

Jan 10th, 2005

Rp40

Indonesia Conglomerate

Bakrie & Brothers (BNBR IJ)

Casting a new and bright outlook

BUY

Stock Summary*

Sector	Conglomerate
Jakarta Composite Index (JCI)	1,004.4
Bloomberg Code	BNBR IJ
Shares issued @ Rp500 & Rp70 par	38,750.4m
Market Capitalisation	Rp1,550bn / US\$167m
Estimated free Float	Rp1,125bn / 72.6%
NAV / Share	Rp64.3

FY end Dec 31	2002	2003	2004F	2005F	2006F
Turnover (Rp bn)	1,513	1,042	1,221	2,715	3,265
EBITDA (Rp bn)	159	89	69	510	725
Operating Profit (Rp bn)	58	(11)	(55)	322	501
Pretax Profit (Rp bn)	165	107	(146)	867	245
Net Profit (Rp bn)	(17)	23	(297)	521	77
F. dil EPS (Rp)	(0.4)	0.6	(7.7)	13.5	2.0
Change (%)	(99.3)	na	na	na	(85.3)
Dividend/Share (Rp)	-	-	-	-	-
Book Value/Share (Rp)	59.7	57.0	51.2	64.6	66.6
Enterprise Value (Rp bn)	3,438	3,672	3,999	3,608	3,830
F. dil P/E (x)	(90)	67.8	(5.2)	3.0	20.2
Price/Book Value (x)	0.67	0.70	0.78	0.62	0.60
EV/EBITDA (x)	21.6	41.4	57.6	7.1	5.3
Adj. Yield (%)	-	-	-	-	-
ROE (%)	(0.7)	1.0	(14.2)	23.2	3.0
ROA (%)	(0.3)	0.4	(5.5)	8.7	1.2
Net Gearing (x)	0.70	0.84	1.01	0.65	0.70

*Based on closing price as of 31 Dec, 2004

Bolstering its growth and stability. BB's strategies to acquire Bakrie Sumatra and invest in the CDMA fixed wireless are expected to drive a 142% CAGR in EBITDA from FY04F - FY07F. The strategies boost BB's NAV, foster the stability of its income, hedge currency exposures, and transform BB into a telecom-cum-plantation driven play.

Huge gains from impending debt restructuring. BB is likely to book Rp739bn pretax gains and see a US\$173m boost in the equity of associate Seamless Pipe upon completions of several debt restructurings in 4Q04 / 2005. The debt restructurings will chop potential forex losses and interest expenses while fuelling growths and attracting strategic partners to come in at attractive valuations.

A main beneficiary of rebounds in infrastructure investments. BB's infrastructure units should benefit from the expected rebounds in mining, oil and gas, and infrastructure sectors driven by (i) rising oil and coal prices, (ii) commencements of delayed oil and gas projects, (iii) a more stable political outlook, and (iv) the government's huge US\$75-110bn investment target in infrastructure.

Manageable industry risks. The main risks are the high price of raw material (steel), overcapacity in the steel pipe industry, and competitions from Telkom and Indosat. However, we believe the worst is over for the steel pipe industry and a high growth in fixed wireless industry allows a focused player like Bakrie Telecom to succeed.

Attractive upside potential. We value BB's NAV /per share at Rp64.4, offering a 61% potential upside. The stock is currently traded at just 0.78x FY05F P/BV. BB's expected turn around to profitability in FY05F, 142% CAGR of EBITDA in FY04F - FY 07F, and completion of debt restructurings are sources of re-rating. With 39bn outstanding shares, a 73% free float and 49% foreign shareholding, BB is one of the most investible JSX stocks.

TABLE OF CONTENT

NO	SECTION	CHAPTER	PAGE NUMBER
1	INVESTMENT SUMMARY		1
2	RISKS		2
3	VALUATION		3
4	DEBT RESTRUCTURINGS AND RIGHTS ISSUES		6
5	COMPANY OPERATION AND FINANCIALS		8
		OPERATION	8
		FINANCIALS	11
		MANAGEMENT	15
6	TELECOM		17
		SUMMARY	17
		DOMESTIC FIXED WIRELESS INDUSTRY	17
		UNIT OVERVIEW	21
		BAKRIE TELECOM (BTCL)	23
		BAKRIE COMMUNICATION (BAKRIE COM)	28
7	OIL AND GAS INFRASTRUCTURE		31
		SUMMARY	31
		PRODUCT AND GLOBAL INDUSTRY OVERVIEW	31
		DOMESTIC MARKET OVERVIEW	33
		UNIT OVERVIEW	36
		SEAMLESS PIPE INDONESIA JAYA (SEAMLESS PIPE)	38
		BAKRIE PIPE INDUSTRIES (BAKRIE PIPE)	43
		SOUTH EAST ASIA PIPE INDUSTRIES (SEA PIPE)	48
		BAKRIE HARPER CORPORATION (HARPER)	53
8	PLANTATION		54
		SUMMARY	54
		OVERVIEW	54
		OUTLOOK	55
		VALUATION	60
9	AUTOMOTIVE COMPONENT		62
		SUMMARY	62
		OVERVIEW	62
		OUTLOOK	65
		RISKS	66
		VALUATION	67
10	HOUSING & STRUCTURE		70
		SUMMARY	70
		OVERVIEW	70
		OUTLOOK	72
		RISKS	73
		VALUATION	73
11	ENGINEERING & TRANSPORT INFRASTRUCTURE		76
		SUMMARY	76
		TRANS BAKRIE	77
		BAKRIE CORRUGATED METAL INDONESIA	80
12	BAKRIE & BROTHERS HOLDING COMPANY		83
13	APPENDIX 1. 2001 GRAND DEBT RESTRUCTURING		85
14	APPENDIX 2. CDMA TECHNOLOGY		86
15	APPENDIX 3. FINANCIAL FORECAST AND RATIO		88
16	APPENDIX 4. EARNINGS MODEL		91
17	APPENDIX 5. STEEL GLOSSARY		93

INVESTMENT SUMMARY

Bakrie & Brothers (BB) probably has not been in many investors' radar screens despite (i) a 19-fold increase in its share outstanding since 2001 to 39bn shares, (ii) nearly US\$170m market cap with a 73% free float and (iii) new professional management that replaces Bakrie family. These, along with BB's current strategy to push through subsidiaries' debt restructurings at an estimated, hefty 50% debt hair cuts, focus on high-growth telecom and acquire US\$-earner Bakrie Sumatra Plantation at a deep discount should bolster NAV and a 142% CAGR in EBITDA in the next three years. These positive outlooks, along with sterling share price performances of Bakrie Group's companies such as Bakrie Sumatra and Bumi Resources in 2004, deserve investors' full attentions.

Bolstering its growth and stability through an acquisition and telecom expansion. BB's acquisition of highly profitable Bakrie Sumatra Plantation (BSP) and investment in Bakrie Telecom's CDMA fixed wireless are expected to drive a 142% CAGR in EBITDA from FY04F - FY07F. The strategy boosts the stability to the Group income as it diversifies risks of fluctuating income from infrastructure units. BSP's acquisition is estimated to add Rp252bn to the Group's NAV while alleviating Group's currency exposure given BSP's US\$ revenues and IDR expenses. The investment in CDMA fixed wireless is expected to steer BB into a telecom play as the telecom unit accounts for 50% of NAV.

Huge gains from impending debt restructurings. BB is likely to book Rp739bn pretax gains from an estimated 50% discount on Rp1.5 trillion debts buy back in two subsidiaries Bakrie Pipe and SEA Pipe in 4Q04 / FY05F. Its subsidiary Seamless Pipe may see a US\$173m boost in equity in the likely conversion of debts and shareholder loans to equity in FY05. The debt restructurings will chop potential forex losses and interest expenses while firing management's enthusiasm and fuelling growths to attract strategic partners to come in at attractive valuations. We do not rule a possibility of BB spinning off or floating the subsidiaries at a later stage.

A main beneficiary of expected recovery in oil and gas, mining and infrastructure industries. BB's should benefit from the expected rebounds in mining, oil and gas, and infrastructure sectors. The rebound will be driven by (i) high oil and coal prices, (ii) commencement of long delayed oil and gas projects, (iii) a more stable political outlook post the presidential election, a key to bolster foreign direct investments, and (iv) the government's target to generate US\$75bn - US\$110bn investments in infrastructure over the next five years to stimulate economic growths and reduce the high unemployment rate.

Big market shares with strategic partnerships. Many of BB's subsidiaries enjoy significant market shares and foreign strategic partnerships. Its subsidiaries in oil and gas infrastructure, automotive, housing / structure, engineering / transport operations command around 30% - 60% market shares. Its fixed wireless operation is one of the only three. Its previous and present partners include Mitsubishi Group, Transfield, Tenaris, and Pertamina.

Likely success of rights issues to fund growth. We expect BB to successfully make a cash call estimated at Rp1,542bn to fund its growth and strengthen balance sheet. The proceeds will sensibly be used to finance (i) the acquisition of ex-jewel Bakrie Sumatra, (ii) an expansion of fast-growing fixed wireless business, (iii) debt buybacks at a deep 50% discount. The cash call is likely to be preceded by a reversed stock split at about 1:5 ratio to allow a smaller percentage of bid and ask increment (decline) to enhance liquidity.

High steel price, industry overcapacity and telecom competition are the main risks. The main risks are the high price of steel, which is the raw material for infrastructure and automotive component units that contribute about 19% of Group's FY05F EBITDA. There is an overcapacity in the steel pipe industry and stiff competition from Telkom and Indosat in the telecom industry. However, we believe the worst is over for the steel pipe industry and a high growth in the fixed wireless industry allows a focused player like Bakrie Telecom to succeed.

Attractive upside potential. We value BB's NAV /per share at Rp64.4, offering a 61% potential upside. The stock is currently traded at just 0.78x FY05F P/BV. BB's expected turn around to profitability in FY05F, 142% CAGR of EBITDA in FY04F - FY 07F, and completion of debt restructurings are sources of re-rating. With 39bn outstanding shares, a 73% free float and 49% foreign shareholding, BB is one of the most investible JSX stocks.

