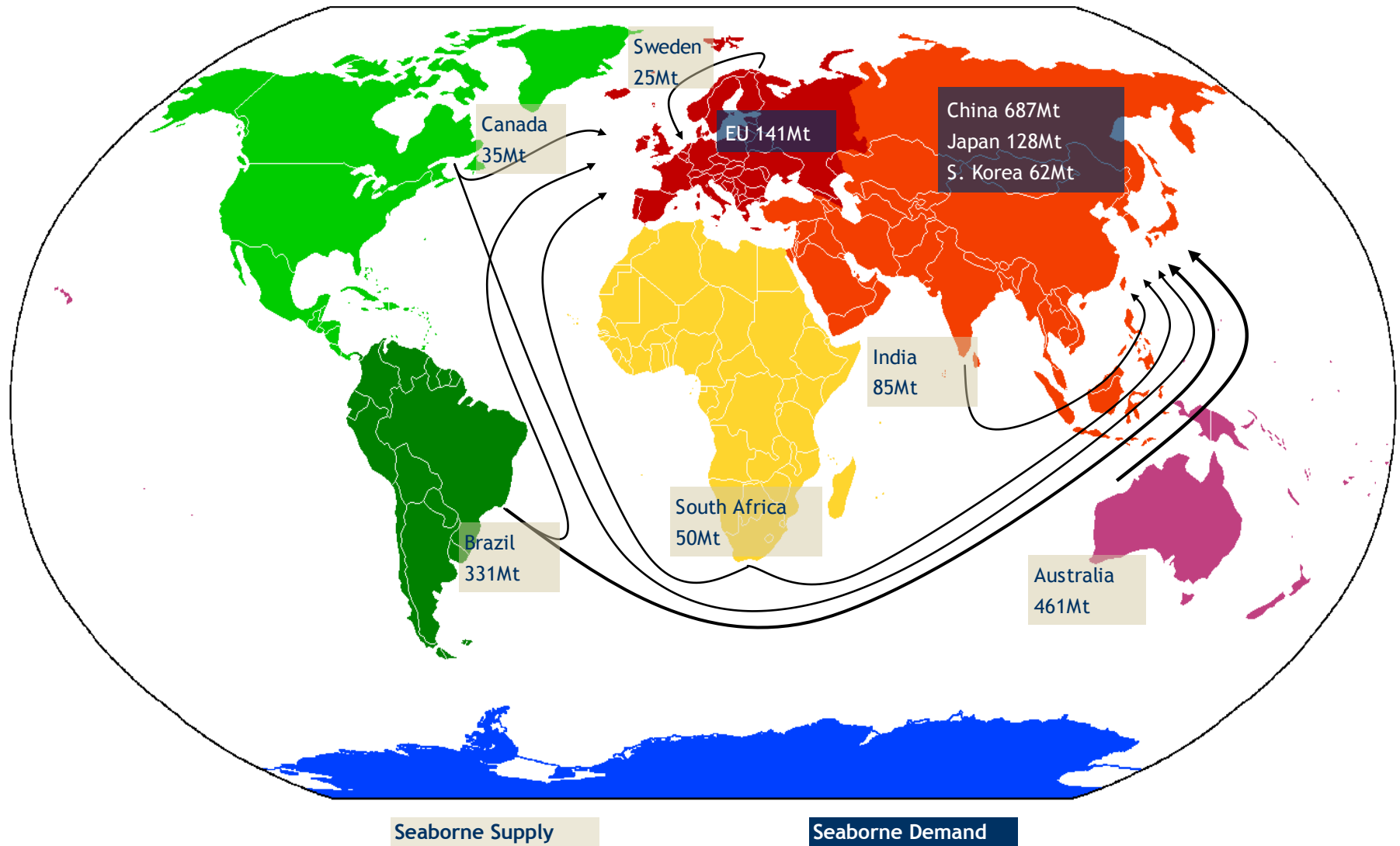
Brazilian Iron Ore and Pellet Exports



Source: RBC Capital Markets, WSA

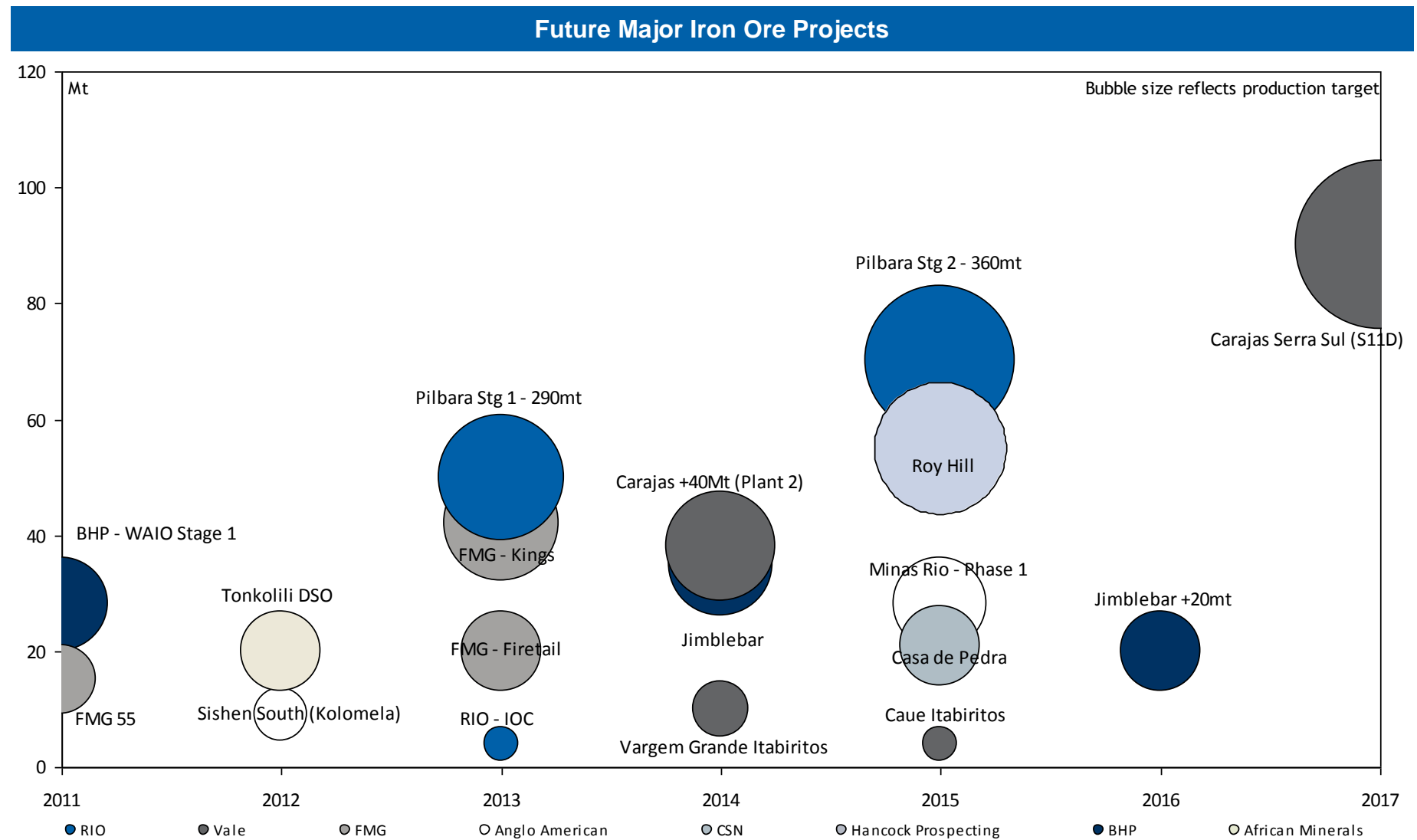
Iron Ore Market Outlook

Global Seaborne Iron Ore Trade (2011)



