kotak Institutional Equities

Cairn India Ltd. (Cairn)
India: Upstream oil

February 9, 2007

Stock rating: Underperform

Coverage view: Attractive

Price: Rs143

Target price: Rs110

BSE-30: 14,652

Why read this report?

- **Initiating coverage**
- **Evaluating exploration opportunities in India**
- **Detailed financial statements and valuation**

Sanjeev Prasad
sanjeev.prasad@kotak.com
Mumbai: +91-22-6634-1229

Gundeep Singh
gundeep.singh@kotak.com
Mumbai: +91-22-6634-1286

Kotak Institutional Equities Research

Important disclosures appear at the back of this report.

Treasure hunting skills don't come cheap. We expect Cairn to create significant value from its current large oil reserves and solid exploration abilities. Nonetheless, we find valuations expensive; they probably reflect street expectations regarding value creation from further oil and gas discoveries. We value the extant assets at Rs110 (12-month forward based on DCF).

Large reserves in Rajasthan block to drive production volumes

We model Cairn's net oil and gas sales volume to increase to 111,700 boe/d in 2010 from 22,300 boe/d in 2006. We expect the steep increase in volumes to be driven by the start of production of crude oil from RJ-ON-90/1 (Rajasthan) block, which had 568 mn barrels of gross 2P reserves as of June 30, 2006. We model gross crude production in the Rajasthan block at 137,000 b/d in 2010 and expect similar volumes for the following few years.

Strong exploration capabilities, large potential opportunity in India

We believe Cairn has solid exploration capabilities to benefit from potential opportunities in India's E&P sector. It has made several important discoveries including (1) discovery of hydrocarbons in deep waters in India and (2) discovery of oil in a new (Barmer) basin. Recent large oil and gas discoveries in various parts of India (onshore, shallow water and deep water) show that India may have ample hydrocarbons; a large portion of basins is still unexplored.

Strong growth in cash flows, net income driven by volume growth

We expect Cairn's net income to increase to Rs51.2 bn in 2010 against Rs0.6 bn (pro forma) in 2005, driven by a sharp increase in volumes following the start of production of oil in mid-2009 from the northern fields of the Rajasthan block. Until 2009, Cairn's revenues will reflect operations of its smaller assets (Ravva, CB-OS-2, southern Rajasthan fields).

Upside potential—more reserves in Rajasthan block, new discoveries

Establishment of additional reserves in the key Rajasthan block, particularly in the Barmer Hill zone, and new discoveries in its 10 exploration blocks, may help close the gap between Cairn's current stock price and our valuation of its extant assets (known reserves). In particular, we highlight the potential of KG-DWN-98/2 block, where ONGC has confirmed a large gas discovery but not announced reserves; Cairn has 10% stake in the block.

Company data and valuation summary

Company data
Rating: Underperform
Current price (Rs)
143

Stock data	High	Low
52-week range (Rs)	160	129
Yield (%)		—
Priced at close of:	February 8, 2007	
Capitalization		
Market cap (Rs bn)		252
Net debt/(cash) (Rs bn)		(7)
Free float (%)		30.5
Shares outstanding (bn)		1.8

Price performance	1M
Absolute (%)	(10.5)
Rel. to BSE-30 (%)	(16.7)

Forecasts/valuation	2005	2006E	2007E
EPS (Rs)	1.8	0.6	0.2
P/E (X)	79	234	693
ROE (%)	8.1	0.7	0.1
EV/EBITDA (X)	47	46	45

Source: Company data, Kotak Institutional Equities estimates.

Table of contents

The prices in this report are based on the market close of February 8, 2007.

Overview: Treasure hunting skills don't come cheap

Exhibit 1: Forecasts and valuations

Year to December	Net sales (Rs mn)	EBITDA (Rs mn)	Net Profit (Rs mn)	EPS (Rs)	EV/ EBITDA (X)	P/E (X)
2005	13,432	5,533	633	1.8	47.2	79
2006E	18,306	5,288	1,077	0.6	46.4	234
2007E	18,472	5,676	364	0.2	44.9	693
2008E	20,397	7,668	884	0.5	35.4	286
2009E	41,786	28,233	16,375	9.3	9.3	15
2010E	91,110	68,366	51,202	29.0	2.0	5

Note:

(a) Historical data reflects summation of material Indian entities (pro forma).

Source: Company, Kotak Institutional Equities estimates.

Overview: Large reserves and large opportunity

We believe Cairn's current stock price fully reflects its current reserves base, which we value at Rs110/share. Additional reserves in its Rajasthan block and/or new discoveries in its 10 exploration blocks may help bridge the gap between the stock price and our estimated fair value of its extant assets. We initiate coverage of Cairn India with a 12-month DCF-based target price of Rs110.

We highlight the following key positive investment factors for Cairn. **(1) Large reserves (2P) of 430 mn boe** (working interest basis) as of June 2006. **(2) Likely steep increase in production from mid-2009** once Cairn starts production of crude oil from its northern Rajasthan fields; total Rajasthan block (RJ-ON-90/1) reserves (2P) comprise 397 mn bbls of crude oil. **(3) Favorable regulatory regime in India**, which includes several attractive fiscal terms such as low royalty, income tax exemption for seven years and typically low share of the government in profit petroleum. **(4) Solid exploration skills and large potential** given presence in several blocks (10) in frontier areas. **(5) Opportunity to participate in India's increasingly attractive E&P sector;** a large part of India's basins are still unexplored and recent exploration activities have resulted in several world-class discoveries of both oil and gas.

Key risks

We see three key risks to Cairn's revenues, earnings and valuation. (1) A sharp decline in crude price would drive expectations of lower crude price for the longer-term, which would be negative for Cairn's cash flows and valuations. (2) Unfavorable developments in regulations dealing with India's E&P sector may result in lower earnings for Cairn. In particular, we highlight the risk from the imposition of cess and royalty on crude oil produced by Cairn from its Rajasthan block. Cairn's cash flows and valuations may vary significantly depending on the amount of cess and royalty. (3) A delay in production of crude oil from the Rajasthan block and weak execution may result in lower-than-expected revenues and earnings.

Financials: Strong growth in cash flows after the commencement of production at Rajasthan block

We expect Cairn's net income to increase to Rs51.2 bn in 2010 from Rs0.6 bn (pro forma) in 2005, driven by the start of production of crude oil from the bigger northern fields in its Rajasthan block in mid-2009. We model oil and gas production to increase to 111,700 boe/d in 2010 compared to 22,300 boe/d in 2006, primarily reflecting contribution from the Rajasthan fields. We assume Dated Brent crude price at US$55/bbl in 2010 and US$45/bbl on a normalized long-term basis. Until 2009, Cairn's earnings will reflect contributions from its smaller Ravva and CB-OS-2 assets and limited crude oil production from the southern fields in its Rajasthan block.

We expect Cairn to start generating significant free cash flows from 2010, once it completes ongoing capex for development of its Rajasthan fields by 2009. We model Cairn to spend Rs66 bn as capex between 2006 and 2009 with the Rajasthan block accounting for the bulk of the expenditure (Rs55 bn). Our projected capex comprises a field development cost of Rs40 bn and pipeline cost of Rs15 bn. Cairn will use a combination of equity and debt to fund the development and has tied up a credit facility of Rs40 bn (US$850 mn) from banks.

Company profile: Treasure hunter of repute

Cairn India Ltd. (Cairn) is a newly incorporated Indian company, which has acquired the Indian assets (subsidiaries) of Cairn Energy PLC, an E&P company with significant interests in South Asia (India, Bangladesh and Nepal). As of June 2006, Cairn had 430 mn boe of oil reserves (proved plus probable) with the bulk of reserves (397 mn bbls of oil) accounted for by its 70% working interest in RJ-ON-90/1 block in Rajasthan. Cairn has a 22.5% stake and a 40% stake in two producing assets, Ravva field and CB-OS-2 block, which produced 82,800 boe/d (gross) and 22,300 boe/d (working interest basis) in 2006. Finally, Cairn has varying stakes in 10 exploration blocks in select frontier basins of India.

Cairn India will likely follow a three-pronged strategy to grow reserves, revenues and earnings over the next few years. (1) Produce crude oil from and monetize large oil reserves of its key Rajasthan block from mid-2009 once it completes ongoing development work; (2) Sustain production from extant assets of Ravva and CB-OS-2 fields through additional development work; (3) Explore for hydrocarbons in extant exploration blocks and acquire new exploration blocks in India for future exploitation through participation in future New Exploration and Licensing (NELP) rounds.

Valuations: DCF, the only way to value Cairn currently

We believe a DCF valuation may be the most appropriate methodology for valuing Cairn, given that its key Rajasthan block will start production in mid-2009. Also, a DCF analysis will best capture the specifics of a production sharing contract as Cairn's share of profits/cash flow from a field/block will change over a period of time. Cairn's current revenues reflect operations of the smaller Ravva and CB-OS-2 blocks only and thus, do not represent the full potential of Cairn's future revenues.

DCF may be most appropriate

Exhibit 2 gives our valuation for Cairn (sum of individual assets) while Exhibit 3 is our DCF valuation for its key Rajasthan block. We believe a DCF valuation may be the most appropriate valuation methodology to value Cairn and its assets currently for the following reasons.

Exhibit 2: We value Cain India stock at Rs110
EV and equity value of Cairn (US$mn)

Block	Now	+ 1-year	+ 2-years
RJ-ON-90/1	2,983	3,542	4,275
CB-OS-2	154	104	67
Ravva	318	273	238
KG-DWN-98/2	400	444	493
Total	**3,856**	**4,364**	**5,073**
Net debt	(157)	50	423
Equity value	**4,013**	**4,315**	**4,650**
Equity shares (mn)	1,765	1,765	1,765
Equity value per share (Rs/share)	**101**	**109**	**117**

Source: Kotak Institutional Equities estimates.

Exhibit 3: DCF valuation of Cairn's Rajasthan assets (Rs mn)

	2007E	2008E	2009E	2010E	2011E	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E
Production (mt)	**0.1**	**0.4**	**1.7**	**4.8**	**5.0**	**4.8**	**4.8**	**4.7**	**4.7**	**4.6**	**4.4**	**4.0**	**3.4**	**2.9**
Cumulative production (mt)	0.1	0.5	2.2	7.0	12.0	16.8	21.6	26.3	31.0	35.6	40.0	44.0	47.5	50.4
Revenues	**1,912**	**5,806**	**28,878**	**79,771**	**66,114**	**64,533**	**63,503**	**63,247**	**62,243**	**61,274**	**59,306**	**53,805**	**45,934**	**38,877**
Cost petroleum entitlement	1,912	5,806	28,878	43,529	11,372	11,141	10,991	10,953	15,354	15,141	14,710	13,504	11,780	8,520
Profit petroleum entitlement	—	—	—	28,993	43,793	32,035	26,256	26,147	23,445	23,066	22,298	20,150	17,077	15,179
Incidental income	—	—	—	—	—	—	—	—	—	—	—	—	—	—
less Production costs	(102)	(341)	(1,696)	(4,686)	(9,659)	(9,428)	(9,278)	(9,240)	(13,640)	(13,428)	(12,997)	(11,791)	(10,066)	(8,520)
less Royalty/cess	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pre-tax net cash income	**1,810**	**5,465**	**27,182**	**67,836**	**45,506**	**33,748**	**27,969**	**27,860**	**25,158**	**24,780**	**24,011**	**21,864**	**18,791**	**15,179**
less tax	(179)	(537)	(2,738)	(6,806)	(4,343)	(3,110)	(2,499)	(2,474)	(2,183)	—	(48)	(6,622)	(6,265)	(5,000)
Net cash income	**1,631**	**4,928**	**24,444**	**61,030**	**41,164**	**30,638**	**25,470**	**25,385**	**22,975**	**24,780**	**23,963**	**15,242**	**12,525**	**10,179**
Exploration costs	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Development costs	(11,793)	(20,025)	(8,900)	(1,713)	(1,713)	(1,713)	(1,713)	(1,713)	(1,713)	(1,713)	(1,713)	(1,713)	(1,713)	—
Investment	(11,793)	(20,025)	(8,900)	(1,713)	(1,713)	(1,713)	(1,713)	(1,713)	(1,713)	(1,713)	(1,713)	(1,713)	(1,713)	—
Free cash flow	**(10,161)**	**(15,097)**	**15,544**	**59,316**	**39,450**	**28,925**	**23,757**	**23,672**	**21,262**	**23,066**	**22,250**	**13,529**	**10,812**	**10,179**
Discounted cash flow	(9,254)	(12,383)	11,486	39,489	23,661	15,624	11,561	10,378	8,398	8,205	7,131	3,906	2,812	2,385
Discounted cash flow-1 year forward	—	(13,749)	12,750	43,833	26,264	17,348	12,833	11,520	9,322	9,110	7,915	4,336	3,122	2,648
Discounted cash flow-2 year forward	—	—	14,156	48,655	29,153	19,256	14,249	12,787	10,347	10,113	8,788	4,812	3,465	2,939

Year Ending	Dec-07	Dec-08	Dec-09	Dec-10	Dec-11	Dec-12	Dec-13	Dec-14	Dec-15	Dec-16	Dec-17	Dec-18	Dec-19	Dec-20
Today	Feb-07	Feb-07	Feb-07	Feb-07	Feb-07	Feb-07	Feb-07	Feb-07	Feb-07	Feb-07	Feb-07	Feb-07	Feb-07	Feb-07
Years left	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Discount factor at WACC	0.91	0.82	0.74	0.67	0.60	0.54	0.49	0.44	0.39	0.36	0.32	0.29	0.26	0.23
Discount rate (%)	11.0													
	Now	**+ 1-year**	**+ 2-years**											
Total PV of free cash flow	**132,760**	**157,641**	**190,255**											
Total PV of free cash flow (US$ mn)	**2,983**	**3,542**	**4,275**											
Implied share price (Rs)	**75**	**89**	**108**											

Note:
(a) Value of cash flows for CY2021-2041 is low, not shown here due to paucity of space.