RISKS

High steel price

High steel price affects a fifth of FY05F EBITDA

About a fifth (19%) of FY05F EBITDA and a half (49%) of FY05F revenues are affected by the currently high price of steel as steel is the main raw material for subsidiaries that operate in oil and gas infrastructure, engineering / transport infrastructure and auto component industries. HRC (Hot Rolled Coil) price rose 71% from low of US\$343/ton in Dec 2003 to US\$585 in Jul 2004 before cooling down 3% to US\$565 in Nov 2004.

Expect lower steel price, higher import tariffs, and debt restructurings to mitigate risks

However, there are few mitigating factors. (i) Steel price is expected to come down in 2006 after peaking in 2005. (ii) The government is considering increasing import tariffs on steel pipes to protect the domestic pipe industry as some of Indonesian pipe tariffs are among the lowest in the world. (iii) The expected completion of debt restructurings at Bakrie Pipe, SEA Pipe and Seamless Pipe will leverage their ability to finance their growths and attract strategic investors. (iv) Strategic partner Tenaris continue providing assistance in sourcing materials and may eventually become an investor.

Uneven cash flow and industry overcapacity

Problem of fluctuating revenues and overcapacity in the domestic pipe industry to be gradually reduced

About a 14% of FY05F EBITDA and 41% of FY05F revenues are expected to come from fluctuating, project-driven sources, i.e. oil and gas infrastructure, engineering / transport infrastructure units. There is overcapacity in the domestic pipe industry with an average utilisation rate of less than 40% currently. However, the risks are mitigated by:

- (i) *Industry recovery.* We expect the utilisation rate of domestic pipe industry to improve given the projected recovery of oil / gas and coal mining sectors. The improvements are due to (a) rising oil and coal prices, (b) commencements of long overdue projects in oil and gas, mining and transport industries, (c) rising foreign direct investments given greater political stability post the presidential election, and (d) a high pressure on the central and provincial governments to raise budgets on infrastructures to stimulate the economic growth and tackle the high unemployment rate.
- (ii) *Large market share with a preferential treatment.* Seamless Pipe, Bakrie Pipe, SEA Pipe are the main beneficiaries of the industry recovery as they command large (about 40% - 60%) market shares. As domestic producers, they enjoy a 15% preferential price in many government-sponsored oil and gas projects and benefit from protective regulations such as a requirement for domestic seaports to use only domestic cranes.
- (iii) *Rising consumer-driven income.* The acquisition of Bakrie Sumatra Plantation (BSP) and a rising contribution from fast-growing Bakrie Telecom are expected to keep EBITDA contributions from consumer driven (recurring-income) subsidiaries at above 84% of Group's EBITDA in FY05F – FY07F while keeping those from project driven subsidiaries at below 16%.

Competition against Telkom and Indosat

High industry growth should allow small, focused players BTel to excel

As Bakrie Tel (BTel) accounts for more than 40% of BB's NAV, BB's future depends largely on the success of BTel's main business, i.e. fixed wireless, which competes with giant Telkom and Indosat. However, we believe that the expected 62% CAGR of fixed wireless industry in the next three years would give BTel enough room to grab a conservative 10% market share. BTel has competitive advantages in (i) being a focused fixed-wireless player, (ii) having a smaller and more agile organisation structure, (iii) operating in three of the highest density provinces including Greater Jakarta, and (iv) paying a lower rollout cost, thanks to its licence to operate at a lower frequency of 800 Mhz than its competitors at 1,800 Mhz. The lower the frequency, the fewer the number of base stations that are required to cover a given area.

VALUATION

31% potential upside

We value BB's Net Asset Value (NAV) / share at Rp64.4, offering a 61% potential upside from the current share price of Rp40 (see Exhibit 3). The largest component of NAV comes from telecommunication (50%), followed by plantation (22%), oil and gas infrastructure (10%), investments of BB Holding company (7%), automotive component (5%), housing and structure (4%), and lastly engineering and transport infrastructure (2%) (see Exhibit 1). Note that the total NAV used to calculate the NAV breakdown is calculated before subtracting Rp371bn debts to fund the acquisition of Bakrie Sumatra to avoid a negative number (see Exhibit 3).

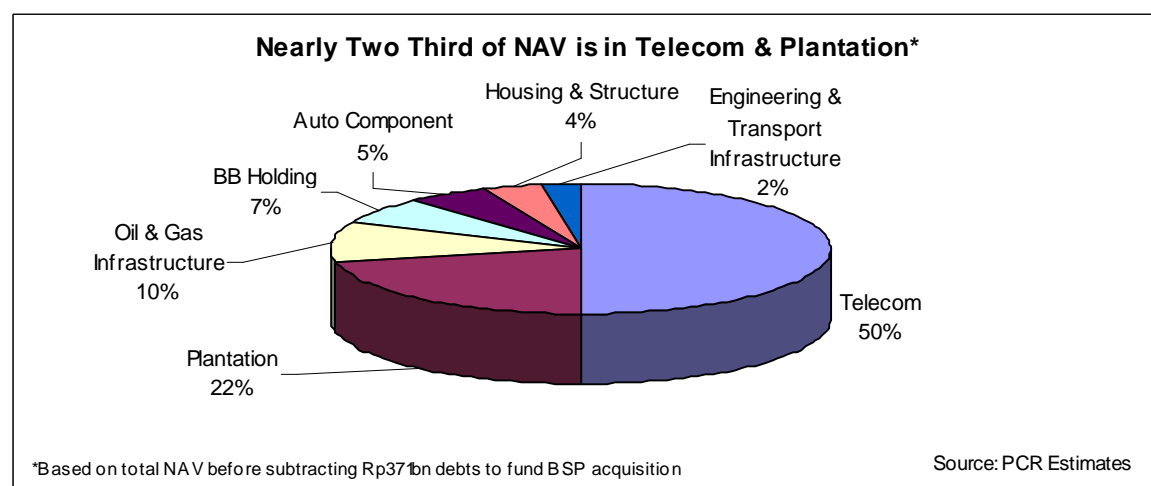


Exhibit 1

Valuation largely based on the DCF approach

There are five valuation methods employed in the valuation of BB but the DCF approach is the most commonly used (see notes on Exhibit 2). The five valuations methods are:

- (i) *Discounted Cash Flow (DCF)*. DCF is used to value to six out of 12 subsidiaries that account for more than a half (54%) of the total NAV (see Exhibit 2 & 3). These subsidiaries are BTel, Seamless Pipe, SEA Pipe, Bakrie Pipe, Tosanjaya and Bakrie Building. In most cases, the DCF valuation is adjusted by the expected debt hair cuts (such as in the case Bakrie Pipe and SEA Pipe), debt-to-equity conversion (Seamless Pipe), and non-operating assets (Bakrie Building and Bakrie Pipe).
- (ii) *Price / Earning (P/E) ratio*. P/E ratio is used only in Bakrie Sumatra, the only listed subsidiary of the Group, which accounts for 22% of total NAV. We assume BB will acquire 60% of Bakrie Sumatra at the indicated price of Rp371bn, a steep 41% discount to our fair value estimate at Rp623bn. Our valuation, which is within the range of Rp583bn - Rp689bn valuation given by the independent party Ernst & Young, is based on 4.5x FY05F P/E plus a 10% control premium to account for BB's majority (60%) ownership in Bakrie Sumatra (see Exhibit 66). Effectively, the acquisition adds Rp252bn to BB's NAV given the Rp623bn fair value against the expected acquisition cost of Rp371bn.
- (iii) *Sum of Part (SOP)*. SOP is used in valuing two holding companies Bakrie Com and BB Holding, which account for 20% of total NAV. The valuation is based on estimated fair market value of assets (investments) less liabilities and, in some cases, expected gains from a debt settlement and provision for asset impairments. It is used primarily because there is no clear cash flow in these holding companies.
- (iv) *Price to adjusted Book Value (P/aBV)*. P/aBV is used in two subsidiaries Bakrie Harper and Trans Bakrie, which together account for 2% of total NAV. Bakrie Harper's non-operating

condition and TB's goodwill and fluctuating (highly project-driven) cash flow make this valuation approach sensible.

- (v) *EV/EBITDA*. EV/EBITDA is used only in one company BCMI, which accounts for small 2% of total NAV. It is used primarily because the subsidiary is small and has a steady cash flow but has a relatively high debt burden.

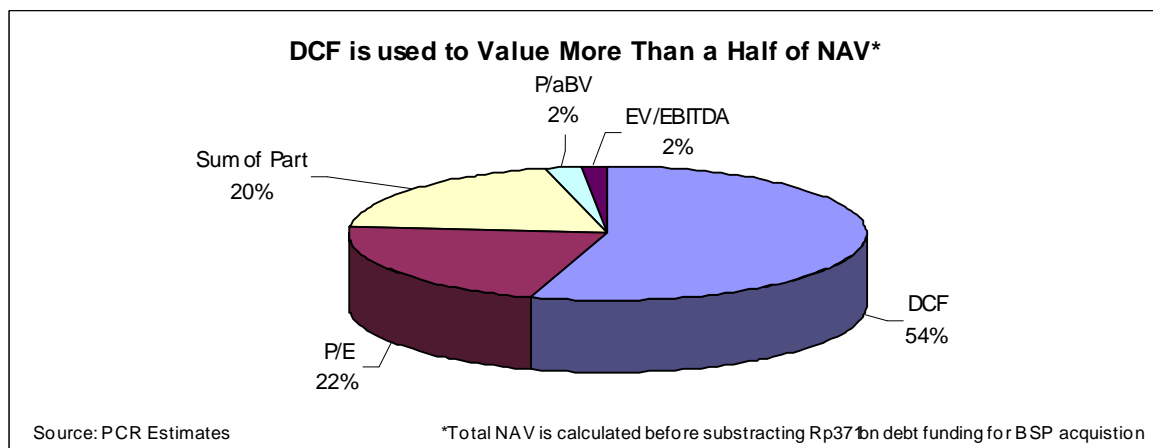


Exhibit 2

Reasonable overall P/BV albeit high EV/EBITDA

Our Rp64.4 / share valuation yields sensible 1.0x FY05F P/BV for BB (see Exhibit 3). Although the valuation translates into a rather high 8.9x FY05F EV/EBITDA multiple, it is nevertheless sensible given that:

- (i) *High EBITDA growth*. Our projected 39% CAGR of EBITDA in FY05F – FY07F cuts BB's EV/EBITDA to 4.9x in FY07F
- (ii) *Significant non-operating assets*. BB has significant non-operating assets such as Bakrie Harper, galvanising plant in Bakrie Pipe and unused land in Bakrie Building. These assets add to the valuation of BB but do not generate EBITDA and hence inflate EV/EBITDA ratio.
- (iii) *US\$-based asset*. BB has significant US\$-based assets such as machinery in Bakrie Pipe, SEA Pipe, and Seamless Pipe. These assets have high replacement costs and hence potentially fetch high divestment values especially given that steel price has soared since they were acquired or built. Arguably, although these subsidiaries generate low cash flows in the near future that translate into high FY05F EV/EBITDA ratio, their valuations should not be less than the resale / divestment values.