Source: Company reports, RBC Capital Markets

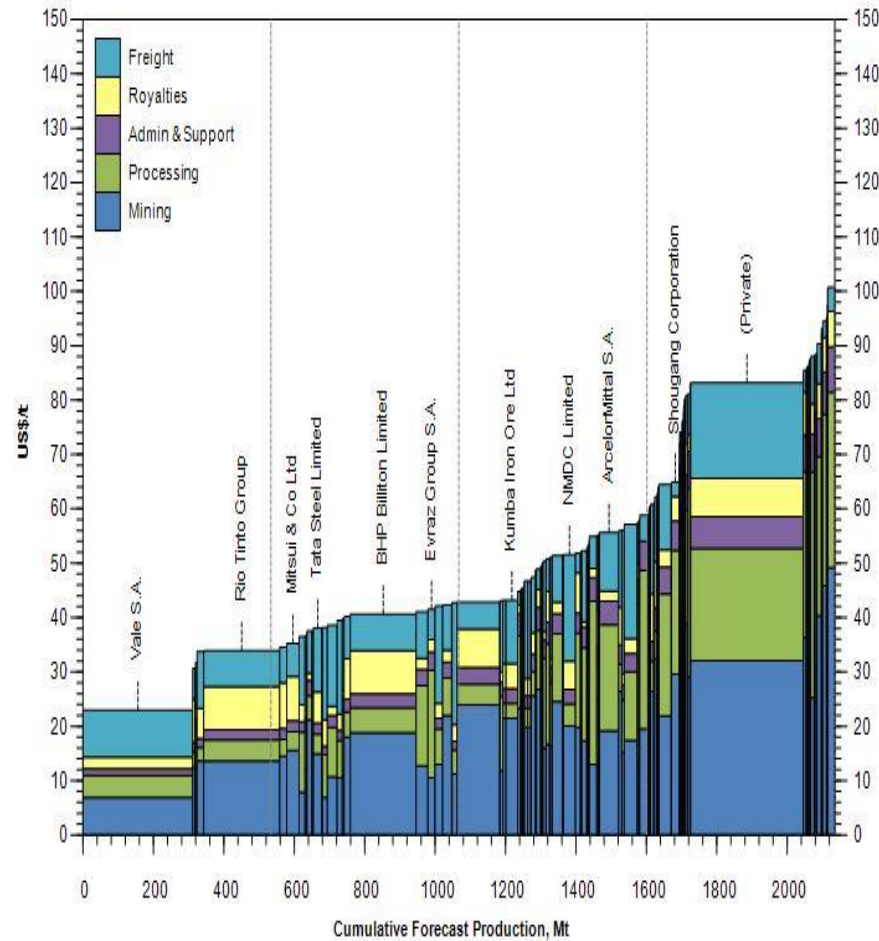
Iron Ore Market Outlook



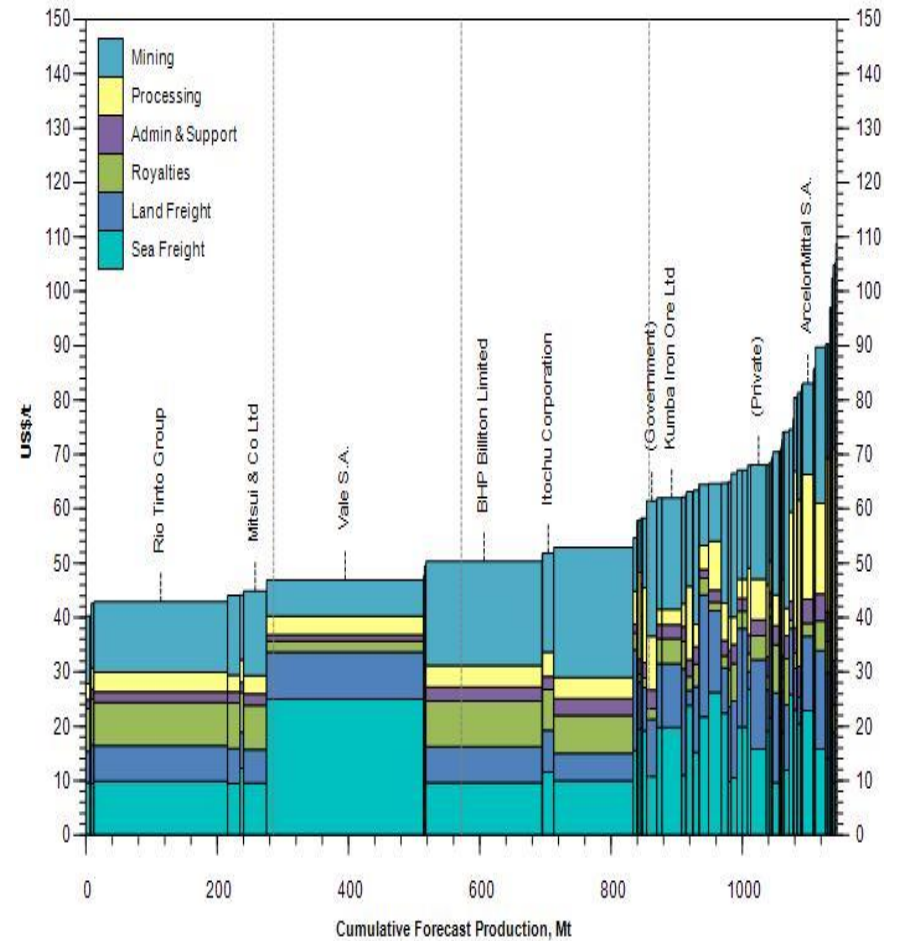
Source: Company reports, RBC Capital Markets

