

## Energy

India

The long wait begins, again. We have fine-tuned our EPS estimates for the Government-owned upstream companies (ONGC, OIL and GAIL) to factor in revised subsidy assumptions post the recent increase in diesel prices and capping of subsidized LPG cylinders. We rule out further increases in retail fuel prices in the next few months. Potential large under-recoveries in FY2013E pose risks to our earnings estimates given the Government's stretched fiscal position. We prefer OIL among the Government-owned oil companies noting a favorable risk-reward balance.

#### Risks from large gross under-recoveries unless crude price or exchange rate moves favorably

We compute gross under-recoveries on diesel, kerosene and LPG at ₹1.54 tn for FY2013E and ₹1.44 tn for FY2014E post the recent changes versus ₹1.39 tn of gross under-recoveries in FY2012 assuming (1) crude oil (Dated Brent) price of US\$110/bbl and (2) exchange rate of ₹55/US\$. Exhibit 1 gives our computations of under-recoveries for FY2013-14E at various levels of crude oil prices assuming no further increase in retail prices of regulated fuels. We see risks to our earnings estimates of upstream companies given large under-recoveries unless crude oil price or exchange rate surprises positively. Exhibit 2 gives our base-case estimates of overall under-recoveries and the likely shares between the Government, upstream and downstream oil companies.

#### Risks to volume assumptions of ONGC and GAIL; OIL is better placed operationally

We see risks to ONGC's earnings from the recent sharp decline in crude oil production from its nominated fields. We highlight that the rate of decline for crude oil production from ONGC's nominated fields has accelerated to 6-7% in the recent months versus a relatively modest 2-3% historically (see Exhibit 3). We also see risks to GAIL's earnings in the medium term noting potential risks to our gas supply assumptions from (1) sharper-than-expected decline in KG D-6 gas production and (2) slower-than-expected ramp-up in LNG imports from new terminals at Dabhol and Kochi. We find OIL better placed operationally given robust track record of increase in oil and gas production by 4% and 3% CAGR over the past five years; OIL's good reserve replacement ratio and high 2P reserves (22 years of current production) suggest that the company can continue to increase its production volumes in the medium term.

#### Prefer OIL among the upstream stocks

We prefer OIL to ONGC and GAIL noting (1) favorable risk-reward balance, (2) attractive valuations and (3) higher upside of 18% for OIL to our 12-month fair valuation versus a modest upside of 9-10% for ONGC and GAIL. OIL's valuations are inexpensive at 8.1X FY2013E EPS and 3.2X FY2013E EV/EBITDA as compared to ONGC trading at 8.9X FY2013E EPS and 3.6X FY2013E EV/EBITDA and GAIL trading at 12.1X FY2013E EPS and 8X FY2013E EV/EBITDA.

#### Fine-tuned estimates to reflect higher crude prices for FY2013E and revised subsidy assumptions

We have revised our earnings estimates for upstream companies to reflect (1) higher crude oil price of US\$110/bbl for FY2013E, (2) revised subsidy sharing assumptions and (3) other minor changes. Exhibit 4 gives our revised EPS estimates for ONGC, OIL and GAIL and compares the same with our previous estimates. We maintain our ADD rating on ONGC (TP: ₹310) and GAIL (TP: ₹410) stocks noting 9-10% potential upside to our unchanged 12-month forward target prices. We maintain our BUY rating on OIL stock noting 18% potential upside to our revised fair value of ₹575 (₹590 previously).

### **NEUTRAL**

**SEPTEMBER 15, 2012** 

**UPDATE** 

BSE-30: 18,464

#### **QUICK NUMBERS**

- ₹1.54 tn of gross under-recoveries in FY2013E
- ₹1.44 tn of gross under-recoveries in FY2014E assuming oil at US\$110/bbl; base-case estimate of ₹1 tn assuming oil at US\$100/bbl
- 9-10% potential upside for ONGC/GAIL; 18% upside for OIL

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#### Under-recovery will be difficult to manage at higher levels of crude prices

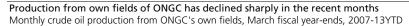
Subsidy loss breakdown at various levels of crude oil prices, March fiscal year-ends, 2013-14E (₹ bn)

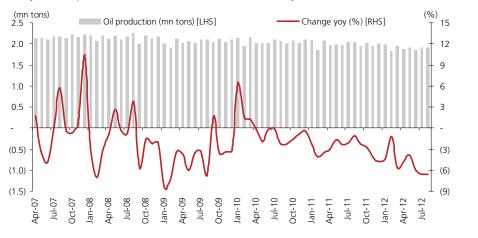
Dated Brent crude price (US\$/bbl)	100	105	110	115	120	125
Assuming stable retail prices for remaining part of FY2013E						
LPG	301	343	385	427	469	511
Kerosene	261	279	296	314	332	349
Diesel	575	716	858	1,000	1,141	1,283
Auto fuels	575	716	858	1,000	1,141	1,283
Cooking fuels	562	621	681	741	801	861
Total subsidy loss	1,136	1,338	1,539	1,741	1,942	2,144
Share of upstream companies	455	535	616	696	777	857
Share of downstream companies	_	_	_	_	_	_
Required compensation from government	682	803	924	1,044	1,165	1,286
Assuming stable retail prices in FY2014E						
LPG	272	310	349	388	426	465
Kerosene	253	269	285	302	318	334
Diesel	495	648	802	955	1,108	1,262
Auto fuels	495	648	802	955	1,108	1,262
Cooking fuels	524	579	634	689	744	800
Total subsidy loss	1,019	1,227	1,436	1,644	1,853	2,061
Share of upstream companies	459	552	646	740	834	928
Share of downstream companies	_	_	_			_
Required compensation from government	560	675	790	904	1,019	1,134