Source: Kotak Institutional Equities estimates.

1. **Strong growth in earnings/cash flows from 2009.** Cairn will commence production at its Rajasthan block in mid-2009 and its earnings and cash flows until 2009 will not include contributions from this important asset. Until 2009, Cairn's revenues will reflect contribution from Ravva and CB-OS-2 blocks only; we note that the reserves in these blocks are much smaller than in the Rajasthan block.

2. **Yearly earnings and cash flows will vary depending on the stage of profit sharing with government.** We note that Cairn's cash flows and earnings from a particular block will be high in the initial years of production but will decline subsequently given the nature of the production sharing contracts (PSCs) signed between the government and Cairn (along with other consortium partners in that particular block). Thus, a year's earnings and cash flows, particularly in the first few years of operation of a block, may not correctly represent the cash flows from the block; we believe DCF will best capture the uneven nature of earnings and cash flows.

   Exhibit 4 gives the share of profit petroleum of Cairn for its key assets at various levels of (1) post tax rate of return, which is the profit sharing methodology for the Ravva and CB-OS-2 blocks and/or (2) Investment Multiple (IM), which is applicable for the Rajasthan block for computing its profit share.

Exhibit 4: Maximum share of government of profit petroleum at 50% for key Rajasthan block

Details of share of profit petroleum between the government and Cairn for Cairn's key assets

	Government share (%)			Government share (%)
PTRR	CB-OS-2	Ravva	IM	RJ-ON-90/1
<15%	**12.5**	10	<1	**20**
<20%	22.5	15	>1, <1.5	20
<25%	45	20	>1.5, <2	30
<30%	50	25	<2, <2.5	40
<35%	55	35	>2.5, <3	50
<40%	60	35	>3	50
>40%	60	**60**		

Note:

(a) Highlighted figure shows current status of respective fields/blocks.

(b) PTRR = post tax rate of return; IM = Investment Multiple.

Source: Company data.

P/E, EV/EBITDA, EV/DACF may not be good measures currently

For reasons discussed above, we rule out multiple-based valuation methodologies for valuing Cairn India at the current juncture.

Driver #1: Large reserves of oil = large reserves of cash

We believe Cairn can create significant value from its large oil reserves (568 mn barrels gross 2P reserves) in its Rajasthan (RJ-ON-90/1) block. Among the positives, we highlight (1) excellent fiscal terms, (2) solid development strategy, and (3) a favorable macro-environment (both global and domestic) for crude oil—strong global crude oil price environment and domestic crude shortage.

Large reserves in Rajasthan block; ready to be exploited

Exhibit 5 presents original oil in place (OOIP) reserves and other data for RJ-ON-90/1 block as on June 30, 2006. Cairn has a 70% working interest in the block. In Exhibit 6, we show the total reserves position of blocks in which Cairn has a working interest according to an independent study done by DeGolyer and MacNaughton in August 2006. The same exhibit also shows that Cairn's Rajasthan block dwarfs reserves in its other blocks and is thus the most important component of Cairn India's valuation.

Exhibit 5: Gross oil in place is about 3.6 bn barrels and P2 reserves is 622 mn barrels
Original oil in place and reserves of RJ-ON-91/1 block (mn bbls)

Cairn data	Orginal oil in place	2P reserves	EOR contingent resources (CR)	2P reserves + EOR CR
Mangala	1,202	428	120	548
Bhagyam	468	140	56	196
Aishwariya	249	56	20	76
Others Rajasthan	1,741	8	61	69
Total RJ-ON-90/1	**3,660**	**632**	**257**	**889**
Total RJ-ON-90/1 (working interest basis)	**2,562**	**442**	**180**	**622**

DeGolyer and MacNaughton data	Orginal oil in place	2P reserves	EOR contingent resources (CR)	2P reserves + EOR CR
Mangala	1,206	334	121	455
Bhagyam	557	156	56	212
Aishwariya	281	60	20	80
Others Rajasthan	1,347	18	75	93
Total RJ-ON-90/1	**3,391**	**568**	**271**	**839**
Total RJ-ON-90/1 (working interest basis)	**2,374**	**398**	**190**	**587**

Source: Company, DeGolyer and MacNaughton.

Exhibit 6: Cairn had 430 mn bbls of oil and oil equivalent 2P reserves (working interest basis) as of June 2006; 397 mn bbls is from its Rajasthan block

Reserves of blocks in which Cairn has working interest (mn bbls)

	Proved reserves			Probable reserves			Possible reserves			Original O/G in place		
	Oil	Gas	Total	Oil	Gas	Total	Oil	Gas	Total	OOIP	OGIP	Total
Mangala	146	—	146	187	—	187	107	—	107	1,206	—	1,206
Bhagyam	71	—	71	85	—	85	44	—	44	557	—	557
Aishwariya	23	—	23	38	—	38	28	—	28	281	—	281
Others Rajasthan	9	—	9	9	—	9	15	—	15	1,346	—	1,346
Total RJ-ON-90/1	**249**	**—**	**249**	**319**	**—**	**319**	**194**	**—**	**194**	**3,391**	**—**	**3,391**
Ravva	70	16	86	15	6	20	5	—	6	—	—	—
CB-OS-2	1	10	11	3	8	11	2	11	13	19	78	97
KG-DWN-98/2	—	—	—	—	—	—	—	—	—	—	220	220
Total	**321**	**26**	**346**	**336**	**14**	**350**	**202**	**11**	**213**	**3,410**	**298**	**3,708**
Total Cairn (working interest basis)	**191**	**8**	**198**	**228**	**4**	**232**	**138**	**4**	**142**	**2,381**	**53**	**2,435**
Total RJ-ON-90/1 (working interest basis)	**174**	**—**	**174**	**223**	**—**	**223**	**136**	**—**	**136**	**2,374**	**—**	**2,374**

Note:

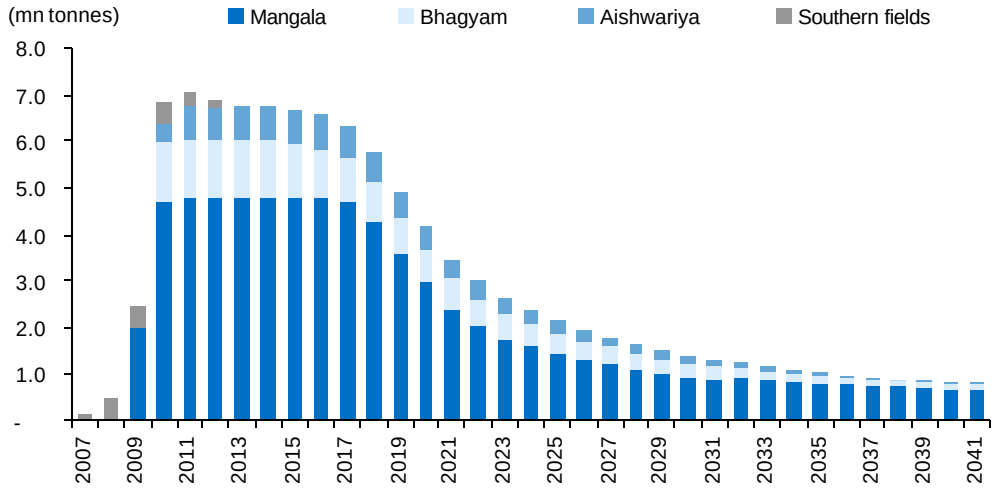
1. Probable and Possible reserves are not adjusted for risk.
2. Cairn has a 70% working interest in RJ-ON-90/1 block, 22.5% stake in Ravva field and 40% stake in CB-OS-2 block.
3. Contingent resources have not been shown.

Source: DeGolyer and MacNaughton report of August 2006.

Exhibit 7 shows the likely production profile of the Rajasthan block based on above-mentioned reserves data. However, we would note that actual production would depend on the reserves assessment (always subject to uncertainty) being accurate, reservoir behavior being on expected lines and development proceeding on schedule.

Exhibit 7: Production from Rajasthan fields to sustain at about 140-150,000 b/d for several years

Gross production volume of Rajasthan block, calendar year-ends



Source: Company, Kotak Institutional Equities estimates.

Favorable operating conditions and excellent strategy to enhance value

Excellent fiscal terms and conditions although cess issue creates uncertainty

We note that Cairn will enjoy excellent fiscal terms as part of its production-sharing contract (PSC) signed with the government of India. These include (1) 0% royalty on its share of crude oil, (2) likely nil cess (fixed rate of tax) on its share of crude oil, (3) 'low' share of profit petroleum with the government of India even at high Investment Multiples (IM); for example, the maximum share of the government of profit petroleum will be 50% (at IM>2.5); and (4) seven year income tax holiday.

Our base-case earnings projection assumes that Cairn will not pay any royalty or cess on the portion of crude oil produced by it from RJ-ON-90/1 block. Cairn management believes that as per the PSC, Cairn's 30% partner in RJ-ON-90/1 block—Oil and Natural Gas Corp. (ONGC)—will pay the royalty and cess for 100% of crude oil produced in the block. ONGC, as the licensor of the block, will pay royalty (20%) and cess (Rs918/tonne or Rs2,550/tonne, as may be applicable) for its portion (30%) of the total crude oil sold as also for Cairn's portion (70%) of crude oil. However, ONGC management believes that the ONGC is liable to pay royalty but not cess as per the PSC.

It is possible that the government may decide that Cairn would have to pay cess for crude oil produced by it. The government has notified Cairn regarding payment on cess on crude oil but a final decision is yet to be taken and will likely be contentious. It is possible that the government may forego the royalty and/or cess on Cairn's portion or it may reimburse royalty (to be paid to the state government) and cess (to be paid to the central government) paid by ONGC on Cairn's behalf, in which case there is no liability on Cairn. We deal with this issue in more detail in the section on risks.

Pricing is linked to global prices as per the PSC

Cairn will receive global prices for the crude oil produced by it as per the terms of its PSC related to pricing. The price will be based on arms length sales to third parties and will be based on the fob price of one or more crude oils which are traded actively in the international market and which have similar characteristics to Cairn's Rajasthan crude oil.

Exhibit 8 gives the key characteristics of MBA (Mangala, Bhagyam and Aishwariya) crude oils; among the benchmark crude oils, Dubai crude may be the closest to MBA crude in terms of quality and characteristics. We use a combination of Duri and Widuri crude oils (two grades of crude oil from Indonesia) to set the price of MBA crude.

Exhibit 8: Bulk of the Rajasthan crude is heavy but sweet
Key characteristics of crude oil of Cairn's Rajasthan fields

	Field Classification	API gravity (°)	Sulfur content	Pour Point (° C)	Other details
Mangala	Northern	27.3	Low	40-50	Waxy
Bhagyam	Northern	22-32	Low	40-45	Waxy
Aishwariya	Northern	27-32	Low	40-46	Waxy
Raageshwari	Southern	35	Low	NA	Waxy
Saraswati	Southern	40	Low	30	Waxy

Source: Company.

Development plan in place; considerable progress made

Cairn has made considerable progress in developing MBA oil fields. We discuss key highlights below.

1. **Field development plan (FDP) approval, engineering and design in progress.** The government of India had given its approval to the FDP of Mangala and related fields in May 2006. Cairn will submit the FDPs for Bhagyam and Shakti fields in 1QCY07. Cairn has also awarded the FEED (front end engineering and design) to Mustang Engineering, Houston and made considerable progress in detailed design and engineering. Cairn will commence construction from 1QCY07, which will be complete by 3QCY08. The company is in the process of placing orders for long-lead items.

2. **Environmental approvals and land acquisition.** Cairn has received the necessary environmental approvals for the development of MBA fields from the Ministry of Environment and Forests. It is in the process of acquiring land for the central processing facility and eight well pads (out of the required 18). We note that the block is located in a barren, sparsely populated area and thus, the development will have a minimal impact on the environment and local communities.