Iron Ore Market Outlook

2014E Iron Ore Cash Cost Curve FOB – Companies



2014E Iron Ore Cash Cost Curve CFR China – Companies



Source: AME

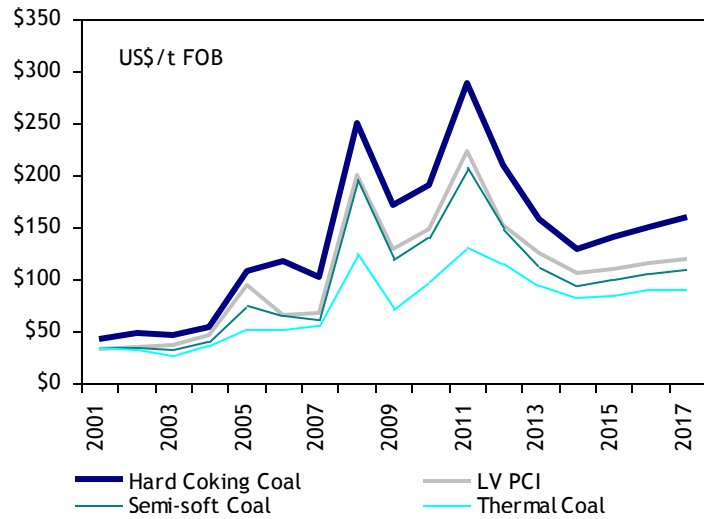
Metallurgical Coal Market Outlook

Metallurgical Coal Supply/Demand											
Seaborne Met Coal Supply/Demand (Mtpa)	2009	2010	2011	2012	2013	2014E	2015E	2016E	2017E	2018E	LT
World Crude Steel Production	1,220	1,405	1,490	1,510	1,582	1,631	1,680	1,729	1,771		
Key Exporters											
Australia	134	159	133	145	169	183	193	195	200		
Canada	21	25	26	30	34	34	34	36	36		
USA	31	47	58	58	53	46	42	45	45		
Russia	9	14	9	11	14	12	12	12	12		
Indonesia	1	3	3	3	4	5	5	5	5		
Other	4	4	7	8	9	11	12	13	16		
Supply of Seaborne Coal	199	251	237	256	284	291	298	306	314		
Key Importers											
Europe	49	61	62	59	56	60	61	62	64		
China	31	32	25	35	60	64	67	70	73		
India	28	35	33	35	37	41	44	45	47		
Japan	45	53	49	47	51	49	50	51	52		
Korea	16	22	26	26	26	27	27	28	29		
Other	28	32	41	49	41	38	41	44	45		
Demand for Seaborne Coal	197	236	236	250	271	278	290	301	310		
Implied Seaborne Market Balance	2.3	15.3	1.1	5.7	12.6	12.2	7.0	4.5	3.1		
Price - Calendar Year Basis (US\$/t)	2009	2010	2011	2012	2013	2014E	2015E	2016E	2017E	2018E	LT
HCC	\$172	\$191	\$289	\$210	\$159	\$130	\$140	\$150	\$160	\$160	\$160
LV PCI	\$129	\$147	\$223	\$153	\$125	\$106	\$110	\$115	\$120	\$120	\$120
SSCC	\$119	\$140	\$208	\$148	\$112	\$95	\$100	\$105	\$110	\$110	\$110

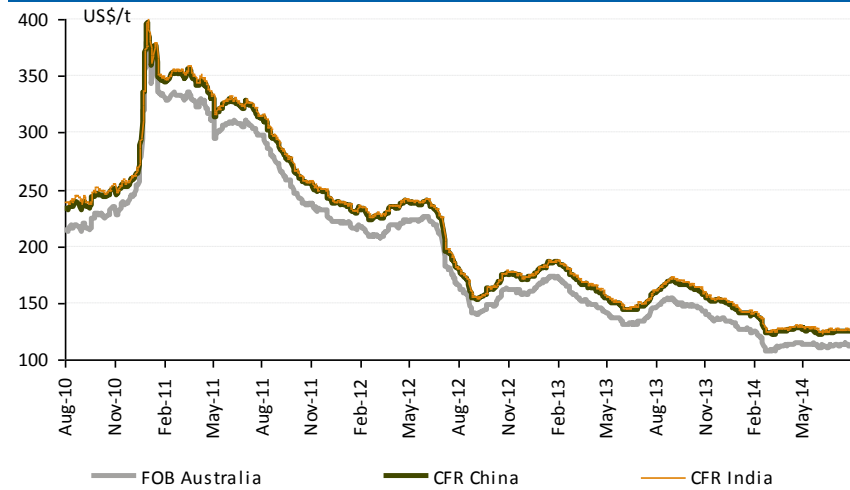
Source: Company reports, RBC Capital Markets estimates

Metallurgical Coal Market Outlook

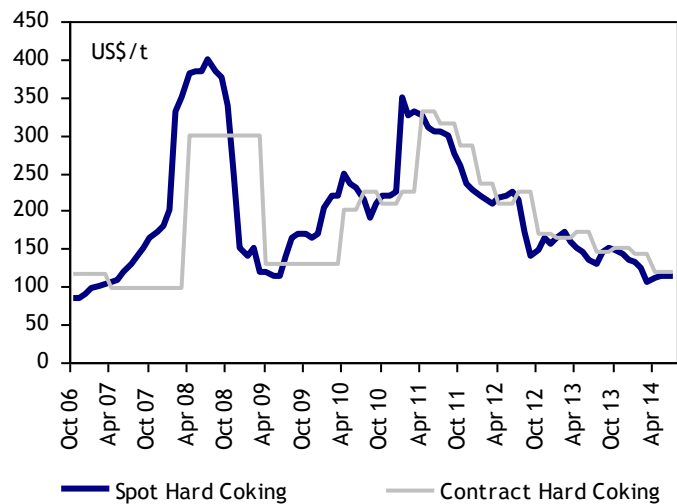
Contract Coal Prices



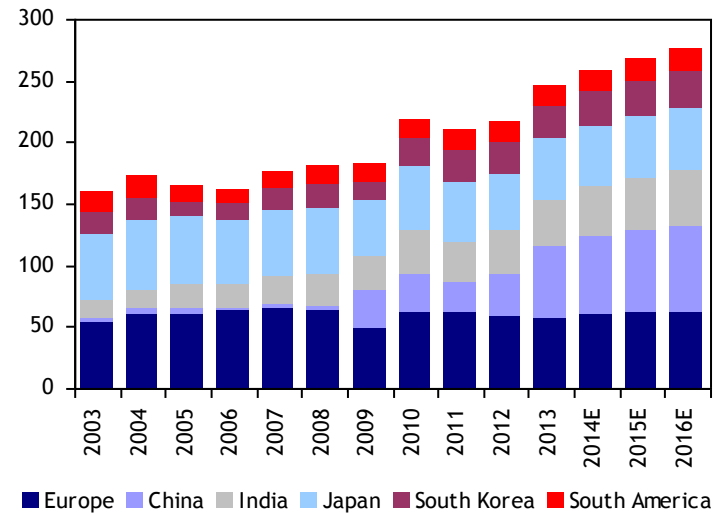
Hard Coking Coal Prices (US\$/tonne)



Hard Coking Coal Spot vs. Contract Prices



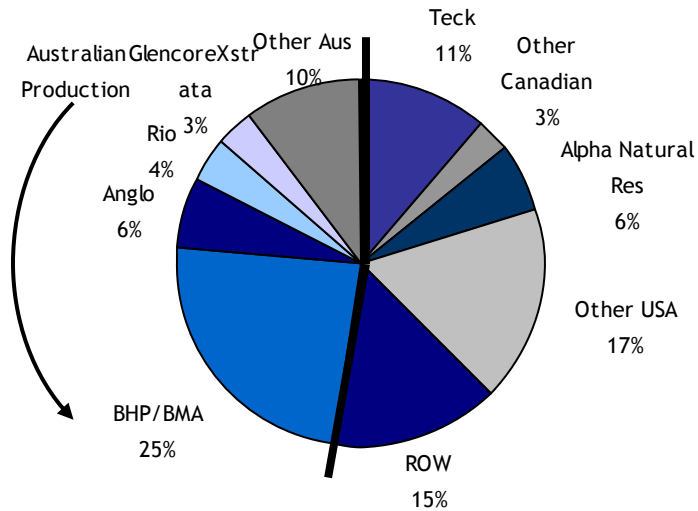
Seaborne Metallurgical Coal Imports



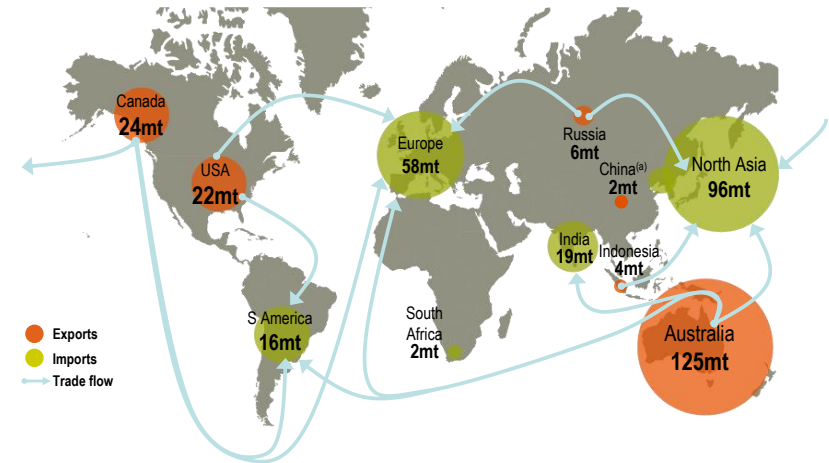
Source: CRU, RBC Capital Markets estimates, Tex Report