Source: Kotak Institutional Equities estimates

We assume 40% subsidy burden on upstream companies for FY2013E Share of under-recoveries for various participants, March fiscal year-ends, 2007-14E (₹ bn)

	2007	2008	2009	2010	2011	2012	2013E	2014E
Dated Brent crude oil price (US\$/bbl)	65	79	89	67	84	113	110	100
Exchange rate (Rs/US\$)	45	40	46	47	46	48	55	55
Gross under-recoveries	521	798	1,061	491	814	1,416	1,570	1,050
Payment by government (direct budgetary support)	27	27	29	30	32	31	31	31
Payment by government (oil bonds/cash)	241	353	713	260	410	835	923	485
Share of BPCL	53	86	162	53	94	190	211	111
Share of HPCL	49	77	147	56	90	182	202	106
Share of IOCL	138	190	404	152	227	462	511	269
Net under-recovery of oil companies	253	418	319	201	372	550	616	534
Receipt from upstream companies	205	257	329	144	303	550	616	459
Share of ONGC	170	220	282	116	249	445	497	368
Share of GAIL	15	14	18	13	21	32	37	30
Share of Oil India	20	23	29	15	33	74	82	61
Net under-recovery of OMCs	48	161	(10)	56	69		_	75





Source: MOPNG, Kotak Institutional Equities

Revised EPS estimates to reflect higher crude oil price for FY2013E, revised subsidy sharing assumptions and other minor changes Revision in EPS estimates, March fiscal year-ends, 2013-15E (₹)

_		2013E			2014E			2015E	
	Old EPS	New EPS	Change (%)	Old EPS	New EPS	Change (%)	Old EPS	New EPS	Change (%)
ONGC	32.8	31.8	(3.0)	34.5	33.5	(2.8)	37.3	35.9	(3.7)
Oil India	62.7	60.2	(4.1)	65.3	64.1	(1.7)	69.4	68.5	(1.4)
GAIL India	30.9	30.9	(0.1)	31.6	31.8	0.4	35.0	35.2	0.5

Source: Kotak Institutional Equities estimates

#### Key assumptions behind our earnings model of ONGC

We discuss our key assumptions behind our earnings model of ONGC below. Exhibit 5 gives the major assumptions behind our earnings model.

India Energy

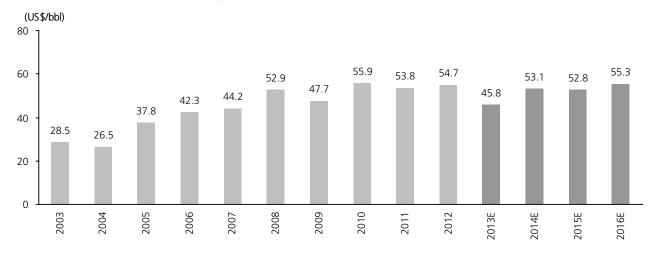
Steady net crude price realization over the next few years Key assumptions, March fiscal year-ends, 2008-16E

	2008	2009	2010	2011	2012	2013E	2014E	2015E	2016E
Macro assumptions									
Rs/US\$ rate	40.3	45.8	47.4	45.6	47.9	55.1	55.0	55.0	55.0
Subsidy share scheme loss (Rs bn)	220.0	282.3	115.5	248.9	444.7	497.1	368.0	334.0	277.2
Import tariff on crude oil (%)	5.2	0.9	0.4	5.2	1.2	_	_	_	_
Pricing and volumes assumptions									
Crude price									
Crude price, Bonny Light (US\$/bbl)	78.9	83.0	67.1	84.0	115.0	110.0	100.0	95.0	90.0
Net crude price, ONGC-India (US\$/bbl)	52.9	47.7	55.9	53.8	54.7	45.8	53.1	52.8	55.3
Natural gas price									
Ceiling natural gas price, India (Rs/cu m)	3.2	3.2	3.2	6.8	7.5	8.7	8.6	12.3	12.3
Ceiling natural gas price, India (US\$/mn BTU)	2.1	1.9	1.8	4.0	4.2	4.2	4.2	6.0	6.0
International operations									
Net natural gas price, OVL-Vietnam (Rs/cu m)	2.8	3.2	3.3	3.2	3.4	3.9	3.9	3.9	3.9
Net crude price, OVL-Sudan (Rs/ton)	10,142	12,136	10,173	12,223	19,269	22,686	20,501	19,431	18,361
Net crude price, OVL-Russia (Rs/ton)	16,231	19,433	16,253	19,573	26,903	31,681	28,607	27,101	25,596
Sales volumes—Domestic fields									
Crude oil - own fields (mn tons)	22.3	21.2	20.5	20.4	19.7	19.3	19.6	19.8	20.0
Crude oil - JV (mn tons)	1.8	1.7	1.8	2.5	3.4	4.9	5.3	5.9	6.6
Natural gas - own fields (bcm)	17.8	17.7	18.1	18.3	18.2	18.8	19.3	19.7	20.0
Natural gas - JV (bcm)	2.7	2.8	2.5	2.0	2.0	1.8	1.7	1.6	1.4
Sales volumes—Overseas fields									
Crude oil (mn tons)	6.8	6.6	6.5	6.8	6.1	4.7	5.7	6.1	6.2
Natural gas (bcm)	2.0	2.2	2.4	2.7	2.5	2.6	2.9	3.2	3.4
Total sales									
Crude oil (mn tons)	30.9	29.4	28.8	29.7	29.2	28.9	30.5	31.8	32.8
Natural gas (bcm)	22.4	22.8	23.0	23.0	22.7	23.1	23.9	24.4	24.9
Total sales (mn toe)	50.9	49.8	49.3	50.2	49.5	49.5	51.8	53.6	55.0
Total sales (mn boe)	372	363	360	367	361	362	378	391	402
Crude oil (%)	61	59	58	59	59	58	59	59	60
Natural gas (%)	39	41	42	41	41	42	41	41	40