Bakrie Brothers' Valuation Summary

N O T E	Company	Share	FY05	P/aBV	P/aBV	FY05	FY05 EV	FY05	FY05	Adjst. DCF Value	100%	Propor-	% of	See
			Adjst.	Ratio*	Value	EBITDA	/ EBITDA	EV	Debt		NAV	tionate	BB's	
			Book	(x)	Rp bn	Rp bn	(x)	Rp bn	Rp bn		Rp bn	NAV to	Total	
	Value				Ratio					Rp bn	BB	NAV	Exhi-	
			Rp bn	(x)	Rp bn	Rp bn	(x)	Rp bn	Rp bn	Rp bn	Rp bn	Rp bn		bit
1	BTel	86.42%	211	5.85	1,235	67	31.3	2,098	863	1,235	1,235	1,067	37%	25
2	Bakrie Comm	96.80%	nm	nm	nm	nm	nm	nm	nm	na	375	363	13%	30
	Total Telecom											1,430	50%	
3	Seamless Pipe**	37.52%	2,015	0.25	506	37	28.5	1,042	536	506	506	155	5%	56
4	SEA Pipe	82.13%	428	0.21	89	6	19.8	128	39	89	89	73	3%	50
5	Bakrie Harper	70.00%	238	0.26	62	na	na	na	na	na	62	44	2%	na
6	Bakrie Pipe	99.96%	113	0.13	15	46	7.8	361	346	15	15	15	1%	43
	Total Oil & Gas Infrastructure											286	10%	
7	Bakrie Sumatra	60.00%	625	1.51	944	343	3.4	1,174	207	na	944	623	22%	66
8	BB Holding	100.0%	na	na	na	na	na	na	na	na	197	197	7%	101
9	Tosanjaya	99.99%	111	1.34	149	28	6.7	188	40	149	149	149	5%	78
10	Bakrie Building	99.99%	114	0.85	97	15	8.0	124	10	114	114	114	4%	87
	Total Holding, Auto Component, Housing & Structure, Plantation											1,083	16%	
11	Trans Bakrie	51.00%	49	0.90	44	6	7.5	44	0	na	44	22	1%	94
12	Bakrie Corrugated	99.80%	15	3.16	46	12	4.0	47	1	na	46	46	2%	99
	Total Engineering & Transport Infrastructure											68	2%	
	Total NAV											2,868	100%	
13	Debt funding for Bakrie Sumatra Acquisition								371			(371)		
14	Net NAV		2,505	1.00	2,497	510	8.9	4,555	2,058			2,497		
	Share Outstanding (m)											38.8		
	NAV / Share (Rp)											64.4		
	Share Price (Rp)											40.0		
	Discount to NAV											61%		

Note: Highlighted areas referred to the main valuation approach used to value the company

* P/aBV = Price to Adjusted Book Value

** Financial statements are in US\$ translated to Rp at exchange rate of Rp8,900/US\$

- BTel's valuation is based primarily on DCF valuation of CDMA wireless. Valuation based on EV/EBITDA is not meaningful due to a start-up loss in launching CDMA fixed wireless. P/aBV is high due to past forex loss and no revaluation of US\$-based asset.
- Bakrie Comm's valuation is based on the sum of parts of its long term investments and holding company operation. P/aBV and EV/EBITDA valuations arguably are not meaningful
- Seamless Pipe's DCF valuation is adjusted by including an assumed 65% debt-to-equity conversion and a reduction of BB's stake in it from 37.5% currently after conversions of debts and shareholder loans to equity. Our valuation puts the enterprise value at only **0.41x** of its replacement cost of US\$285m.
- SEA Pipe's DCF valuation is adjusted by including an expected 50% debt hair cut. Our valuation puts the enterprise value at only **0.26x** of its replacement cost of US\$55m
- Bakrie Harper's valuation is based on 0.26x of the book value of asset. As the book value has already been written down by 35% to account for impairments, our valuation effectively is at a 83% discount to Rp365bn original value of investment. Harper has no debt but Due to Shareholders (BB).
- Bakrie Pipe's DCF valuation is adjusted by including an expected 50% debt hair cut, fair market value of investments in Bakrie (BB) Ltd, SEAPI and project under development
- Bakrie Sumatra's (BSP) valuation is based on 4.5x FY05F P/E, plus a 10% premium of control to account for BB's majority control (60%) over BSP, times 60% share ownership.
- BB's holding valuation is based on it market value of its net assets excluding investments in subsidiaries that have been accounted separately. P/aBV and EV/EBITDA valuations are not meaningful
- Bakrie Tosanjaya's valuation is based on a DCF approach
- Bakrie Building's DCF valuation is adjusted by including an idle parcel of land and investments in non-operating subsidiaries. Book value is adjusted by assuming a conversion of convertible bonds and payable to parent (BB) into equity
- Trans Bakrie's valuation is based on 0.9x P/BV
- Bakrie Corrugated's valuation is based on 4.0x FY05F EV/EBITDA
- BB's Rp371bn acquisition cost for the 60% share in BSP was funded by debts. We have not taken into account the impact rights issue to repay the debts.
- Total adjusted book value, EBITDA, debts and EV are based on BB's consolidated financial statements. They are NOT the same as the sum of all subsidiaries due to adjustments and inter-company eliminations. Net debts include the impact of expected debt hair cuts in Bakrie Pipe and SEA Pipe but have not taken into account the potential rights issues and debt-to-equity conversion of Seamless Pipe. If these were to happen, P/aBV and EV/EBITDA would be lower.

Source: PCR Estimates

Exhibit 3

DEBT RESTRUCTURINGS AND RIGHTS ISSUES

Likely huge gains from impending debt restructurings

We expect BB to post Rp739bn pretax gains and Rp556bn net gains from debt hair cuts in two subsidiaries Bakrie Pipe and SEA Pipe (see Exhibit 4 - top left hand panel). The restructuring may be completed as early as 4Q04 although for a conservative purpose we factor it only in FY05F. The impact of the debt restructurings are estimated as follows:

- (i) *Bakrie Pipe.* We estimate that Bakrie Pipe would post Rp501bn after-tax gains assuming that Bakrie Pipe can get a 50% discount on its Rp1,347bn (US\$151m) debt buyback and offset part of the tax on the gains with its Rp30bn deferred tax assets (see Exhibit 4 - top left hand). The 50% discount is likely given that (i) Bakrie Pipe has stopped servicing the debts and (ii) the debts are part of old debts that creditors chose not to transfer to the holding company (BB) in the 2001 grand debt restructuring scheme (see Appendix 1). The creditors then believed that Bakrie Pipe could sustain the debts. However, it turned out that the debts were too large to service given the downturn in the oil and gas industry in the past few years.
- (ii) *SEA Pipe.* SEA Pipe is estimated to book Rp55bn after-tax gains assuming that it could get a 50% discount on its Rp130bn (1.4bn yen plus US\$2.6m) debt buyback and offset part of the tax on the gains with its Rp9bn deferred tax assets (see Exhibit 4 - top left hand). We believe a 50% discount is negotiable given that (i) the loans come from only one creditor Itochu, which is the vendor of SEA Pipe's machinery, and (ii) SEA Pipe has not operated at full capacity since its commencement in 2001 and, in fact, did not operate at all in 2004.

Huge Gains from Impending Debt Restructuring in Three Subsidiaries

Subsidiary	Debt Hair Cut		Total		Debt-to-Equity Swap
	Bakrie Pipe	SEA Pipe			Seamless Pipe
	(Rp bn)	(Rp bn)	(Rp bn)		(US\$ m)
Debt Outstanding*	1,347	130	1,477	Debt Outstanding*	172
Assumed Debt Hair Cut	50%	50%	50%	Debt-to-Equity Sw ap	65%
Pretax Gain	674	65	739	Debt Reduction	112
Tax @ 30%	(202)	(20)	(222)	FX rate	8,900
Offset: Deferred Tax Assets	30	9	39	Debt Reduction (Rp bn)	996
After-Tax Gain	501	55	556		
BB's Share	99.96%	100%**			
After-Tax Gain to BB	501	55	556		
Debt Outstanding*	1,347	130	1,477	Current equity (US\$ m)	54
Less: After-Tax Gain	(501)	(55)	(556)	Add: Debt-to-equity sw ap	112
Net Funding Required	846	76	921	Add: Conversion of shareholder loan	61
				Ending Equity (US\$ m)	226
				Increase in equity (US\$ m)	173
				<i>Increase in equity (%)</i>	<i>323%</i>

*Estimated As of Dec 04 based on exchange rate of RP 8.900/US\$
 **82 % owned directly by BB and 18% through subsidiary Bakrie Pipe
 Source: PCR Estimates

Exhibit 4

Debt-to-equity swap in Seamless Pipe

We believe Seamless Pipe has a good chance to negotiate for a conversion of 65% of its US\$172m debts in FY05F that would translate into Rp996bn reductions in debt (see Exhibit 4 - top right hand). We believe a 65% conversion ratio is attainable given that (i) Seamless Pipe's debts have never been effectively restructured. (ii) BB is prepared to convert its US\$61m shareholder loans to equity (see Exhibit 4 - bottom right hand) if lenders, mainly the Asian Development Bank, are willing to convert the loans to equity. (iii) The market value of the loans is estimated to be not more than 35 cents per dollar as most of the loans have not been serviced and, at their par

value, the loans are worth more than the company's estimated valuation. The successful restructuring will see Seamless Pipe's equity jump 323% (US\$173m) (see Exhibit 4 - bottom right hand), placing it in a strong position to raise funds to leverage its growth and expand its export market.

