MOIL Ltd MOIL IN

INDIA / METALS & MINING

TARGET	INR337.00
PRIOR TP	N/A
CLOSE	INR397.35
UP/DOWNSIDE	-15.2%

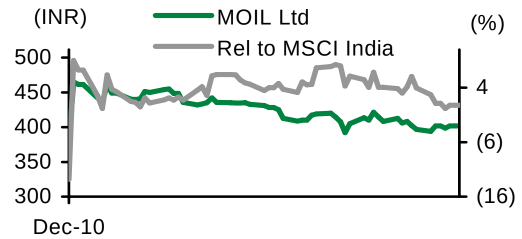
REDUCE

HOW WE DIFFER FROM THE STREET

	BNP	Consensus	% Diff
Target Price (INR)	337.00	472.25	(28.6)
EPS 2011 (INR)	37.08	40.04	(7.4)
EPS 2012 (INR)	29.84	42.94	(30.5)
	Positive	Neutral	Negative
Market Recs.	4	1	0

KEY STOCK DATA

YE Mar (INR m)	2011E	2012E	2013E
Revenue	12,387	10,662	11,153
Rec. net profit	6,230	5,012	5,159
Recurring EPS (INR)	37.08	29.84	30.71
Prior rec. EPS (INR)	-	-	-
Chg. In EPS est. (%)	N/A	N/A	N/A
EPS growth (%)	33.6	(19.5)	2.9
Recurring P/E (x)	10.7	13.3	12.9
Dividend yield (%)	2.2	1.8	1.8
EV/EBITDA (x)	6.1	7.4	6.6
Price/book (x)	3.1	2.6	2.3
Net debt/Equity	(86.7)	(86.2)	(82.7)
ROE (%)	32.5	21.4	18.9



Share price performance	1 Month	3 Month	12 Month
Absolute (%)	(5.2)	-	-
Relative to country (%)	(6.6)	-	-

Next results	May 2011
Mkt cap (USD m)	1,484
3m avg daily turnover (USD m)	44.0
Free float (%)	20
Major shareholder	Government of India (80%)
12m high/low (INR)	465.05/375.00
3m historic vol. (%)	53.2
ADR ticker	-
ADR closing price (USD)	-

Sources: Bloomberg consensus; BNP Paribas estimates

INDUSTRY OUTLOOK ↔ INITIATION

Early to play growth story

- **Expensive valuations and lack of near-term triggers; REDUCE**
- **Back-ended volume growth; no avenues to reduce costs**
- **Production from JVs and greenfield mine still 3-5 years away**
- **Weak price outlook for manganese ore due to rising supplies**

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Expensive; initiate at REDUCE

We initiate coverage of MOIL Ltd (MOIL), India's largest manganese (Mn) ore producer, with a REDUCE rating and a target price of INR337.00 based on 6.0x FY12E EV/EBITDA. MOIL's stock is trading at 7.6x FY12E EV/EBITDA, at a 25% premium to global Mn peers and a 9% premium to other steel-making raw material companies. We see little room for out-performance in the next 12 months, given muted earnings growth, declining-to-flat Mn ore price outlook and lack of near-term triggers. Even if we value MOIL at 6.0x EV/EBITDA for FY17E and discount back to end-FY12 at 14%, we get a fair value of only INR286, or 28% potential downside from current levels. Even on DCF valuation, we derive a fair value of INR381, or 4% downside potential.

Back-ended volume growth; no avenues to cut costs

MOIL plans to increase production volumes from 1.1m tonnes in FY10 to 1.5m tonnes by FY15-16, but only 9% is due in FY12-13 with the balance due in FY15-17. The average cost of production for MOIL has almost doubled since FY08, reaching INR3,800/tonne for 9MFY11. We believe the cost increase is permanent and see no triggers for future cost-savings.

Lack of near-term triggers; upside capped

Incremental production from ferro-alloy JVs is unlikely before FY14-15, in our view, given delays in project finalisation. The planned greenfield mine is also three to five years away, as it is awaiting the grant of prospecting lease. Additions to reserves through brownfield exploration are a long-term positive, but they do not translate into near-term production growth.

Muted manganese ore prices over 2011-13E

We expect Mn ore prices to remain in a range of USD6-7/dmtu over 2011-13 with Mn ore capacity addition of 8.9m tonnes over 2010-13E. We forecast Mn ore market will move into a surplus as 2009-13E supply CAGR (10.3%) exceeds demand CAGR (9.6%). We believe Mn ore demand-supply balance will deteriorate as new projects increase supplies and prevent utilisation from rising.

What will make us turn positive on MOIL?

A sharper-than-expected increase in global steel production or slower-than-expected ramp-up in global Mn ore capacity addition and production could lead to a spike in Mn ore prices. Alternatively, if MOIL is able to front-end its production growth, we would turn positive on the company.

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Please see India Research Team list on page 32.

RISK EXPERTS

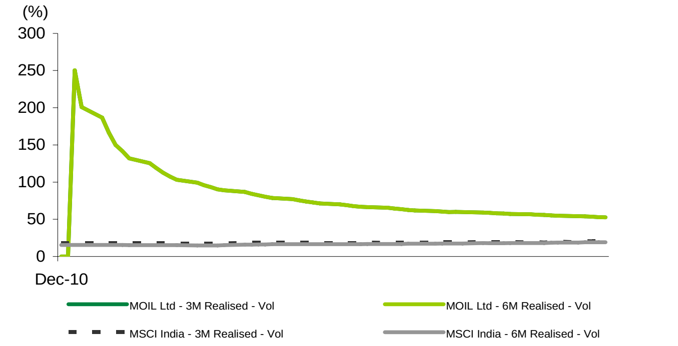
Sensitivity	Base case assumption	Change in FY12E EBITDA (%)	Change in FY12E EPS (%)	Change in FY12E fair value (%)
Change of USD0.5/dmtu in FY12 spot Mn ore price assumption	USD6.5	12.7	11.0	8.6
Change of 50,000 tonnes Mn ore sales in FY12	1.15m tonnes	5.7	4.9	3.9

Sources: BNP Paribas estimates

Key Earnings Drivers & Sensitivity

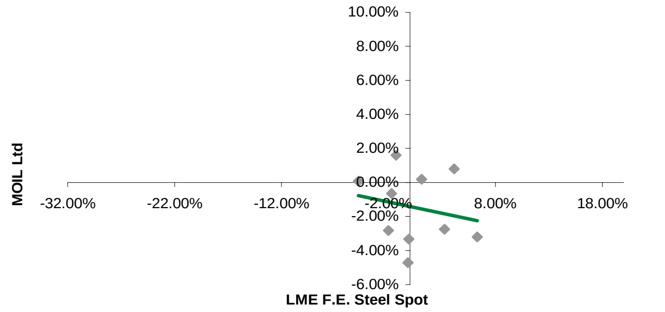
- Mn ore realisations and sales volume are key earnings drivers.
- An increase of USD0.5/tonne in spot Mn ore price assumption changes FY12E EBITDA by 12.7%, EPS by 11.0% and fair value by 8.6%.

MOIL Ltd and MXIN Index (3M and 6M realised-vol)



Sources: Bloomberg; BNP Paribas

Regression – MOIL Ltd to Steel Spot



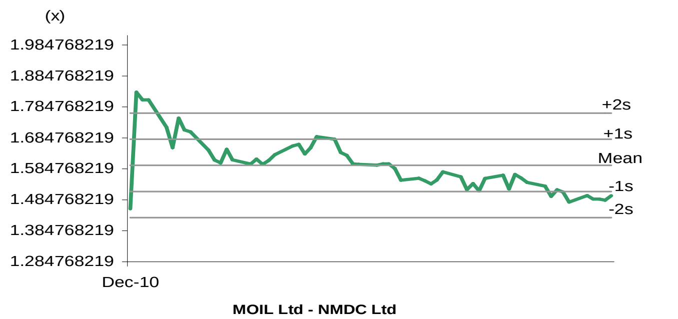
MOIL Ltd = 34 + 0.8799 * LMFMDY Comdty
R Square = 0.0425
Regression based on 12 observations of 5 years weekly data. Please refer to Appendix 1 for the explanation of R-square
Sources: Bloomberg; BNP Paribas

India sector correlation matrix at 30 December 2010

	Autos	Banks	Engineering & Construction	Metals & Mining	Oil & Gas	IT Services	Telecom	Utilities	Property
Autos	1.00	0.65	0.69	0.70	0.60	0.52	0.54	0.63	0.62
Banks		1.00	0.82	0.74	0.74	0.55	0.62	0.71	0.73
Engineering & Construction			1.00	0.77	0.74	0.52	0.67	0.75	0.79
Metals & Mining				1.00	0.76	0.52	0.60	0.73	0.75
Oil & Gas					1.00	0.53	0.62	0.75	0.66
IT Services						1.00	0.42	0.49	0.39
Telecom							1.00	0.66	0.62
Utilities								1.00	0.71
Property									1.00

Source: BNP Paribas Sector Strategy

Long/short chart



Sources: Bloomberg, BNP Paribas

The risk experts

The Risk Experts

- Our starting point for this page is a recognition of the macro factors that can have a significant impact on stock-price performance, sometimes independently of bottom-up factors.
- With our Risk Expert page, we identify the key macro risks that can impact stock performance.
- This analysis enhances the fundamental work laid out in the rest of this report, giving investors yet another resource to use in their decision-making process.

Expensive; initiate with a REDUCE rating

Little room for out-performance in next 12 months

We see little room for outperformance for MOIL in the next 12 months, as we expect muted earnings growth resulting from lack of volume growth, a declining to flat pricing outlook for Mn ore and no scope for cost reduction. Even if we value MOIL at 6.0x FY17E EV/EBITDA and discount back the valuation to end-FY12E at 14%, we get a fair value of only INR286 – or 28% downside potential from current levels. We believe that a sharper-than-expected increase in global steel production or slower-than-expected ramp-up in global Mn ore capacity addition and production can lead to a spike in Mn ore prices, which is the key risk to our ratings and estimates.

Exhibit 1: TP based on 6.0x FY12E EV/EBITDA

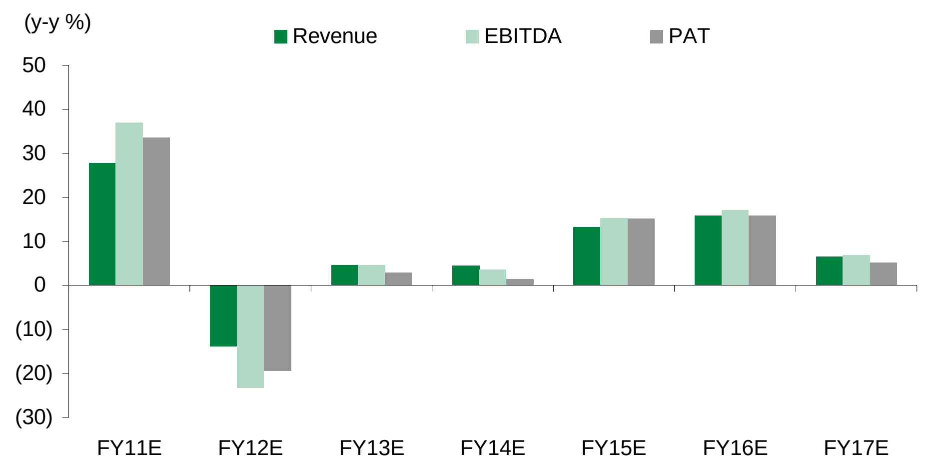
	(INR m)
FY12E EBITDA	6,322
EV/EBITA multiple (x)	6.0
EV	37,931
Net debt – FY11E	(18,673)
Equity value	**56,604**
Issued shares (m)	168.0
Target price (INR)	**337.00**

Sources: MOIL Ltd; BNP Paribas estimates

Muted earnings growth for the foreseeable future

We expect MOIL's earnings to decline in FY12 and thereafter grow at 1-3% y-y until FY14. EBITDA and PAT growth should be muted over FY12-14, with minimal volume growth of 2-5% y-y and a declining-to-flat Mn ore pricing assumption (USD6.5/6.5/6.7 per dmtu over FY12-14). Thereafter, we see EBITDA growth of 15-17% y-y in FY15 and FY16, as most of the Phase I volume growth comes into production. We get an EBITDA CAGR of 9.4% and a PAT CAGR of 8.0% even if we look at earnings growth over FY12-17 – the time when the company reaches steady state production after Phase I expansion is complete.

Exhibit 2: Muted growth till FY14E



Sources: MOIL Ltd; BNP Paribas estimates

Valuing MOIL at 6.0x FY12E EV/EBITDA

We value MOIL at 6.0x FY12E EV/EBITDA, in line with the valuation of its global Mn ore and ferro-alloys peers.

We believe investors will evaluate various stocks in the ferrous sector based on the growth profile of the company, the current valuation of the stock and the demand-supply fundamentals of the underlying commodity. Thus, we value MOIL relative to its peers in the ferrous sector, which includes Mn ore and ferro-alloys, iron ore, coking coal and steel, using an earnings-based multiple. We prefer to value MOIL on EV/EBITDA rather than on P/E, as we believe that EV/EBITDA multiples equalise for the differing capital structures of the companies being compared.