- ▶ Subsidy amount. We model ONGC's FY2013E, FY2014E and FY2015E subsidy burden at ₹497 bn, ₹368 bn and ₹334 bn. We assume that the upstream companies will bear 40% of gross under-recoveries in FY2013E and 45% in FY2014E versus 39.7% in FY2012 and 38.7% in FY2011. We assume ONGC to bear 80.75% of the subsidy burden on upstream companies in FY2013E and 80.25% in FY2014E versus 80.8% in FY2012. We assume a modest decline in ONGC's share in FY2013-15E due to increase in GAIL's share given lower proportion of under-recoveries on diesel in the overall under-recoveries over the next two years led by lower crude oil prices.
- ▶ Oil and gas volumes. We model domestic crude oil sales volume at 23.2 mn tons in FY2013E, 23.7 mn tons in FY2014E and 24.3 mn tons in FY2015E versus 23.1 mtpa in FY2012 led by higher production from the Rajasthan block. We model domestic gas sales volume at 56.2 mcm/d for FY2013E, 57.5 mcm/d in FY2014E and 58.1 mcm/d in FY2015E versus 55.3 mcm/d in FY2012 led by incremental production from marginal fields.
- ▶ Crude oil price assumption. We have assumed crude oil (Dated Brent) prices for FY2013E, FY2014E and FY2015E at US\$110/bbl, US\$100/bbl and US\$95/bbl. However, we would focus more on ONGC's net realized crude price and our long-term crude price assumption. Exhibit 6 gives ONGC's historical net realized price and our expectations for FY2013E (US\$45.8/bbl), FY2014E (US\$53.1/bbl) and FY2015E (US\$52.8/bbl).

### ONGC's net realization has increased steadily over the past few years

ONGC's net crude price realization, March fiscal year-ends, 2003-16E (US\$/bbl)



Source: Company, Kotak Institutional Equities estimates

▶ Natural gas price assumption. We assume FY2013-14E natural gas price at US\$4.2/mn BTU and FY2015E gas price at US\$6/mn BTU. Exhibit 7 gives ONGC's FY2015E EPS at various levels of gas prices and royalty rates.

#### ONGC will benefit from increase in domestic gas prices

ONGC's EPS at various levels of gas prices and royalty rates, March fiscal year-end, 2015E (₹)

FY2015E EPS for ONGC (Rs)										
	Natural gas price (US\$/mn BTU)									
as		4.2	5.0	6.0	7.0	8.0				
o da	10	31.2	33.3	35.9	38.5	41.2				
alt.  ra   %	20	30.2	32.1	34.5	36.9	39.2				
Royalt natural (%)	30	29.3	31.1	33.2	35.4	37.6				
œ c	40	28.6	30.2	32.2	34.2	36.2				

30.2

Source: Kotak Institutional Equities estimates

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▶ Rupee-Dollar exchange rate. We have revised our exchange rate assumptions for FY2013E, FY2014E and FY2015E to ₹55.1/US\$, ₹55/US\$ and ₹55/US\$ from ₹53.75/US\$, ₹51.5/US\$ and ₹50/US\$ previously.

32.2

34.2

36.2

#### Key assumptions behind our earnings model of OIL

28.6

We discuss our key assumptions behind our earnings model of OIL below. Exhibit 8 gives the major assumptions behind our earnings model.

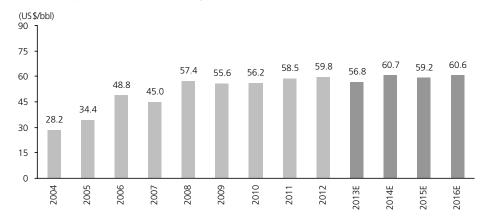
Steady net crude price realizations over the next few year	'S
Key assumptions March fiscal year-ends 2008-16F	

	2008	2009	2010	2011	2012	2013E	2014E	2015E	2016E
Rs/US\$ rate	40.3	45.8	47.4	45.6	47.9	55.1	55.0	55.0	55.0
Subsidy share scheme loss (Rs mn)	23,051	30,233	15,488	32,931	73,518	81,567	60,758	56,363	46,778
Import tariff on crude oil (%)	5.2	0.9	0.4	5.2	1.2				
Crude/natural gas prices									
Crude price									
Crude price, Bonny Light (US\$/bbl)	78.9	83.0	67.1	84.0	113.0	110.0	100.0	95.0	90.0
Net crude price, OIL-India (US\$/bbl)	57.4	55.6	56.2	58.5	59.8	56.8	60.7	59.2	60.6
Natural gas price									
Ceiling natural gas price, India (Rs/cu m)	3.2	3.2	3.2	6.8	7.5	8.7	8.6	12.3	12.3
Ceiling natural gas price, India (US\$/mn BTU)	2.1	1.9	1.8	4.0	4.2	4.2	4.2	6.0	6.0
Net natural gas price, OIL-India (Rs/cu m)	2.9	2.9	2.9	5.5	5.8	6.7	6.6	9.5	9.5
Net natural gas price, OIL-India (US\$/mn BTU)	1.9	1.7	1.6	3.2	3.2	3.2	3.2	4.6	4.6
Sales volumes—Domestic fields									
Crude oil (mn tons)	3.0	3.4	3.5	3.6	3.9	3.9	4.0	4.1	4.2
Natural gas (bcm)	1.8	1.7	1.9	1.8	2.1	2.1	2.3	2.5	2.6
Total sales (mn toe)	4.7	4.9	5.2	5.2	5.7	5.8	6.0	6.3	6.4
Total sales (mn boe)	35	37	39	39	43	43	45	47	48
Crude oil (%)	65	69	68	69	67	68	66	65	65
Natural gas (%)	35	31	32	31	33	32	34	35	35