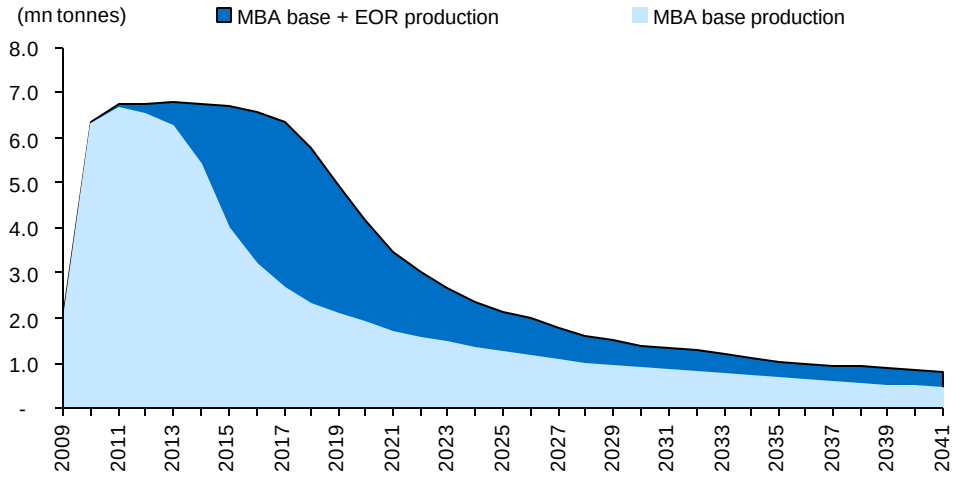
3. **Water supply from underground aquifer located close to Mangala field.** Cairn has got approvals from the Rajasthan state government and Central Ground Water Authority to use saline ground water for use at its oil processing terminal and hot water injection for recovery of crude oil, which is of a waxy nature. It will construct a 20 km water pipeline; the quantity of ground water is sufficient to meet Cairn's requirement through its current projected reserve life without any material impact on ground water level.

4. **Raageshwari deep gas field to meet fuel requirements.** Cairn will construct an 80-km gas pipeline to move gas from the Raageshwari gas field to its oil-processing terminal, located at the Mangala oil field site. The gas is sufficient to meet the fuel requirement through the reserve life of the oil fields.

Strategy to maximize production and recovery; early EOR

Cairn's strategy to maximize recovery of crude oil from MBA reserves include (1) steam injection and (2) early use of enhanced oil recovery (EOR) techniques during the life of the field. Exhibit 9 shows the base production profile and the contribution from EOR application (higher recovery of oil). Typically, operators deploy IOR/EOR techniques once the base exploitation of reserves has been achieved (30%-40% recovery of original oil in place); Cairn's early use of advanced techniques is somewhat unique.

Exhibit 9: Cairn can sustain peak production for a longer period through EOR technique
Gross production volume of Rajasthan block, MBA+EOR calendar year-ends (mn tonnes)



Source: Company, DM, Kotak Institutional Equities estimates.

Well-established execution capabilities

We note that Cairn has proven solid execution capabilities, visible from the rapid development of its Ravva and CB-OS-2 assets. In particular, we highlight that Cairn developed the Lakshmi fields in CB-OS-2 block and produced hydrocarbons in 28 months from the date of discovery, which is creditable in our view. Similarly, it developed the Ravva Satellite and Gauri fields in CB-OS-2 block in 13 and 16 months, respectively, from the date of FDP approval.

Several options for evacuation, although a final decision is awaited

Recent press reports suggest that Cairn and ONGC have agreed to construct a pipeline to connect with IOC's pipeline system in North-West India. This will be a heated and insulated pipeline with a likely cost of US$500 mn. We assume Cairn and ONGC will split the cost of the pipeline in the same ratio as their equity in the block. Cairn management expects to commence construction of the pipeline from the middle of 2007 and complete it in 15 months.

It is not clear as yet whether the pipeline capex will be treated as part of the field development cost and allowed for cost recovery as are other cost items under the PSC. We have assumed so in our model. Thus, we do not assume any further discount on crude oil price; Cairn and ONGC will ensure delivery of the crude through the proposed pipeline to IOC's crude tank farm at Viramgram (see map in Exhibit 10).

In case the proposed pipeline fails to materialize, Cairn has other options to evacuate crude oil produced from its MBA fields. We see the sale of crude oil to the refineries of Reliance and Essar with a total capacity of 72 mtpa (1.44 mb/d) by end-2008 as another option. These are fairly complex refineries and will likely have the capability to refine the heavy and waxy MBA crude. In any case, we do not see sale of crude oil as an issue in an energy-short country like India. At the current juncture, the government has nominated Mangalore Refineries and Petrochemicals Ltd. (MRPL) to process MBA crude. However, this will involve pipeline construction and sea transportation and will likely be less economical versus other options, in our view.

Exhibit 10: Cairn has various options to evacuate its crude

Source: Company, Kotak Institutional Equities.

Large gap between demand and supply of domestic crude oil

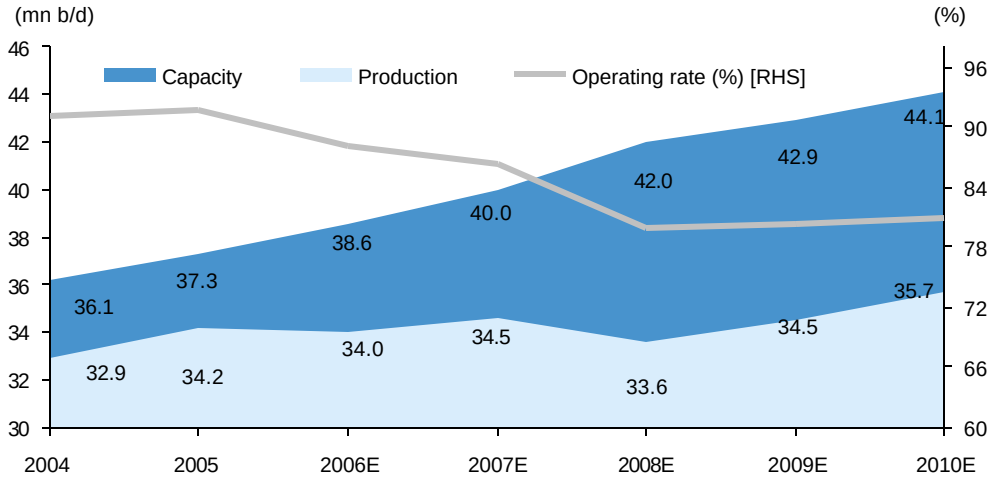
We do not see any issues about the sale of crude oil to be produced from Cairn's Rajasthan fields at the appropriate price given (1) large supply-demand gap for crude oil in India; and (2) likely tight global supply-demand conditions although we expect the balance to ease moderately in 2007 and 2008 (see Exhibits 11 and 12).

Exhibit 11: Expect high crude prices to sustain backed by strong demand growth
Estimated global crude demand, supply and prices, Calendar year-ends

	2003	2004	2005	2006	2007E	2008E	2009E	2010E	2011N
Demand (mb/d)	**79.3**	**82.5**	**83.6**	**84.5**	**86.0**	**87.6**	**89.4**	**91.3**	**93.3**
Yoy growth	1.6	3.2	1.1	0.9	1.4	1.6	1.8	1.9	2.0
Supply (mb/d)									
Non-OPEC	49.1	50.1	50.3	50.9	52.4	53.8	54.8	55.2	55.6
Yoy growth	1.0	1.0	0.2	0.6	1.5	1.4	1.0	0.4	0.5
OPEC:	—	—	—	—	—	—	—	—	—
Crude	27.1	28.9	29.8	29.7	28.7	28.5	28.6	29.8	31.0
NGLs	3.7	4.2	4.5	4.7	4.9	5.3	6.0	6.4	6.7
Total	**30.8**	**33.1**	**34.2**	**34.4**	**33.6**	**33.8**	**34.6**	**36.2**	**37.7**
Total	**79.8**	**83.2**	**84.5**	**85.3**	**86.0**	**87.6**	**89.4**	**91.3**	**93.3**
Total stock change and misc	0.5	1.0	0.7	0.8	—	—	—	—	—
Demand growth (yoy)	2.0	4.0	1.3	0.8	1.7	1.9	2.0	2.2	2.2
Supply growth (yoy)									
Non-OPEC	1.9	2.1	0.3	1.2	2.9	2.7	1.9	0.7	0.9
OPEC	6.4	7.5	3.4	0.4	(2.2)	0.6	2.3	4.6	4.2
Total	3.6	4.3	1.6	0.9	0.8	1.9	2.0	2.2	2.2
Dated Brent spot oil prices ($/bbl)	**31.1**	**38.3**	**54.4**	**65.8**	**60.0**	**55.0**	**55.0**	**55.0**	**45.0**

Source: IEA, BP Statistical Review of World Energy, Kotak Institutional Equities estimates.

Exhibit 12: OPEC has sufficient spare production capacity
OPEC production capacity and actual production (mbpd)

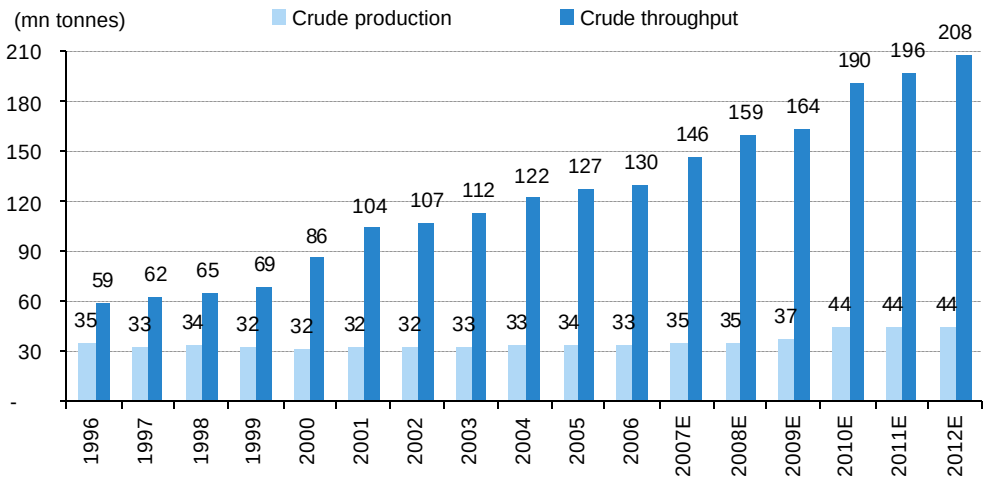


Source: OPEC, compiled by Kotak Institutional Equities.

Gap between domestic demand and supply to increase rapidly

Exhibit 13 shows that the current large gap between domestic crude demand and production will increase rapidly over the next few years. We note that Cairn's production volumes even at peak/plateau production rate (around 150,000 bpd or 7.5 mtpa) will not make any significant dent in India's likely large and increasing imports of crude oil. In fact, Cairn's peak output will be equal to the annual increase in demand for refined products in India.

Exhibit 13: Gap between crude demand and production in India set to increase rapidly over the next few years
Historical data and estimates of crude demand (refining throughput) and domestic production, March fiscal year-ends, 1996-2012E



Source: Ministry of Petroleum and Natural gas, Kotak Institutional Equities estimates.

New refining capacity to result in higher demand for crude oil

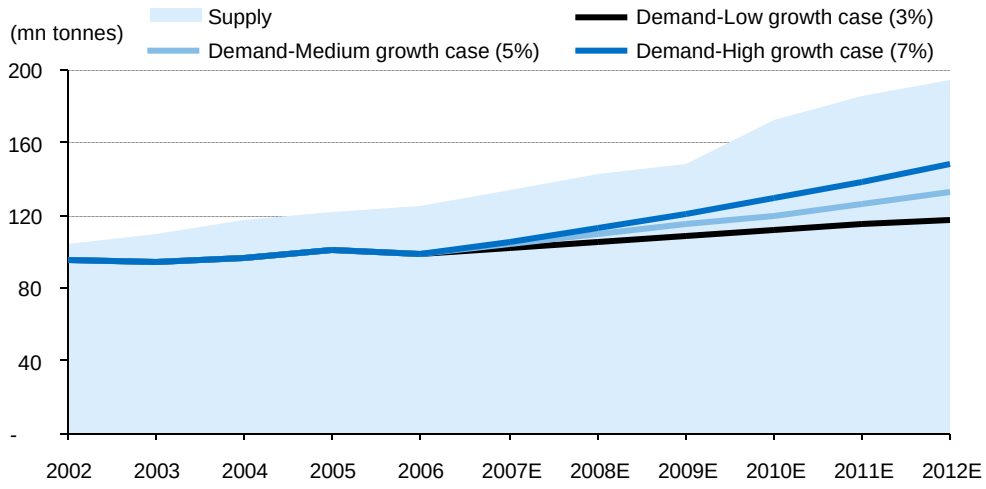
We expect the demand for crude oil to increase rapidly over the next few years, led by the start of several new refineries and capacity expansions at extant refineries (see Exhibit 14. The commissioning of new refineries may increase the current surplus of refined products in India as shown in Exhibit 15. However, we note that Indian refiners have chosen to expand their capacities due to (1) likely favorable global refining conditions over the next few years; (2) compulsion to maintain market share, improve geographical presence or maintain/improve balance between refining and marketing (as is the case for the three integrated R&M PSUs); and (3) export opportunities being increasingly available due to constraints in setting up new refining capacity in developed countries (the case with Reliance Petroleum).