Metallurgical Coal Market Outlook

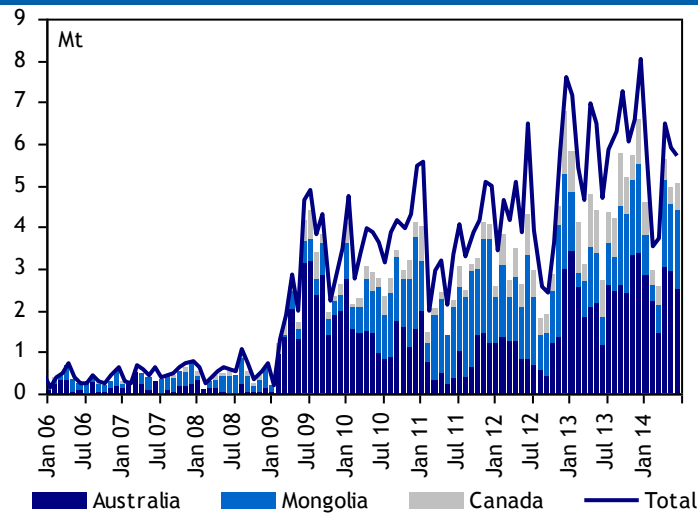
Composition of Seaborne Hard Coking Coal Market



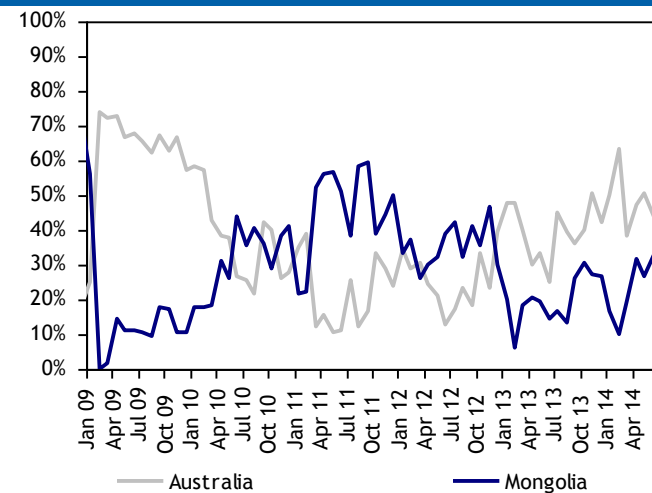
Seaborne Met Coal Trade Flow



Chinese Met Coal Imports by Origin



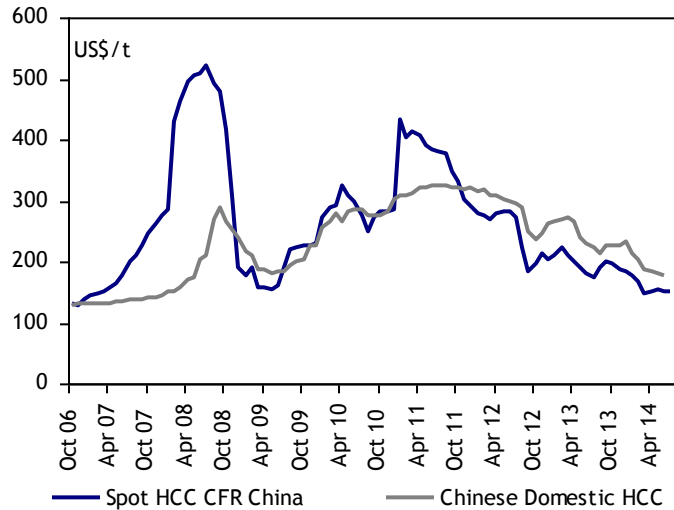
Chinese Met Imports from Australia vs. Mongolia



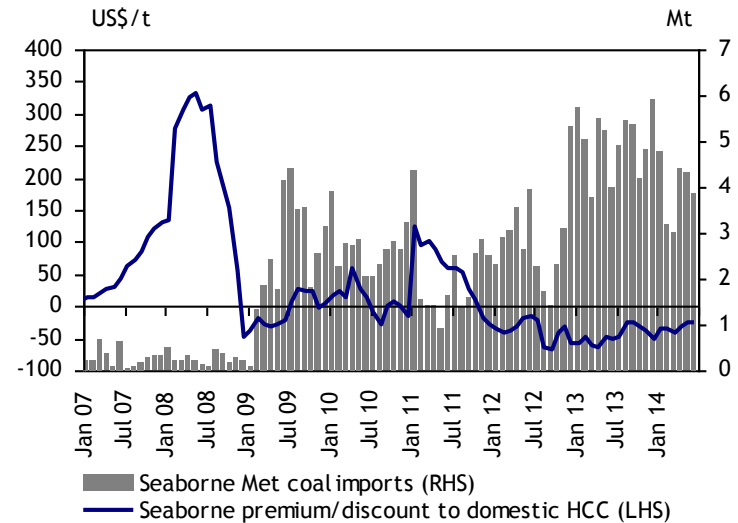
Source: CRU, RBC Capital Markets, Tex Report

Metallurgical Coal Market Outlook

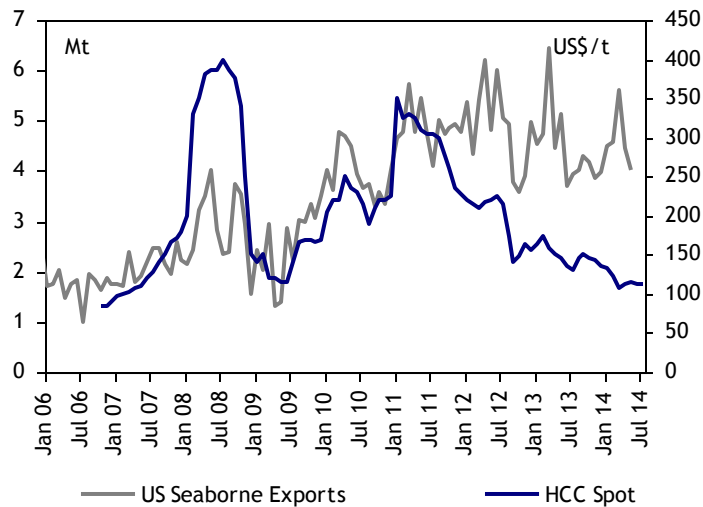
Seaborne vs. Chinese Domestic HCC Prices



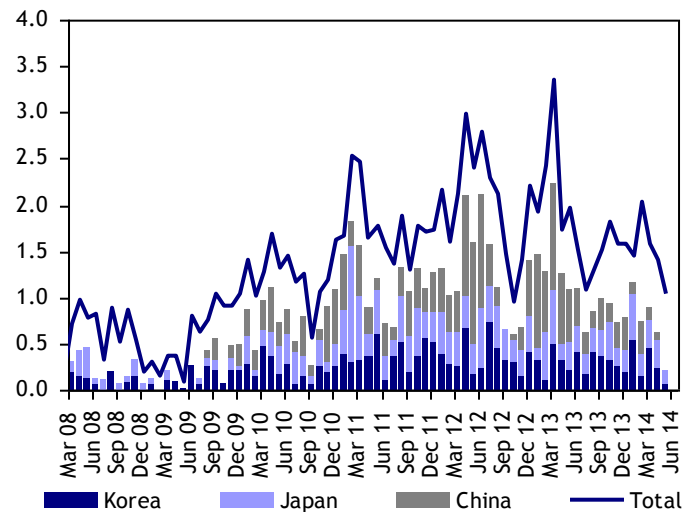
Chinese Imports vs. Seaborne Prem/Disc to Domestic Prices