Exhibit 3: DCF valuation for MOIL

	(INR m)
NPV	**45,320**
Gross cash – FY11E	18,673
Equity value	**63,993**
Issued shares (m)	168.0
Risk free rate (%)	8.0
Beta of MOIL IN	1.25
Market risk premium (%)	5.0
Cost of equity (%)	14.3
Equity value (INR/share)	**381.00**

Sources: MOIL Ltd; BNP Paribas estimates

We prefer EV/EBITDA valuation over DCF for MOIL, as the company has a long mine life and we believe MOIL can be seen as a going concern. We find that most of the NPV comes beyond FY17E (61%), so using DCF would mean a leap of faith on the company's volume growth potential and future commodity prices. We get a fair value of INR381 (4% downside potential) using DCF with a 14% discount rate. Our estimates do not factor in growth from the recently announced Phase II expansion plan, as it is still at very initial stages of planning.

Expensive in comparison to global peers

MOIL is currently trading at 7.6x FY12E EV/EBITDA, at a 25% premium to global Mn ore and ferro alloy peers and a 9% premium to other steel-making raw material peers. MOIL is also trading at a 15% premium to global steel companies. We believe the premium to global peers is not justified, given our muted earnings growth outlook, lack of triggers, and execution risk on expansion projects. We expect the stock price to decline to more reasonable levels to provide an attractive entry point.

Exhibit 4: Peer group valuation

Company	BBG code	Share price (LC)	P/E 2010E (x)	P/E 2011E (x)	P/E 2012E (x)	EV/EBITDA 2010E (x)	EV/EBITDA 2011E (x)	EV/EBITDA 2012E (x)	P/BV 2010E (x)	P/BV 2011E (x)	P/BV 2012E (x)
Mn ore and Ferro-alloy peers											
Assore Ltd	ASR SJ	20,951.00	18.6	8.1	5.9	11.7	5.8	4.3	3.4	2.4	1.8
Eramet	ERA FP	264.45	19.0	13.6	9.8	7.6	5.7	5.3	2.5	2.0	1.7
Eurasian Natural Resources Corp	ENRC LN	978.00	10.2	7.8	7.5	6.6	5.1	4.8	2.2	1.8	1.5
OM Holdings	OMH AU	1.54	23.3	11.2	8.0	13.9	6.4	5.2	2.8	2.0	1.7
CITIC Dameng Holdings	1091 HK	2.70	34.6	12.6	8.4	16.6	7.2	4.6	na	na	na
Cia Minera Autlan SAB de CV	AUTLANB MM	34.70	17.3	14.1	14.5	9.5	8.0	8.6	na	na	na
Adhunik Metaliks	ADML IN	101.10	8.9	6.0	4.4	na	na	na	1.7	1.3	1.1
Global Mn ore and Ferro-alloy peers median			**18.6**	**11.2**	**8.0**	**10.6**	**6.1**	**5.0**	**2.5**	**2.0**	**1.7**
MOIL Ltd		**401.65**	**10.8**	**13.5**	**13.1**	**6.4**	**7.7**	**6.9**	**3.1**	**2.7**	**2.3**
Aquila Resources	AQA AU	8.50	na	na	na	na	48.8	25.3	7.6	7.2	7.7
Hidili Industry International	1393 HK	6.55	16.7	9.8	8.3	12.4	8.2	6.9	1.8	1.6	1.4
Riversdale Mining	RIV AU	15.08	na	na	43.7	na	na	36.4	6.1	4.2	3.7
Walter Energy	WLT US	127.36	16.8	9.7	9.7	9.3	5.3	5.0	11.0	5.1	3.4
Mongolian Mining	975 HK	9.70	na	14.8	10.7	49.1	12.5	7.8	5.5	4.2	3.1
MacArthur Coal	MCC AU	11.98	24.7	18.7	12.4	14.4	10.7	7.4	2.7	2.1	1.9
BHP Billiton	BHP AU	46.55	11.9	10.2	10.2	6.6	5.6	5.6	4.2	3.2	2.6
Xstrata	XTA LN	1,443.50	13.5	8.5	7.9	7.8	5.3	5.0	1.9	1.5	1.2
Global coking coal peers median			**16.7**	**10.0**	**10.2**	**10.8**	**8.2**	**7.2**	**4.9**	**3.7**	**3.0**

(Cont'd on next page)

Exhibit 4: Peer group valuation (Cont'd)

Company	BBG code	Share price (LC)	P/E 2010E (x)	P/E 2011E (x)	P/E 2012E (x)	EV/EBITDA 2010E (x)	EV/EBITDA 2011E (x)	EV/EBITDA 2012E (x)	P/BV 2010E (x)	P/BV 2011E (x)	P/BV 2012E (x)
Atlas Iron	AGO AU	3.81	11.6	7.8	6.9	10.5	6.4	5.4	4.1	2.8	1.7
Aquila Resources	AQA AU	8.50	na	na	na	na	48.8	25.3	7.6	7.2	7.7
BHP Billiton Ltd	BHP AU	46.55	11.9	10.2	10.2	6.6	5.6	5.6	4.2	3.2	2.6
BHP Billiton PLC	BLT LN	2,484.00	10.2	8.7	8.7	6.6	5.6	5.6	3.6	2.8	2.2
Cliffs Natural Resources	CLF UN	96.88	14.7	7.7	7.4	8.4	4.5	4.2	3.7	2.5	1.9
Consolidated Thompson Iron Mines	CLM CN	17.14	na	10.6	10.3	43.4	7.3	6.5	4.4	2.8	2.1
Eurasian Natural Resources	ENRC LN	967.00	10.2	7.8	7.5	6.5	5.1	4.8	2.2	1.8	1.5
Exxaro Resources	EXX SJ	15,566.00	10.8	7.3	6.0	12.0	7.9	6.1	3.2	2.4	1.9
Fortescue Metals Group	FMG AU	6.48	12.1	8.9	8.0	8.0	5.8	5.1	7.2	4.0	2.7
Ferraus Ltd	FRS AU	0.89	na	na	na	na	na	na	2.3	2.4	3.2
Ferrexpo PLC	FXPO LN	420.00	9.7	7.4	7.1	7.8	5.9	5.4	5.0	3.0	1.9
Gindalbie Metals	GBG AU	1.12	na	14.7	4.8	na	8.5	3.5	2.0	1.7	1.3
Grange Resources	GRR AU	0.72	6.2	5.8	7.9	3.4	2.9	4.1	1.3	1.1	1.0
Kumba Iron Ore	KIO SJ	47,493.00	11.3	8.9	8.2	6.3	4.8	4.5	11.7	8.3	6.5
Labrador Iron Ore Royalty	LIF-U CN	74.26	12.0	10.4	9.2	16.0	14.1	12.5	0.3	0.3	0.2
Labrador Iron Mines Holdings	LIM CN	13.89	na	10.4	6.7	na	6.0	3.7	na	na	na
Mount Gibson Iron	MGX AU	1.98	6.5	3.9	3.7	3.3	2.2	2.1	1.7	1.2	0.9
MMX Mineracao e Metalicos SA	MMXM3 BZ	9.30	na	14.1	14.4	35.8	8.8	6.6	3.7	2.5	2.2
Rio Tinto Ltd	RIO AU	84.20	12.3	8.9	9.0	6.2	5.0	5.0	3.1	2.3	1.9
Rio Tinto PLC	RIO LN	4,351.00	10.1	7.3	7.4	6.1	4.9	4.9	2.6	1.9	1.5
Vale SA	VALE US	34.32	11.2	7.0	6.7	na	na	na	2.5	1.9	1.6
Sphere Minerals	SPH AU	3.00	na	na	na	na	na	na	na	na	na
Vale SA	VALE3 BZ	56.18	11.0	7.3	7.6	7.4	5.2	5.2	2.5	1.9	1.6
NMDC Ltd	NMDC IN	268.15	15.7	12.6	13.5	10.0	7.7	8.0	5.5	4.1	3.3
Sesa Goa	SESA IN	276.05	6.0	4.2	3.9	3.8	1.9	2.9	2.1	1.5	1.1
Global iron ore peers median			**11.1**	**8.2**	**7.5**	**7.4**	**5.7**	**5.1**	**3.2**	**2.4**	**1.9**
Global iron ore and coking coal peers median			**13.9**	**9.1**	**8.8**	**9.1**	**7.0**	**6.2**	**4.1**	**3.1**	**2.4**
ArcelorMittal	MT NA	26.55	15.2	13.1	9.1	9.2	7.3	6.0	0.9	0.9	0.8
Eregli Demir ve Celik Fabrikalari TAS	EREGL TI	4.83	11.2	10.5	9.0	8.5	7.7	6.8	1.2	1.1	1.0
Salzgitter AG	SZG GR	58.52	na	18.4	10.4	6.0	4.0	3.0	0.8	0.8	0.7
SSAB AB	SSABA SS	99.95	44.9	17.3	10.3	13.4	9.1	6.8	1.0	1.0	1.0
ThyssenKrupp AG	TKA GR	30.04	19.4	14.3	8.8	7.3	6.0	4.7	1.5	1.4	1.3
Voestalpine AG	VOE AV	33.64	11.5	9.1	8.0	6.0	5.3	5.0	1.4	1.2	1.1
Europe median			**15.2**	**13.7**	**9.1**	**7.9**	**6.6**	**5.5**	**1.1**	**1.1**	**1.0**
Mechel	MTL UN	30.52	18.3	8.8	7.5	10.0	6.2	5.5	2.9	2.3	1.9
Severstal OAO	CHMF RU	19.00	24.4	10.8	8.6	8.2	6.1	5.3	2.3	1.8	1.5
Russia median			**21.4**	**9.8**	**8.0**	**9.1**	**6.1**	**5.4**	**2.6**	**2.0**	**1.7**
Nucor Corp	NUE UN	47.97	na	19.5	13.2	17.6	8.4	6.3	2.1	2.0	1.8
United States Steel Corp	X UN	56.75	na	15.7	9.7	21.4	6.3	4.8	1.9	2.0	1.7
Cia Siderurgica Nacional SA	CSNA3 BZ	26.80	13.8	9.5	8.1	7.6	5.8	5.1	4.8	3.2	2.3
Gerdau SA	GGB UN	14.01	16.7	14.6	8.5	na	na	na	1.7	1.6	1.5
Usinas Siderurgicas de Minas Gerais SA	USIM5 BZ	20.05	15.4	13.8	7.8	10.5	9.0	6.6	1.2	1.1	1.0
Americas median			**15.4**	**14.6**	**8.5**	**14.0**	**7.3**	**5.7**	**1.9**	**2.0**	**1.7**
BlueScope Steel	BSL AU	2.00	na	14.4	8.9	10.8	5.8	4.6	0.7	0.7	0.6
China Steel	2002 TT	34.00	12.5	13.9	11.2	9.9	9.9	9.3	1.7	1.6	1.5
Hyundai Steel	004020 KS	130,500.00	12.8	9.9	8.8	11.0	6.7	6.0	1.5	1.2	1.1
POSCO	005490 KS	465,000.00	8.7	7.9	6.8	5.4	4.7	4.2	1.1	0.9	0.8
Asia (ex-Japan/China) median			**12.5**	**11.9**	**8.8**	**10.4**	**6.2**	**5.3**	**1.3**	**1.1**	**0.9**
JFE Holdings	5411 JP	2,529.00	16.5	10.5	8.7	6.8	6.4	5.9	0.9	0.9	0.8
Kobe Steel	5406 JP	222.00	14.0	13.1	12.2	6.0	5.7	5.5	1.2	1.1	1.0
Nippon Steel	5401 JP	293.00	16.4	12.0	10.1	7.8	7.2	6.7	1.0	1.0	0.9
Sumitomo Metal Industries	5405 JP	205.00	30.2	15.8	11.3	10.9	8.6	7.7	1.1	1.1	1.0
Japan median			**16.5**	**12.6**	**10.7**	**7.3**	**6.8**	**6.3**	**1.1**	**1.0**	**1.0**
Angang Steel	347 HK	10.68	24.7	14.6	11.9	8.4	6.6	5.9	1.2	1.1	1.1
Baoshan Iron & Steel	600019 CH	7.07	10.0	8.5	7.2	5.7	5.1	4.5	1.2	1.1	1.0
Maanshan Iron & Steel	323 HK	4.22	24.9	14.7	10.8	6.5	5.5	5.1	1.0	0.9	0.9
Pangang Group Steel Vanadium	000629 CH	13.92	na	34.0	16.9	32.1	20.5	na	5.1	4.4	na
Shanxi Taigang Stainless Steel	000825 CH	5.79	22.2	14.2	10.3	8.0	6.7	5.8	1.6	1.5	1.3
Hebei Iron & Steel	000709 CH	3.93	20.9	14.0	14.0	21.9	18.3	16.6	na	na	na
Wuhan Iron & Steel	600005 CH	4.68	20.9	15.0	10.7	7.9	7.6	6.2	1.3	1.2	1.1
China median			**21.5**	**14.6**	**10.8**	**8.0**	**6.7**	**5.8**	**1.2**	**1.2**	**1.1**
JSW Steel	JSTL IN	952.95	11.5	6.0	4.7	7.4	4.1	2.9	1.5	1.2	1.0
Steel Authority of India	SAIL IN	155.10	8.9	7.7	7.7	5.3	4.8	5.0	1.7	1.4	1.3
Tata Steel	TATA IN	618.20	8.5	7.7	6.5	6.2	5.4	4.7	1.9	1.5	1.3
India median			**8.9**	**7.7**	**6.5**	**6.2**	**4.8**	**4.7**	**1.7**	**1.4**	**1.3**
Global steel median			**15.4**	**12.6**	**8.8**	**8.0**	**6.6**	**5.5**	**1.3**	**1.2**	**1.1**

Prices as at 3 March 2011
TATA IN: Adjusted for value of non-consolidated investments(INR91/share)
Sources: BNP Paribas estimates for MOIL IN, SESA IN, NMDC IN, TATA IN, SAIL IN and JSTL IN, all others (not rated) are Bloomberg consensus estimates

We prefer coking coal, steel, iron ore to Mn ore in ferrous sector

In the ferrous sector, we continue to prefer coking coal, steel, iron ore and Mn ore in the stated order. Within steel-making raw materials, we prefer coking coal and iron ore over Mn ore, as: 1) we expect adverse demand-supply conditions, and 2) with near-term supply side issues constraining movement of coking coal and iron ore, prices of these commodities are likely to remain strong.