Exhibit 14: Refining capacity in India will grow rapidly over the next few years
Current and projected Indian refining capacity additions, March fiscal year-ends ('000 tonnes)

	Capacity			New capacity					
Company/Refinery	**2004**	**2005**	**2006**	**2007E**	**2008E**	**2009E**	**2010E**	**2011E**	**2012E**
IOC/Barauni	6,000	6,000	6,000						
IOC/Digboi	650	650	650						
IOC/Guwahati	1,000	1,000	1,000						
IOC/Koyali	13,700	13,700	13,700						
IOC/Haldia	4,600	6,000	6,000						
IOC/Mathura	8,000	8,000	8,000						
IOC/Panipat	6,000	6,000	6,000	6,000					
BRPL/Assam	2,350	2,350	2,350						
CPCL/Chennai	6,500	9,500	9,500						
CPCL/Narimanam	1,000	1,000	1,000						
HPCL/Mumbai	5,500	5,500	5,500		2,400				
HPCL/Visakh	7,500	7,500	7,500		830				
BPCL/Mumbai	9,000	9,000	12,000						
KRL/Kochi	7,500	7,500	7,500						
NRL/Numaligarh	3,000	3,000	3,000						
MRPL/Mangalore	9,690	9,690	9,690				3,000		
Reliance Industries/Jamnagar	33,000	33,000	33,000						
Reliance Petroleum/Jamnagar						5,000	22,000		
Essar Oil/Vadinar				3,000	7,500		1,500		
HPCL/Bhatinda								9,000	
BPCL/Bina								6,000	
IOC/Paradip									9,000
Total additions				**9,000**	**10,730**	**5,000**	**26,500**	**15,000**	**9,000**
Cumulative capacity	**124,990**	**129,390**	**132,390**	**141,390**	**152,120**	**157,120**	**183,620**	**198,620**	**207,620**

Source: Company, Kotak Institutional Equities estimates.

Exhibit 15: Supply of refined products will likely exceed demand in India over next few years
Supply-demand balance of refined products, March fiscal year-ends, 2002-2012E (mn tonnes)

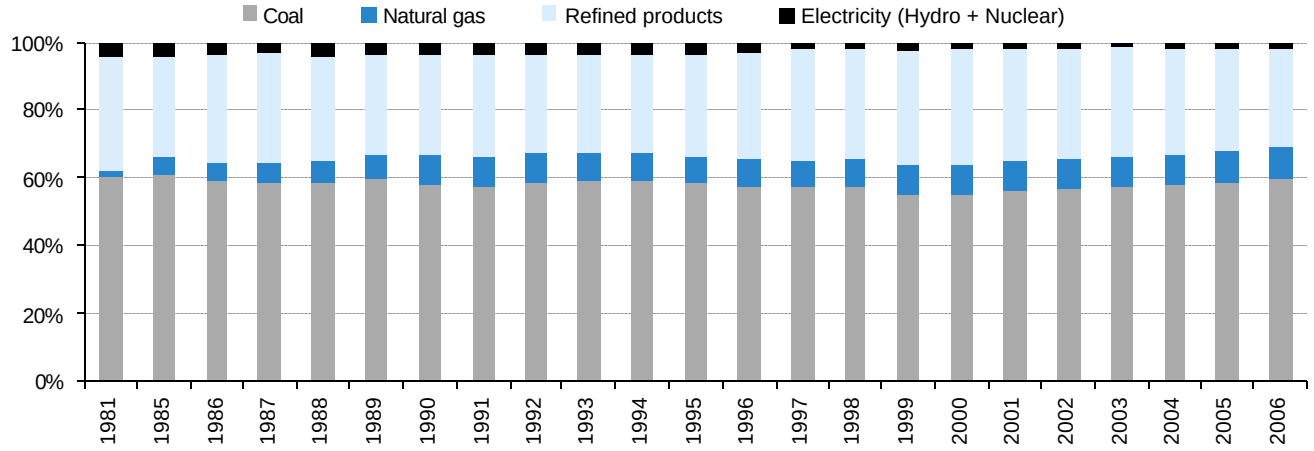


Source: Kotak Institutional Equities estimates.

Oil is an integral part of India's energy mix and will likely remain so

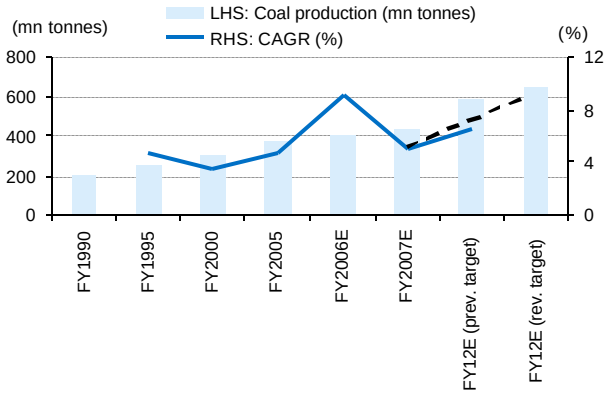
Exhibit 16 shows that oil is an important part of India's energy mix and has been so for the past several years. However, the share of oil in India's energy mix has declined over the past few years as a result of (1) increased domestic coal production and imports and (2) imports of LNG. We expect the trend to continue as (a) the government has increased focus on coal given India's abundant coal reserves (see Exhibits 17 and 18) and (b) new discoveries of gas in the KG-basin.

Exhibit 16: Oil is the second largest source of primary energy in India
Energy mix in India, March fiscal year-ends, 1981-2006



Source: Ministry of Petroleum and Natural Gas, Center for Monitoring Indian Economy.

Exhibit 17: Indian government is keen to step up production of coal
Coal production in India, March fiscal year-ends (mn tonnes)



Source: Ministry of Coal, Planning Commission.

Exhibit 18: Large potential for increasing production from CIL's blocks as also non-proven reserves
Distribution of coal resources in India, FY2005 (bn tonnes)

Blocks/Owner	Proved	Indicated	Inferred	Total
CIL	68	19	5	92
Non-CIL (Captive)	10	16	3	28
Non-CIL (Others)	6	4	6	16
Godavari Valley	8	6	3	17
NE Region	0	0	0	1
Un-blocked	1	72	22	94
Total	**93**	**117**	**38**	**248**

Source: Draft Vision Coal 2025, Ministry of Coal.

Nonetheless, strong demand for auto fuels will result in overall oil consumption growth in the region of 4%-5%. We see higher demand for auto fuels but lower demand for industrial fuels (naphtha, fuel oil), which we expect to be gradually replaced by natural gas. The latter process will likely result in oil demand growing at below real GDP growth rates. However, we note that Cairn is immune to this trend given the current and growing large gap between demand for and supply of domestic crude oil.

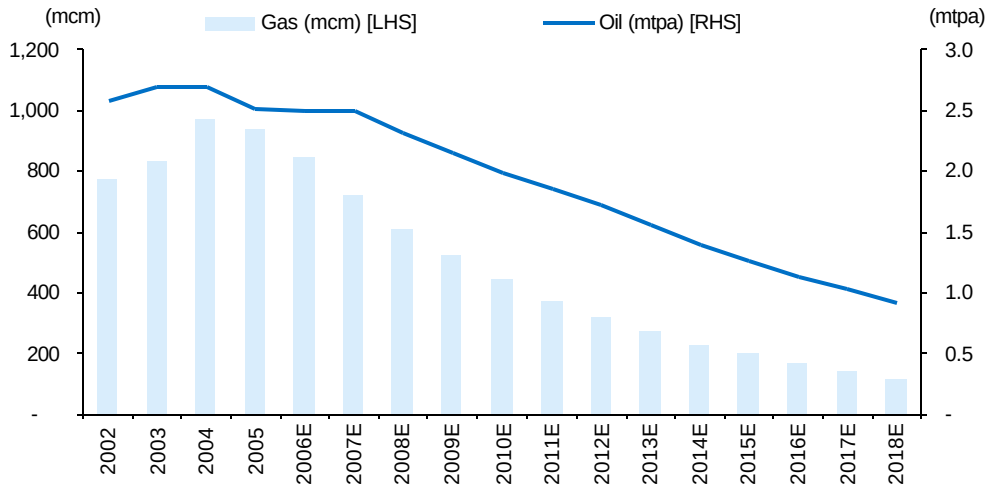
Driver #2: Extant assets to contribute until Rajasthan starts

Production from Cairn's extant producing assets—Ravva (22.5% ownership) and CB-OS-2 (40%ownership)—will decline over the next few years, although overall production will jump sharply from 2009 when its northern Rajasthan fields begin production. Cairn's producing assets may not be very significant from a valuation perspective but are important from a financial perspective until 2009 as they constitute Cairn's entire revenues and profits at present.

Ravva—little big field

We expect Ravva's production (gross) to decline over the next few years from its current level of 50,000 bpd of oil and 2.3 mcm/d of gas in 1H2006. Ravva's oil production has been steady over the past few years although gas production has started to decline from its peak in 2004 (see Exhibit 19). We expect gas production to decline swiftly following the norm while oil production will likely continue until 2020 albeit at lower rates.

Exhibit 19: Production from Ravva to likely decline in the future
Gross production volume of Ravva block, calendar year-ends



Source: Company for historical data, Kotak Institutional Equities estimates.

The Ravva consortium has chalked out a strategy to extend the life of the Ravva field. The strategy includes (1) drilling of infill wells; it has already contracted a rig for this purpose; (2) additional seismic acquisition and exploration drilling; and (3) exploration of deep prospects in the block.

The Ravva field has produced more than 200 mn boe until June 30, 2006 since commencement of production; the life-to-date production has turned out to be significantly higher than initial estimates. Additional infill drilling has sustained production at the plateau rate of 50,000 b/d, beyond initial estimates.

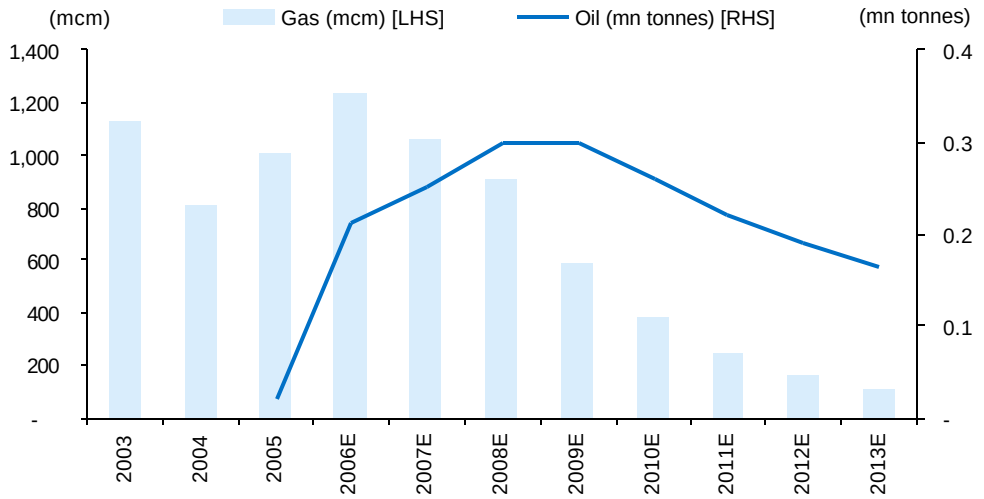
Favorable royalty regime

Cairn pays royalty and cess at fixed rates of Rs481/tonne and Rs918/tonne, respectively, which translates into total tax of around US$4/bbl. Additionally, it shares a part of profit petroleum with the government as per the terms of the PSC. Since Ravva has already achieved the maximum PTRR (post tax rate of return) of 35% as per the PSC, the share of the government in profit petroleum has risen to the maximum 60% and will remain at 60% for the rest of the life of the field.

CB-OS-2—still some gas left

We expect gas volumes from the Lakshmi and Gauri fields to decline swiftly over the next few years (see Exhibit 20) led by natural decline at the fields. Lakshmi fields started production in November 2002 and Gauri field in April 2004. Out of the original 450 bcf of gas in place (OGIP), the block has produced 132 bcf of gas (23 mn boe) until June 2006.

Exhibit 20: Gas production levels from CB-OS-2 fields to decline steeply from likely peak in 2006
Gross production volume of CB-OS-2 block, calendar year-ends



Source: Company, Kotak Institutional Equities estimates.

To some extent, gas production from the new fields of Ambe and CB-X will compensate for lower production from the main Lakhsmi and Gauri fields. Cairn has also planned a four-well drilling program in 2007.

Upward price revisions to also compensate for lower volumes

We expect Cairn to receive a higher price for gas sold (60% of total volumes) to Gujarat Paguthan Electric Corp. (which operates a 655 MW power plant) when the current gas-pricing contract comes for review in April 2007. We expect the gas price to move to around US$4/mn BTU (or Rs7.7/cu m) from the current US$3.7/mn BTU. We note that our expected price for gas will be competitive versus coal (both domestic and imported coal), as we show in Exhibit 21. We note that currently the maximum free market price of domestic gas in India is US$4.75/mn BTU (applicable for non-power, non-fertilizer sectors). However, power companies in Gujarat are paying significantly higher gas prices (imported LNG) given the limited availability of domestic gas at present.

Cairn sells the balance gas to Gujarat Transportation Corp. Ltd. (a 100% subsidiary of Gujarat Gas) at US$4.45/mn BTU currently.