USA Seaborne Met Coal Exports vs. Price



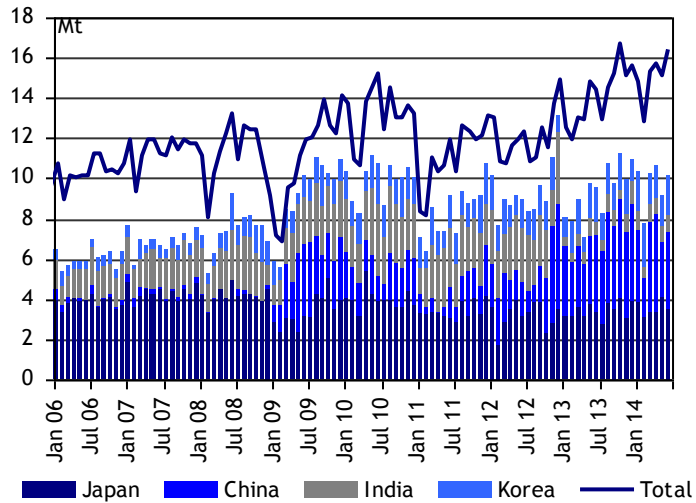
USA Met Coal Exports to Asia



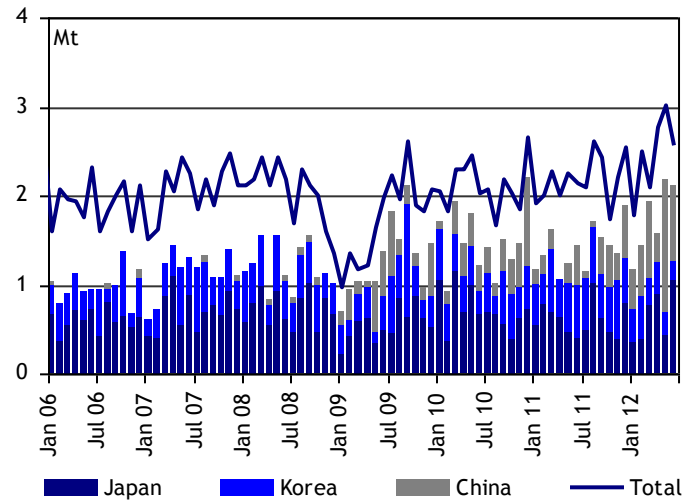
Source: CRU, RBC Capital Markets estimates, Tex Report