Expect a successful rights issue

We expect BB to make estimated Rp1,542bn cash call to fund (i) the debt buybacks of Bakrie Pipe (55% of total proceeds) and SEA Pipe (5%) at a hefty 50% discount, (ii) the acquisition of ex-jewel Bakrie Sumatra (24%) and (iii) the expansion of fast growing, fixed wireless business (16%) (see Exhibit 5). The cash call is likely to be successful given (i) a sensible use of the proceeds, (ii) a manageable size of the rights issues at no greater than BB's current market cap, and (iii) successful records of the companies in Bakrie Group -- Bumi Resources (private placement - 2H03), Energi Mega Persada (IPO - 2Q04), and Bakrie Sumatra (rights issue - 4Q04) -- in raising funds.

Expect a reverse stock split to enhance liquidity

The cash call is likely to be preceded by a *reversed* stock split in a ratio of around 1:5 (new-for-old ratio) that will increase BB's stock price to around Rp200. The price increase will enhance liquidity as it allows a smaller percentage of bid and offer increment (decline). Currently the stock exchange rule requires a minimum of Rp5 per unit of increment (decline) on any bid and offer for stocks traded below Rp500. Given BB's stock price at Rp40 currently, one tick of price movement will mean a 12.5% price movement. On the other hand if the price is at Rp200, one tick (Rp5) will mean only a 2.5% movement.

Rights Issue Size Likely to be Smaller than BB's Market Cap

Use of Funds	Rp bn	%
Debt Buy Back - Bakrie Pipe	846	55%
Debt Buy Back - SEA Pipe	76	5%
Acquisition of 60% of Bakrie Sumatra	371	24%
Expansion of CDMA Fixed Wireless	250	16%
Total Funds Needed	1,542	100%
BB's Current Market Cap	1,550	
Ratio of Rights Issue to Market Cap	0.99	

Source: PCR Estimates

Exhibit 5

Likely entrances of strategic partners at attractive prices

One of the main aims of BB's strategy to restructure the debts of subsidiaries SEA Pipe, Seamless Pipe and Bakrie Pipe is to make the subsidiaries attractive to potential investors so that BB could not only bring in strategic partners but also fetch high prices upon sale to these investors. BB has indicated its intention to grow its less-cyclical business like telecom and plantation and reduce exposures in cyclical, project-oriented business like oil and gas infrastructures.

Post debt restructurings, the subsidiaries should have stronger balance sheets to propel their growths while the management will have more time and resources to spend on improving efficiency and sourcing material at more favourable prices. The greater growth and efficiency, combined with clean balance sheets, US\$ replacement costs, relatively new plants especially at SEA Pipe and Seamless Pipe, and a lack of major technology breakthrough in the pipe production technology over the past few years, should attract strategic investors at prices much higher than their valuations prior to the debt restructurings. We do not rule out a possibility that these subsidiaries may be spin off / floated in the future.

COMPANY OPERATION AND FINANCIALS

OPERATION

More than a half century of existence

Starting as a trading company in 1942, BB turned itself into one of Indonesian largest conglomerates and one of first few companies to be listed in 1989. The company successfully raised funds 4 times through private placements and rights issues during 1991 – 1994 (see Exhibit 6).

Debt Restructuring Bolstered Number of Share Outstanding by 19 Folds

	Year	Ratio	Price	New Share	Total Share
		(Old-to-New)	Rp	(Million)	(Million)
Public	Aug-89		7,975	2.9	2.9
Company Listing	Mar-90			16.2	19.0
Private Placement I	Nov-91			1.0	20.0
Private Placement II	Jan-92			0.0	20.0
Rights Issue I	Apr-93	37:2	6,000	1.1	21.1
Bonus Share	Jun-94	2:3		31.6	52.7
Rights issue II	Jul-94	5:18	6,500	189.5	242.2
Stock Split	Aug-95	1:1		242.2	484.4
Bonus Share II	Jan-97	1:3		1,453.1	1,937.5
<i>New Shares as part of Debt Restructuring*</i>	<i>Oct-01</i>			<i>36,812.9</i>	<i>38,750.4</i>

*No preemptive rights
Source: Company

Exhibit 6

More investible after the grand debt restructuring

Like most of the large Indonesian companies, BB was hit by the devaluation of Indonesian rupiah in 1997. However, it managed to become one of the first big corporations to complete US\$1.1bn debt restructuring in 2001 (see Appendix 1 for details of the 2001 grand debt restructuring). Post the debt restructuring, BB became more investible as total share outstanding jump 19 folds to 38.8bn (see Exhibit 6). The free float surged from 29.0% on Dec 00 to 97.4% on Dec 01 as the ownership of the founders, primarily Bakrie family, was reduced from 71.1% to 2.6% over the same period (see Exhibit 7). The free float remained high at 72.6% as of Sept 2004.

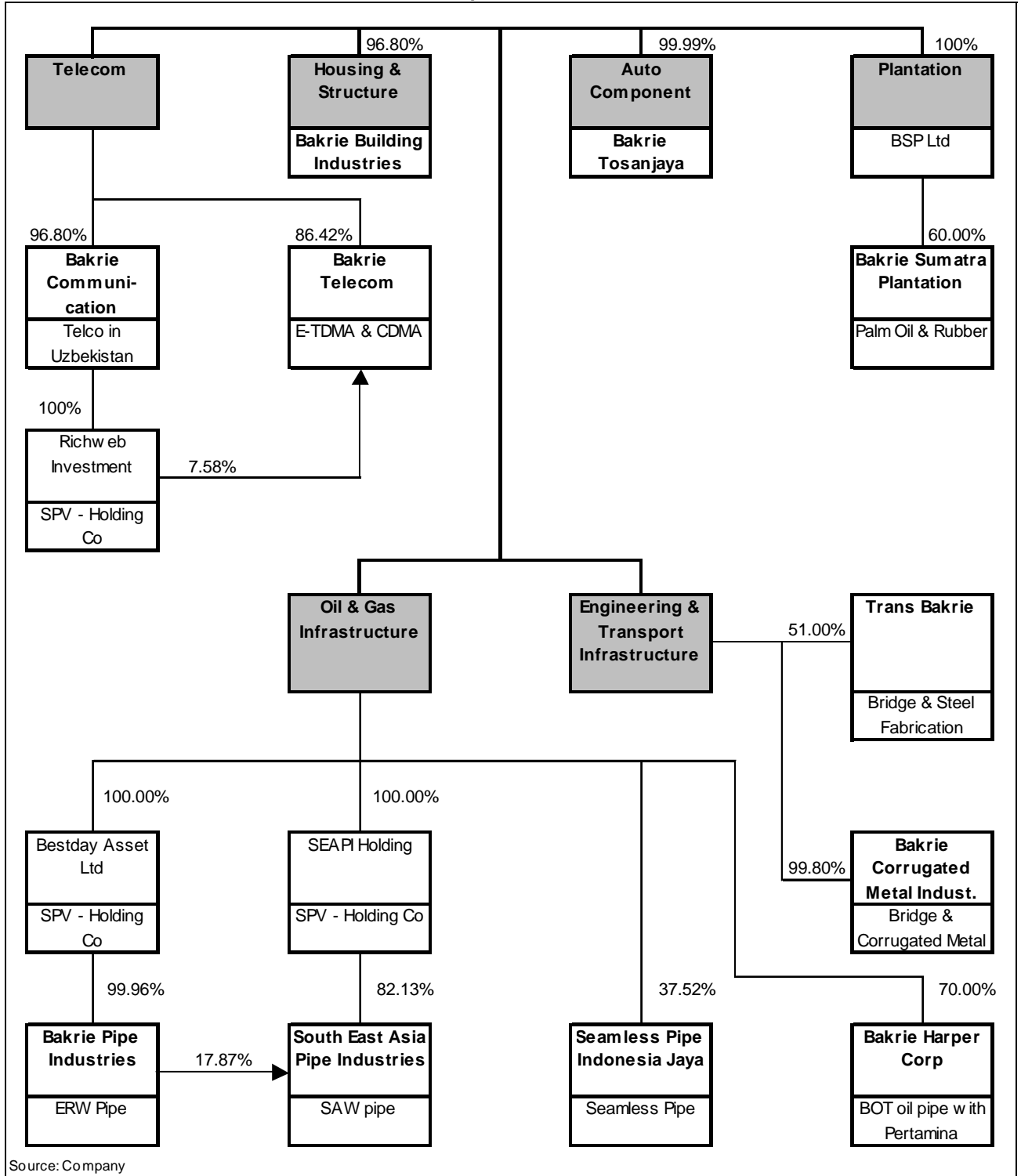
Jump in Free Float Post 2001 Debt Restructuring Until Now

	Dec 00	Dec 01	Sept 04
CSFB Singapore s/a Capital Manager Asia	0.0%	0.0%	10.3%
Omni Capital Asia Ltd	0.0%	0.0%	9.7%
Capital Manager Asia	0.0%	0.0%	5.6%
Bakrie Family	64.7%	2.4%	1.7%
Other Founders	<u>6.3%</u>	<u>0.1%</u>	<u>0.1%</u>
<i>Non-Free Float</i>	<i>71.1%</i>	<i>2.6%</i>	<i>27.4%</i>
Export Improt Bank of US	0.0%	0.0%	4.7%
Bakrie (BB) Limited	0.0%	95.0%	1.7%
DBJK Loans Operation	0.0%	0.0%	1.4%
Public	<u>29.0%</u>	<u>2.4%</u>	<u>64.9%</u>
<i>Free Float</i>	<i>29.0%</i>	<i>97.4%</i>	<i>72.6%</i>
Total	100.0%	100.0%	100.0%
Series A (Rp500 Par Value) (bn)	1.9	1.9	1.9
Series B (Rp70 Par Value) (bn)	-	36.8	36.8
Total Share (bn)	1.9	38.8	38.8