Exhibit 5: Industry fundamentals for steel making raw-materials

	Iron ore	Coking coal	Manganese ore
Type of raw material for steel	Direct input	Direct input	Indirect input
Usage in per tonne of steel	1.6-1.8 tonnes	0.6-0.8 tonnes	25-30 kgs
Demand growth	Strong	Strong	Balanced
Supply growth	Strong	Weak	Strong
Industry structure	Consolidated	Consolidated	Fragmented
Pricing power	Medium	Strong	Weak

Source: BNP Paribas estimates

Within our coverage, we prefer India steel over iron ore. We have a negative view on iron ore over the longer term (2010-15) with supply addition expected to overtake demand and push down iron ore prices. For India steel, we expect a 12% CAGR in demand over FY11-13 and supply addition to lag demand growth. Also, as we expect India to remain a net importer of steel over FY11-13, we expect domestic steel producers to enjoy a small premium in pricing over their regional peers.

We have a positive view on coking coal, as coking-coal deposits (especially hard coking coal) are not widely available. Current coking-coal exporters like Australia face railway and port capacity bottlenecks, while the prime coking-coal resource base in China is depleting rapidly with high production rates. Exports from other traditional suppliers like the US, Canada and Russia should see only modest increases. New coking-coal suppliers like Mozambique and Mongolia face infrastructure hurdles. Recently, unfavourable weather in Australia has resulted in disruptions in supply of coking coal, causing a spike in spot prices. We expect that this will flow into the quarterly contract prices as well for 2Q12.

Exhibit 6: BNPP price forecasts for Mn ore, iron ore, coking coal and steel

	2011E	2012E	2013E
Mn ore (USD/dmtu)	6.5	6.5	6.7
Iron ore (USD/tonne)	130	107	99
Coking coal (USD/tonne)	260	250	250
China HRC (USD/tonne)	700	730	730

Source: BNP Paribas estimates

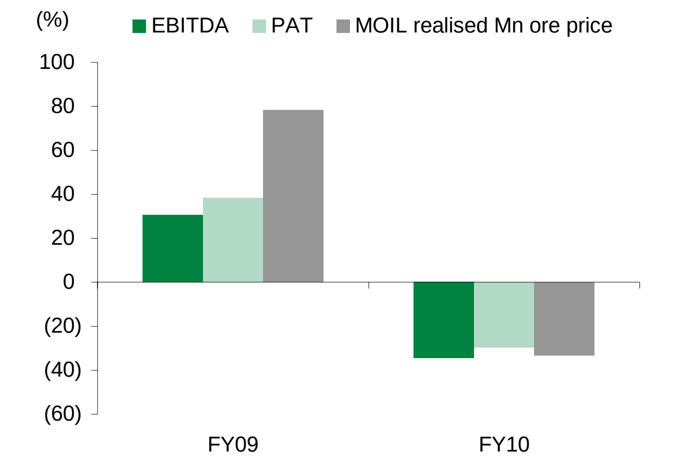
We expect seaborne iron-ore demand to grow 8% pa over 2010-15, driven by 5% steel production CAGR in China. Demand growth from other regions is likely to be muted. We expect supply growth to accelerate from 2013 onward, as high iron-ore prices have spurred supply additions with 1.5b-2.0b tonnes of new capacity planned. We expect moderate supply additions over 2010-12, as most greenfield projects are located in unstable/remote regions and face infrastructure challenges. However, supply growth could accelerate from 2013 onward and push down prices sharply if big supply additions from Africa materialise.

We expect India to remain a net steel importer over FY11-13, as demand outpaces supply. We expect India's finished steel demand to post a 12% CAGR over FY10-13 to 84m tonnes, led by strong demand growth from the Auto, Consumer Durable and Engineering sectors. Supply response, on the other hand, is likely to lag, with most greenfield steel projects facing considerable delays. Hence, we expect domestic steel prices to enjoy a small premium over regional prices during FY11-13.

Sensitivity to Mn ore price movements

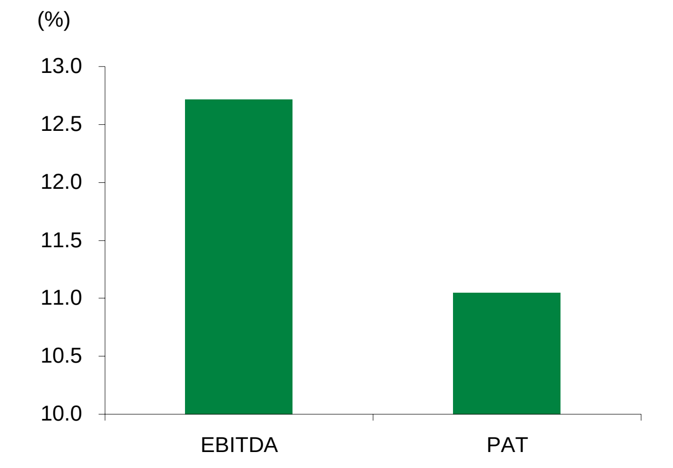
The EBITDA and PAT for MOIL are sensitive to changes in Mn ore prices. In FY09, when global Mn ore prices increased 152% y-y, EBITDA and PAT for MOIL increased 31% and 38%, respectively. In FY10, when Mn ore prices declined 60% y-y, EBITDA and PAT for MOIL was lower 35% and 30% y-y, respectively. We estimate that for every USD0.5 per dmtu change in global Mn ore price assumption, FY12E EBITDA and PAT for MOIL changes 13% and 11%, respectively.

Exhibit 7: Historical change in EBITDA and PAT with change in MOIL's Mn ore realisations



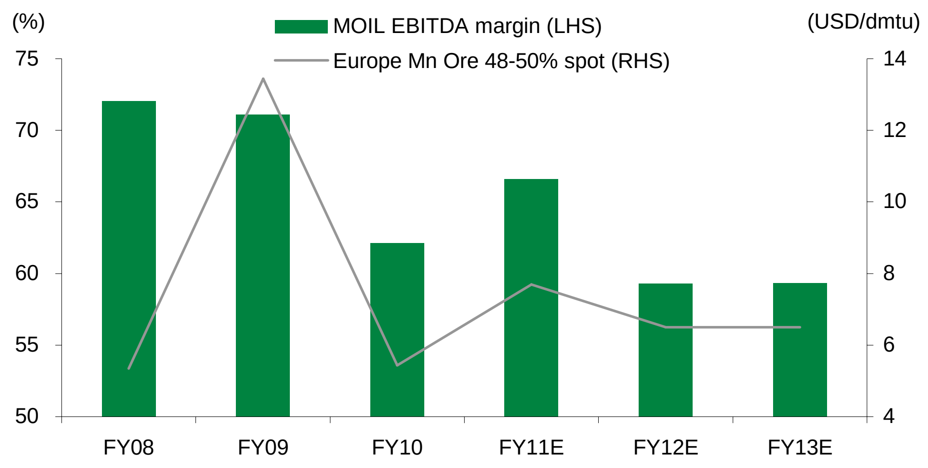
Sources: MOIL Ltd; BNP Paribas

Exhibit 8: FY12E EBITDA and PAT sensitivity to USD0.5 per dmtu change in Mn ore price assumption



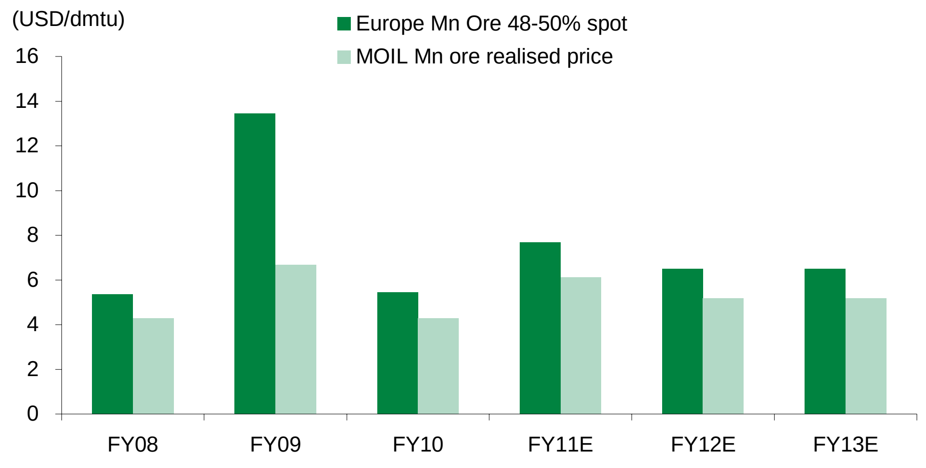
Source: BNP Paribas estimates

Exhibit 9: EBITDA margins driven by Mn ore prices



Sources: MOIL Ltd; BNP Paribas estimates

Exhibit 10: MOIL's Mn ore realisation is at a discount to global spot prices



Sources: MOIL Ltd; Bloomberg; BNP Paribas estimates

Exhibit 11: Key assumptions table

Year-end 31 Mar	2008	2009	2010	2011E	2012E	2013E	2014E	2015E
Mn ore production volume (m tonnes)	1.36	1.18	1.09	1.12	1.15	1.21	1.23	1.37
Europe Mn ore 48-50% spot (USD/dmtu)	5.3	13.4	5.4	7.7	6.5	6.5	6.7	6.8
Mn ore realisation for MOIL (INR/tonne)	6,501	11,600	7,744	10,653	8,886	8,886	9,108	9,336
USD/INR rate	40.26	46.00	47.41	45.60	45.00	45.00	45.00	45.00

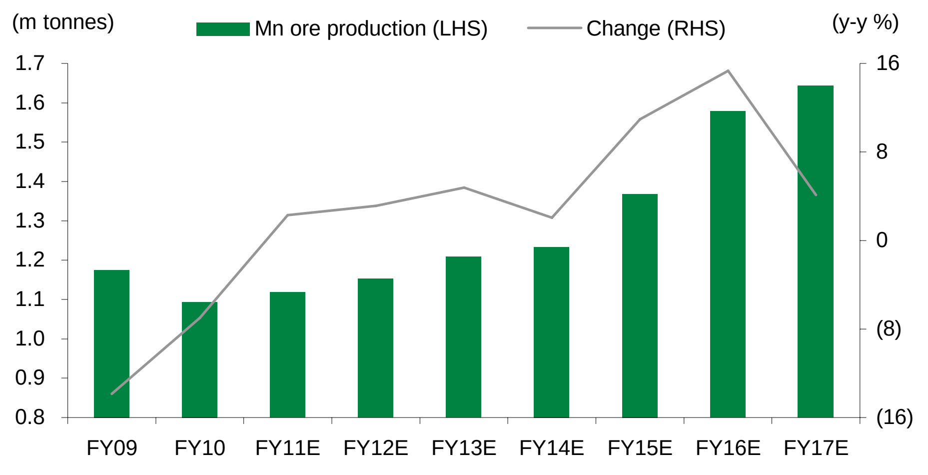
Sources: MOIL Ltd; BNP Paribas estimates

Back-ended volume growth; no cost-savings

Volume growth is mostly back-ended

MOIL has announced its Phase I capacity expansion plan to increase volumes from 1.1m tonnes in FY10 to about 1.5m tonnes in FY15-16. The company is spending about INR7.7b to reach 1.5m tonnes capacity. As part of the expansion plan, MOIL is increasing capacity at five of its 10 existing mines.

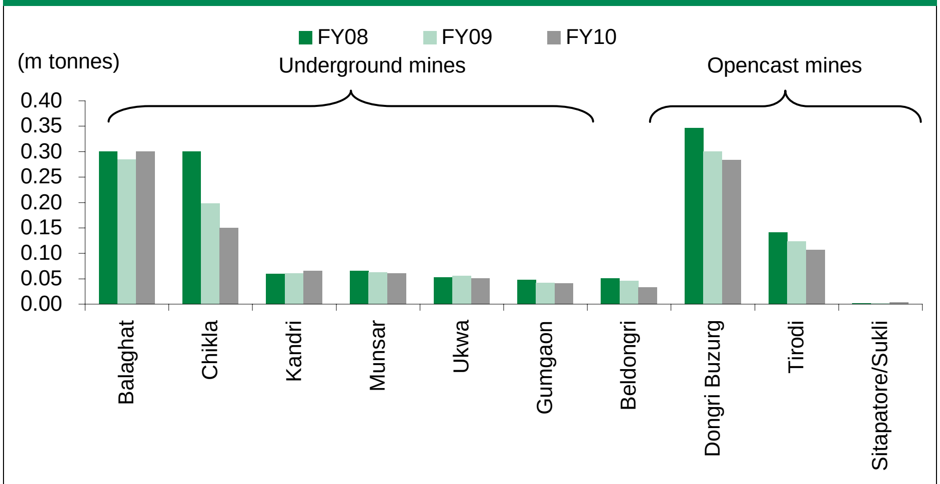
Exhibit 12: Near term volume growth is muted



Sources: MOIL Ltd; BNP Paribas estimates

Over FY12-13, only the Gumgaon mine expansion (increase in mine production from 60,000 tpa to 100,000 tpa) is due to come into production. This accounts for about 9% of the overall capacity expansion. The balance capacity expansion is due to become operational over FY15-17. We are also factoring in additional production growth of 25,000 tpa y-y from the Dongri Buzurg mine over FY11-14. Thus, volume growth in the near term (over FY12-14) would be only 2-5% y-y for MOIL.