- ▶ Subsidy amount. We model OlL's FY2013, FY2014E and FY2015E subsidy burden at ₹81.6 bn, ₹60.8 bn and ₹56.4 bn. We assume that the upstream companies will bear 40% of gross under-recoveries in FY2013E and 45% in FY2014E versus 39.7% in FY2012 and 38.7% in FY2011. We model OlL to bear 13.25% of the subsidy burden on upstream companies in FY2013-14E versus 13.4% in FY2012.
- ▶ Oil and gas volumes. We model crude oil sales volume at 3.93 mn tons in FY2013E, 4.01 mn tons in FY2014E and 4.09 mn tons in FY2015E versus 3.85 mtpa in FY2012. We model gas volumes at 5.75 mcm/d for FY2013E, 6.25 mcm/d in FY2014E and 6.75 mcm/d in FY2015E versus 5.7 mcm/d in FY2012. Implementation of EOR/IOR techniques in OIL's existing producing fields will contribute to higher volumes.
- ▶ Crude oil price assumption. We have assumed crude oil (Dated Brent) prices for FY2013E, FY2014E and FY2015E at US\$110/bbl, US\$100/bbl and US\$95/bbl. However, we would focus more on OlL's net realized crude price and our long-term crude price assumption. Exhibit 9 gives OlL's historical net realized price and our expectations for FY2013E (US\$56.8/bbl), FY2014E (US\$60.7/bbl) and FY2015E (US\$59.2/bbl).

#### OIL's net realization has improved over the past few years

OIL's net crude price realization, March fiscal year-ends, 2004-16E (US\$/bbl)



Source: Company, Kotak Institutional Equities estimates

▶ Natural gas price assumption. We assume FY2013-14E natural gas price at US\$4.2/mn BTU and FY2015E gas price at US\$6/mn BTU. Exhibit 10 gives OIL's FY2015E EPS at various levels of gas prices and royalty rates.

#### Government may increase royalty rates along with prices for natural gas

OIL's EPS at various levels of gas prices and royalty rates, March fiscal year-end, 2015E (₹)

61.8

FY2015E EPS for OIL (Rs)									
	Natural gas price (US\$/mn BTU)								
as .		4.2	5.0	6.0	7.0	8.0			
	10	60.6	64.1	68.5	72.8	77.2			
Royalty on atural g	20	58.8	61.9	65.9	69.8	73.8			
oy atu	30	57.2	60.1	63.7	67.3	70.8			
<b>E</b> C	40	EE O	EOE	61.0	6E 1	60.2			

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Source: Kotak Institutional Equities estimates

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Provided Pr

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### Key assumptions behind earnings model of GAIL

We discuss our key assumptions behind our earnings model of GAIL below. Exhibit 11 gives the major assumptions behind our earnings model.

# We model increase in gas volumes in FY2014-15E led by higher LNG imports Key assumptions behind GAIL model, March fiscal year-ends, 2008-16E