Source: Company & PCR Estimates

Exhibit 7

BB's Corporate Structure



Source: Company

Exhibit 8

Operates in 6 distinct industries

After divestment of four of its subsidiaries as part of grand debt restructuring in 2001 (see Appendix 1) and acquisition of Bakrie Sumatra in 4Q04, BB's operations consist of investments in 6 distinct industries and 11 main companies (see Exhibit 8). These are:

- (i) *Two subsidiaries under the telecommunication.* These are Bakrie Communication (hereinafter after referred as Bakrie Com - 96.80% owned) and Bakrie Telecom (Bakrie Tel: 94% owned of which 86.42% is held directly and 7.58% through Bakrie Com).
- (ii) *One housing and structure unit.* This represents Bakrie Building Industries (Bakrie Building - 96.8%) that produces roofs, ceiling, and wall / fences using a mixture of cement, pulp and asbestos.
- (iii) *Four subsidiaries under oil and gas.* The subsidiaries, which produce steel pipe or own a pipeline, are Bakrie Pipe Industries (Bakrie Pipe - 99.96% owned), South East Asia Pipe Industries (SEA Pipe: 100% owned of which 82.13% is held through wholly owned SEAPI Holding and the remaining 17.87% through Bakrie Pipe), Seamless Pipe Indonesia Jaya (Seamless Pipe - 37.52%), and Bakrie Harper (Harper - 70%).
- (iv) *Two subsidiaries under engineering and transport infrastructure.* These are Trans Bakrie (51% owned) that provides engineering and steel fabrication services and Bakrie Corrugated Metal Industries (Bakrie Corrugated - 99.80%) that makes nestable flanges, bridges and guard rails.
- (v) *One auto component unit.* This represents Bakrie Tosanjaya (Tosanjaya - 99.99%), a steel casting company (foundry) that produces auto components like brake drums and fly wheels.
- (vi) *One plantation unit.* This represents Bakrie Sumatra Plantation (Bakrie Sumatra - 60%), the only listed subsidiary, which is being re-acquired by BB in 4Q04 after its divestment in 2001 (see Appendix 1).

FINANCIALS

Increasing portion of consumer-driven income

BB's revenues composition is expected to change with the consumer driven income, i.e. steady and recurring revenues, increases 8 percentage points from 49% in FY03 to 58% in FY05F (see Exhibit 9) at a decline of project-driven revenues. Consumer-driven income comes from plantation, telecom, auto component, and housing / structure operations whereas project-driven income from oil / gas infrastructure and engineering / transport infrastructure units. The change is mainly due to the contribution from newly acquired BSP in 4Q04, offset partially by the strong growth of SEA Pipe and Bakrie Pipe in FY05F (see Appendix 4 on Earnings Model for details of P&L breakdown). Nevertheless, in FY05F the oil and gas infrastructure unit is expected to remain the largest (35%) revenue contributor, followed by plantation (27%), telecom (17%), auto component (7%), engineering and transport infrastructure (7%), and lastly housing and structure (6%) (see Exhibit 9).

Lower revenue contribution from subsidiaries that depend on steel

Revenues contribution from subsidiaries that depend on steel is projected to decline by 14 percentage points from 62% in FY03 to 42% in FY05F (see Exhibit 9). Subsidiaries that depend on steel are those that are engaged in oil and gas infrastructure, auto component and engineering and transport infrastructure operations. Again, the change is due primarily to the contribution from newly acquired BSP.

Increasing Portion of Consumer-Driven Revenues

	2003	2004F	2005F	Change '03 - '05
Oil & Gas Infrastructure	41%	38%	35%	-6%
Plantation	0%	4%	27%	27%
Telecom	23%	21%	17%	-5%
Auto Component	13%	14%	7%	-6%
Engineering & Transport Infrastructure	9%	10%	7%	-2%
Housing & Structure	14%	12%	6%	-7%
Investment (BB Holding Co) / Adjustments	2%	1%	0%	-1%
Total Revenues	100%	100%	100%	0%
Project-Driven*	49%	48%	41%	-8%
Consumer-Driven	49%	51%	58%	9%
Investment (BB Holding Co) / Adjustments	2%	1%	0%	-1%
Total Revenues	100%	100%	100%	0%
Dependent on steel**	62%	62%	49%	-14%
Not Dependent on steel	38%	38%	51%	14%
Total Revenues	100%	100%	100%	0%
*Oil & Gas Infrastructure (Bakrie Pipe, SEA Pipe), Engineering & Transport Infrastructure (Trans Bakrie, Bakrie Corrugated)				
**Oil & Gas Infrastructure (Bakrie Pipe, SEA Pipe), Auto Component (Bakrie Tosanjaya), Engineering & Transport Infrastructure (Trans Bakrie, Bakrie Corrugated)				
Source: Company & PCR Estimates				

Exhibit 9

Cash flow to come mainly from consumer-driven and non-steel-dependent subsidiaries

We expect the EBITDA contribution from consumer-driven subsidiaries to remain high at 90% in 2005 (see Exhibit 10 and refer to Appendix 4 on Earnings Model for absolute breakdown). This is despite an expected rise in the contribution from project-driven subsidiaries by 17 percentage points from FY03 to FY05F given a projected improvement in Bakrie Pipe and SEA Pipe's performances. EBITDA contribution from subsidiaries that do not depend on steel is projected to increase by 8 percentage points from 72% in FY03 to 81% in FY05F. This is due primarily to high growth of BTel and BSP acquisition (see Appendix 4 on Earnings Model for details). The same is true for operating profit whereby more than 80% of FY05F operating profit is expected to come from consumer-driven subsidiaries and subsidiaries that do not significantly depend on steel (see Exhibit 11). The decline in the EBITDA loss of BB Holding Co from FY03 to FY05F is due to adjustments / eliminations (see Appendix 4 on Earnings Model for absolute breakdown).

Most of FY05F EBITDA to Come from Consumer-Driven Subsidiaries and Non-Steel-Dependent Subsidiaries

	2003	2004F	2005F	Change '03F-'05F
Plantation	0%	0%	67%	67%
Telecom	75%	150%	13%	-63%
Oil & Gas Infrastructure	1%	21%	10%	9%
Auto Component	31%	-18%	6%	-26%
Housing & Structure	13%	-10%	4%	-9%
Engineering & Transport Infrastructure	-5%	-8%	3%	8%
Investment (BB Holding Co) / Adjustments	-15%	2%	-3%	12%
Total EBITDA	100%	100%	100%	0%
Project-Driven*	-4%	13%	14%	17%
Consumer-Driven	119%	85%	90%	-29%
Investment (BB Holding Co) / Adjustments	-15%	2%	-3%	12%
Total EBITDA	100%	100%	100%	0%
Dependent on steel**	28%	-5%	19%	-8%
Not Dependent on steel	72%	105%	81%	8%
Total EBITDA	100%	100%	100%	0%

*Oil & Gas Infrastructure (Bakrie Pipe, SEA Pipe), Engineering & Transport Infrastructure (Trans Bakrie, Bakrie Corrugated)
**Oil & Gas Infrastructure (Bakrie Pipe, SEA Pipe), Auto Component (Bakrie Tosanjaya), Engineering & Transport Infrastructure (Trans Bakrie, Bakrie Corrugated)
Source: Company & PCR Estimates

Exhibit 10

Most of FY05F Operating Income to Come from Recurring Income and Non-Steel Dependent Subsidiaries

	2003	2005F	Change '03F-'05F
Plantation	0%	98%	98%
Oil & Gas Infrastructure	0%	9%	8%
Auto Component	30%	5%	-25%
Housing & Structure	9%	4%	-5%
Engineering & Transport Infrastructure	-14%	4%	18%
Investment (BB Holding Co) / Adjustments	-23%	-6%	17%
Telecom	113%	-13%	-126%
Total Operating Income	100%	100%	0%
Project-Driven*	-13%	12%	26%
Consumer-Driven	113%	88%	-26%
Investment (BB Holding Co) / Adjustments	-23%	-6%	17%
Total Operating Income	100%	100%	0%
Dependent on steel**	17%	17%	1%
Not Dependent on steel	83%	83%	-1%
Total Operating Income	100%	100%	0%

*Oil & Gas Infrastructure (Bakrie Pipe, SEA Pipe), Engineering & Transport Infrastructure (Trans Bakrie, Bakrie Corrugated)
**Oil & Gas Infrastructure (Bakrie Pipe, SEA Pipe), Auto Component (Bakrie Tosanjaya), Engineering & Transport Infrastructure (Trans Bakrie, Bakrie Corrugated)
Source: Company & PCR Estimates

Exhibit 11

BB is Expected To Turn Profitable in FY05F

	2003	2004F	2005F	2006F	2007F	CAGR '04-'07	CAGR '05-'07
Oil & Gas Infrastructure	(93)	(119)	503	(10)	4	na	-91%
Telecom	153	(316)	(98)	(62)	34	na	na
Plantation	-	13	210	221	247	na	8%
Housing & Structure	(4)	20	4	7	9	-23%	46%
Engineering & Transport Infrastructure	(16)	5	9	12	15	42%	31%
Auto Component	7	11	10	13	16	15%	32%
Investment	25	69	(116)	(104)	(113)	-218%	-1%
Other	(1)	-	-	-	-	na	na
Total Net Profit	97	(297)	521	77	212	-189%	-36%
Growth	0%	-408%	-275%	-85%	177%		