Exhibit 21: Domestic gas at US$4/mn BTU (delivered price) can be competitive with domestic/imported coal
Comparative cost of power generation using various fuels

	Naphtha (a)	Gas (b)	Gas (c)	Coal (d)	Coal (e)	Coal (f)
Unit	Kg	m3	m3	Kg	Kg	Kg
Price (Rs/unit)	23.0	8.2	6.9	0.6	1.5	2.6
Calorific value (Kcal/unit)	10,500	9,000	9,000	3,500	3,500	6,500
Thermal efficiency (%)	54	54	54	37	37	37
Thermal requirement (kcal/kwh)	1,593	1,593	1,593	2,324	2,324	2,324
Cost of generation (Rs/Kwh)	**3.48**	**1.46**	**1.23**	**0.42**	**0.97**	**0.95**
Other operating costs (Rs/Kwh)	**0.20**	**0.20**	**0.20**	**0.20**	**0.20**	**0.20**
Plant load factor (%)	90	90	90	85	85	85
Fixed capital investment (Rs mn/MW)	33	32	32	40	40	40
Depreciation charge (%)	5	5	5	5	5	5
Depreciation charge (Rs/Kwh)	0.21	0.20	0.20	0.27	0.27	0.27
Fixed capital charge (%)	14	14	14	14	14	14
Fixed capital charge (Rs/Kwh)	0.59	0.57	0.57	0.75	0.75	0.75
Total cost (Rs/Kwh)	**4.48**	**2.43**	**2.20**	**1.64**	**2.19**	**2.17**

Note:
(a) Naphtha cost based on FY2005-FY2006 average price.
(b) Re-gassified LNG delivered price at US$5/mn BTU.
(c) Natural gas price delivered so assumed (US$4.25 per mn BTU) that cost of power generated matches average cost of power based on domestic/imported coal.
(d) Domestic coal at pithead.
(e) Domestic coal 1,000 kms from pithead.
(f) Imported coal at coastal plant.

Source: Platt's, Indian Railway Budget, Kotak Institutional Equities estimates.

Driver #3: Exploration = potential value

We believe Cairn can create potential value from exploration. It has a portfolio of 10 exploration blocks, many of them in frontier areas where exploration activity has been very limited. Cairn has a proven track record of exploration, which includes (1) discovery of hydrocarbons in deep-water in India; (2) discovery of a new basin (Barmer) in India; and (3) discovery of gas in Gulf of Cambay in 2000.

Under-explored areas offer large opportunity

We believe India is a very under-explored country with about 80% of its basins yet to be explored. In Exhibit 22, we present the level of exploration activity in India; although the data is somewhat dated, it shows that a large portion of the area of sedimentary basins in India is yet to be meaningfully explored.

However, increased exploration activity over the past few years has resulted in meaningful discoveries, which proves the potential of India. The discoveries include (1) Cairn's 3.4 bn boe of oil discovery in Rajasthan; (2) Reliance-Niko Resources discovery of 12 tcf of 2P gas reserves in 2002 in deep-water KG basin (KG-DWN-98/3); (3) Gujarat State Petroleum Corp.'s (GSPC) large discovery of gas in shallow-water KG basin (KG-OSN-2001/3); and (4) ONGC's reported large discovery of gas in deep-water KG basin (KG-DWN-98/2) in December 2006.

Exhibit 22: India is still relatively unexplored
Breakdown of sedimentary basins' area by level of exploration (mn sq km)

	1996	1999	2003
Moderately/well explored	0.50	0.50	0.54
Poorly explored	0.53	0.53	0.59
Exploration inititated	0.56	0.84	1.00
Unexplored	1.57	1.28	1.02
Total	**3.15**	**3.14**	**3.14**

Source: Directorate General of Hydrocarbons.

Cairn—Presence in five basins, some frontier

Cairn has chosen a deliberate strategy of focusing on frontier areas to maximize potential returns on investment. It is also following a well-crafted strategy of partnerships with companies that may have a better understanding of a region's geology. For example, it is in partnership with ENI (and ONGC) in a block (RJ-ONN-2003/1) in West Rajasthan (close to Pakistan border); ENI has interests in blocks in Pakistan (on the other side of the border) and may have a better understanding of the geology of that area.

Exhibit 23 gives details of exploration blocks where Cairn holds a stake. Apart from the extant blocks, Cairn also has the opportunity to participate in future exploration and licensing rounds including in the ongoing NELP (New Exploration and Licensing Policy) VI round. Cairn group has bid for 11 blocks of the 55 blocks offered by the government under NELP VI, which includes 25 onshore blocks, 24 deep-water blocks and six shallow-water blocks.

Exhibit 23: Cairn has 13 exploration blocks in India, most of which are in frontier areas
Details of exploration blocks in which Cairn has a stake

	Block name	Basin	Area (sq kms)	Consortium	Operator	Cairn stake (%)
Exploration phase						
1	GV-ONN-97/1	Ganga Valley	27,562	ONGC, Cairn India, Cairn Plc, IOCL	ONGC	15
2	KG-DWN-98/2	Krishna-Godavari	9,757	ONGC, Cairn India	ONGC	10
3	CB-ONN-2001/1	Cambay	210	ONGC, Cairn India	ONGC	30
4	CB-ONN-2002/1	Cambay	135	ONGC, Cairn India	ONGC	30
5	GV-ONN-2002/1	Ganga Valley	15,550	Cairn India, Cairn Plc	Cairn India	50
6	GS-OSN-2003/1	Saurashtra	5,970	ONGC, Cairn India	ONGC	49
7	GV-ONN-2003/1	Ganga Valley	7,210	Cairn India, ONGC, Cairn Plc	Cairn India	24
8	KG-ONN-2003/1	Krishna-Godavari	1,697	ONGC, Cairn India	ONGC	49
9	RJ-ONN-2003/1	Rajasthan	1,335	ENI, ONGC, Cairn India	ENI India	30
10	VN-ONN-2003/1	Vindhyan	3,585	ONGC, Cairn India	ONGC	49
Exploration and development phase						
1	PKGM-1 (Ravva)	Krishna-Godavari	4,566	Cairn India, ONGC, Videocon, Ravva Oil	Cairn India	22.5
2	CB-OS-2	Cambay	3,413	Cairn India, ONGC, Tata	Cairn India	40
3	RJ-ON-90/1 (note 2)	Rajasthan	4,970	Cairn India	Cairn India	100

Note:
1. Cairn Energy Plc will own a share equal to Cairn India in the Ganga Valley basin blocks.
2. ONGC has the option to take a 30% stake in the development phase.

Source: Ministry of Petroleum and Natural Gas.

Rajasthan—basin is still evolving

Cairn's oil discovery in RJ-ON-90/1 has opened up a new basin for further exploration. It has drilled 130 wells and made 18 discoveries, which highlights the high prospectivity of the block. Cairn has a 100% stake in exploration but a 70% stake in development of this block.

In particular, we highlight the potential from Barmer Hill zone; this zone has about 1.4 bn bbls of OIP. However, due to difficult conditions for exploitation, Cairn is unable to book the oil as reserves. It is evaluating options to extract oil from this potentially exciting play.

KG basin blocks—KG-DWN-98/2 may have large reserves

ONGC has confirmed a large gas discovery in KG-DWN-98/2 block (9,757 sq. kms.), in which Cairn owns a 10% stake (previously 100%). Ironically, Cairn had discovered gas in 2001 in this block, which is, incidentally, the first deep-water discovery in India. Cairn had subsequently sold a 90% stake in the block to ONGC to focus its resources on the development of its Rajasthan block.

ONGC has made a large discovery in an ultra deep-water well (UD-1) but is yet to assess the reserves of the discovery. It needs to drill a few appraisal wells to estimate the size of the field and reserves. It has struck a net pay zone of 30 meters of gas at about 5,300 meters total depth in a secondary target zone; however, the primary target is a zone 6,500 meters deep. Drillship 'Belford Dolphin' is drilling UDW-1 well and will reach the target depth of 7,000 meters by early February 2007.

Ganga Valley basin—frontier basin

The Ganga Valley basin, which occupies a huge swathe of North India, is a largely unexplored region; so far, only seven wells have been drilled in this area, which shows that the region is practically unexplored. Cairn has stakes in three blocks with a total area of 50,322 sq. kms. Cairn Energy PLC, Cairn's parent company, will have a share equal to that of Cairn India in these blocks to enhance cooperation in exploration in the Ganga Valley basin; the strategy is driven by Cairn PLC's presence in Nepal and Bangladesh and the view that these contiguous areas may have similar geology.

Key risks: Crude price, delays in production

We see several risks to Cairn's earnings and cash flows (1) a sharp decline in crude price, (2) potential unfavorable regulatory developments, (3) a delay in production of crude oil from Rajasthan, and (4) inability to find new oil and gas at a reasonable cost. We do not see any potential conflicts of interest between Cairn India and Cairn Energy PLC.

Crude price decline

A sharp decline in crude price longer term would be negative for Cairn's earnings. Cairn's earnings are highly leveraged to crude oil price, as we show in Exhibit 24. However, we note that we model crude price (Dated Brent) at US$45/bbl longer-term (from 2011), which we assume as our long-term normalized crude price. Cairn will start production of crude oil from its Rajasthan block in mid-2009.

Exhibit 24: Cairn's earnings are highly leveraged to crude prices
Earnings sensitivity of Cairn to key variables

	2009E			2010E		
	Downside	Base case	Upside	Downside	Base case	Upside
Average crude prices						
Crude price (US$/bbl)	53.0	55.0	57.0	53.0	55.0	57.0
Net profits (Rs mn)	15,258	16,375	17,492	49,071	51,202	53,332
Earnings per share (Rs)	8.6	9.3	9.9	27.8	29.0	30.2
% upside/(downside)	**(6.8)**		**6.8**	**(4.2)**		**4.2**
Exchange rate						
Rs/US$	43.0	44.5	46.0	43.0	44.5	46.0
Net profits (Rs mn)	15,496	16,375	17,254	49,443	51,202	52,960
Earnings per share (Rs)	8.8	9.3	9.8	28.0	29.0	30.0
% upside/(downside)	**(5.4)**		**5.4**	**(3.4)**		**3.4**

Source: Kotak Institutional Equities estimates.

Unfavorable regulatory developments

Unfavorable changes to the current regulatory regime (fiscal terms, pricing and taxation) may be negative for Cairn's earnings. The current fiscal regime for E&P in India is very attractive with low royalty (5%-12.5%) on crude oil and gas, a seven-year tax holiday and a sliding-scale production-sharing contract (bidders bid for blocks on offer based on this parameter); see Exhibit 25 for details.

Exhibit 25: India's NELP offers attractive fiscal terms
Details of key fiscal terms and conditions of the NELP

1. Royalty on crude oil and natural gas (% of wellhead value)	
Crude oil	
Onshore block	12.5
Offshore shallow water	10.0
Offshore deep water (a)	5.0
Natural gas	
Onshore block	10.0
Offshore shallow water	10.0
Offshore deep water (a)	5.0
2. Income tax	
Years of income tax holiday	7
3. Pricing of crude oil and natural gas	
Crude oil	FOB price of equivalent crude/(s)
Natural gas	Arms-length prices
4. Production sharing	
Share of profit petroleum linked to IM (b)	Variable

Note:
(a) The 5% royalty rate is valid for the first seven years of production, after which it increases to 10%.
(b) IM = Investment Multiple; share of profit petroleum is fixed at the time of bidding for NELP blocks.

Source: Ministry of Petroleum and Natural Gas.

However, we note that the regulatory regime for upstream oil and gas sector is well established in India with the introduction of the NELP in 1998. Also, we doubt the Indian government will change the regulatory regime unfavorably given that it needs to attract investment (overseas and domestic) in the critical E&P sector. As discussed previously, India has a large current shortage of oil and gas, which will likely increase over the next few years.

Imposition of royalty and cess on Cairn for Rajasthan will be very negative for cash flows

Our sensitivity analysis of valuation (based on DCF analysis) of Cairn's RJ-ON-90/1 block (see Exhibit 26) shows that the valuation can vary significantly depending on the level of royalty and cess to be paid by Cairn on crude oil produced by it, if at all. The government has notified Cairn that it will have to pay cess on the crude oil produced by it. Additionally, the amount of cess is not certain and it could be Rs900/tonne (prevailing cess rate when the PSC was signed plus an additional 2% education cess) or Rs2,550/tonne, which is the current rate.

Exhibit 26: Cairn's Rajasthan field's enterprise value is highly leveraged to crude prices, regulations
Enterprise value sensitivity of Cairn to key variables (US$ bn)

	Sensitvity of current valuation		Sensitvity of +1-year valuation	
	Enterprise value (US$ bn)	Change from base case (%)	Enterprise value (US$ bn)	Change from base case (%)
Average crude prices (2011 and beyond)				
Dated Brent price (US70$/bbl)	4.5	51	5.2	48
Dated Brent price (US60$/bbl)	4.0	33	4.6	31
Dated Brent price (US50$/bbl)	3.3	11	3.9	10
Dated Brent price (US45$/bbl)	**3.0**		**3.5**	
Dated Brent price (US40$/bbl)	2.7	(11)	3.2	(10)
Dated Brent price (US30$/bbl)	2.1	(31)	2.5	(29)
Cess, royalty				
Royalty (0%), Cess (Rs0/tonne)	**3.0**		**3.5**	
Royalty (0%), Cess (Rs918/tonne)	2.8	(7)	3.3	(6)
Royalty (0%), Cess (Rs2,550/tonne)	2.3	(21)	2.8	(20)
Royalty (20%), Cess (Rs918/tonne)	1.9	(36)	2.4	(33)
Royalty (20%), Cess (Rs2,550/tonne)	1.5	(50)	1.9	(47)

Source: Kotak Institutional Equities estimates.

Lower-than-expected volumes or inability to place crude oil

Development risks

A delay in production, weak execution or unusual reservoir behavior may result in lower-than-expected volumes from the Rajasthan block in the initial years of production. However, we believe that the Cairn management has a well-crafted development plan, which potentially mitigates project risks. Also, we do not see a delay in the delivery of critical infrastructure. Unlike the current tight market for offshore rigs and platforms, there is no such issue for on-land equipment.