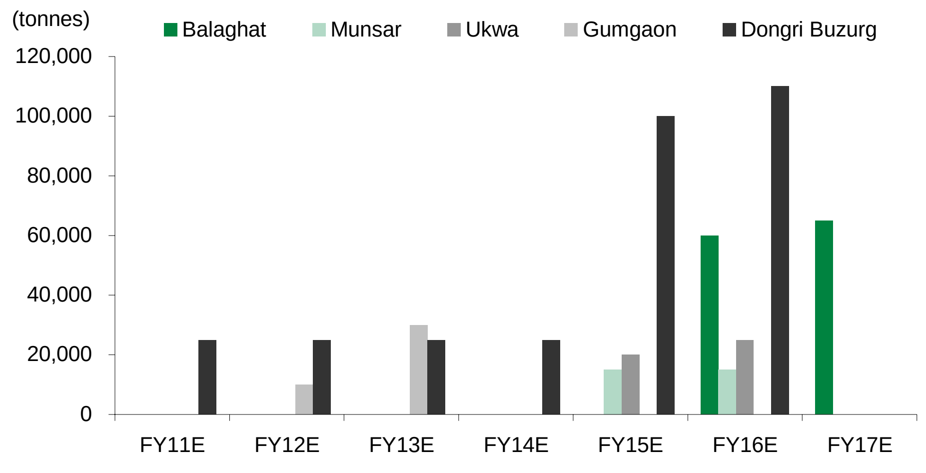
Exhibit 13: Underground mines constitute more than 60% of production



Sources: MOIL Ltd; BNP Paribas

The company has guided to volumes of 1.15m tonnes in FY11 and 1.20m tonnes in FY12, which is about 2.8% and 3.9% higher than our respective estimate. MOIL's Mn ore volumes at end-3QFY11 were about 0.74m tonnes (64% of its FY11 target).

Exhibit 14: Production increase mine-wise – FY11-17E



Sources: MOIL Ltd; BNP Paribas estimates

But less risk of delays in expansion plans

We believe that MOIL's expansion plans face less risk than the expansion plans of other Indian mining companies such as NMDC (NMDC IN, BUY), Coal India (COAL IN, Not rated) and Nalco (NACL IN, REDUCE). MOIL has already secured environmental approval to expand production to 1.6m tonnes. Also, unlike the experience of its peers, MOIL's operations have never been affected by disruptions caused by insurgents (Naxalites). Even the logistical constraints faced by MOIL are relatively less than those of NMDC and Coal India, due to its mines being located close to Nagpur, a logistics hub. The company also has funds available (INR18b cash balance as at the end of 3QFY11) for its expansion. Thus, we are not building in any delays in its expansion plans and project the company will reach 1.5m-1.6m tonnes by FY16-17.

Exhibit 15: Expansion plans of MOIL better placed than other PSU miners

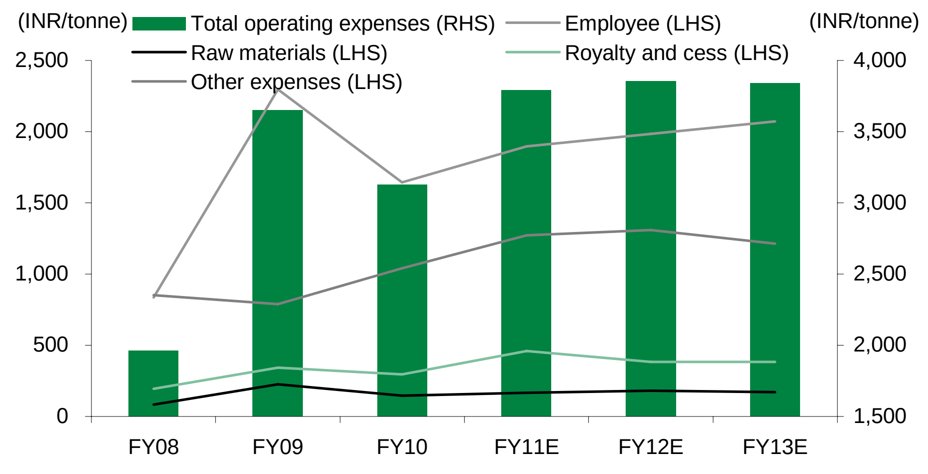
	NMDC	Coal India	Nalco	MOIL
Environmental approval for expansion	No	No	No	Yes
Affected by Naxalite disruption	Yes	Yes	Yes	No
Logistical constraints	Yes	Yes	No	No
Cash for capex	Yes	Yes	Yes	Yes

Sources: MOIL Ltd; Company data; BNP Paribas

Rise in costs is permanent and here to stay, in our view

The average cost of production for the company has risen sharply from about INR2,000/tonne in FY08 to about INR3,800/tonne for 9MFY11. We believe the majority of the cost increase has resulted from increased employee expenses, and that most of the cost increase seen over the last two years is permanent. However, we believe that costs will not increase drastically from current levels unless there is a sharp upward revision again in employee costs or a revision of royalty rates. We have not built in such a scenario in our estimates.

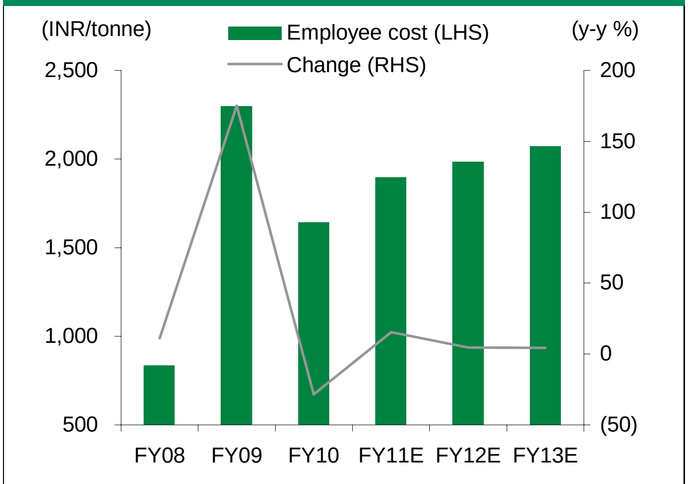
Exhibit 16: We believe cost increase is permanent



Sources: MOIL Ltd; BNP Paribas estimates

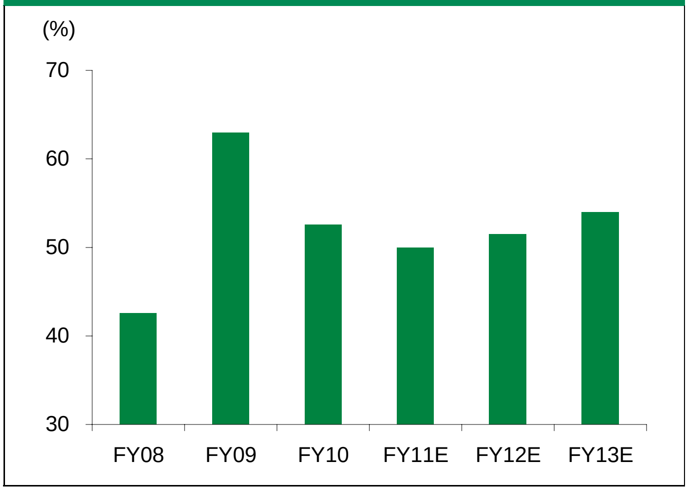
Employee expenses/tonne increased from about INR850 in FY08 to about INR2,000 for 9MFY11. MOIL faced an increase in employee costs during FY08 and FY09, largely due to provisions made for expected retroactive increases in employee costs due to the Pay Commission's revision of salaries for government employees. We expect no huge increase in employee costs in the future and have not built it into our estimates. Even with production cost of about USD65/tonne for FY10, MOIL continues to be among the lowest cost producers globally.

Exhibit 17: Employee costs have increased sharply



Sources: MOIL Ltd; BNP Paribas estimates

Exhibit 18: Employee costs are more than 50% of overall costs

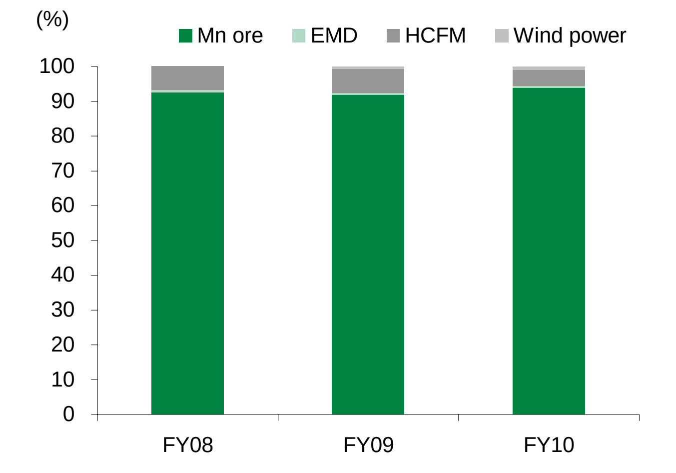


Sources: MOIL Ltd; BNP Paribas estimates

Other businesses – little contribution to revenue or EBITDA

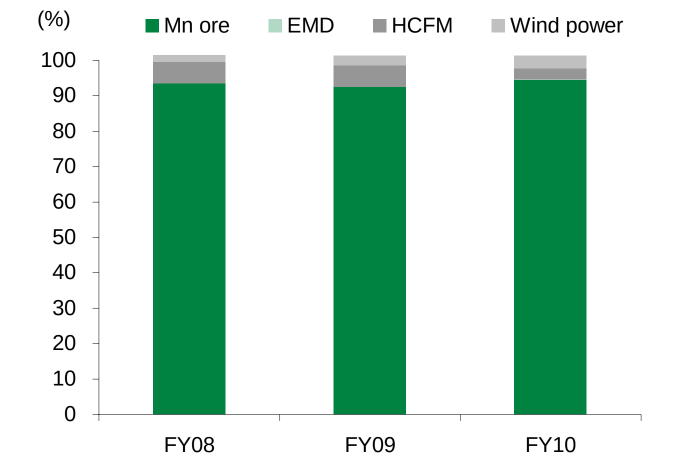
The other businesses of MOIL include a 1,000 tonnes per annum (tpa) plant for manufacturing electrolytic manganese dioxide (EMD), a 10,000 tpa plant for producing high carbon ferro manganese (HCFM), and a 20MW wind-power farm. These together contributed about 6% to FY10 revenue and EBITDA. We expect these businesses to further decrease in significance, based on revenue and EBITDA contribution to the company, as the production of Mn ore increases.

Exhibit 19: Revenue breakdown by segment



Sources: MOIL Ltd; BNP Paribas

Exhibit 20: EBITDA breakdown by segment



Sources: MOIL Ltd; BNP Paribas

Lack of near-term triggers; upside capped

Plans to increase ferro-alloy production are facing delays

In 2008 MOIL announced a JV with SAIL (SAIL IN, HOLD) to produce ferro-manganese, and in 2009 it announced a JV with RINL (Not listed) to produce silico-manganese (50% stake in both). Once complete, the JVs will increase MOIL's ferro-alloy production from about 11,000 tpa to about 93,000 tpa (on an attributable basis), but both these ventures have been facing delays with no significant progress as yet.

Exhibit 21: Pls for JVs to increase value added production have been facing delays

JV	Announcement date	Proportion of ownership Interest	FeMn capacity	SiMn capacity	Capex	Timeline	Location
		(%)	(tonnes)	(tonnes)	(INR m)		
SAIL & MOIL Ferro Alloys Pvt Ltd	February 2008	50	31,000	75,000	3,920	24 months	Nandini, Bhilai, Chattisgarh
RINMOIL Ferro Alloys Pvt Ltd	May 2009	50	20,000	37,500	2,062	24 months	Bobbili, Vizag District of Andhra Pradesh

Source: MOIL Ltd

MOIL is aiming to complete the tendering process for the JVs by end-FY11 and to complete the projects in 22-24 months thereafter. We estimate MOIL's equity contribution to the two JVs to be about INR3b. We are not building these JVs into our estimates, as we expect further delays and no meaningful contribution from these until FY14-15.

Greenfield mine still three to five years away from production

MOIL has received an area of about 814.7 hectares in the state of Maharashtra for greenfield exploration. The company has applied for a prospecting lease over the tenement and expects to start exploratory drilling on receiving the necessary approvals. The company has earmarked about INR1.5b in capex to bring this mine into production.

We believe that this mine is three to five years away from production, as MOIL is yet to obtain the prospecting lease. The company would be required to do exploratory drilling to establish reserve and resource estimates before it can apply for a mining lease. Even after getting the mining lease, MOIL will require environmental approvals including stage 1 forest and stage 2 forest clearances before it can start mining the ore.

Brownfield exploration will not lead to immediate production

We believe that although addition to reserves is a long-term positive for the company, it does not translate to immediate production. MOIL has a good track record of converting resources into reserves. In the past three years, the company has added about 4.9m tonnes to reserves, translating into a reserve-replacement ratio of about 1.4x. It has set a drilling target of about 4,500 metres for FY11 and 5,000 metres for FY12, and expects to add 3.0m-4.0m tonnes to reserves in the next two years.