	2008	2009	2010	2011	2012	2013E	2014E	2015E	2016E
Volumes									
Natural gas transportation, gross (mcm/day)									
HVJ pipeline	32	32	32	32	30	32	32	32	32
Dahej-Vijaypur-GREP upgradation					7	6	6	10	18
Dadri-Bawana-Nangal (transmitted and sold)			1	2	2	2	2	4	7
Dadri-Bawana-Nangal (transmitted)				1	2	2	2	4	7
Chainsa-Jhajjar-Hissar (transmitted and sold)				0	0	1	1	2	5
Chainsa-Jhajjar-Hissar (transmitted)				0	1	1	2	3	5
Other pipelines (transmitted)				16	15	10	10	12	14
Other pipelines	40	39	49	39	34	32	32	31	29
Regassified LNG									
Dahej-Vijaipur pipeline (transmitted and sold)	9	9	15	13	13	13	13	13	13
Dahej-Vijaipur pipeline (transmitted)	6	6	10	13	12	12	12	12	12
Dahej-Uran pipeline (transmitted and sold)	6	9	12	6	6	6	6	6	6
Dahej-Uran pipeline (transmitted)			12	6	6	6	6	6	6
Panvel-Dabhol pipeline (transmitted)	4	6	8	3	4	4	4	4	4
Panvel-Dabhol pipeline (transmitted and sold)	-			4	4	4	4	4	4
Dabhol-Bangalore pipeline						2	6	8	11
Kochi-Bangalore/Mangalore pipeline						2	6	8	12
Elimination of double-counted volumes (a)	(15)	(18)	(2.1)	(16)	(18)	(23)	(24)	(29)	(40)
		83	(21)						
Total gas transmission	82	83	107	118	118	112	120	130	145
Total gas sales				83	84	84	92	100	113
LPG (000 tons)	1.020	1.002	1 101	1.072	1 124	1 1 1 1 5	1 1 6 5	1 1 6 5	1 105
Sold	1,039	1,092	1,101	1,073	1,124	1,145	1,165	1,165	1,165
Transported	2,754	2,744	3,160	3,337	3,362	3,375	3,375	3,375	3,375
Petrochemicals (000 tons)									
Polyethylene	204	422	440	120	110	445	400	400	704
Domestic sales	381	423	410	420	448	445	480	480	701
Exports	10								
Total petrochemicals	391	423	410	420	448	445	480	480	701
Prices									
Natural gas (Rs/cubic meter)									
Natural gas ceiling price	4.21	4.59	5.75	7.55	7.71	7.71	7.71	7.71	7.71
Regassified LNG including transportation	6.44	7.05	11.36	12.89	18.23	24.49	28.29	29.77	29.52
Transmission charges									
HVJ pipeline, Dahej-Vijaipur pipeline (from FY2007)	0.96	1.05	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Dahej-Vijaypur-GREP upgradation			1.95	1.95	1.95	1.54	1.54	1.54	1.54
Dadri-Bawana-Nangal			0.43	0.43	0.43	0.43	0.43	0.43	0.43
Chainsa-Jhajjar-Hissar			0.77	0.77	0.77	0.77	0.77	0.77	0.77
Dahej-Uran, Panvel-Dabhol pipeline	1.03	1.04	1.04	0.95	0.89	0.89	0.89	0.89	0.89
Dabhol-Bangalore pipeline						0.74	1.47	1.47	1.47
Kochi-Bangalore/Mangalore pipeline						0.66	1.31	1.31	1.31
Other pipelines	0.42	0.44	0.44	0.48	0.48	0.42	0.42	0.42	0.42
LPG									
LPG (US\$/ton)	702	685	586	756	894	860	785	748	710
Transmission charges (Rs/ton)									
Jamnagar-Loni	1,404	1,369	1,404	1,413	1,522	1,370	1,370	1,522	1,522
Vizag-Secunderabad	1,450	1,450	1,450	1,450	1,450	1,305	1,305	1,450	1,450
Other assumptions									
Polyethylene, HDPE (US\$/ton)	1,500	1,360	1,340	1,415	1,550	1,450	1,465	1,425	1,400
Import tariff, Polyethylene	5%	5%	5%	5%	5%	5%	5%	5%	5%
Import tariff, LPG	0%	0%	0%	0%	0%	0%	0%	0%	0%
Exchange rate (Rs/US\$)	40.3	45.8	47.4	45.6	47.9	55.1	55.0	55.0	55.0
Subsidy losses	13,137	17,812	13,267	21,112	31,826	36,936	29,806	27,138	22,523
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#### Note:

(a) Gas transported through the HVJ or DV pipeline and then to smaller pipelines.

▶ Subsidy burden. We model GAIL's FY2013E, FY2014E and FY2015E subsidy burden at ₹36.9 bn, ₹29.8 bn and ₹27.1 bn versus ₹31.8 bn in FY2012. We assume that upstream companies will bear 40-45% of total under-recoveries for FY2013-14E. We assume GAIL's share of subsidy burden on upstream companies at 6% in FY2013E and 6.5% in FY2014-15E versus 5.8% in FY2012. The rising share reflects the fact that GAIL bears subsidy burden on kerosene and LPG only and we expect the share of these two fuels to rise disproportionately as a share of overall under-recoveries on fuels given our assumption of lower crude oil prices (see Exhibit 12).

## GAIL's share of subsidy burden has remained consistent historically Share of subsidy burden for GAIL, March fiscal year-ends, 2008-14E (₹ bn)

	2008	2009	2010	2011	2012	2013E	2014E
Gross under-recoveries	771	1,032	461	782	1,385	1,539	1,019
Subsidy losses on cooking fuels	346	458	316	416	573	681	524
Subsidy losses on auto fuels	425	575	144	366	812	858	495
Subsidy burden on upstream companies	257	329	144	303	550	616	459
Upstream share of total subsidy burden (%)	33	32	31	39	40	40	45
Subsidy burden on GAIL	14	18	13	21	32	37	30
GAIL's share of subsidy burden on cooking fuels (%)	4.0	3.9	4.2	5.1	5.5	5.4	5.7

Source: Company, Kotak Institutional Equities estimates

- ▶ Gas transmission volumes. We estimate GAIL's transmission volumes for FY2013E at 112 mcm/d versus 118 mcm/d in FY2012. We model transmission volumes for FY2014E and FY2015E at 120 mcm/d and 130 mcm/d led by (1) higher LNG imports from start of Dabhol and Kochi terminals and (2) incremental gas production from ONGC's marginal fields.
- Marketing margins. We have assumed lower marketing margins on gas sales at ₹0.2/cu m (same as applicable to APM gas currently) from FY2014E compared to ₹0.2-0.35/cu m for domestic gas/contract LNG and higher for spot LNG. Thus, we model the trading segment's EBITDA to decline to ₹8.4 bn in FY2014E from ₹11.6 bn in FY2013E and ₹10.9 bn in FY2012.
- ▶ Crude oil and LPG price assumptions. We have assumed FY2013E, FY2014E and FY2015E crude oil (Dated Brent) prices at US\$110/bbl, US\$100/bbl and US\$95/bbl.
- ▶ Rupee-Dollar exchange rate assumptions. We have revised our exchange rate assumptions for FY2013E, FY2014E and FY2015E to ₹55.1/US\$, ₹55/US\$ and ₹55/US\$ versus ₹53.75/US\$, ₹51.5/US\$ and ₹50/US\$ previously.