We note that the development itself is not technically challenging given the onshore location of the block and moderate depths of the wells. Although the reservoir pressure is low (given moderate depths) and the crude oil of a waxy nature, we note that hot water injections will enable the recovery of the crude oil—a technology used in other parts of the world.

Evacuation risks

We believe timely construction of a pipeline to transport crude oil to a designated refinery is critical, in our view. Although there is some progress on the pipeline as discussed previously, it is not yet certain whether Cairn and ONGC will be allowed to treat the pipeline capex as part of the investment for MBA development and ongoing operating costs for cost recovery. We suspect the economics for a pipeline owner or for Cairn (unless it is allowed for cost recovery and treated as investment as part of the MBA development) may not be exciting, especially as the pipeline will be severely under-utilized after the first few years; crude production from MBA fields will decline from its stable/plateau levels from 2018 even with the proposed EOR program.

As discussed earlier, we do not see evacuation or sale of crude oil to be an issue in India, which faces a large and increasing shortage of crude oil. Also, as per the terms of the PSC, Cairn has the responsibility of delivering crude oil to a delivery point located at the outlet of its storage facilities. The evacuation of crude oil beyond the delivery point is the responsibility of the government or its nominee. However, it appears that the government and the companies are working on a pragmatic solution to address the problem.

Potential conflicts of interest between Cairn India and Cairn Energy PLC

We do not see any major issue arising from Cairn India and Cairn Energy PLC owning equal shares in certain exploration (three) blocks or engaging in potential competition for acquisition of NELP blocks in the future. Cairn India has entered into a non-compete agreement with Cairn Energy PLC, under which Cairn India will be exclusively entitled to operate in the E&P sector in India (geographical area including territorial waters). The agreement is valid for three years from the effective date of agreement or until Cairn Energy PLC's equity ownership in Cairn India drops to below 20%, whichever is earlier.

We expect the two entities to work closely and jointly (if required and if the two entities so decide) in certain cases; we see this as logical as Cairn Energy PLC will likely continue to own a majority stake in Cairn India. We highlight that the two entities have bid jointly for certain exploration blocks in the ongoing NELP VI round. Cairn India will have exclusive rights to participate in future NELP rounds (during the non-compete agreement period) but can choose Cairn Energy PLC as a consortium partner at its sole discretion.

Financials: The real story unfolds in 2010

We expect Cairn's net income to increase to Rs51.2 bn in 2010 from Rs0.6 bn (pro forma) in 2005, driven by the start of production of crude oil from the northern fields in the Rajasthan block in mid-2009. Cairn will spend an additional Rs55 bn or US$1.2 bn between 2006 and 2009 (until first oil from northern fields) as its share to develop the Rajasthan fields.

Strong growth in gas transportation volumes to drive revenues

Exhibit 27 presents our key assumptions—crude price, gas price and volumes—behind our earnings model for Cairn. We discuss key assumptions below.

Exhibit 27: We model crude price at US$55/bbl between 2008-2010 and US$45/bbl normalized
Key assumptions, calendar year-ends, 2003-2015E

	2003	2004	2005	2006	2007E	2008E	2009E	2010E	2011E	2012E	2013E	2014E	2015E
Rs/US$ rate	46.6	45.3	44.0	45.3	44.5	44.5	44.5	44.5	44.5	44.5	44.5	44.5	44.5
Price (US$/bbl)													
Crude oil													
Dated Brent	29	38	54	65	60	55	55	55	45	45	45	45	45
Ravva	38	38	54	66	60	55	55	55	45	45	45	45	45
Rajasthan							51	51	41	41	41	41	41
Gas (US$/mn BTU)													
Ravva	3.1	3.3	3.1	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
CB-OS-2	3.7	3.6	3.5	4.0	4.0	4.1	4.2	4.2	4.2	4.2	4.2	4.2	4.2
Volume													
Ravva gas (mcm)	188	218	211	191	162	138	117	99	85	72	61	52	44
Ravva oil (mn tonnes)	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.4	0.4	0.4	0.3	0.3	0.3
CB-OS-2 gas (mcm)	452	324	401	493	424	364	237	154	100	65	42	—	—
CB-OS-2 oil (mn tonnes)	—	—	—	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	—	—
Rajasthan oil (mn tonnes)	—	—	—	—	0.1	0.4	1.7	4.8	5.0	4.8	4.8	4.7	4.7
Mangala (mn tonnes)	—	—	—	—	—	—	1.4	3.3	3.4	3.4	3.4	3.4	3.4
Bhagyam (mn tonnes)	—	—	—	—	—	—	—	0.9	0.9	0.9	0.9	0.9	0.8
Aishwariya (mn tonnes)	—	—	—	—	—	—	—	0.3	0.5	0.5	0.5	0.5	0.5
Southern fields (mn tonnes)	—	—	—	—	0.1	0.4	0.4	0.4	0.2	0.1	—	—	—
Total volume (mn toe)	**1.2**	**1.1**	**1.1**	**1.3**	**1.3**	**1.4**	**2.7**	**5.6**	**5.6**	**5.4**	**5.3**	**5.1**	**5.0**
Total volume (mn boe)	**8.6**	**7.9**	**8.2**	**9.1**	**9.4**	**10.5**	**19.4**	**40.8**	**41.1**	**39.6**	**38.5**	**37.2**	**36.4**
Total volume ('000 boe/d)	**23**	**22**	**22**	**25**	**26**	**29**	**53**	**112**	**113**	**108**	**105**	**102**	**100**

Note:
1. All volume figures are net for Cairn on working interest basis and before production (profit petroleum) share with the government of India.
2. Data for 2003-2005 represents data for Indian assets of Cairn PLC, which are being acquired by Cairn India Ltd.

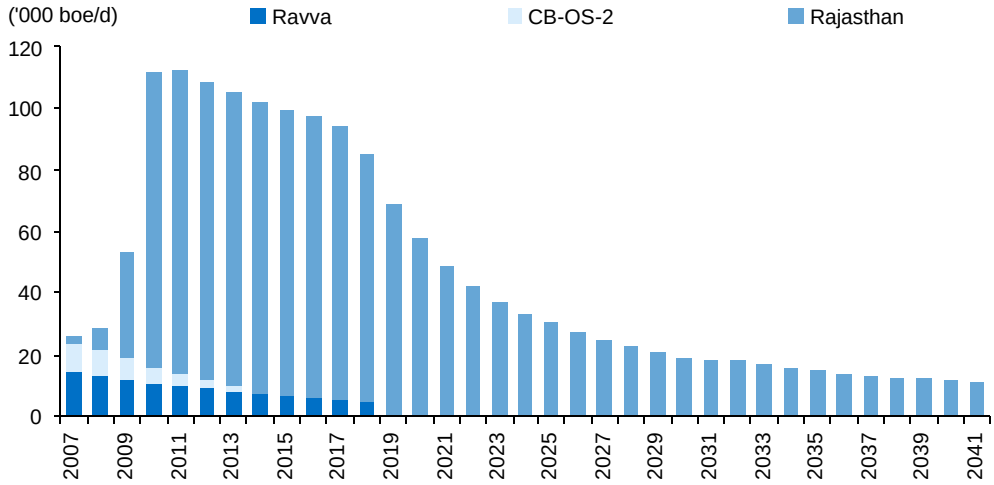
Source: Company for historical data, Kotak Institutional Equities estimates.

1. **Crude price.** We model crude price (Dated Brent) at US$60/bbl, US$55/bbl, US$55/bbl, US$55/bbl for 2007, 2008, 2009 and 2010, respectively. Beyond 2011, we use a normalized price of US$45/bbl for valuation purposes. For Ravva crude, the formula for pricing of crude oil is the average price of Tapis and Minas crude less US$0.6/bbl and we assume this will continue over the reserve life of the field. For Rajasthan crude, we use a 50-50 blend of Duri and Widuri crude oils as the basis for pricing.

2. **Natural gas price.** We model the natural gas price at US$4/mn BTU (average across various fields and contracts) from 2007 as Cairn's contracts expire in October 2006 (Ravva) and in April 2007 (portion of CB-OS-2 gas). We note that the government has fixed the price of gas produced from Panna, Mukta and Tapti (PMT) fields at US$4.75/mn BTU from April 2006. Thus, we do not see any government-related issue regarding the pricing of natural gas.

3. **Crude oil and natural gas production.** We model crude production from the northern fields of Rajasthan block to commence from July 2009. We model contribution from the southern fields from 2Q2007 but note these volumes are very small compared to the northern fields, which will start production later. Exhibit 28 shows our assumed crude oil and gas production profile for Cairn on a net basis (working interest basis), broken down by key assets.

Exhibit 28: Cairn's production will ramp upto 120,000 boe/d by 2010
Working interest production volume of Cairn, calendar year-ends



Source: Company, Kotak Institutional Equities estimates.

4. **Share of profit petroleum.** In Exhibit 29, we show the share of profit petroleum of Cairn at various levels of post tax rate of return (applicable for Ravva and CB-OS-2 blocks) and/or Investment Multiple (IM, as applicable for the Rajasthan block). We find Cairn's share of profit petroleum high compared to certain blocks of other operators.

Exhibit 29: Maximum share of government of profit petroleum at 50% for key Rajasthan block

Details of share of profit petroleum between the government and Cairn for Cairn's key assets

	Government share (%)			Government share (%)
PTRR	CB-OS-2	Ravva	IM	RJ-ON-90/1
<15%	**12.5**	10	<1	**20**
<20%	22.5	15	>1, <1.5	20
<25%	45	20	>1.5, <2	30
<30%	50	25	<2, <2.5	40
<35%	55	35	>2.5, <3	50
<40%	60	35	>3	50
>40%	60	**60**		

Note:

(a) Highlighted figure shows current status of respective fields/blocks.

(b) PTRR = post tax rate of return; IM = Investment Multiple.

Source: Company data.

Key accounting policies and other issues

1. **Depletion calculation on unit of production (UOP) method.** Cairn will follow the unit-of-production method to provide for depletion costs—UOP rate X production for the period, where UOP rate = depletion base of the cost center/provided oil and gas reserves. We use only P1 (proved) reserves to compute depletion charges as per standard Indian accounting practice.

2. **Exploration costs accounted on successful efforts method.** As per Indian Accounting Standards, Cairn will write off survey costs as also the cost of dry wells in the year in which the exploration expenses (if unsuccessful) are incurred.

3. **Impairment of goodwill on acquisition of Cairn PLC's India assets.** Cairn India has acquired the Indian assets of Cairn Energy PLC's and paid cash and issued shares (1.23 bn or 69.5% of outstanding shares) to Cairn Energy PLC in lieu of acquisition of assets. The difference between the acquisition value and book value (acquisition value is higher than book value) would reflect as goodwill on the books of Cairn India. Cairn India will write-off the goodwill depending on impairment, if any. In the meantime, the goodwill (if any) will reflect on Cairn's balance sheet.

4. **Taxation.** As discussed previously, Cairn will enjoy a seven-year tax holiday for each of its assets from the year of commercial production. However, it will have to pay tax at the MAT (minimum alternative tax) rate of 10.455% as is applicable for foreign companies. For Ravva, the seven-year period will get over in FY2008. For CB-OS-2, the tax exemption will continue until FY2009 (Lakshmi fields) and FY2011 (Gauri field). For the Rajasthan block, FY2010 will be the first year of commercial production (Mangala field) and each of the fields will be exempt from tax for seven years from the year of commercial production. We note that the corporate tax rate for Cairn India is 41.82%, as it is deemed to be a foreign company having acquired/acquiring the subsidiaries/assets of a foreign company.

Exhibit 30 is our profit and loss model for Cairn.

Exhibit 30: Cairn profit model, calendar year-ends, 2006E-2012N (Rs mn)

	2006E	2007E	2008E	2009E	2010E	2011N	2012N
Net sales	**18,306**	**18,472**	**20,397**	**41,786**	**91,110**	**74,543**	**72,053**
Production costs	(2,943)	(2,950)	(2,991)	(4,125)	(6,905)	(11,693)	(11,297)
Employee costs	(750)	(1,000)	(1,070)	(1,145)	(1,225)	(1,311)	(1,403)
Government share of profit petroleum	(7,869)	(7,443)	(7,268)	(6,979)	(13,403)	(15,446)	(25,379)
Royalty/taxes	(1,206)	(1,153)	(1,050)	(904)	(791)	(702)	(630)
Other expenditure	(250)	(250)	(350)	(400)	(420)	(441)	(463)
EBITDA	**5,288**	**5,676**	**7,668**	**28,233**	**68,366**	**44,950**	**32,882**
Other income	524	566	112	72	55	138	312
Interest	(404)	(344)	(344)	(406)	(141)	—	—
DD&A	(3,935)	(5,462)	(6,216)	(7,333)	(8,808)	(8,446)	(8,527)
Pretax profits	**1,474**	**437**	**1,221**	**20,566**	**59,471**	**36,642**	**24,667**
Tax	(372)	—	(250)	(3,479)	(7,508)	(4,777)	(3,521)
Deferred tax	(25)	(73)	(87)	(711)	(762)	(371)	(53)
Net profits	**1,077**	**364**	**884**	**16,375**	**51,202**	**31,495**	**21,094**
Shares outstanding (mn)							
Year end	1,765	1,765	1,765	1,765	1,765	1,765	1,765
Primary	1,765	1,765	1,765	1,765	1,765	1,765	1,765
EPS (Rs)							
Year end	0.6	0.2	0.5	9.3	29.0	17.8	11.9
Primary	**0.6**	**0.2**	**0.5**	**9.3**	**29.0**	**17.8**	**11.9**
Cash flow per share (Rs)							
Year end	2.3	1.6	2.4	11.3	31.2	23.4	16.8
Primary	**2.3**	**1.6**	**2.4**	**11.3**	**31.2**	**23.4**	**16.8**
Growth (%)							
Net income	70	(66)	142	1,753	213	(38)	(33)
EPS		(66)	142	1,753	213	(38)	(33)
Operating cash flow	11	(29)	48	364	177	(25)	(28)
Operating cash flow/share		(29)	48	364	177	(25)	(28)
Effective tax rate (%)	**27**	**17**	**28**	**20**	**14**	**14**	**14**

Note:
(a) Historical data represents consolidated statements of CEA, CEIH and CEH.
(b) Final number of shares will be 1,765 mn.