Phase II capacity expansion plan is at the drawing board stage

MOIL recently announced the Phase II of its expansion plan to increase production to 2.5m tonnes by 2020. We believe this is at the drawing board stage and will take at least 1-2 years for the company to finalise its plans and lay down the capex budget.

Exhibit 22: Phase 1 capex plan under execution; phase II is still at the drawing board stage

	Capex (INR m)	Estimated completion date
Deepening of Production Shaft at Balaghat Mine	65	Dec-10
Deepening of Holm's Shaft at Balaghat Mine	190	Mar-15
High speed shaft for mining at deeper levels at Balaghat Mine	3,000	2016
Sinking of vertical shaft at Gumgaon Mine	160	Apr-11
Sinking of vertical shaft at Munsar Mine	252	Apr-14
Sinking of vertical shaft at Ukwa Mine	181	Apr-14
Development of Dongri Buzurg opencast mine	1,800	Mar-14
Township at mines	2,030	2014-15

Source: MOIL Ltd

Muted Mn ore prices over 2011-13E

Large capacity addition to keep Mn ore prices under check

We expect the Mn ore market to have moved into surplus in 2010 and to remain in surplus until 2013 after being in a small deficit in 2009. Based on the announced expansions at existing mine sites and new projects, we expect additions of about 8.9m tonnes in Mn ore mining capacity over 2010-13. This is almost 17% of the global Mn ore mining capacity in 2009. We forecast a 3.9% capacity addition CAGR over 2009-13. With strong capacity additions in global Mn ore mining capacity, we expect Mn ore market to move into a surplus, as we forecast only a 7.1% CAGR in global steel production over 2009-13.

Exhibit 23: Expected pipeline of 8.9m tonnes capacity addition over 2010-13E

Sources: USGS; BNP Paribas estimates

We believe the capacity additions will be led by projects in South Africa, Australia and China, while smaller additions will also happen in Gabon, India, Ivory Coast and Cameroon. We do not expect high capacity utilisation at the new projects in their first year of operations, and so expect no deluge of supply or a consequent crash in Mn ore prices. Additionally, with infrastructure constraints in South Africa and Australia, we are building only a gradual ramp-up in supplies.

Mn ore production continues to rise

The Mn ore industry recovered in 2010 after going through a recessionary phase in 2009, as global steel production grew almost 15% y-y. All the major miners increased production to cater to the demand from increasing steel production. We estimate that Mn ore production increased 34% y-y to in 2010, to about 47m tonnes, implying a global capacity utilisation rate of about 84%, up 18ppt y-y. We forecast a 10.3% production CAGR over 2009-13.

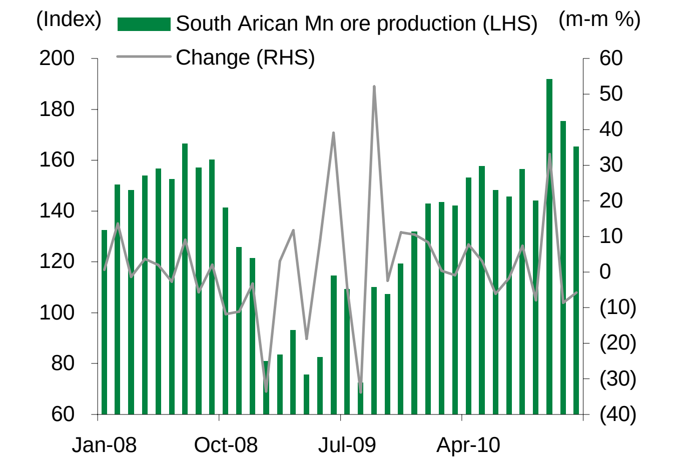
Exhibit 24: Mn ore demand/supply

('000 tonnes)	2005	2006	2007	2008	2009	2010E	2011E	2012E	2013E
Mn ore capacity									
Global	40,971	41,996	47,066	52,396	53,717	56,067	57,124	59,884	62,624
China	12,000	12,000	16,500	20,000	20,000	20,500	21,000	21,500	22,000
Global ex-China	28,971	29,996	30,566	32,396	33,717	35,567	36,124	38,384	40,624
Mn ore capacity utlisation (%)									
Global	84	81	81	86	66	84	84	84	84
China capacity utilisation	100	92	85	95	75	87	83	82	80
Global ex-China	78	77	79	81	60	82	85	85	85
Mn ore production									
Global	34,526	33,954	38,187	45,317	35,308	47,129	48,116	50,189	52,309
China	12,000	11,000	14,000	19,000	15,000	17,889	17,372	17,666	17,635
Global ex-China	22,526	22,954	24,187	26,317	20,308	29,240	30,744	32,523	34,674
Mn ore consumption									
Global	31,522	31,929	37,870	42,809	35,696	46,329	47,116	49,189	51,509
China	12,796	14,388	17,366	20,703	21,842	20,539	21,559	22,473	23,474
Global ex-China	18,727	17,541	20,504	22,106	13,854	25,790	25,557	26,716	28,035
Mn ore balance - surplus/(Deficit)	3,004	2,026	317	2,508	(388)	800	1,000	1,000	800
Mn ore price (USD/dmtu)	3.22	2.60	3.55	14.10	5.48	7.71	6.50	6.50	6.66
Global steel production (m tonnes)	1,150	1,247	1,346	1,329	1,225	1,414	1,460	1,532	1,613

Sources: IMnI; BNP Paribas estimates

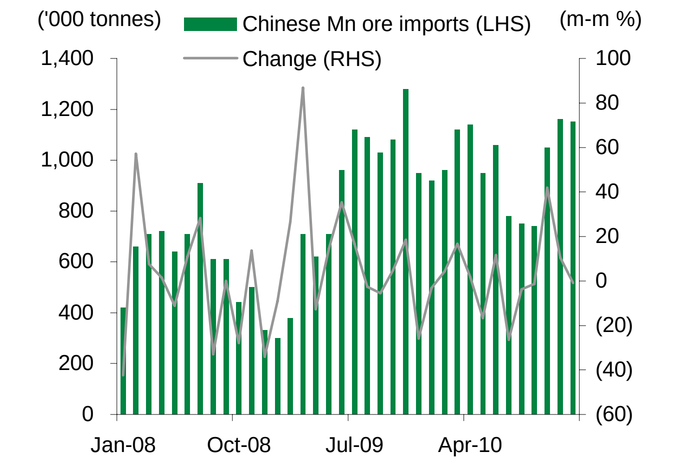
Mn ore prices started rising in early 2010 with increasing global steel production, and touched a high of USD8.6/dmtu in May 2010 and averaged USD7.6/dmtu for 1H10. With prices rising almost 29% y-y, miners increased production of Mn ore to benefit from the price rise. We believe this led to a big increase in Mn ore production and accumulation of inventories in 2H10, leading to Mn ore prices declining about 19% from a high of USD8.6/dmtu in 1H10 to a low of about USD7.0/dmtu in 2H10. The slowing down of Chinese steel production in 2H10 due to curtailment of electricity supplies in order to achieve year-end emission targets was also a reason for the slowdown in Mn ore demand. Since then, prices have remained flat at about USD7.0/dmtu in January-February 2011.

Exhibit 25: South African Mn ore production



Sources: Bloomberg; BNP Paribas

Exhibit 26: Chinese imports of Mn ore



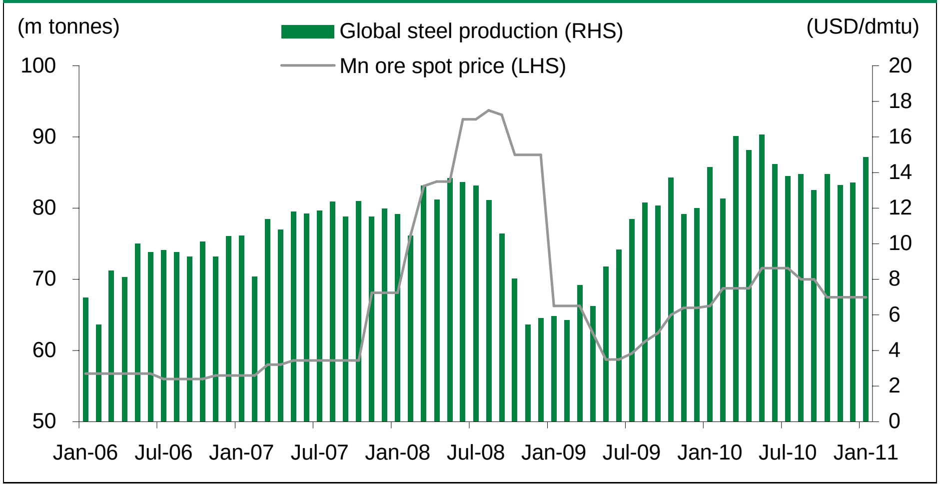
Sources: Bloomberg; BNP Paribas

We believe at current Mn ore price of about USD7/dmtu, miners will continue to bring new projects into production thereby increasing supplies and keeping global capacity utilisation from rising sharply. With the Chinese being at the far end of the marginal cost curve, we believe they will increase their imports from the high grade production that is coming from projects in South Africa and Australia. We believe global capacity utilisation will continue to remain at 80%+ levels as current Mn ore prices are still significantly above the marginal cost of production.

Steel production expected to grow at moderate levels

The global steel industry is the single largest consumer of Mn ore, as 90% of the Mn ore produced goes into producing steel. The balance goes into the production of batteries, chemical products and other products. Therefore, we believe demand for Mn ore will grow in line with steel production growth. We forecast demand CAGR of 9.6% for Mn ore over 2009-13.

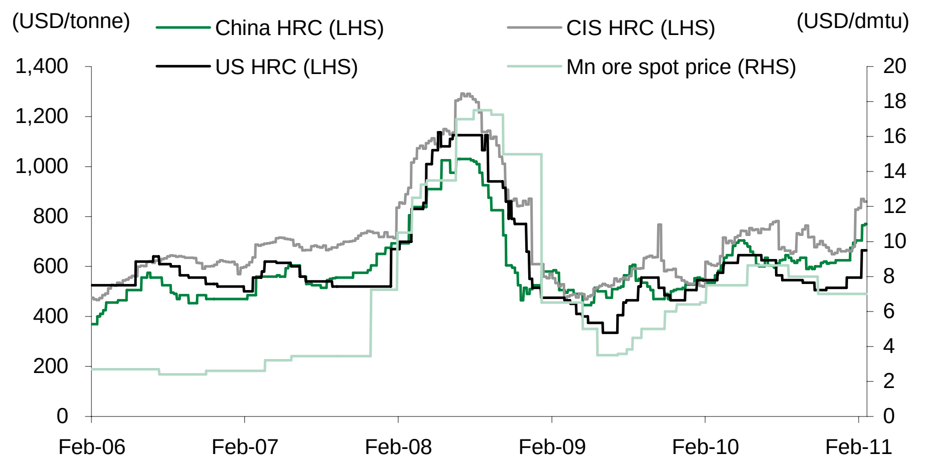
Exhibit 27: Global monthly steel production and Mn ore price movement



Sources: Bloomberg; BNP Paribas

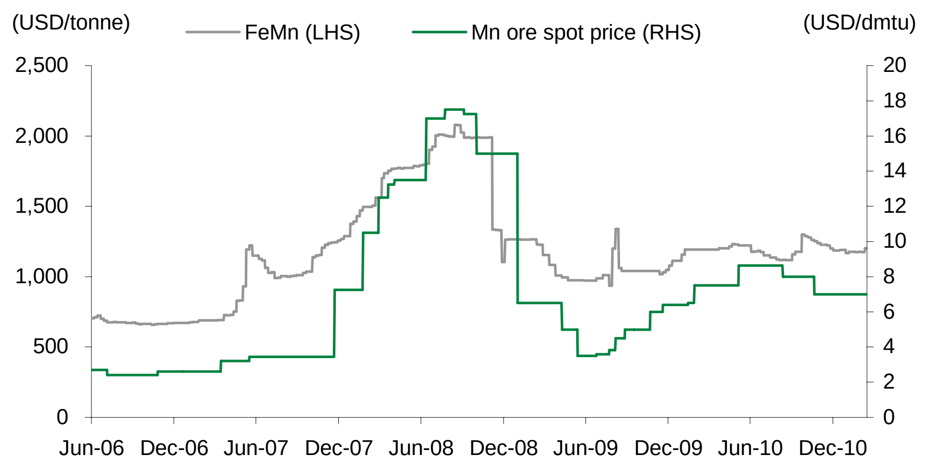
After growing at 15% y-y in 2010, we expect steel production to moderate to 3-5% y-y growth over 2011-13. With the developed economies still facing a weak outlook, steel production should remain muted and, thus, Mn ore requirement for steel production from these economies should remain at fairly low levels.