Metallurgical Coal Market Outlook

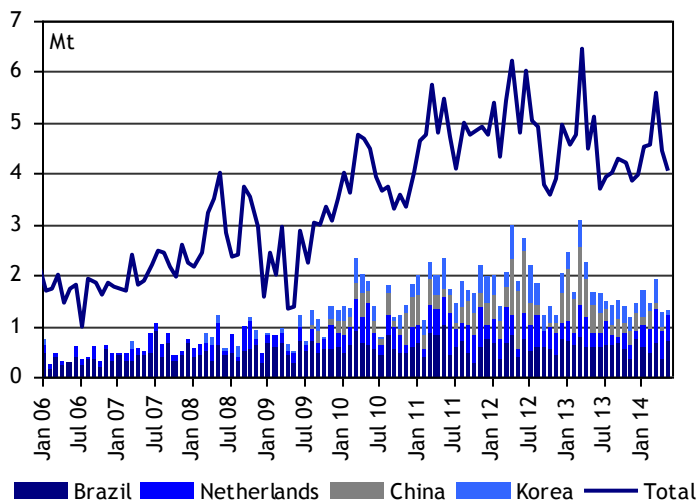
Australian Met Coal Exports



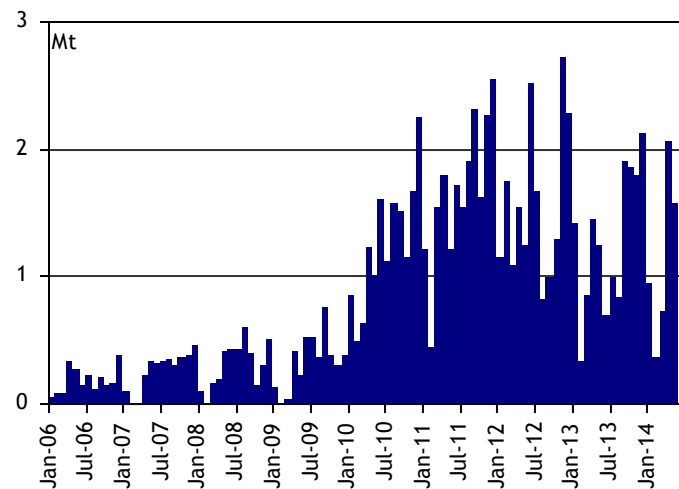
Canadian Met Coal Exports



USA Met Coal Exports



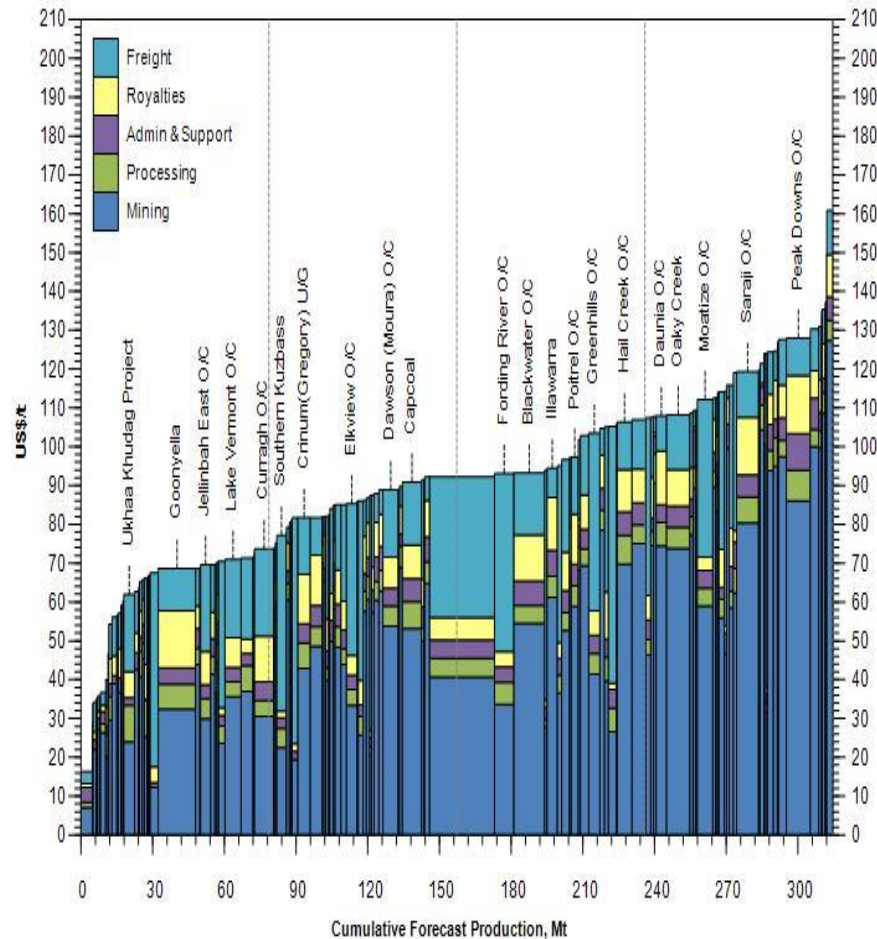
Mongolian Met Coal Exports



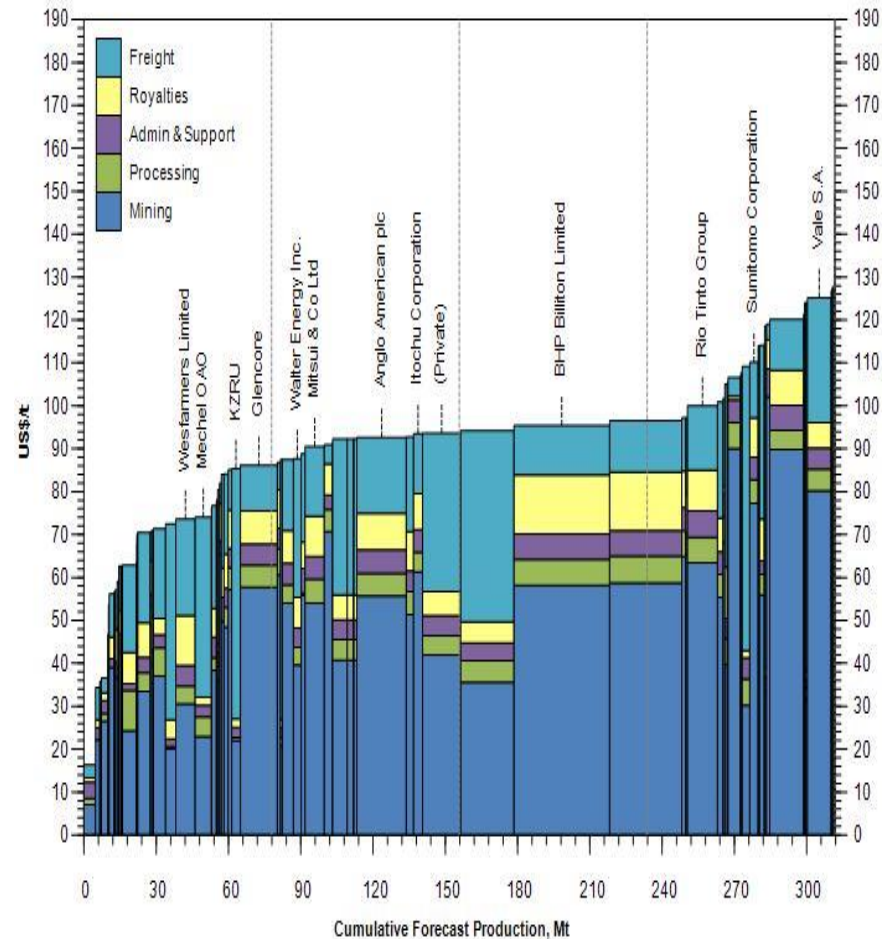
Source: CRU, RBC Capital Markets estimates, Tex Report

Metallurgical Coal Market Outlook

2014E Metallurgical Coal Cash Cost Curve FOB – Mines



2014E Metallurgical Coal Cost Curve FOB – Companies



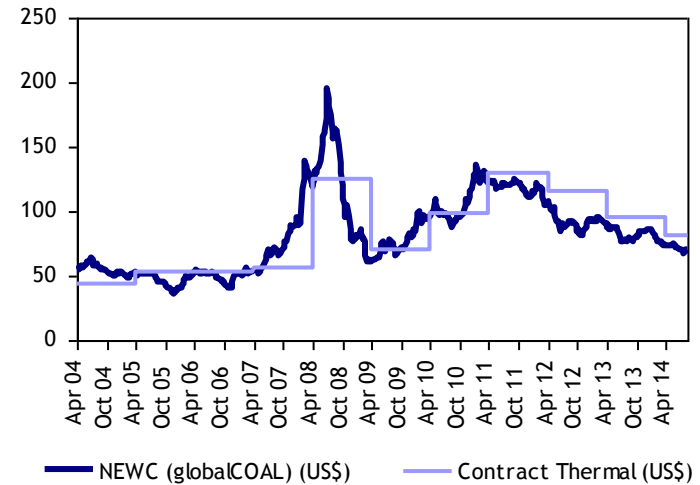
Source: AME

Thermal Coal Market Outlook

Thermal Coal Supply/Demand

Seaborne Thermal Coal Supply/Demand (Mtpa)	2009	2010	2011	2012	2013	2014E	2015E	2016E	2017E	2018E	Long Term
Key Exporters											
Indonesia	233	291	323	347	381	400	412	424	433		
Australia	139	141	148	171	188	195	201	207	215		
CIS	126	153	148	148	139	145	149	154	158		
Colombia	63	69	76	80	74	78	82	84	87		
South Africa	67	70	69	75	70	74	75	75	75		
USA	19	23	34	50	46	42	41	40	40		
Vietnam	25	20	22	19	16	17	17	18	18		
Other	42	38	33	25	25	30	30	30	31		
Supply of Seaborne Coal	715	804	852	914	940	981	1008	1033	1057		
Key Importers											
EU	143	137	155	157	137	150	156	161	166		
China	58	92	102	147	152	160	165	170	175		
Japan	113	125	120	133	135	140	141	143	144		
India	60	76	94	123	143	156	162	169	175		
Korea	80	89	94	92	92	94	96	98	100		
Taiwan	49	54	47	43	46	48	48	49	49		
Other Asia	69	81	106	74	120	97	103	110	117		
CIS	26	29	32	36	28	30	30	30	30		
Americas	46	45	41	39	37	38	39	39	40		
Other	34	31	31	38	31	35	37	38	39		
Demand for Seaborne Coal	678	759	824	881	920	948	977	1006	1035		
Demand Growth (%)	3.0%	11.9%	8.5%	6.9%	4.5%	3.1%	3.1%	2.9%	2.9%		
Implied Seaborne Market Balance	37	45	28	34	19	32	30	27	22		
Price (US\$/t)											
Thermal Spot (CY)					\$85	\$77	\$80	\$85	\$90	\$90	\$90
Thermal Benchmark (JFY)	\$71	\$98	\$130	\$115	\$95	\$82	\$85	\$90	\$90	\$90	\$90
Semi-soft premium to Thermal	\$7	\$42	\$79	\$33	\$17	\$13	\$15	\$15	\$20	\$20	\$20

Thermal Coal Spot vs. Contract Prices



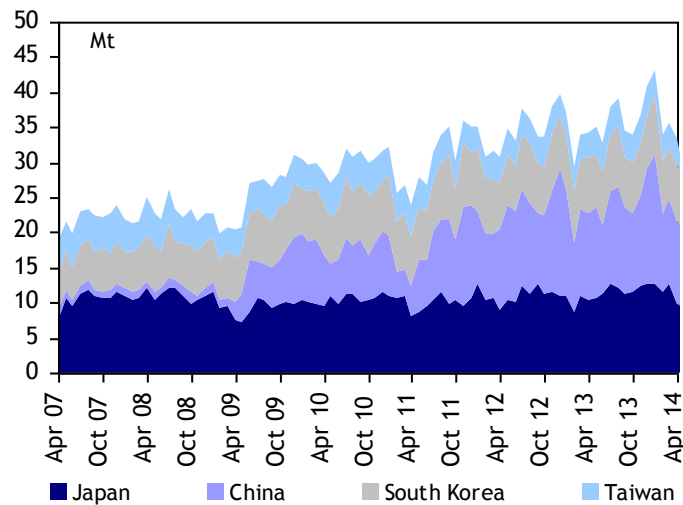
Thermal Coal Prices



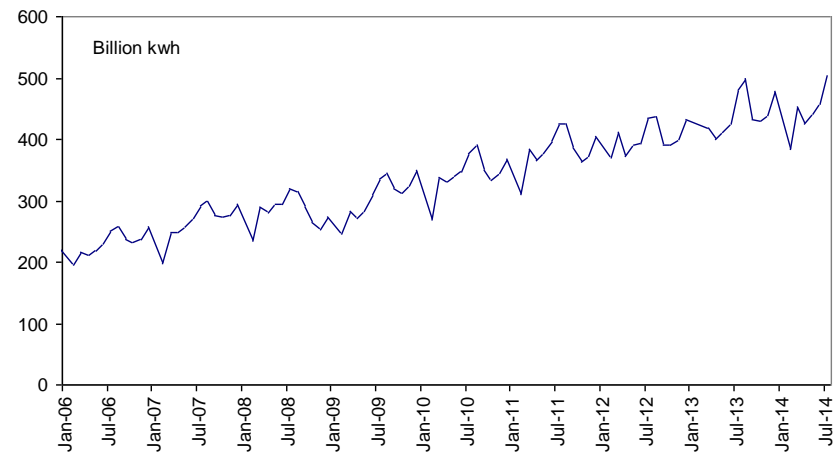
Source: RBC Capital Markets estimates, WSA