Source: Company data, Kotak Institutional Equities estimates.

Heavy capex program through to 2009

Exhibit 31 is our cash flow model for Cairn. Cairn will invest Rs55 bn as capex in exploration and development between 2006 and 2009 with the bulk of the capex for development of its key Rajasthan fields. Exhibit 32 gives our estimated yearly breakdown of capex for key assets and segments.

Exhibit 31: Cairn cash flow model, calendar year-ends, 2006E-2012E (Rs mn)

	2006E	2007E	2008E	2009E	2010E	2011E	2012E
Operating							
Net profits before tax	1,474	437	1,221	20,566	59,471	36,642	24,667
DD&A	2,935	3,412	3,966	5,183	6,658	6,996	7,077
Interest expense	404	344	344	406	141	—	—
Interest paid	(807)	(687)	(687)	(812)	(281)	—	—
Taxes paid	(372)	—	(250)	(3,479)	(7,508)	(4,777)	(3,521)
Other income/dividends	(524)	(566)	(112)	(72)	(55)	(138)	(312)
Working capital changes (a)	998	(41)	(194)	(1,912)	(3,331)	2,631	1,690
Total operating	**4,107**	**2,898**	**4,286**	**19,879**	**55,096**	**41,354**	**29,601**
Cash generated from operations (b)	**3,109**	**2,939**	**4,480**	**21,791**	**58,426**	**38,723**	**27,911**
Investing							
Capital expenditure (c)	(14,946)	(12,793)	(21,025)	(9,900)	(2,713)	(2,463)	(2,463)
(Purchase)/Sale of investments (d)	(249,804)	—	—	—	—	—	—
Interest received	524	566	112	72	55	138	312
Total investing	**(264,226)**	**(12,226)**	**(20,913)**	**(9,828)**	**(2,659)**	**(2,325)**	**(2,152)**
Financing							
Proceeds from issue of share capital	276,624	—	—	—	—	—	—
Proceeds from borrowings	10,196	(15,000)	15,000	(10,000)	(11,245)	—	—
Dividends paid	—	—	—	—	(40,259)	(32,207)	(21,571)
Total financing	**286,820**	**(15,000)**	**15,000**	**(10,000)**	**(51,504)**	**(32,207)**	**(21,571)**
Net increase in cash and cash equivalents	26,701	(24,329)	(1,627)	51	933	6,821	5,878
Beginning cash	1,666	28,367	4,038	2,411	2,463	3,395	10,217
Ending cash	**28,367**	**4,038**	**2,411**	**2,463**	**3,395**	**10,217**	**16,095**
Gross cash flow (b)	3,109	2,939	4,480	21,791	58,426	38,723	27,911
Free cash flow (b) + (a) + (c) + (d)	**(260,119)**	**(9,329)**	**(16,627)**	**10,051**	**52,437**	**39,029**	**27,449**
Excess cash flow (b) +(a) + (c) + (d) + (e)	(260,119)	(9,329)	(16,627)	10,051	12,178	6,821	5,878

Source: Kotak Institutional Equities estimates.

Exhibit 32: Aggressive capex program to develop Rajasthan reserves
Breadown of Cairn's capex by key areas, December calendar year-ends, 2006E-2010E

	2006E	2007E	2008E	2009E	2010E
Fixed assets					
Crude pipeline	—	1,780	8,900	4,450	—
Others	1,000	1,000	1,000	1,000	1,000
Fixed assets total	**1,000**	**2,780**	**9,900**	**5,450**	**1,000**
Survey and drilling					
Survey	300	650	850	750	750
Exploration drilling	4,450	1,400	1,400	1,400	1,400
Exploration-Rajasthan	3,750	—	—	—	—
Development	10,196	10,013	11,125	4,450	1,713
Development-Rajasthan	10,196	10,013	11,125	4,450	1,713
Drilling total	**14,946**	**12,063**	**13,375**	**6,600**	**3,863**
Total	**15,946**	**14,843**	**23,275**	**12,050**	**4,863**

Source: Kotak Institutional Equities estimates.

Balance sheet—gearing to peak in 2008

We expect Cairn's debt and net debt-to-equity ratio to decline once it starts generating FCF from 2009. Cairn has tied a credit facility of US$850 mn from commercial banks (US$722.5 mn) and International Finance Corp. (IFC) (US$127.5 mn)—the facilities have repayment period of five years and nine years, respectively. Exhibit 33 is our balance sheet model for Cairn India. We note that this may not reflect Cairn's India balance sheet as we have tried to extrapolate the future balance sheet of Cairn India from limited information on the balance sheets of the three major subsidiaries to be acquired by it and which constitute Cairn India.

Exhibit 33: Cairn balance sheet, calendar year-ends, 2006E-2012E (Rs mn)

	2006E	2007E	2008E	2009E	2010E	2011E	2012E
Equity							
Share capital	17,654	17,654	17,654	17,654	17,654	17,654	17,654
Reserves	265,874	266,239	267,122	283,497	294,440	293,727	293,250
Total equity	**283,528**	**283,892**	**284,776**	**301,151**	**312,094**	**311,381**	**310,904**
Deferred tax liability	3,205	3,278	3,365	4,076	4,838	5,208	5,261
Liabilities							
Short-term loans	—	—	—	—	—	—	—
Long-term loans	21,245	6,245	21,245	11,245	—	—	—
Total borrowings	**21,245**	**6,245**	**21,245**	**11,245**	**—**	**—**	**—**
Currrent liabilities	1,742	1,717	1,707	1,846	3,245	4,287	5,738
Total capital	**309,720**	**295,132**	**311,093**	**318,318**	**320,176**	**320,876**	**321,902**
Assets							
Cash	28,367	4,038	2,411	2,463	3,395	10,217	16,095
Current assets	1,755	1,771	1,956	4,007	8,737	7,148	6,909
Gross block	2,489	3,832	5,176	21,712	22,853	23,603	24,353
Less: accumulated depreciation	885	1,174	1,649	3,073	5,430	7,919	10,511
Net fixed assets	1,604	2,659	3,527	18,639	17,423	15,684	13,841
Net producing properties	7,698	5,995	2,505	38,746	44,022	41,228	38,457
Capital work-in-progress	23,697	34,069	54,094	7,864	—	—	—
Total fixed assets	**32,999**	**42,723**	**60,126**	**65,249**	**61,445**	**56,912**	**52,299**
Goodwill	246,595	246,595	246,595	246,595	246,595	246,595	246,595
Investments	4	4	4	4	4	4	4
Investments-subsidiaries	—	—	—	—	—	—	—
Misc expenditure not written off	—	—	—	—	—	—	—
Total assets	**309,720**	**295,132**	**311,092**	**318,318**	**320,176**	**320,876**	**321,902**
Ratios (%)							
Debt/equity	7.4	2.2	7.4	3.7	—	—	—
Debt/capitalization	6.9	2.1	6.9	3.6	—	—	—
Net debt/equity	(2.5)	0.8	6.5	2.9	(1.1)	(3.2)	(5.1)
Net debt/capitalization	(2.5)	0.8	6.1	2.8	(1.1)	(3.3)	(5.4)
RoAE	0.7	0.1	0.3	5.5	16.5	9.9	6.7
RoACE	**0.8**	**0.2**	**0.4**	**5.3**	**16.2**	**9.9**	**6.7**

Note:

(a) Capital work-in-progress refers to exploratory and development wells in progress.

Source: Kotak Institutional Equities estimates.

Company profile: Treasure hunter of repute

Cairn India, which will acquire the Indian E&P assets of Cairn Energy PLC, will have the advantages of a large reserves base, potentially attractive exploration blocks and the opportunity to participate in India's increasingly attractive E&P sector. Likely large operating cash flows starting 2009, once Cairn starts full production from its Rajasthan block, will help it pursue a more aggressive E&P strategy.

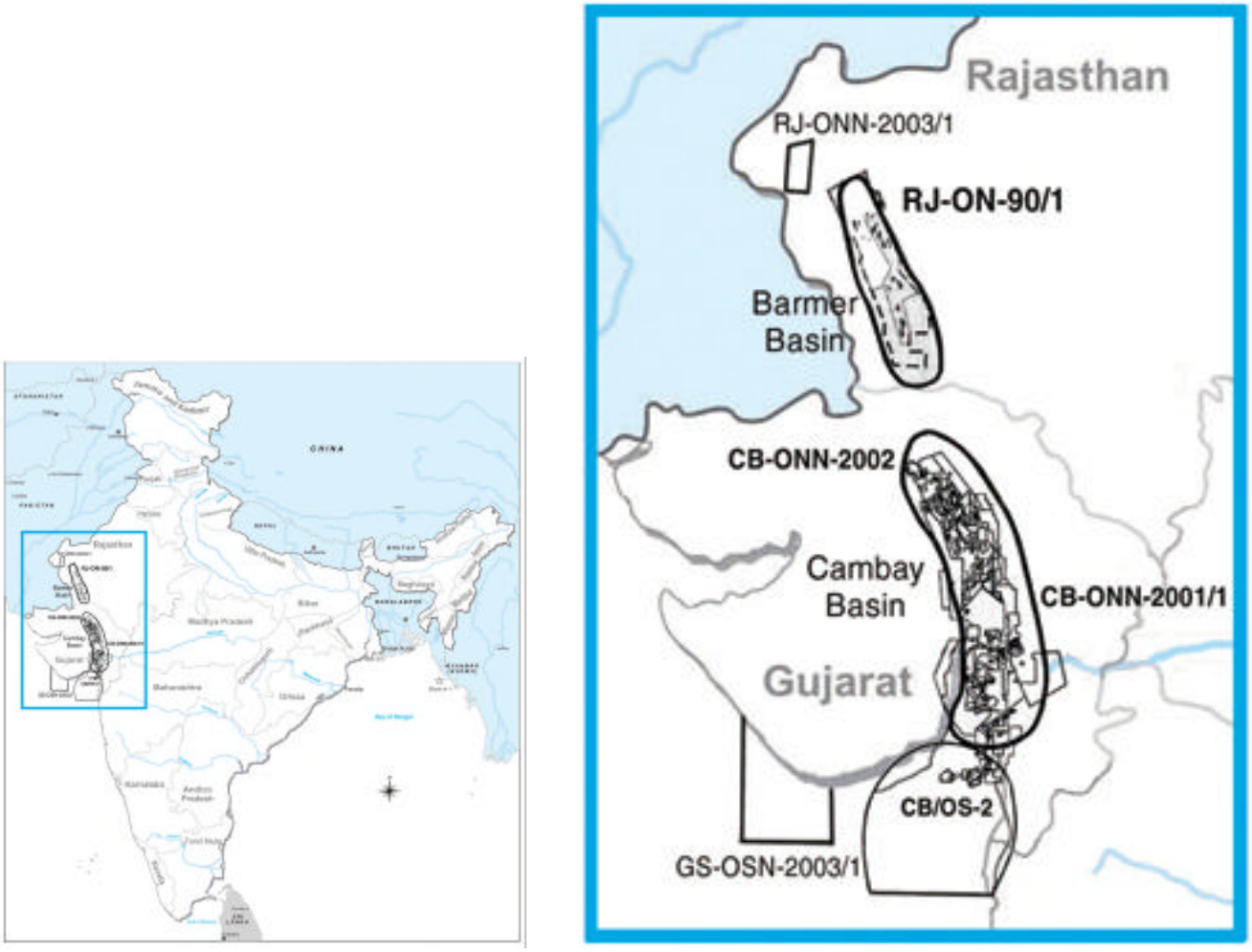
Reputation well earned

Three-pronged strategy to grow reserves, revenues and earnings

Cairn India will follow a three-pronged strategy to grow reserves, revenues and earnings over the next few years: (1) Produce crude oil from and monetize large oil reserves of its key Rajasthan block from mid-2009 once it completes ongoing development work; (2) Sustain production from extant assets of Ravva and CB-OS-2 fields through additional development work; (3) Explore for hydrocarbons in extant exploration blocks and acquire new exploration blocks in India for future exploitation through participation in future New Exploration and Licensing (NELP) rounds.

As of June 2006, Cairn had 430 mn boe of oil reserves (proved plus probable) with the bulk of reserves being accounted for by its 70% working interest in RJ-ON-90/1 block, which had 397 mn boe of oil. Cairn has 22.5% stake and 40% stake in two producing assets, Ravva field and CB-OS-2 block, which produced 87,500 b/d of oil equivalent (gross) in 1H2006 (December year-end). See Exhibit 34 for locations of the various blocks. We note that Cairn also has varying stakes in 10 exploration blocks in certain frontier basins of India.