## We compute fair value of ONGC at ₹310/share Fair value of ONGC (₹/share)

12-month forward EPS	33
Less: income from investments valued separately	0
12-month forward adjusted EPS	33
P/E (X)	9
Valuation of operating business	293
Investments	12
Indian Oil Corp.	<b>12</b> 7
	7 3
Indian Oil Corp.	7 3 2

We compute fair value	of OIL India at ₹575/share

Fair value of OIL (₹/share)

12-month forward rolling EPS	62
Less: income from investments valued separately	0
12-month forward adjusted EPS	62
P/E (X)	9
Valuation of core business	559
Value of investments	15
Numaligarh Refinery Limited	10
Other equity investments	5
Fair value	574

Source: Kotak Institutional Equities estimates

We value GAIL stock at ₹400 per share Sum-of-the-parts valuation of GAIL, FY2013E basis (₹ bn)

					EV (R	s bn)	
	Valuation b	ase (Rs bn)	Multi	ples (X)		EBITDA	EV
	Other	EBITDA	Other	EV/EBITDA	Other	basis	(Rs/share)
Natural gas transportation							
HVJ pipeline	34				34		27
DV pipeline	28				28		22
DUPD pipeline	29				29		23
DBN pipeline	9				9		7
CGJH pipeline	17				17		13
DV GREP pipeline	76				76		60
DB pipeline	43				43		34
KBM pipeline	28				28		22
Short distance pipelines		4.4		5.0		22	17
Total natural gas transportation							225
Other businesses							
LPG transportation		3.1		6.5		20	16
LPG production		11.0		5.0		55	43
Petrochemicals		16.5		4.0		66	52
Natural gas trading		11.6		3.0		35	28
Total other business segments							139
Investments							
ONGC shares	64		8.0	}	51		40
Others	56		8.0	}	45		35
Investments	120		0.8		96		76
Total						198	439
Net debt/(cash)					47	47	37
Implied value of share (Rs/share)							402

We value GAIL stock at ₹425 per share Sum-of-the-parts valuation of GAIL, FY2014E basis (₹ bn)

					EV (R	s bn)	
	Valuation b	ase (Rs bn)	Multi	ples (X)		EBITDA	EV
	Other	EBITDA	Other	EV/EBITDA	Other	basis	(Rs/share)
Natural gas transportation							
HVJ pipeline	32				32		25
DV pipeline	26				26		20
DUPD pipeline	28				28		22
DBN pipeline	10				10		8
CGJH pipeline	19				19		15
DV GREP pipeline	82				82		65
DB pipeline	45				45		36
KBM pipeline	40				40		32
Short distance pipelines		4.3		5.0		21	17
Total natural gas transportation							240
Other businesses							
LPG transportation		3.1		6.5		20	16
LPG production		12.5		5.0		62	49
Petrochemicals		18.1		4.0		73	57
Natural gas trading		8.4		3.0		25	20
Total other business segments							142
Investments							
ONGC shares	64		8.0	}	51		40
Others	56		8.0	}	45		35
Investments	120		0.8		96		76
Total						201	458
Net debt/(cash)					43	43	34
Implied value of share (Rs/share)							424

Consolidated profit model, balance sheet, cash model of ONGC, March fiscal year-ends, 2008-16E (₹ mn)

	2008	2009	2010	2011	2012	2013E	2014E	2015E	2016E
Profit model (Rs mn)									
Net sales	1,091,644	1,200,176	1,070,520	1,232,000	1,526,445	1,665,534	1,764,139	1,809,540	1,798,242
EBITDA	408,423	419,955	445,845	493,944	589,121	601,806	647,396	690,543	685,088
Other income	53,565	50,721	50,409	42,048	50,904	46,272	54,243	59,290	71,852
Interest	(12,027)	(5,966)	(3,019)	(4,011)	(5,385)	(8,220)	(8,133)	(6,096)	(4,900)
Depreciation and depletion	(138,624)	(153,985)	(186,838)	(205,853)	(214,502)	(228,849)	(255,634)	(275,212)	(282,512)
Pretax profits	311,338	310,725	306,397	326,128	420,137	411,009	437,873	468,526	469,527
Tax	(102,908)	(111,333)	(95,580)	(110,328)	(135,582)	(121,989)	(116,966)	(132,352)	(135,262)
Deferred tax	(6,471)	(3,495)	(11,457)	(8,842)	(13,534)	(16,334)	(30,433)	(25,090)	(22,517)
Net profits	203,710	201,719	199,951	228,376	289,143	272,687	290,474	311,084	311,749
Adjusted net profits after minority interests	198,959	194,624	196,409	210,963	274,608	272,238	286,948	307,294	307,686
Adjusted EPS (Rs)	23.3	22.7	23.0	24.7	32.1	31.8	33.5	35.9	36.0
Balance sheet (Rs mn)									
Total equity	786,657	929,353	1,024,615	1,166,139	1,354,875	1,528,081	1,706,289	1,896,658	2,084,094
Deferred tax liability	87,227	92,076	102,669	111,328	124,863	141,197	171,629	196,719	219,236
Liability for abandonment cost	129,325	171,451	174,590	198,504	199,391	199,391	199,391	199,391	199,391
Total borrowings	22,039	73,633	61,274	48,691	149,952	110,917	88,388	72,942	72,285
Currrent liabilities	251,797	293,499	306,532	390,543	429,184	462,580	490,318	501,722	512,602
Total liabilities and equity	1,277,045	1,560,013	1,669,680	1,915,205	2,258,265	2,442,166	2,656,016	2,867,432	3,087,608
Cash	249,807	224,671	222,348	285,722	328,054	364,777	468,001	665,442	863,429
Current assets	257,384	309,514	306,619	331,746	493,343	440,541	456,826	461,547	461,147
Total fixed assets	695,227	871,287	986,293	1,168,907	1,304,724	1,504,704	1,599,044	1,608,298	1,630,887
Goodwill	22,847	111,108	92,455	86,998	86,998	86,998	86,998	86,998	86,998
Investments	45,041	36,926	53,551	33,871	33,420	33,420	33,420	33,420	33,420
Deferred expenditure	6,739	6,506	8,413	7,960	11,726	11,726	11,726	11,726	11,726
Total assets	1,277,045	1,560,013	1,669,680	1,915,205	2,258,265	2,442,166	2,656,016	2,867,431	3,087,607
- 10 (- )									
Free cash flow (Rs mn)	204 517	274 221	202.050	242.505	200 570	262.050	404 242	424.162	414 202
Operating cash flow, excl. working capital	284,517	274,321	302,059	343,505	380,570	362,859	404,242	424,163	414,302
Working capital changes	(24,929)	(109,306)	(29,693)	68,489	(69,726)	111,197	53,953	51,969	11,280
Capital expenditure	(166,427)	(208,137)	(207,849)	(267,547)	_ , , ,	(320,091)	(231,919)	(156,534)	(174,477)
Investments	(7,348)	(92,159)	(11,021)	15,288		- 46.070			
Other income	22,822	31,612	22,154	21,385	29,232	46,272	54,243	59,290	71,852
Free cash flow	108,636	(103,668)	75,650	181,120	112,378	200,238	280,519	378,889	322,957
Ratios (%)									
Debt/equity	2.8	7.9	6.0	4.2	11.1	7.3	5.2	3.8	3.5
Net debt/equity	(29.0)	(16.3)	(15.7)	(20.3)	(13.1)	(16.6)	(22.2)	(31.2)	(38.0)
RoAE	24.9	21.2	18.6	19.0	21.1	17.5	16.4	15.7	14.2
RoACE	22.1	18.4	16.2	15.6	17.8	15.7	15.0	14.4	13.1
Key assumptions									
Exchange rate (Rs/US\$)	40.3	45.8	47.4	45.6	47.9	55.1	55.0	55.0	55.0
Crude fob price (US\$/bbl)	78.9	83.0	67.1	84.0	115.0	110.0	100.0	95.0	90.0
Crude rob price (03 \$700)	7 0.5								
Ceiling/actual natural gas price (Rs/'000 cm)	3,200	3,200	3,200	6,783	7,534	8,661	8,644	12,348	12,348