Thermal Coal Market Outlook

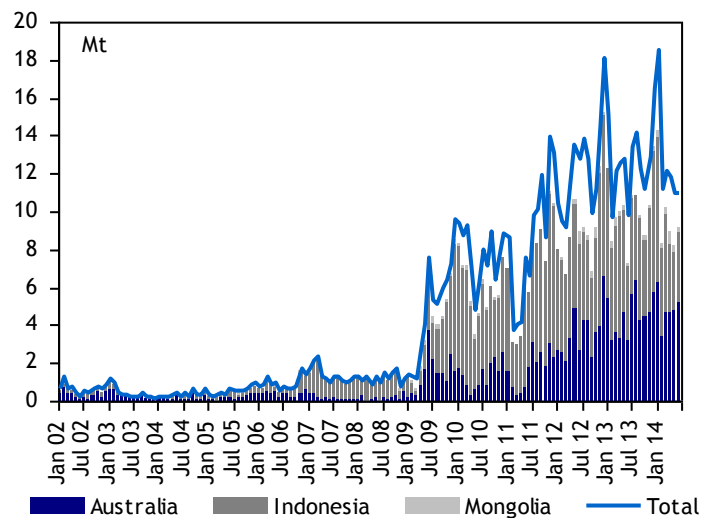
Thermal Coal Imports



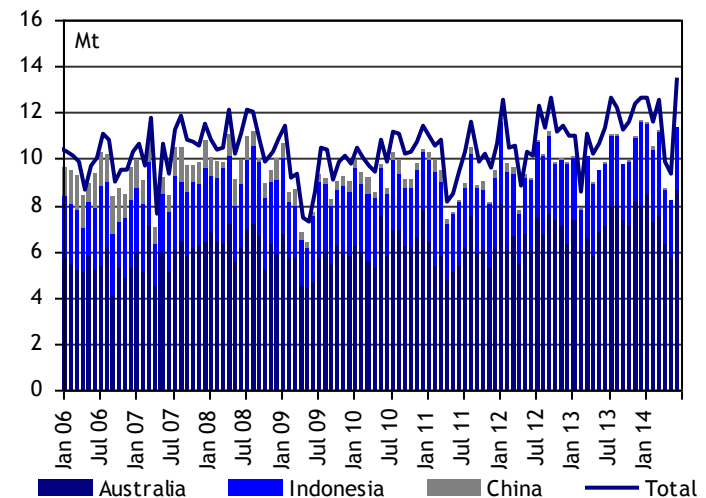
Chinese Electricity Generation



Chinese Thermal Coal Imports



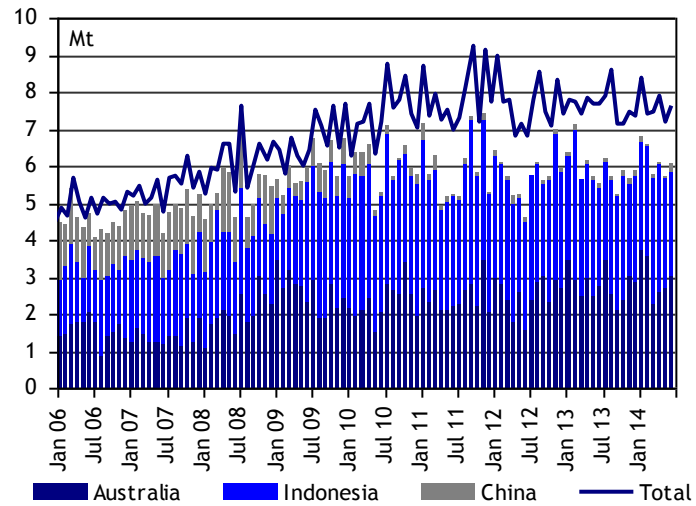
Japanese Thermal Coal Imports



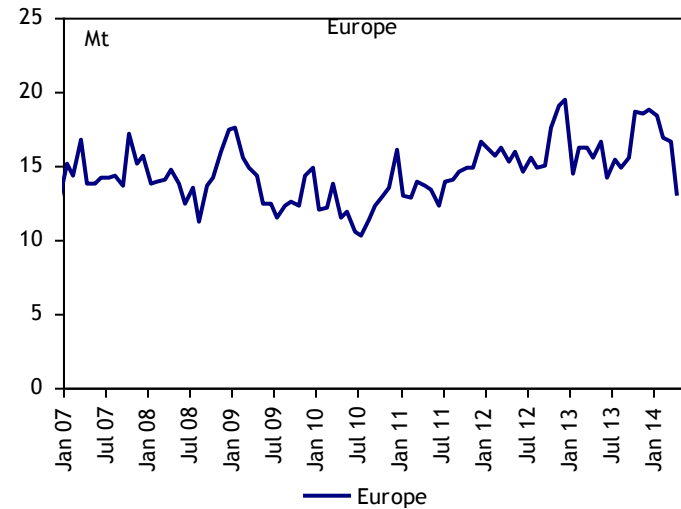
Source: CRU, McCloskey, Platts, RBC Capital Markets, Tex Report