Exhibit 28: Steel prices and Mn ore prices



Sources: Bloomberg; BNP Paribas

Exhibit 29: Mn ore price and FeMn price

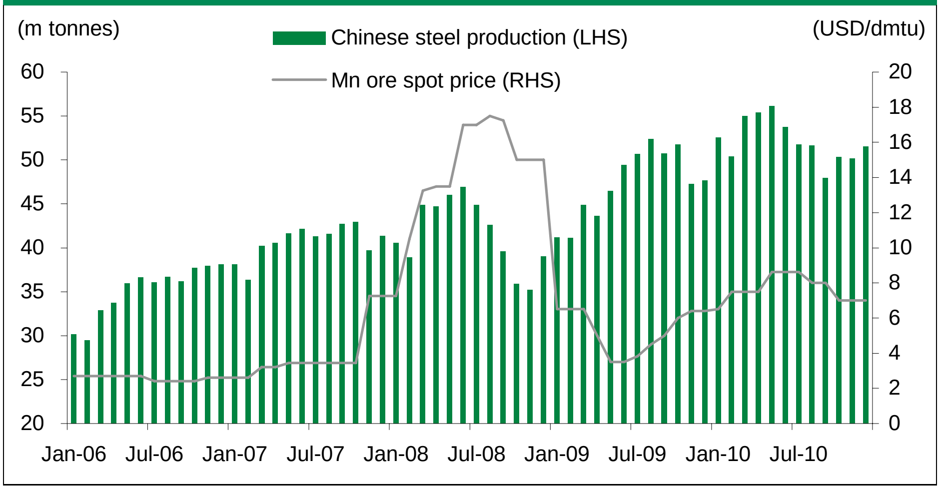


Sources: Bloomberg; BNP Paribas

China, the swing factor for Mn ore prices

We believe China plays a very important role in determining Mn ore prices. It is the largest producer of steel globally and also the largest importer of Mn ore. In 2009, China imported about 10m tonnes of Mn ore, accounting for 60%+ of the global trade in Mn ore. Chinese Mn ore production tends to be of low grade and the country needs to import high grade ore required for blending in order to produce ferro-alloys.

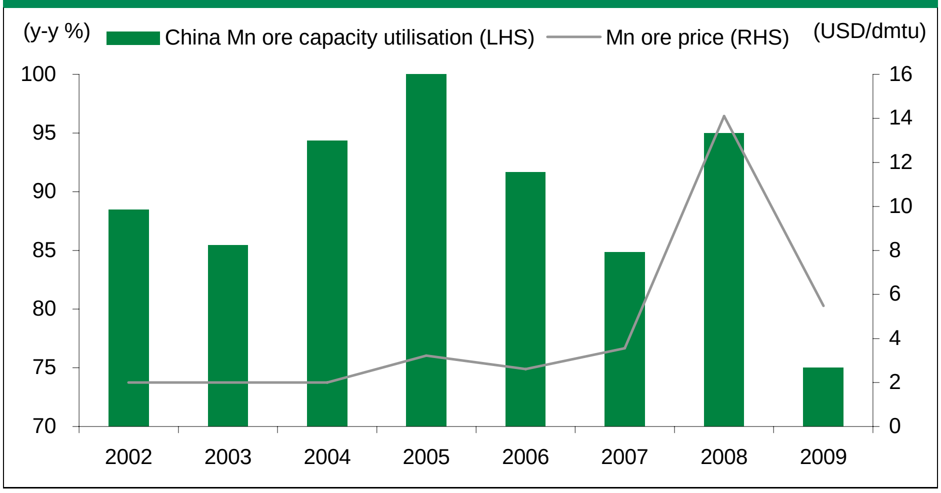
Exhibit 30: Chinese monthly steel production and Mn ore price



Sources: Bloomberg; BNP Paribas

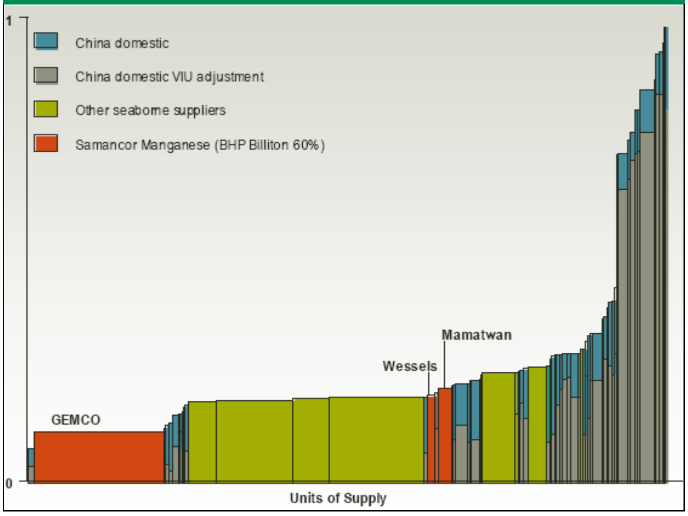
We expect steel production in China to slow to 5-7% y-y growth over 2011-13 after growing strongly in 2010. We believe that demand from China determines Mn ore prices, given the country is its biggest importer and consumer. Therefore, we expect Mn ore prices to remain subdued as steel production in China slows. We do not expect Mn ore prices to crash as they did in 2009, because we expect no major shock to global steel production. Additionally, if Mn ore prices remain under pressure for a prolonged period of time, we would expect a cut-back in production from marginal-cost producers, thereby reinstating the demand/supply balance.

Exhibit 31: China sets the Mn ore price



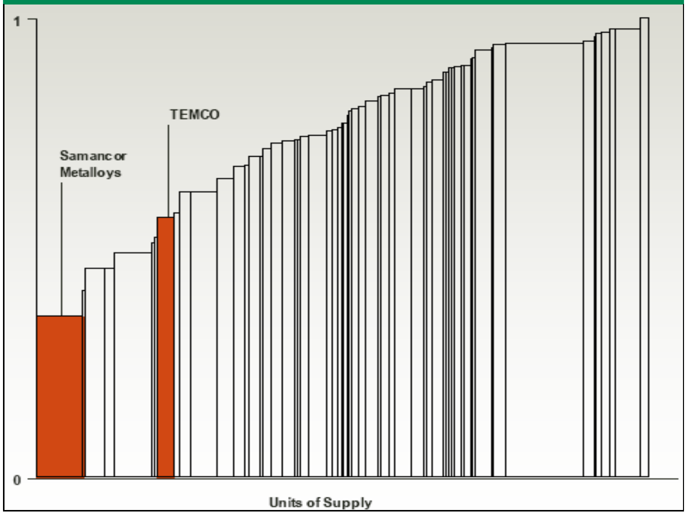
Sources: IMnI; BNP Paribas

Exhibit 32: Mn ore relative value in use index



Sources: BHP Billiton; BNP Paribas

Exhibit 33: High carbon ferro manganese cost curve



Sources: BHP Billiton; BNP Paribas

Catalysts

Delays in securing approvals for Greenfield mine

MOIL has applied for a prospecting lease for a Greenfield mine allotted to it by the state of Maharashtra, India. As the mine is yet to get a prospecting lease, we believe it will take at least three to five years before the mine starts to produce Mn ore. However, given the current tough stance of the Indian Environment Ministry, if there are delays in securing environmental and forest clearances, then the production from this mine could even be delayed beyond five years.

Proposed 26% mining tax

The Indian mining ministry has proposed in the draft mining bill that miners should provide 26% of equity or share 26% of the profits from the project with the displaced people. While the proposal is still in the draft stage and details are awaited, this could result in a meaningful decline in the profitability of the mining companies, including MOIL. However, discussions are still in initial stages and the final form in which the profit-sharing clause will be implemented remains to be seen to judge the impact on Indian miners.

Royalty rate on Mn ore could increase with next revision

MOIL has to pay royalty to the Government of India on the Mn ore that it mines. The royalty is payable on production at the rates determined by the Government of India. The royalty rates are revised periodically and at the last revision that took place in August 2009, the rate was set at 4.2% of the selling price of Mn ore. As the Government of India revises royalty rates once every three years, it can see an increase in the next revision which is slated for August 2012.

Decline in global steel production could hurt Mn ore prices

If global steel production was to decline, similar to the situation in 2009, then Mn ore demand would take a hit as more than 90% of the Mn ore mined is used in the production of steel. As a result, Mn ore prices would decline and thus negatively impact the company's profitability.

Devil’s advocate – Key risks to our thesis

Higher-than-expected steel demand

We are forecasting global steel demand growth of 3-5% y-y over 2011-13. If steel production growth is higher than our expectations, it could lead to higher-than-expected demand for Mn ore. This could result in a spike in Mn ore prices if the supply side is not quick enough to respond to the increase in demand. This presents a key risk to our ratings and estimates for MOIL.

Slower-than-expected ramp-up in Mn ore capacity addition

We are expecting additions of 8.9m tonnes to the global Mn ore mining capacity over 2010-13. If for any reason these projects are delayed, or if the ramp-up is slower than expected, it could lead to a situation where the miners are unable to meet the demand for Mn ore. In such a situation, Mn ore prices could rise beyond our forecast prices, posing an upside risk to our estimates for MOIL.

Reserve/Resource addition – domestically or internationally

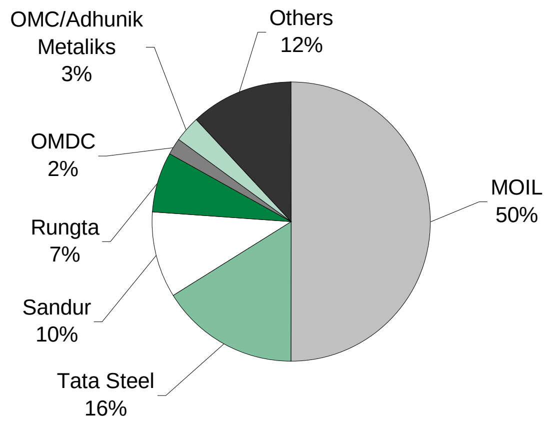
We have not built in any reserve/resource additions for MOIL. If the company announces additions to reserves/resources through any of the following: 1) brownfield exploration, 2) exploration at greenfield mine in Maharashtra, and 3) acquisition of new mine in India or abroad; we believe it would be a sentiment positive for the stock price, although it may not translate into production or earnings growth in the near term.

Appendix 1: MOIL – Company profile

Dominant domestic market share position

MOIL is the single largest producer of manganese (Mn) ore in India and among the top 10 Mn ore producers globally. The company produces about 50% of the Indian Mn ore, with the balance being produced by players like Tata Steel (TATA IN, BUY), Sandur Mines and Minerals (SMIO IN, Not rated), Rungta Mines (Not listed), OMDC (OMDC IN, Not Rated), OMC/Adhunik Metaliks (ADML IN, Not rated) and other smaller players. A large part of the manganese ore produced in India is used for captive consumption by steel producers such as Tata Steel.

Exhibit 34: Market share position in India



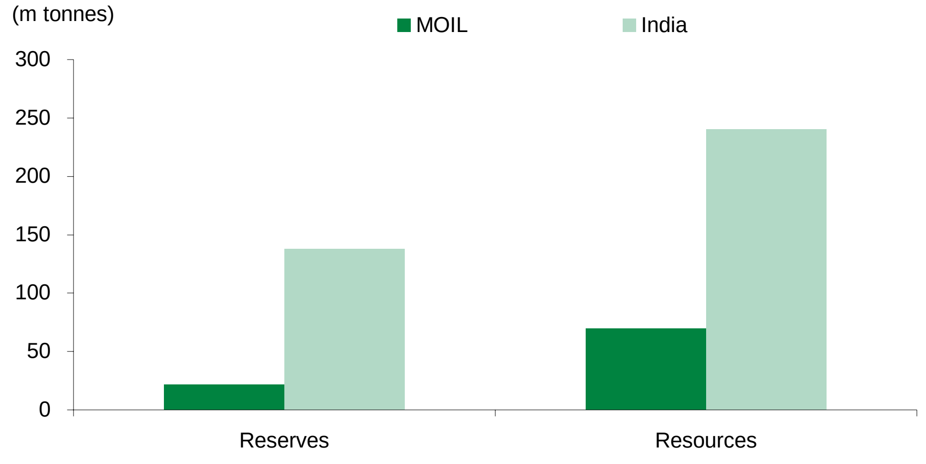
Sources: MOIL Ltd; Company data; BNP Paribas

The company primarily sells its Mn ore to ferro-alloy manufacturers, with its top 10 customers representing about 51.5% of its Mn ore revenues for FY10. MOIL's key customers include Maharashtra Elektrosmelt Ltd (Not listed) and Bhilai Steel Plant (Not listed), which are both public sector undertakings (PSUs) and subsidiaries of SAIL, and these together accounted for about 22.1% of MOIL's FY10 Mn ore revenues.

Controls 16% and 29% of Indian Mn ore reserves and resources

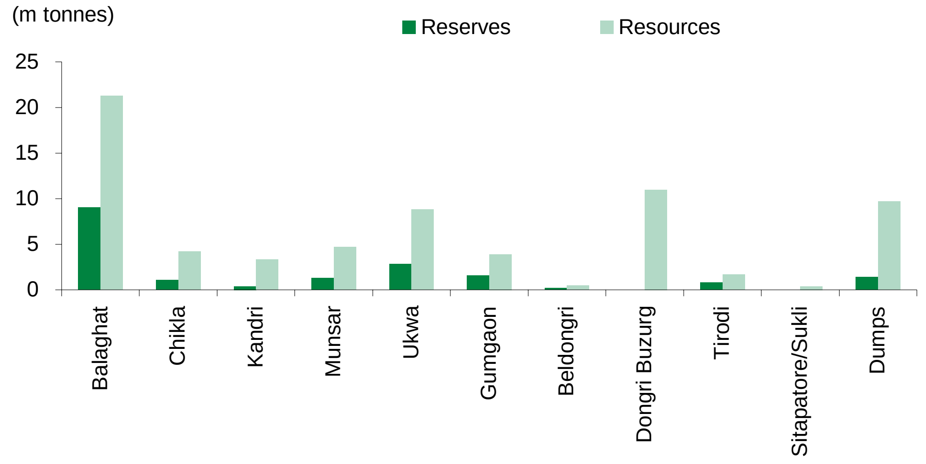
MOIL has total Mn ore JORC-compliant reserves and resources of about 91.2m tonnes as at 1 October 2010. Of the 91.2m tonnes resources, about 21.7m tonnes are reserves while the remaining 69.5m tonnes are under the resources category. MOIL's is the single largest producer of Mn ore in India with its reserves and resources accounting for about 16% and 29% of total Indian Mn ore reserves and resources, respectively. At its current mining rate of about 1.1m tonnes per annum, the reserves translate into an average mine life of about 20 years.