Source: Company & PCR Estimates

Exhibit 12

Expected turn-around in FY05F to be followed by a high growth

We expect BB to turn profitable (Rp521bn net profit) FY05F (see Exhibit 12) and post 39% and 50% CAGR in EBITDA and operating profit (see Exhibit 13 & 14) respectively from FY05F - FY07F. The rebound is due to:

1. *Completion of debt restructurings.* The expected completion of debt restructurings in Bakrie Pipe and SEA Pipe is projected to contribute Rp556bn after-tax gains in FY05F and place the subsidiaries in stronger positions to get working capital and capex financing to fund their growths. We have not factored in the impact of Seamless Pipe's potential debt restructuring in our forecasts.
2. *No write off on deferred tax.* In FY05F we do not expect BTel to write off deferred tax assets again like it did in FY04F. In FY04F, BTel is expected to write off Rp86bn expired deferred tax assets.
3. *Acquisition of cash-cow BSP.* We expect BB to complete its acquisition of 60% of Bakrie Sumatra by end of November and hence Bakrie Sumatra would contribute one-month net profit to BB in FY04F. Bakrie Sumatra is expected to account for two third (67%) of the BB's EBITDA in FY05F (see Exhibit 10) and we expect it to post a 9% CAGR in EBITDA in FY05F - FY07F (see Exhibit 13).
4. *Riding on the booming telecom industry.* We forecast BTel to grow its EBITDA by a CAGR of 145% in FY05F - FY07F (see Exhibit 13) driven by (i) a low base, (ii) an exponential growth of Indonesian fixed wireless industry, and (iii) large capex estimated at above US\$100m in FY05F - FY07F.
5. *Recovery in the oil and gas, mining and infrastructure investments.* BB's oil and gas infrastructure, engineering and transport infrastructure units are projected to post 78% and 29% CAGR in EBITDA respectively in FY04F - FY07F given (i) a low base in FY04F, (ii) rising oil / gas and coal prices, (iii) commencements of oil and gas projects that have been delayed since the 1997 economy crisis, and (iv) a more stable political outlook post the presidential election, and (v) a pressure on provincial and central governments to increase spending on infrastructures to drive the economic growth.
6. *Turn around in the automotive component operation.* Auto component operation (Tosanjaya) is expected to post 52% CAGR in EBITDA from FY04F – FY07F (see Exhibit 13). The growth will be driven by (i) a turn around to profitability in 2H04 after gradually passing on raw material price increases to customers, (ii) projected increase in the utilisation rate of its new Plant III, and (iii) a forecast robust growth of car sales.

Triple Digit CAGR of Overall EBITDA in FY04F - FY07F

	2003	2004F	2005F	2006F	2007F	CAGR '04-'07	CAGR '05-'07
Oil & Gas Infrastructure	11	19	53	86	110	78%	44%
Telecom	139	(0)	65	196	388	na	145%
Plantation	-	23	343	379	409	na	9%
Housing & Structure	7	16	21	25	28	20%	17%
Engineering & Transport Infrastructure	(8)	12	18	21	25	29%	19%
Auto Component	19	17	28	35	40	32%	19%
Investment	(12)	(18)	(17)	(16)	(16)	-3%	-2%
Other	(1)	-	-	-	-	na	na
Total EBITDA	136	69	510	725	983	142%	39%
Grow th	-27%	-49%	635%	42%	36%		

Source: Company & PCR Estimates

Exhibit 13

BB's Operating Income was Bolstered by Bakrie Sumatra's Acquisition

	2003	2004F	2005F	2006F	2007F	CAGR '04-'07	CAGR '05-'07
Oil & Gas Infrastructure	0	5	28	57	77	na	67%
Telecom	71	(84)	(43)	63	228	na	na
Plantation	-	21	314	346	372	na	9%
Housing & Structure	6	11	14	18	21	25%	20%
Engineering & Transport Infrastructure	(9)	7	12	15	19	42%	23%
Auto Component	19	7	16	22	26	52%	25%
Investment	(15)	(22)	(21)	(20)	(20)	-3%	-2%
Other	(1)	-	-	-	-	na	na
Total Operating Income	63	(55)	322	501	722	-336%	50%
Grow th	-46%	-188%	-683%	56%	44%		

Source: Company & PCR Estimates

Exhibit 14

A chop in currency exposure and interest expense post debt restructuring

We expect BB to reduce its currency exposure by 95% (US\$204m) post debt restructurings in Bakrie Pipe and SEA Pipe in FY05F (see Exhibit 15). Total net exposure to be chopped from US\$215m as of Jun 04 to mere US\$11m in FY05F assuming US\$152m debts in Bakrie Pipe and US\$52m in SEA Pipe are bought back using proceeds of rights issue or rupiah loan refinancing. After including US\$ 44m net exposure from newly acquired Bakrie Sumatra, BB's net exposure is estimated to be only US\$38m, 83% lower than what it had in Jun 04.

Currency Exposures Significantly Reduced Upon Completion of Debt Restructuring

	Jun 04	2005F	Change	
	(US\$ m)	(US\$ m)	(US\$ m)	(%)
Current Exposure				
Bakrie Pipe	152	-	(152)	100%
SEA Pipe	52	-	(52)	100%
Others	30	30	-	0%
Liabilities (Foreign Currency)	234	30	(204)	-87%
Assets (Foreign Currency)	(18)	(18)	-	0%
Net Existing Exposure	215	11	(204)	-95%
New Exposures from Bakrie Sumatra's (BSP) Acquisition				
Liabilities (Foreign Currency)	na	46		
Assets (Foreign Currency)	na	(2)		
Bakrie Sumatra (BSP) Exposure	na	44		
BB's share in BSP	na	60%		
Additional Net Exposure from BSP's Acquisition	na	26		
Total Group Net (Liability) Exposure	215	38	(178)	-83%

Source: Company & PCR Estimates

Exhibit 15

MANAGEMENT

Benefited from foreign strategic partnerships

Six out of 10 of BB's subsidiaries benefit from existing or previous affiliations with foreign strategic partners. These subsidiaries are Bakrie Tosanjaya, Seamless Pipe, SEA Pipe, Bakrie Sumatra and Trans Bakrie (see Exhibit 16). The strategic partners include Mitsubishi and Isuzu Groups, Tenaris, and Transfield. We expect the subsidiaries, primarily the oil and gas infrastructure subsidiaries, to forge greater alliances in the future by selling some of their shares to new strategic partners.

Most Subsidiaries Benefit from Existing or Past Foreign Strategic Partnerships

Subsidiary	Strategic Partner	Status	Share
Bakrie Tosanjaya	Mitsubishi Group (Krama Yudha Tiga Berlian)	Owner	50%
	Isuzu Group (General Motors)	Owner	60%
Seamless Pipe	Tenaris	Strategic partner	0%
SEA Pipe	Tenaris	Marketing Assistance	0%
Bakrie Sumatra	Hollandsch Amerikane Plantage Maatschappij	Ex-owner	100%
Trans Bakrie	Transfield	Ex-owner	49%

Source: Companies

Exhibit 16

Most subsidiaries command important market shares

Most of BB's subsidiaries command significant market share in the industries they operate. In the oil and gas infrastructure, the three subsidiaries (Bakrie Pipe, SEA Pipe, Seamless Pipe) have between 40% - 60% market share, auto component 19%, house and structure 25%, engineering and transport infrastructure 15% - 80% depending on the products. In the fixed wireless industry, BTel is one of the only three players. BTel's projected 10% market share looks small. However, it would be more impressive if one considers that it is a regional player (only in three provinces) whereas its competitors Telkom and Indosat are national players.

BB's Subsidiaries Command Significant Market Shares in Their Respective Industries

Industry	No	Company	Market Share	Competitor
Oil & Gas Infrastructure	1	SEA Pipe*	60%	KHI Pipe Industries, Indal Steel Pipe, Bumi Kaya Steel Industries
	2	Bakrie Pipe	55%	Bumi Kaya, Spindo, KHI Pipe Industries
	3	Seamless Pipe	40%	Citra Tubindo
Auto Component	4	Tosanjaya	19%	Pakarti Riken, Asama Indonesia, Toyota Astra Motor, Aisin Takaoka
Housing & Structure	5	Bakrie Building	25% (Second	Jabesmen, Atrisco, C. Siam, Eternit Gresik
Engineering & Transport Infrastructure	6	Trans Bakrie	15% - 80%	Depending on products
	7	Bakrie Corrugated	65%	Wijaya Karya, Bukaka, Armindo, Alim Ampuh
Telecom	8	Bakrie Tel	10%	Telkom & Indosat

* Based on the total plant capacity of longitudinal SAW pipes in Indonesia. Market share of imported pipes not counted
Source: Companies & PCR Estimates

Exhibit 17

New blood in the management team

All of the existing three members of the board of director are new blood, i.e. not the same as the ones prior to the debt restructuring in 2001 (see Exhibit 18). They are younger professionals with a greater drive for changes and do not have a family tie with the founding shareholders. The last founding shareholder in the board of commissioner, Messr. Aburizal Bakrie, relinquished his position as president commissioner in the June 2004 AGM (see Exhibit 19) and is currently assuming the post of economic tsar (coordinating minister for economy) in the current cabinet under the new president Bambang Yudhoyono.

New Board of Director in 2004

	2000	2001	2002	2003	2004
President Director	Irwan Sjarkawi	Irwan Sjarkawi	Gafur Sulisty Umar	Gafur Sulisty Umar	Gafur Sulisty Umar
Director	Nalinkant Rathod	Beta Sri Winarto	Beta Sri Winarto	Beta Sri Winarto	Yanita Rohali
Director	Raniwati Malik	Raniwati Malik	Ambono	Ambono	Juliandus Tobing
Source: BB					

Exhibit 18

Board of Commissioners

	2000	2001	2002	2003	2004
President Commissioner	Aburizal Bakrie	Aburizal Bakrie	Aburizal Bakrie	Aburizal Bakrie	Irwan Sjarkawi
Independent Commissioner		DR. Sjahir	Irwan Sjarkawi	Irwan Sjarkawi	Amrin Yamin
Independent Commissioner			DR. Sjahir	Mohamad Ichsan	Mohamad Ichsan
Commissioner	Amrin Yamin	Amrin Yamin	Amrin Yamin	Amrin Yamin	
Commissioner	Hamizar Hamid	Hamizar Hamid			
Source: BB					

Exhibit 19

TELECOM

SUMMARY

The telecom unit is the largest contributor to the Group's NAV (50%) and EBITDA (86%) in FY03. It is the one on which BB will spend most of its future capex. It consists of two subsidiaries Bakrie Telecom, which operate fixed wireless telecom in Indonesia, and Bakrie Com, which has investments in overseas telcos. The unit is expected to post a high 78% CAGR in EBITDA from FY05F - FY07F driven by a robust fixed wireless industry growth and focused strategy. The main risks are competitions from Telkom and Indosat, a high capex requirement, and a potential cannibalisation of old Ratelindo by new CDMA system (Esia). However, a high projected industry growth would significantly mitigate the risks.