Profit model, balance sheet, cash model of OIL, March fiscal year-ends, 2008-16E (₹ mn)

	2008	2009	2010	2011	2012	2013E	2014E	2015E	2016E
Profit model (Rs mn)									
Net sales	60,819	72,414	79,056	83,034	98,632	114,416	123,290	131,778	136,960
EBITDA	24,947	30,397	36,980	39,567	46,747	52,000	57,393	62,855	65,068
Other income	6,770	9,372	9,371	11,851	14,454	14,265	15,020	15,780	16,140
Interest	(344)	(87)	(37)	(139)	(94)	(8)	_	_	_
Depreciation and depletion	(4,228)	(5,765)	(7,306)	(8,188)	(10,088)	(12,729)	(15,335)	(17,717)	(19,962)
Pretax profits	27,145	33,916	39,010	43,091	51,019	53,528	57,078	60,918	61,246
Tax	(8,538)	(11,910)	(11,598)	(12,973)	(17,273)	(17,288)	(18,430)	(19,685)	(19,805)
Deferred tax	(707)	(343)	(1,211)	(1,282)	723	(79)	(89)	(79)	(66)
Adjusted net profits	17,897	21,646	26,169	28,850	34,469	36,161	38,559	41,153	41,375
Earnings per share (Rs)	33.5	40.5	46.1	48.0	57.3	60.2	64.1	68.5	68.8
Balance sheet (Rs mn)									
Total equity	79,330	93,310	137,638	156,019	177,213	202,309	224,799	247,788	269,601
Deferred tax liability	8,655	8,998	10,209	11,491	10,767	10,847	10,935	11,015	11,081
Liability for abandonment cost	11	15	19	1,645	2,031	2,031	2,031	2,031	2,031
Total borrowings	1,749	565	375	10,268	189		_		_
Currrent liabilities	17,541	30,914	32,693	33,216	36,612	36,521	36,971	37,579	37,984
Total liabilities and equity	107,286	133,801	180,934	212,638	226,813	251,708	274,737	298,413	320,697
Cash	42,808	60,700	85,429	117,693	109,355	127,062	142,295	157,868	172,308
Current assets	18,957	22,853	37,266	30,318	34,831	37,248	38,628	39,949	40,755
Total fixed assets	40,633	45,361	49,460	55,723	56,485	61,256	67,671	74,454	81,492
Investments	4,887	4,887	8,594	8,904	26,142	26,142	26,142	26,142	26,142
Deferred expenditure	_	_	184	_	_	_	_	_	_
Total assets	107,286	133,801	180,934	212,638	226,813	251,708	274,736	298,413	320,696
Free cash flow (Rs mn)									
Operating cash flow, excl. working capital	20,104	27,246	23,621	26,353	27,779	27,954	31,462	34,670	36,263
Working capital changes	7,435	2,368	(9,113)	4,034	3,125	(2,508)	(931)	(712)	(401)
Capital expenditure	(9,492)	(8,496)	(11,485)	(9,518)	(8,599)	(10,750)	(14,250)	(16,000)	(18,000)
Investments	(811)		(3,201)	4,692	(16,688)				
Other income	4,214	5,470	7,268	6,343	11,335	14,265	15,020	15,780	16,140
Free cash flow	21,450	26,587	7,091	31,904	16,953	28,961	31,302	33,738	34,001
- 1 (0)									
Ratios (%)									
Debt/equity	2.2	0.6	0.3	6.6					
Net debt/equity	(31.9)	(31.9)	(38.3)	(54.1)	(41.0)	(44.8)	(46.9)	(48.5)	(49.8)
RoAE	21.8	22.8	20.9	18.3	19.4	18.0	17.2	16.6	15.3
RoACE	21.5	22.7	20.9	18.1	19.2	17.8	17.0	16.5	15.2
Voyaggumntions									
Key assumptions	40.2	45.8	47.4	AE C	47.0	55.1	EE ^	EE ^	55.0
Exchange rate (Rs/US\$)	40.3		47.4	45.6	47.9		55.0	55.0	
Crude fob price (US\$/bbl)	78.9	83.0	67.1	84.0	113.0	110.0	100.0	95.0	90.0
Ceiling/actual natural gas price (Rs/'000 cm)	3,200	3,200	3,200	6,783	7,534	8,660	8,644	12,348	12,348
Subsidy loss (Rs bn)	23.1	30.2	15.5	32.9	73.5	81.6	60.8	56.4	46.8