Exhibit 35: India vs MOIL reserves and resources, as at October 2010



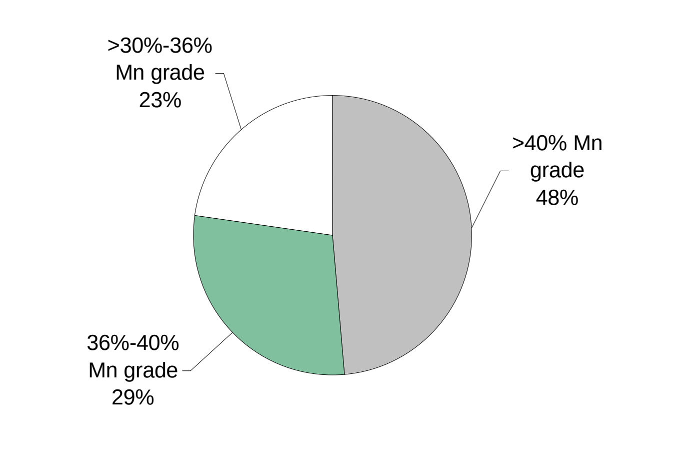
Sources: MOIL Ltd; BNP Paribas

Exhibit 36: MOIL's reserves and resources by mine, as at October 2010



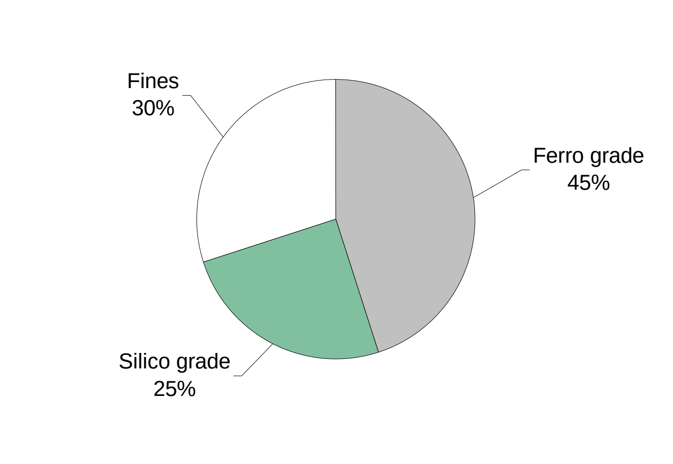
Sources: MOIL Ltd; BNP Paribas

Exhibit 37: Breakdown of MOIL's resources and reserves as per grades, as at October 2010



Sources: MOIL Ltd; BNP Paribas

Exhibit 38: MOIL's production of Mn ore according to end product grade, as at October 2010

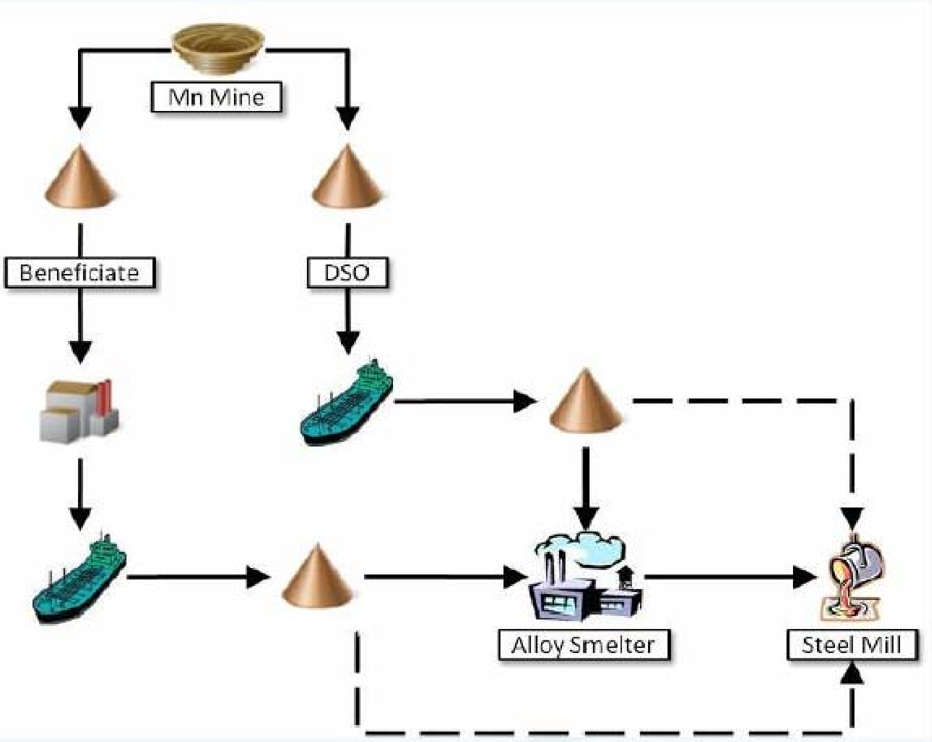


Sources: MOIL Ltd; BNP Paribas

Appendix 2: Manganese – From ore to steel

Global Mn ore and ferro-alloys industry

Exhibit 39: Mn ore mining to steel – process flow

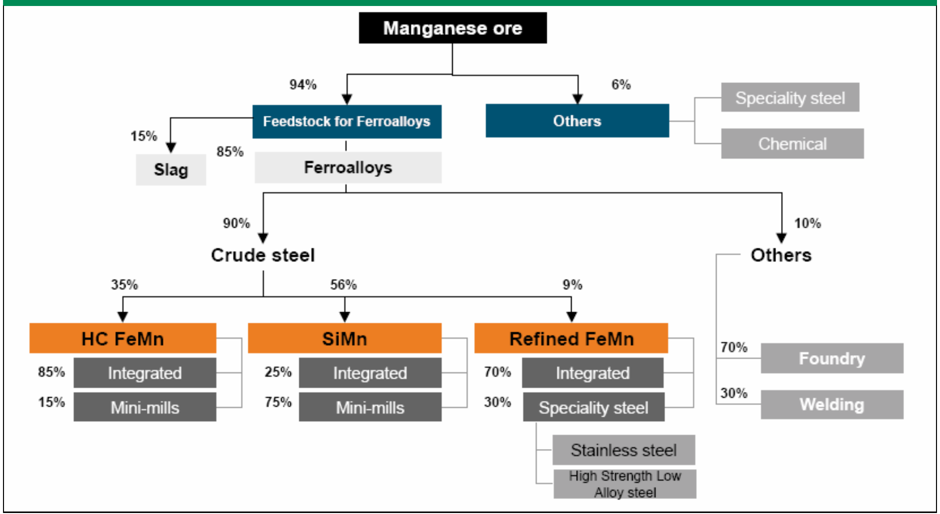


Source: Shaw River Resources

Mn ore is an essential ingredient in the manufacture of steel. Mn ore is used because it: 1) Reduces the undesirable amount of sulphur and oxygen in steel; 2) improves the response of steel to quenching; and 3) enhances the mechanical properties of steel by increasing the hardenability rate.

Every tonne of steel requires 25-30kg of Mn ore. Mn ore is converted into ferro-alloys to be used in the production of steel. About 10kg of ferro-alloys are used per tonne of steel.

Exhibit 40: Mn ore end consumer segment demand



Source: ENRC

About 90% of the Mn ore produced goes into making steel.

Mn ore is also used to manufacture non-ferrous alloys, as it: 1) Enhances corrosion resistance of Al alloys; 2) improves copper alloys' castability and strength; and 3) can replace part of the nickel in Ni-Al alloys.

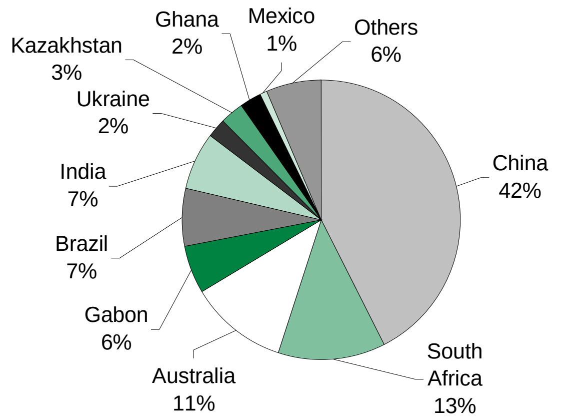
Other uses of Mn ore include the following: 1) Used in dry-cell batteries in the manganese dioxide form; 2) used in purifying drinking water, treating waste water and odour control; and 3) Used for controlling crop and cereal diseases.

Exhibit 41: Global Mn ore reserves distribution

Global Ore Reserves Base – 2009	(% of total)
South Africa	77
Ukraine	10
Australia	3
India	3
China	2
Gabon	2
Brazil	1
Mexico	0
Other Countries	2
Total (m tonnes)	**5,200**

Source: IMnI

Exhibit 42: Producers of Mn ore



Sources: IMnI; BNP Paribas

Exhibit 43: Grade-wise production of Mn ore by country – 2009

Country	> 44% ('000 tonnes)	>30% and <44% ('000 tonnes)	< 30% ('000 tonnes)
China	-	-	15,000
South Africa	2,325	2,130	-
Australia	3,796	193	-
Gabon	1,992	-	-
Brazil	1,843	446	61
India	-	2,347	-
Ukraine	-	726	-
Kazakhstan	-	917	55
Ghana	-	-	881
Mexico	-	274	56
Others	276	1,887	103
Total	**10,232**	**8,920**	**16,156**

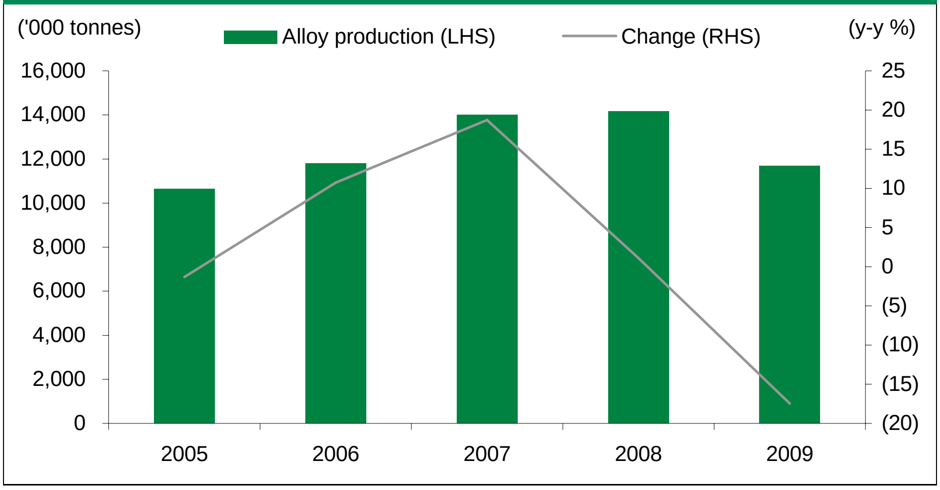
Source: IMnI

Exhibit 44: Global Mn ore producing companies

Company	Mine	Location	Year	Reserve (m tonnes)	Resource (m tonnes)	Grade (%)	Production (m tonnes)
BHP Billiton	GEMCO, Hotazel and Samancor	South Africa, Australia and Gabon	2010	259	415	na	6.1
Vale	Corumbá, Mina do Azul and Urucum Complex	Brazil	2009	74	na	38	3.2
ENRC	Various mines	Kazakhstan	2009	28	223	na	0.9
Eramet	Various mines	Gabon	2009	na	na	na	2.0
OM Holdings	Bootu Creek	Australia	2010	na	33	37	0.8
Assore/ARM	Various mines	South Africa	2010	148	390	na	3.1
Mineral Resources	na	Australia	2010	na	na	na	0.4
Consolidated Minerals	Woodie Woodie Mine	Australia	2010	12	18	42	1.2
MOIL	Various mines	India	2010	22	70	38	1.1