DOMESTIC FIXED WIRELESS INDUSTRY

Today fixed wireless offers better mobility

Technology innovation has allowed fixed wireless phone to be closed to cellular phone in providing mobility. In the earlier E-TDMA fixed-wireless version (Ratelindo) that Bakrie Telecom (BTel) offers, the fixed wireless mobility was limited to a few km. However, in the CDMA version (Esia), which BTel launched in FY03, the mobility is up to one area code / province (see Appendix 2 for details of CDMA technology). The limited (few km) mobility such as the "Home" service in BTel becomes an option rather than a constraint. In fact, CDMA fixed wireless could be designed to provide a nationwide coverage like CDMA cellular (offered by Mobile 8) does.

Superior technology to GSM

CDMA technology is superior to that of GSM in that the former has (i) a faster rate of data transfer of up to 2,400 kbps in CDMA2000 1x EV-DO (see Appendix 2 for details of CDMA technology) compared to 96 kbps of GSM's GPRS technology. (ii) CDMA allows a greater number of users per spectrum and this is highly important for a regional player like BTel that is licensed to operate only in limited three provinces (Greater Jakarta, West Java, and Banten).

Proven success of fixed wireless in countries with Indonesia's characteristics

Fixed wireless phone has been proven successful in India and China, the countries that share similar characteristics with Indonesia. They all have large populations, relatively low GDP per capita, and low phone penetration rates. Offered by fixed-line players China Telecom and China Netcom, fixed wireless in China has become a main threat to the GSM service provided by China Mobile and China Unicom. Similarly, Indian fixed wireless, which was launched by Reliance Telecom, is forecast to grow faster than the cellular does in the near future.

CDMA has also been launched in a neighbouring country

Fixed wireless has also been introduced in the neighbouring country Thailand, which also has a relatively low penetration rate, by Telecom Asia. Unlike Indonesia and India, however, Thailand uses the PHS technology, a similar technology used by the Little Smart fixed-wireless in China. On the other hand, Indonesia and India deploy the CDMA technology, which is a more proven technology though it is also more expensive.

Significant tariff advantage

Fixed wireless differentiates itself from cellular and fixed line in that it offers a limited mobility but charges the same fee as fixed line does. Currently the maximum airtime tariff for *post-paid*, fixed wireless at peak hours is Rp167, less than 40% of *post-paid* GSM's at Rp406. The price gap for *prepaid* services in most cases is even larger.

Plenty of room for tariff increases

Unlike many other countries where phone tariffs tend to decline or remain stable, Indonesia is expected to see significant tariff increases. Fixed wireless tariffs are set equal to fixed line tariffs, which are expected to rise by hefty 21.5% in the next few years. The government mandated a 45.5% fixed line tariff increase in 2002 but up to now the tariff has been increased only by a weighed average of 24% (15% in 2002 and 9% in 2003), leaving a room for another a 21.5% increase. Historically, increases in fixed-line tariff were accompanied by rising cellular tariffs and hence the price advantage of fixed line / fixed wireless over cellular remained.

Fixed Wireless to Become the Fastest Growing Segment

	2000	2001	2002	2003	2004F	2005F	2006F	2007F		
Subscribers (m)										
Cellular	3.7	6.6	12.3	19.7	29.3	39.4	49.4	59.7		
Fixed Line	6.7	7.2	7.8	8.0	8.2	8.2	8.3	8.4		
Fixed Wireless	0.1	0.1	0.1	0.6	2.2	4.2	6.6	9.2		
Total	10.5	13.9	20.2	28.3	39.6	51.8	64.4	77.3		
Market Share										
Cellular	35%	47%	61%	70%	74%	76%	77%	77%		
Fixed Line	64%	52%	38%	28%	21%	16%	13%	11%		
Fixed Wireless	1%	1%	1%	2%	5%	8%	10%	12%		
Total	100%	100%	100%	100%	100%	100%	100%	100%		
									CAGR	CAGR
									'00-'04	'04-'07
Growth										
Cellular	65%	79%	87%	61%	48%	34%	26%	21%	68%	27%
Fixed Line	10%	8%	7%	3%	2%	1%	1%	1%	5%	1%
Fixed Wireless	12%	6%	3%	354%	263%	96%	56%	40%	106%	62%
Total	24%	33%	45%	41%	40%	31%	24%	20%	40%	25%
									Average Net Add	
									'00-'04	'04-'07
Net Addition (m subscribers)										
Cellular	1.4	2.9	5.7	7.5	9.6	10.1	10.1	10.3	5.4	10.0
Fixed Line	0.6	0.6	0.5	0.3	0.2	0.1	0.1	0.1	0.4	0.1
Fixed Wireless	0.0	0.0	0.0	0.5	1.6	2.1	2.4	2.6	0.4	2.2
Total	2.0	3.5	6.2	8.2	11.3	12.2	12.5	13.0	6.2	12.2
Penetration										
Cellular	2%	3%	5%	9%	12%	17%	21%	25%		
Fixed Line	3%	3%	3%	3%	3%	3%	3%	3%		
Fixed Wireless	0%	0%	0%	0%	1%	2%	3%	4%		
Total	5%	6%	9%	12%	17%	22%	27%	32%		

Source: Companies, PCR Estimates

Exhibit 20

BTel to flourish in a fast growing fixed wireless industry

Indonesia's fixed wireless industry is expected to become the fastest growing segment within the telecom industry with a 62% CAGR in 2004F - 2007F compared to 27% in cellular and 1% in fixed line (see Exhibit 20). BTel is expected to grow faster at a 66% CAGR to maintain its 10% market share while Indosat to grab 18% market share and Telkom remain the market leader with 72% share in 2007F (see Exhibit 21). BTel's projected growth and market share look more impressive if one considers that it is a regional player whereas competitors Telkom and Indosat are nationwide players (or at least the licences allow them to become nationwide players).

Fixed wireless growth to be driven by a low base, competitive tariff, and a niche market

The high growth of fixed wireless industry is to be driven by:

- (a) *Low base.* Fixed wireless accounted for only 2% of total telecom subscribers in 2003 compared to 70% for cellular and 28% for fixed line. Given its low base, fixed wireless's projected 62% CAGR of subscriber growth translates only into 2.2m new subscribers per year or less than a quarter of cellular's projected net addition at 10m pa.
- (b) *Fixed wireless is a key substitute for fixed line.* We expect fixed wireless subscribers to overtake fixed line subscribers by 2007. Fixed wireless has many competitive advantages over fixed line. Its capex per line at US\$140 is less than a third of fixed-line's at US\$500 despite the fact that fixed wireless has an advantage in its mobility. Further, fixed wireless, when upgraded to CDMA2000 1x EV-DO, allows 2.4 Mbps data transfer speed, which is nearly 5x faster than the existing fixed line DSL technology at 0.5 Mbps.

- (c) *Niche market.* Fixed wireless offers services to a niche market of low to middle income that has not been well served by the limited availability of fixed lines. Fixed wireless also targets a segment that is not well served by cellular market, i.e. those who are cost conscious and yet need limited mobility.
- (d) *Low penetration rate.* Our projection suggests that Indonesia's combined fixed line and fixed wireless penetration will reach only 7% in 2007F from 3% in 2003. This would still be low compared to those of neighbouring countries or the projected penetration rate of Indonesia's cellular at 25% in 2007F (see Exhibit 20).
- (e) *Healthy economic growth.* With the Indonesian economy projected to grow at 4% - 5% in the next three years, demand for telecom services should remain robust.

BTel to Growth in Line with Fixed Wireless Industry's Growth

	2000	2001	2002	2003	2004F	2005F	2006F	2007F		
Fixed Wireless Subscriber (m)										
Telkom				467	1,700	3,180	4,807	6,597		
Indosat	-	-	-	-	250	600	1,090	1,678		
B-Tel	120	127	131	127	205	438	687	929		
Total	120	127	131	594	2,155	4,218	6,585	9,205		
Market Share										
Telkom	0%	0%	0%	79%	79%	75%	73%	72%		
Indosat	0%	0%	0%	0%	12%	14%	17%	18%		
B-Tel	100%	100%	100%	21%	10%	10%	10%	10%		
Total	100%	100%	100%	100%	100%	100%	100%	100%		
Growth										
									CAGR	CAGR
									00-'04	04-'07
Telkom					264%	87%	51%	37%	na	57%
Indosat						140%	82%	54%	na	89%
B-Tel	12%	6%	3%	-3%	61%	114%	57%	35%	14%	66%
Total	12%	6%	3%	354%	263%	96%	56%	40%	106%	62%
Net Add (m Subscribers)										
									Average Net Add	
									00-'04	04-'07
Telkom	-	-	-	467	1,233	1,480	1,628	1,790	340	1,533
Indosat	-	-	-	-	250	350	490	588	50	420
B-Tel	13	7	4	(4)	78	233	250	242	20	200
Total	13	7	4	463	1,561	2,063	2,367	2,620	410	2,153