Profit model, balance sheet, cash model of GAIL, March fiscal year-ends, 2008-16E (₹ mn)

	2008	2009	2010	2011	2012	2013E	2014E	2015E	2016E
Profit model (Rs mn)									
Net sales	180,082	237,760	249,964	325,365	403,980	478,450	601,740	674,753	774,940
EBITDA	39,275	40,647	46,688	55,496	58,192	65,756	69,571	73,829	83,709
Other income	5,564	7,966	5,411	4,407	4,319	2,983	3,231	3,464	4,417
Interest	(796)	(870)	(700)	(829)	(1,165)	(2,327)	(3,553)	(3,171)	(2,599)
Depreciation	(5,710)	(5,599)	(5,618)	(6,503)	(7,915)	(9,587)	(11,136)	(11,699)	(16,004)
Pretax profits	38,333	42,144	45,781	52,572	53,431	56,824	58,112	62,424	69,523
Tax	(12,525)	(13,941)	(13,750)	(14,352)	(15,508)	(12,409)	(13,193)	(14,415)	(11,877)
Deferred taxation	(10)	(62)	(636)	(2,437)	(1,354)	(5,179)	(4,634)	(3,365)	(6,584)
Net profits	26,015	28,037	31,398	35,611	36,538	39,236	40,285	44,644	51,062
Adjusted net profits	25,868	28,106	31,396	35,728	36,559	39,236	40,285	44,644	51,062
Adjusted earnings per share (Rs)	20.4	22.2	24.8	28.2	28.8	30.9	31.8	35.2	40.3
Balance sheet (Rs mn)									
Total equity	130,049	147,696	167,990	192,533	216,245	241,475	267,018	295,445	325,868
Deferred taxation liability	13,197	13,259	13,896	16,332	17,686	22,865	27,500	30,865	37,448
Total borrowings	12,659	12,001	14,804	23,100	53,469	59,706	55,944	45,725	29,794
Current liabilities	60,604	81,548	103,784	88,149	103,447	112,162	123,600	130,224	138,598
Total liabilities and equity	216,509	254,505	300,473	320,115	390,847	436,208	474,061	502,259	531,708
Cash	44,730	34,562	41,715	21,314	9,313	11,272	11,493	14,619	37,294
Other current assets	59,370	87,804	95,412	90,148	105,050	113,900	123,737	130,985	140,169
Total fixed assets	97,500	114,767	142,616	182,827	240,994	275,548	303,342	321,166	318,757
Investments	14,909	17,373	20,730	25,825	35,489	35,489	35,489	35,489	35,489
Total assets	216,509	254,505	300,473	320,115	390,847	436,208	474,061	502,259	531,708
Free cash flow (Rs mn)									
Operating cash flow, excl. working capital	33,692	30,456	33,480	42,110	46,659	48,692	51,641	55,451	68,944
Working capital changes	(388)	(5,573)	12,454	(12,420)	(5,081)	(135)	1,601	(624)	(809)
Capital expenditure	(12,419)	(25,535)	(35,702)	(46,322)	(66,805)	(41,814)	(37,746)	(28,730)	(13,306)
Investments	(270)	(2,464)	(3,358)	(5,095)	(9,664)	(+1,01+)	(57,740)	(20,730)	(13,300)
Other income	4,042	5,243	4,705	4,090	4,420	2,983	3,231	3,464	4,417
Free cash flow	24,658	2,127	11,580	(17,637)	(30,471)	9,726	18,727	29,561	59,245
	,	_,	11,000	(11,121,	(01)1111	-,			
Ratios (%)									
Debt/equity	8.8	7.5	8.1	11.1	22.9	22.6	19.0	14.0	8.2
Net debt/equity	(22.4)	(14.0)	(14.8)	0.9	18.9	18.3	15.1	9.5	(2.1)
ROAE (%)	19.2	18.4	18.3	18.2	16.5	15.7	14.4	14.4	14.8
ROACE (%)	17.8	17.5	17.2	16.9	14.4	13.4	12.7	13.0	13.8
Key assumptions									
Gas transmission volumes (mcm/d)	82	83	107	118	118	112	120	130	145
Petrochemical sales volumes (000 tons)	391	423	410	420	448	445	480	480	701
LPG sales volumes (000 tons)	1,039	1,092	1,101	1,073	1,124	1,145	1,165	1,165	1,165
LPG sales volumes (000 tons)  LPG transmission volumes (000 tons)	2,754	2,744	3,160	3,337	3,362	3,375	3,375	3,375	3,375
							29,806		22,523
Subsidy losses (Rs mn)	13,137	17,812	13,267	21,112	31,826	36,936	29,806	27,138	22,523