Thermal Coal Market Outlook

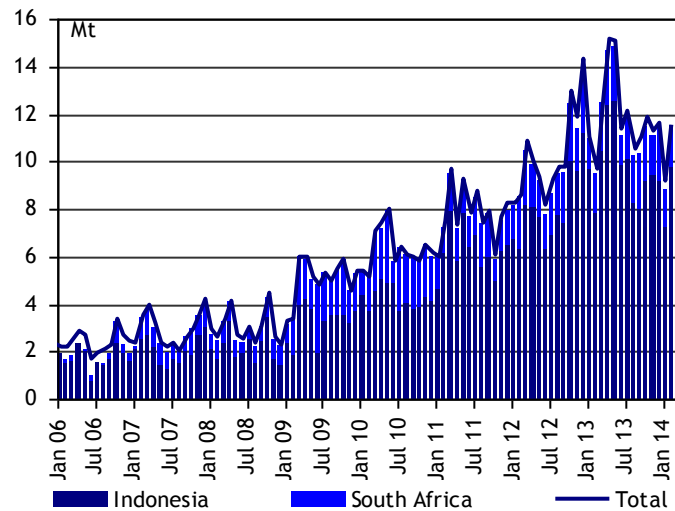
South Korean Thermal Coal Imports



European Thermal Coal Imports



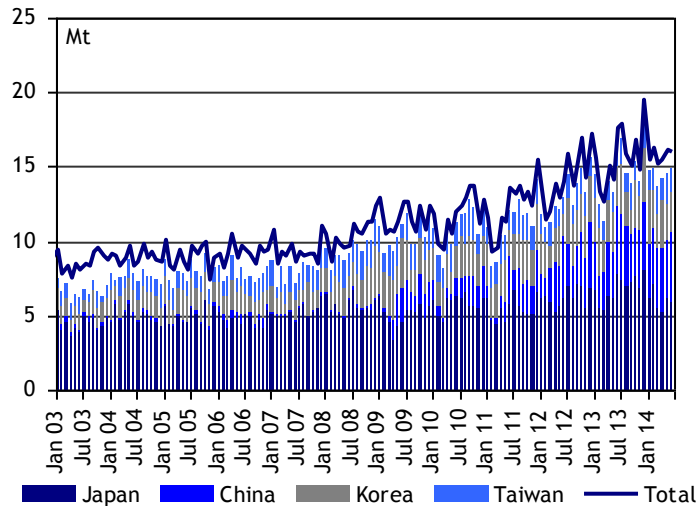
Indian Thermal Coal Imports



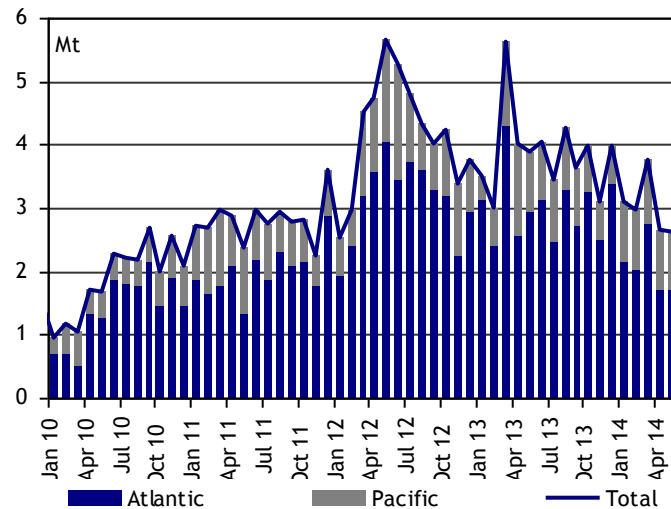
Source: CRU, McCloskey, Platts, RBC Capital Markets, Tex Report

Thermal Coal Market Outlook

Australian Thermal Coal Exports



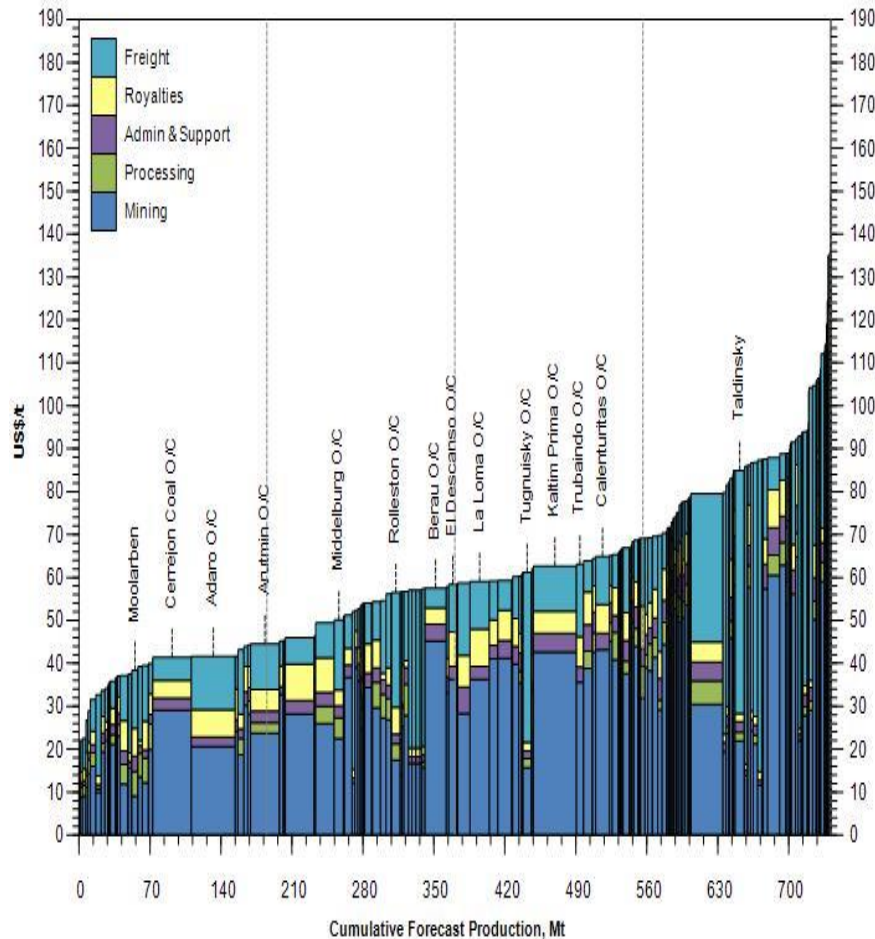
USA Thermal Coal Exports



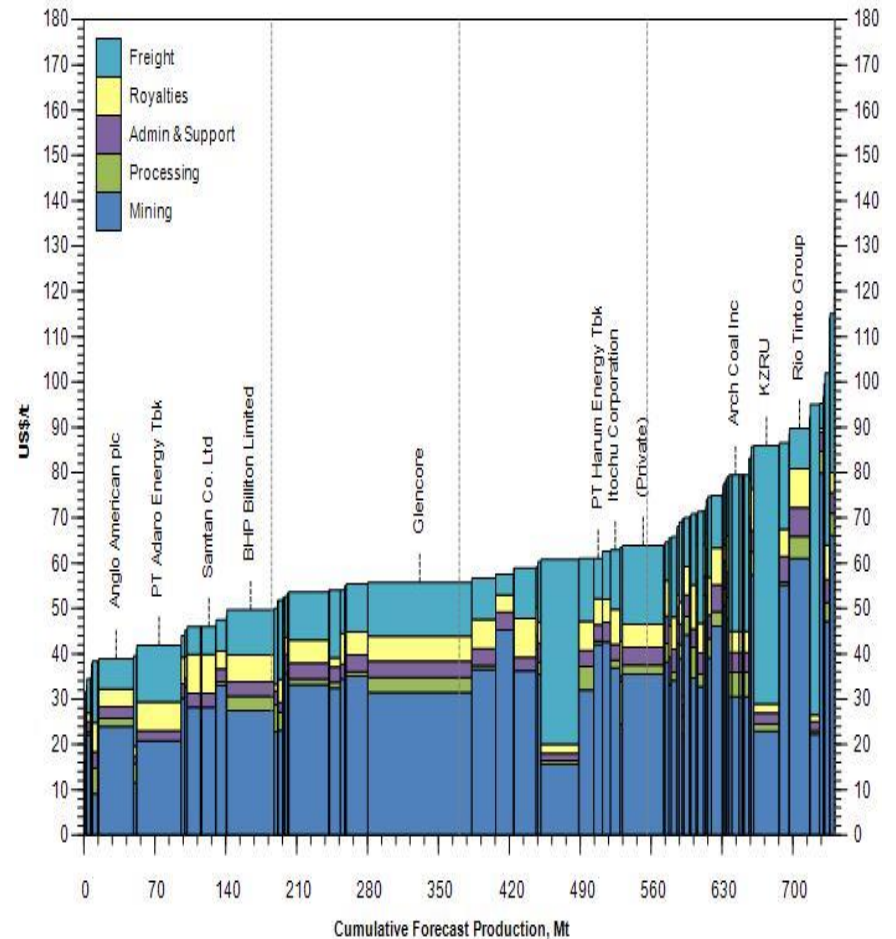
Source: CRU, McCloskey, Platts, RBC Capital Markets, Tex Report

Thermal Coal Market Outlook

2014E Thermal Coal Cost Curve FOB – Mines



2014E Thermal Coal Cost Curve FOB – Companies



Source: CRU, McCloskey, Platts, RBC Capital Markets, Tex Report

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