Exhibit 34: Cairn's producing assets are concentrated in western India

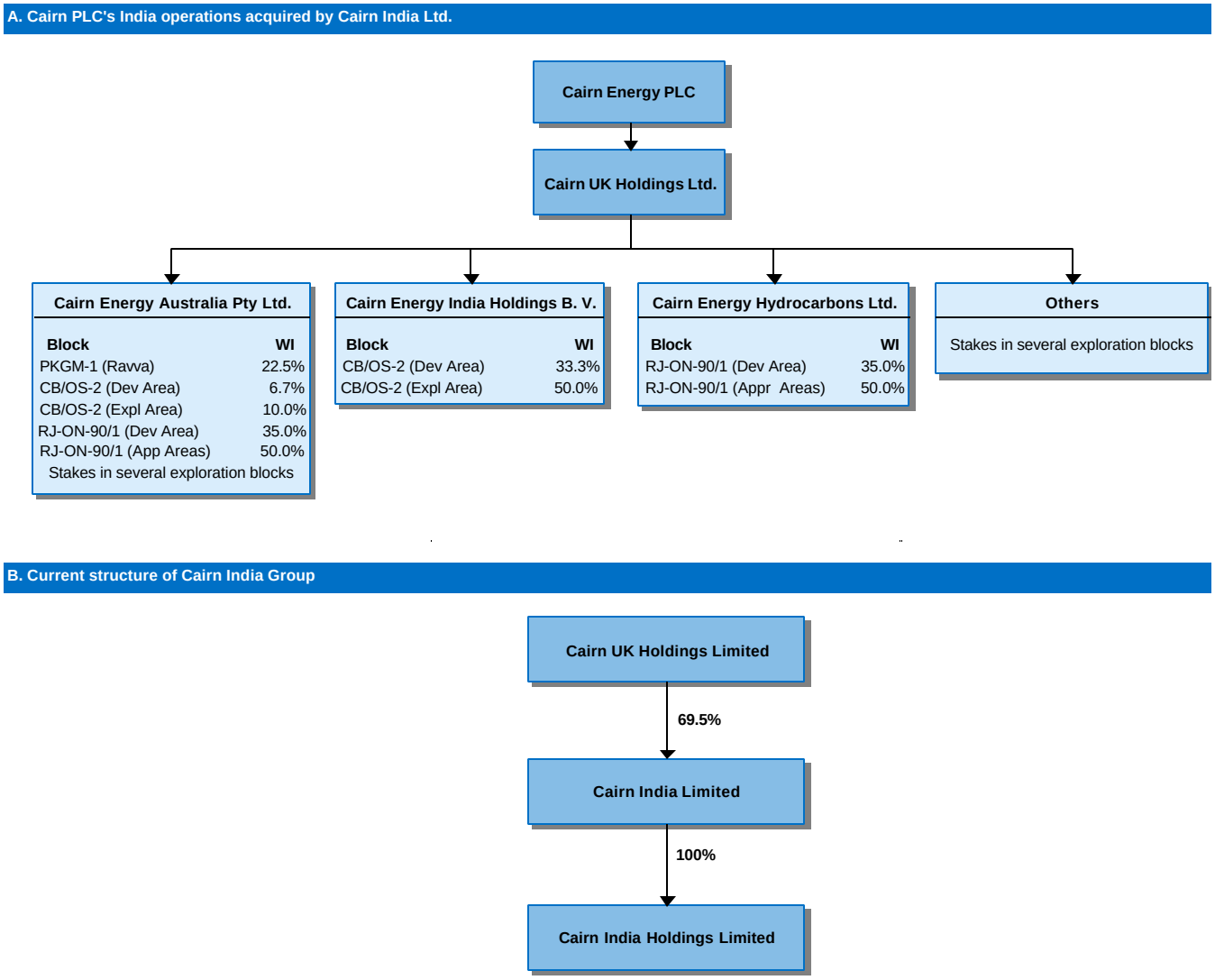


Source: Company.

Transaction details

Cairn India Ltd. (Cairn), a newly incorporated Indian company, has acquired the Indian assets (subsidiaries and other interests) of Cairn Energy PLC, an E&P company with significant interests in South Asia. It has issued 1,227 mn shares to Cairn UK Holdings (Cairn PLC is the promoter of Cairn UK Holdings) towards the acquisition of the assets. Post the IPO, Cairn UK Holdings Ltd. owns 69.5% of Cairn India Ltd., which in turn owns 100% of Cairn India Holdings Ltd., the holding company (directly and indirectly) of all of Cairn Energy PLC's India assets. Exhibit 35 gives details of the transaction.

Exhibit 35: Reorganization of Cairn Energy PLC's Indian assets



Source: Company.

The major subsidiaries of Cairn India Holdings Ltd. include (1) Cairn Energy Australia Pty Ltd. (CEA), which has a 22.5% working interest in Ravva field and a 6.7% working interest in CB-OS-2 block, (2) Cairn Energy India Holdings B. V. (CEIH), which a 33.3% working interest in CB-OS-2 block, and (3) Cairn Energy Hydrocarbons Ltd. (CEH), which has a 35% working interest in the development area of RJ-ON-90/1 block and a 50% working interest in the exploration area, the balance being held by CEA. Cairn India will also get certain exploration blocks in other smaller subsidiaries of Cairn India Holdings Ltd. in addition to the major operating/under development assets of the three above-mentioned subsidiaries.

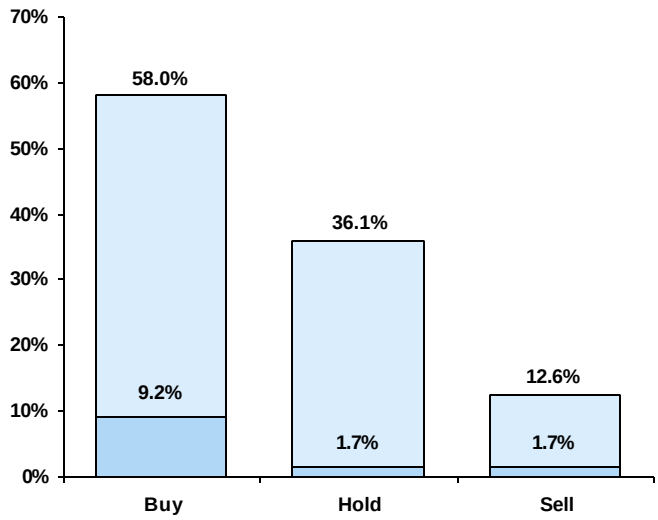
Cairn Energy PLC to continue to hold majority stake in the company

Cairn Energy PLC is an independent oil and gas exploration company, which has significant exploration, development and production assets in South Asia, specifically in India, Bangladesh and Nepal. Cairn Energy PLC's association with India started in 1995/1996, when it acquired Command Petroleum, an Australian company, which had signed a PSC for Ravva. Cairn Energy PLC's presence in India increased in 1998, when it acquired a 10% stake (with option to increase to 40%) in RJ-ON-90/1 block from Shell as part of a restructuring of Cairn Energy PLC's operations in Bangladesh. In 1999, Cairn Energy PLC increased its stake in the block to 50% and also became the operator of the block. Cairn Energy PLC increased its stake in RJ-ON-90/1 block to 100% in May 2002 and discovered the Mangala field in January 2004.

"I, Sanjeev Prasad, hereby certify that all of the views expressed in this report accurately reflect my personal views about the subject company or companies and its or their securities. I also certify that no part of my compensation was, is or will be, directly or indirectly, related to the specific recommendations or views expressed in this report."

Disclosures

Kotak Institutional Equities Research coverage universe
Distribution of ratings/investment banking relationships



Percentage of companies covered by Kotak Institutional Equities, within the specified category.

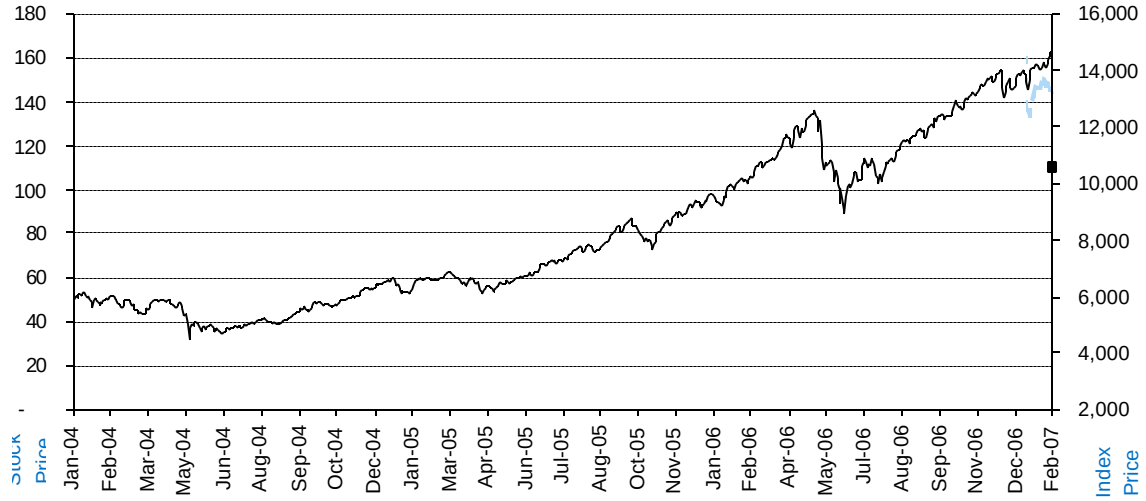
Percentage of companies within each category for which Kotak Institutional Equities and or its affiliates has provided investment banking services within the previous 12 months.

* The above categories are defined as follows: Buy = OP; Hold = IL; Sell = U. Buy, Hold and Sell are not defined Kotak Institutional Equities ratings and should not be constructed as investment opinions. Rather, these ratings are used illustratively to comply with applicable regulations. As of 12/31/06 Kotak Institutional Equities Investment Research had investment ratings on 128 equity securities.

Source: Kotak Institutional Equities. *As of December 31, 2006*

Cairn India (CAIL.BO)

Kotak Institutional Equities rating and stock price target history



Source: Kotak Institutional Equities Research for ratings and price targets, Bloomberg for daily closing prices.

Rating
Price target
X Price target removal
Covered by Sanjeev Prasad
Not covered by current analyst
BSE-30 Index (RHS)

The price targets shown should be considered in the context of all prior published Kotak Institutional Equities research, which may or may not have included price targets, as well as developments relating to the company, its industry and financial markets

Analyst coverage

Companies that the analyst mentioned in this document follow

Covering Analyst: Sanjeev Prasad	
Company name	**Ticker**
Bharat Petroleum	BPCL.BO
Bharti Airtel	BRTI.BO
Cairn India	CAIL.BO
Castrol India	CAST.BO
GAIL (India)	GAIL.BO
Gujarat State Petronet	GSPT.BO
Hindustan Petroleum	HPCL.BO
HT Media	HTML.BO
Indian Oil Corp.	IOC.BO
Indian Petrochemicals Corp.	IPCL.BO
Mahanagar Telephone Nigam	MTNL.BO
Oil & Natural Gas Corporation	ONGC.BO
Petronet LNG	PLNG.BO
Reliance Communications	RLCM.BO
Reliance Industries	RELI.BO
Sun TV	SUTV.BO
Videsh Sanchar Nigam	VSNL.BO
Zee Entertainment Enterprises	ZEE.BO

Source: Kotak Institutional Equities Research.

Ratings and other definitions/identifiers

Current rating system

Definitions of ratings

OP = Outperform. We expect this stock to outperform the BSE Sensex over the next 12 months.

IL = In-Line. We expect this stock to perform in line with the BSE Sensex over the next 12 months.

U = Underperform. We expect this stock to underperform the BSE Sensex over the next 12 months.

Other definitions

Coverage view. The coverage view represents each analyst's overall fundamental outlook on the Sector. The coverage view will consist of one of the following designations: Attractive (A), Neutral (N), Cautious (C).

Other ratings/identifiers

NR = Not Rated. The investment rating and target price, if any, have been suspended temporarily. Such suspension is in compliance with applicable regulation(s) and/or Kotak Securities policies in circumstances when Kotak Securities or its affiliates is acting in an advisory capacity in a merger or strategic transaction involving this company and in certain other circumstances.

CS = Coverage Suspended. Kotak Securities has suspended coverage of this company.

NC = Not Covered. Kotak Securities does not cover this company.

RS = Rating Suspended. Kotak Securities Research has suspended the investment rating and price target, if any, for this stock, because there is not a sufficient fundamental basis for determining an investment rating or target. The previous investment rating and price target, if any, are no longer in effect for this stock and should not be relied upon.

NA = Not Available or Not Applicable. The information is not available for display or is not applicable.

NM = Not Meaningful. The information is not meaningful and is therefore excluded.

Corporate Office
Kotak Securities Ltd.
Bakhtawar, 1st Floor
229, Nariman Point
Mumbai 400 021, India
Tel: +91-22-6634-1100

Overseas Offices
Kotak Mahindra (UK) Ltd.
6th Floor, Portsoken House
155-157 The Minories
London EC 3N 1 LS
Tel: +44-20-7977-6900 / 6940

Kotak Mahindra Inc.
50 Main Street, Suite No.310
Westchester Financial Centre
White Plains, New York 10606
Tel: +1-914-997-6120