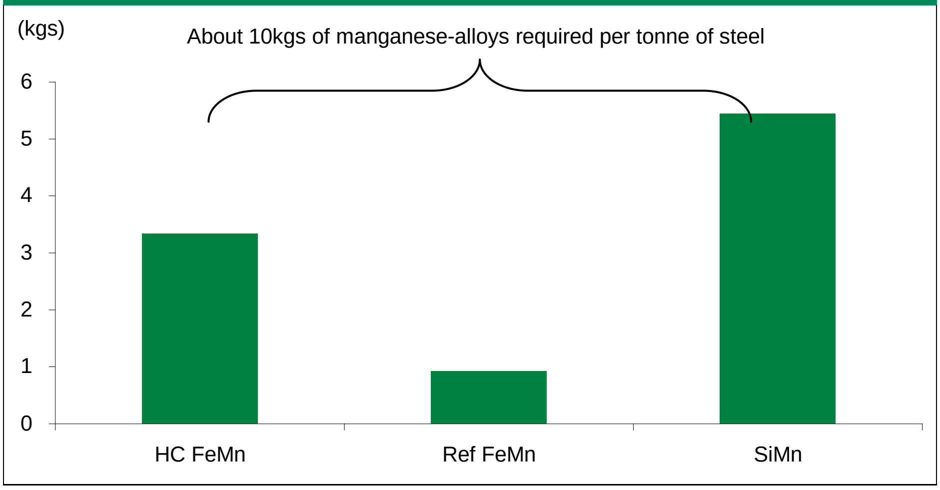
Sources Company data; BNP Paribas

Exhibit 45: World manganese-alloy production



Sources: IMnI; BNP Paribas

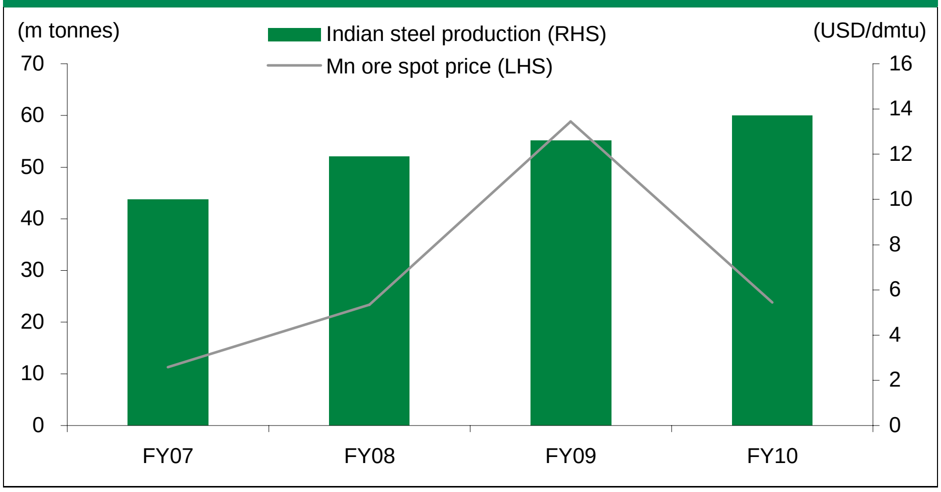
Exhibit 46: Usage of manganese-alloys in steel industry



Sources: ENRC; BNP Paribas

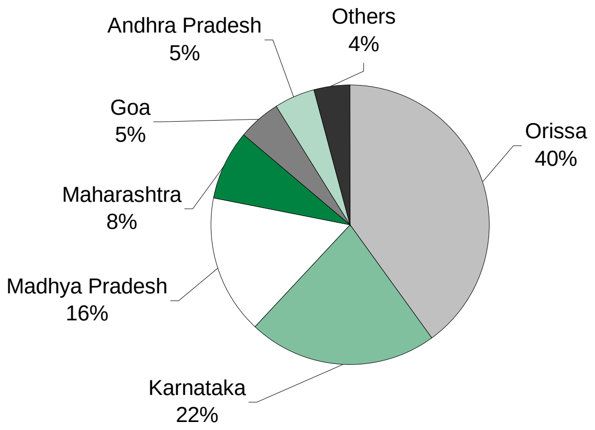
Indian Mn ore and ferro-alloys industry

Exhibit 47: Indian steel production and Mn ore spot price



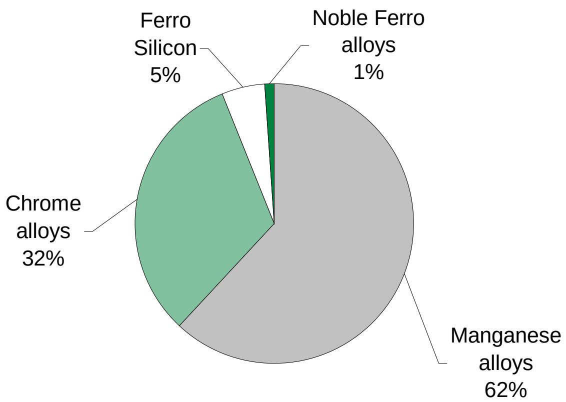
Sources: MOIL Ltd.; Bloomberg; BNP Paribas

Exhibit 48: Indian Mn ore resources



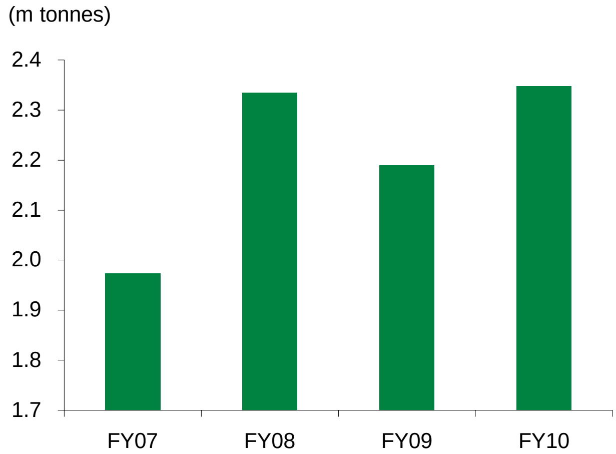
Sources: MOIL Ltd.; BNP Paribas

Exhibit 49: Indian ferro-alloys capacity breakdown, 2010



Sources: MOIL Ltd.; BNP Paribas

Exhibit 50: Production of ferro alloys in India



Sources: MOIL Ltd.; BNP Paribas

FINANCIAL STATEMENTS

MOIL Ltd

Profit and Loss (INR m) Year Ending Mar	2009A	2010A	2011E	2012E	2013E
Revenue	12,933	9,694	12,387	10,662	11,153
Cost of sales ex depreciation	(2,587)	(2,565)	(2,604)	(2,952)	(3,076)
Gross profit ex depreciation	**10,346**	**7,129**	**9,784**	**7,710**	**8,077**
Other operating income	0	0	0	0	0
Operating costs	(1,149)	(1,108)	(1,535)	(1,389)	(1,458)
Operating EBITDA	**9,197**	**6,021**	**8,249**	**6,322**	**6,619**
Depreciation	(247)	(253)	(268)	(289)	(319)
Goodwill amortisation	0	0	0	0	0
Operating EBIT	**8,951**	**5,768**	**7,981**	**6,032**	**6,300**
Net financing costs	1,117	1,300	1,317	1,449	1,401
Associates	0	0	0	0	0
Recurring non operating income	0	0	0	0	0
Non recurring items	0	0	0	0	0
Profit before tax	**10,068**	**7,068**	**9,299**	**7,481**	**7,700**
Tax	(3,430)	(2,404)	(3,069)	(2,469)	(2,541)
Profit after tax	**6,638**	**4,663**	**6,230**	**5,012**	**5,159**
Minority interests	0	0	0	0	0
Preferred dividends	0	0	0	0	0
Other items	0	0	0	0	0
Reported net profit	**6,638**	**4,663**	**6,230**	**5,012**	**5,159**
Non recurring items & goodwill (net)	0	0	0	0	0
Recurring net profit	**6,638**	**4,663**	**6,230**	**5,012**	**5,159**
Per share (INR)					
Recurring EPS *	39.51	27.76	37.08	29.84	30.71
Reported EPS	39.51	27.76	37.08	29.84	30.71
DPS	9.26	6.54	8.68	6.98	7.19
Growth					
Revenue (%)	32.3	(25.0)	27.8	(13.9)	4.6
Operating EBITDA (%)	30.6	(34.5)	37.0	(23.4)	4.7
Operating EBIT (%)	30.0	(35.6)	38.4	(24.4)	4.4
Recurring EPS (%)	38.3	(29.7)	33.6	(19.5)	2.9
Reported EPS (%)	38.3	(29.7)	33.6	(19.5)	2.9
Operating performance					
Gross margin inc depreciation (%)	78.1	70.9	76.8	69.6	69.6
Operating EBITDA margin (%)	71.1	62.1	66.6	59.3	59.3
Operating EBIT margin (%)	69.2	59.5	64.4	56.6	56.5
Net margin (%)	51.3	48.1	50.3	47.0	46.3
Effective tax rate (%)	34.1	34.0	33.0	33.0	33.0
Dividend payout on recurring profit (%)	23.4	23.6	23.4	23.4	23.4
Interest cover (x)	-	-	-	-	-
Inventory days	56.9	73.6	75.3	70.3	63.8
Debtor days	31.0	27.6	29.1	35.7	32.3
Creditor days	223.2	234.1	217.5	208.3	209.1
Operating ROIC (%)	642.6	423.0	405.6	306.2	329.5
Operating ROIC – WACC (%)	-	-	-	-	-
ROIC (%)	591.2	371.2	317.0	181.6	142.4
ROIC – WACC (%)	-	-	-	-	-
ROE (%)	63.0	31.1	32.5	21.4	18.9
ROA (%)	40.9	18.6	22.1	13.3	12.3

** Pre exceptional, pre-goodwill and fully diluted*

Sources: MOIL Ltd; BNP Paribas estimates

EBITDA CAGR of 9.4% over FY12-17E

PAT CAGR of 8.0% over FY12-17E

MOIL Ltd

Cash Flow (INR m) Year Ending Mar	2009A	2010A	2011E	2012E	2013E
Recurring net profit	6,638	4,663	6,230	5,012	5,159
Depreciation	247	253	268	289	319
Associates & minorities	0	0	0	0	0
Other non-cash items	(758)	(1,305)	0	0	0
Recurring cash flow	**6,127**	**3,612**	**6,498**	**5,302**	**5,478**
Change in working capital	1,110	(974)	(289)	326	7
Capex - maintenance	0	0	0	0	0
Capex – new investment	(485)	(231)	(949)	(1,248)	(1,890)
Free cash flow to equity	**6,751**	**2,407**	**5,260**	**4,381**	**3,595**
Net acquisitions & disposals	0	0	0	0	0
Dividends paid	(1,556)	(1,098)	(1,458)	(1,173)	(1,207)
Non recurring cash flows	1,041	1,241	0	0	0
Net cash flow	**6,236**	**2,549**	**3,802**	**3,208**	**2,388**
Equity finance	0	0	0	0	0
Debt finance	0	0	0	0	0
Movement in cash	**6,236**	**2,549**	**3,802**	**3,208**	**2,388**
Per share (INR)					
Recurring cash flow per share	36.47	21.50	38.68	31.56	32.61
FCF to equity per share	40.18	14.33	31.31	26.08	21.40

Capex for capacity expansion to 1.5m tonnes

Balance Sheet (INR m) Year Ending Mar	2009A	2010A	2011E	2012E	2013E
Working capital assets	2,130	2,550	3,379	2,908	3,042
Working capital liabilities	(3,269)	(2,715)	(3,254)	(3,110)	(3,251)
Net working capital	**(1,139)**	**(165)**	**124**	**(202)**	**(209)**
Tangible fixed assets	2,056	1,965	1,998	2,008	2,214
Operating invested capital	**917**	**1,801**	**2,122**	**1,806**	**2,005**
Goodwill	0	0	0	0	0
Other intangible assets	0	0	0	0	0
Investments	1	2	2	2	2
Other assets	155	222	871	1,819	3,184
Invested capital	**1,073**	**2,025**	**2,995**	**3,627**	**5,190**
Cash & equivalents	(12,322)	(14,871)	(18,673)	(21,881)	(24,269)
Short term debt	0	0	0	0	0
Long term debt *	0	0	0	0	0
Net debt	**(12,322)**	**(14,871)**	**(18,673)**	**(21,881)**	**(24,269)**
Deferred tax	185	128	128	128	128
Other liabilities	0	0	0	0	0
Total equity	13,209	16,767	21,539	25,379	29,331
Minority interests	0	0	0	0	0
Invested capital	**1,073**	**2,025**	**2,995**	**3,627**	**5,190**
Per share (INR)					
Book value per share	78.63	99.80	128	151	175
Tangible book value per share	78.63	99.80	128	151	175
Financial strength					
Net debt/equity (%)	(93.3)	(88.7)	(86.7)	(86.2)	(82.7)
Net debt/total assets (%)	(73.9)	(75.8)	(74.9)	(76.5)	(74.2)
Current ratio (x)	4.4	6.4	6.8	8.0	8.4
CF interest cover (x)	-	-	-	-	-

** includes convertibles and preferred stock which is being treated as debt*

Valuation	2009A	2010A	2011E	2012E	2013E
Recurring P/E (x) *	10.1	14.3	10.7	13.3	12.9
Recurring P/E @ target price (x) *	8.5	12.1	9.1	11.3	11.0
Reported P/E (x)	10.1	14.3	10.7	13.3	12.9
Dividend yield (%)	2.3	1.6	2.2	1.8	1.8
P/CF (x)	10.9	18.5	10.3	12.6	12.2
P/FCF (x)	9.9	27.7	12.7	15.2	18.6
Price/book (x)	5.1	4.0	3.1	2.6	2.3
Price/tangible book (x)	5.1	4.0	3.1	2.6	2.3
EV/EBITDA (x) **	6.3	8.8	6.1	7.4	6.6
EV/EBITDA @ target price (x) **	5.2	7.1	4.8	5.7	5.1
EV/invested capital (x)	50.7	25.6	16.1	12.4	8.2

** Pre exceptional, pre-goodwill and fully diluted*
*** EBITDA includes associate income and recurring non-operating income*

Trading at a significant premium to comparable peer group

Sources: MOIL Ltd; BNP Paribas estimates

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NOTES

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