Source: Companies, PCR Estimates

Exhibit 21

Profile of CDMA Players in Indonesia

	Telkom	Indosat	Mobile 8 Telecom	Bakrie Tel
Previous name	na	na	Merger of Komselindo, Metrosel, Telesera	Ratelindo
Shareholders	Government (51%), Public (49%)	ST Telecom (42%), Government (15%), Public (43%)	Bimantara (70.5%), Korea Telecom Freetel & Qualcomm (15.6%), Dwimarga Dwitama Asia Link (8.5%), Centralindo (5.4%),	Bakrie & Brothers (86%), Richweb Investment (7.58%), CMA Fund Mgt (6%)
Start up	May 03	May 04	Dec 03	Sep 03
Brand	TelkomFlexi	Star-One	Fren	Esia
Licence	Nationwide	Nationwide	Nationwide	Jakarta, West Java, Banten
Frequency	1900 Mhz (Jakarta, W. Java, Banten) 800 Mhz (others)	1900 Mhz (Jakarta, W. Java, Banten) 800 Mhz (others)	800 Mhz	800 Mhz (Jakarta, W. Java, Banten)
Spectrum	5 Mhz	5 Mhz	10 Mhz	10 Mhz
Service	Fixed wireless	Fixed wireless	Cellular	Fixed wireless
System	CDMA 2000 (1x)	CDMA 2000 (1x)	D-AMPS & CDMA 2000 (1x) & EV-DO (Evolution of Data Only)	E-TDMA, CDMA 2000 (1x)
Subscriber (Aug 04)	1,200,000	75,000	400,000	140,000

Source: Companies, PCR Estimates

Exhibit 22

Manageable competitions from fixed line, GSM, and CDMA players

Competition in the fixed wireless industry comes from within the players themselves as well as from GSM, CDMA cellular, and fixed-line player as described below.

- (i) *Competition among fixed wireless operators.* There are only three fixed wireless players - Telkom, Indosat and BTel - and all deploy the CDMA technology. Compared to BTel, Telkom and Indosat have competitive advantages in size, brand name, and existing subscriber base and infrastructures. However, BTel has the following competitive advantages:
 - (a) *Better focus.* BTel focuses on fixed wireless as its sole business. On the other hand, for both Indosat and Telkom, fixed wireless is a small part of their overall operations. Both Indosat and Telkom are still concerned with a potential cannibalisation of fixed wireless to their GSM operations. In the case of Telkom, there is an additional worry about the impact to its main fixed-line business. For both, the cannibalisation concerns are greatest in the main market the Greater Jakarta, where BTel pays most attentions.
 - (b) *Greeter agility.* BTel's small-scale operation allows it to be more agile than bureaucratic Telkom and huge Indosat. BTel is expected to be faster in responding to customer feedbacks given that it only serves three neighbouring provinces compared to Telkom and Indosat, which have wider and more dispersed coverage.
 - (c) *Lower investment cost.* BTel's investment cost is lower than the other two's because BTel is licensed to operate at a low frequency of 800 Mhz against Telkom and Indosat's 1,800 Mhz (see Exhibit 22). The lower frequency allows BTel to cover a same area with fewer radio base stations and hence lower cost.
- (ii) *Competition with GSM cellular operators.* The four nationwide GSM operators - Telkomsel, Satelindo / IM3, and Excelcomindo - have many competitive advantages. They have full mobility, greater coverage areas, international roaming, more handset choices at lower prices, greater customer base and brand recognition but cost nearly 3x more. While we project that cellular subscriber will increase by 10m per year or more than 4x that of fixed wireless at 2.2m pa over the next 3 years, we believe there is a room

for fixed wireless to grow. Fixed wireless has competitive advantages in lower investment costs and tariffs and serves a niche market of cost-conscious consumers.

- (iii) *Competition from the full-pledge CDMA cellular operator.* Competition with Mobile 8, the only CDMA cellular operator, is indirect because (i) Mobile 8 offers full (cellular) instead of limited mobility and (ii) it charges cellular instead of fixed line tariffs. (iii) Mobile 8 targets the middle- upper segment that GSM players serve whereas BTel aims at the lower - middle-income segment. (iv) Mobile 8 assists fixed wireless players by popularising the CDMA system especially through its handset subsidy program.
- (iv) *Competition from fixed-line operator.* Fixed line operator Telkom poses the least threat because (i) Telkom has been slow in adding fixed line capacity, (ii) fixed line offers no mobility, and (iii) Telkom's bureaucratic system often becomes a hindrance to the advantage of its competitors.

UNIT OVERVIEW

The largest in term of NAV

BB's telecom unit is the most important operation, accounting for a half (50%) of BB's NAV (see Exhibit 23). Of the two companies under telecom, BTel is by far the larger, contributing 37% to BB's NAV compared to 13% from Bakrie Com. Bakrie Com owns cellular and fixed line telcos in Uzbekistan and has 7.58% share in of BTel through its wholly owned Richweb Holding.

The largest in term of EBITDA and asset

The telecom unit is the largest contributor in term of EBITDA (86% of total EBITDA) and asset (41%) to BB in FY03 (see Exhibit 23). However, the unit contributed only 17% to the BB's revenues in FY03. Nearly all (95%) of the unit's EBITDA in FY03 came from BTel as Bakrie Com equity accounted all of its major investments.

Summary of Telecom Division

	Bakrie Telecom	Bakrie Communication	Total
Shareholding			
BB's Share	86.42%	96.80%	na
Other shareholders	Richweb Investment Ltd (7.58%), CMA Fund Mgt (6%)	Hardinato K. Kamarga (3.20%)	na
Valuation & Investment			
NAV to BB (Rp bn)	1,067	363	1,430
% of BB's Total NAV	37%	13%	50%
Long term Investment	None	Bakrie Uzbekistan Telecom (Buztel) (100%) Richweb Holding Ltd (100%) which owns: Bakrie Telecom (7.58%) Multi Kontrol Nusantara (99%) which Farina Investment (100%) Sanmil Holding (100%) which owns: South Pacific Iridium Holding Ltd (100%) South Pacific Iridium Holding Ltd II (100%) Iridium LLC (Rp0) Uzbek Telecom Int'l AO (Rp205bn) Prosyst Bangun Nusantara (Rp0bn)	
Company Description			
Commenced Operation	1995	1997	
Product	E-TDMA and CDMA fixed wireless	Investment in Uzbekistan telecom, Bakrie Telecom, Provision for IT services	na
Main competitors	Telkom, Indosat, Mobile 8	na	na
'03 Financial (Rp bn)*			
Revenues	169	12	181
EBITDA	72	4	76
Operating Profit	5	2	7
Net Profit	13	0	14
Assets	1,108	987	2,095
Total Liabilities	696	930	1,627
Equity	412	56	468
Debt / Equity Ratio	1.1	1.4	1.3
% BB Consolidated*			
Revenues	16%	1%	17%
EBITDA	81%	4%	86%
Operating Profit	nm	nm	nm
Net Profit	nm	nm	nm
Assets***	22%	19%	41%
Liabilities	33%	45%	78%
Equity	19%	3%	21%
*Due to inter-company elimination and adjustments, sum of P&L and Balance Sheet figures do not necessarily equal to BB's consolidated figures. The same is true for the percentage contribution to BB's consolidated financial figures. Source: Companies, PCR Estimates			

Exhibit 23

BAKRIE TELECOM (BTCL)

Overview

The pioneer of fixed wireless service

BTCL is the pioneer of fixed wireless telecom in the nation when it launched its E-TDMA system under a brand of Ratelindo in 1996. In Sept 2003, BTCL became the 2nd player after Telkom to launch the new generation of fixed wireless named Esia using the CDMA 2000 1x of Qualcomm, USA (see Appendix 2 for details of CDMA technology). Following the launching of CDMA, BTCL has stopped growing its Ratelindo as it plans to migrate Ratelindo subscribers to Esia's CDMA.

Has well-established, high ARPU subscriber base

BTCL had around 130,000 subscribers on its Ratelindo's E-TDMA in Sept 04. All of the subscribers are post-paid subscribers, as it does not offer prepaid service. ARPU for Ratelindo at Rp147,000 per month is higher than that of post-paid CDMA at around Rp123,000. Ratelindo has a high ARPU because a half its subscriber is telecom kiosks, which retail Internet and phone services, while the remaining comes from corporate (3%) and household (47%). On the other hand, most of CDMA subscribers are individuals.

Licence to cover most lucrative provinces

BTCL's licence allows it to operate in 3 of the highest density provinces - Greater Jakarta, West Java, and Banten - which have among the highest average income per capita. It is estimated that BTCL has some 40m addressable, middle lower - middle upper income customers in these areas.

Outlook

Good chance of getting additional licences in other regions

BTCL has a good chance to get licences to operate in other provinces as (i) the government is considering to revoke many GSM 1800 licences as the licensees have not commenced operations since the licences were granted years ago. (ii) BTCL is the only regional fixed-wireless licensee in operation and it needs spectrums in other regions to compete with Telkom and Indosat, which already have nationwide licences. (iii) The government is likely to favour awarding the 1800 Mhz spectrum for the development of fixed wireless than cellular as the cellular market has already been well served by the four national players. The number of cellular subscribers has exceeded that of fixed line.

Lower Interconnection tariff

We expect BTCL's interconnection expense per subscriber to decrease overtime because:

- (i) *New, cost-based interconnection tariff.* The government has announced it would set new, cost-based interconnection tariffs starting in January FY05F and we expect this to be lower than the current rate. We do not expect the upcoming regulation to change the existing interconnection agreements between BTCL and fixed line operators, which is based on "senders keep all". The agreement is beneficial to BTCL, as it does not have to pay net outgoing interconnection fees to Telkom although it makes much more calls to Telkom than receiving ones from Telkom.
- (ii) *Increased subscriber base.* BTCL's outgoing to incoming ratio, which stands at about 3.6 to 1 currently, is expected to decline as number of CDMA subscribers rises. The currently high ratio is largely because about a half of its E-TDMA subscribers are Internet / telecom kiosks, whose customers usually make only outgoing calls. However, in the future, the new subscriber addition is expected to come from CDMA personal subscribers, who typically have a more balanced incoming and outgoing call ratio.

Triple digit CAGR in EBITDA

We expect BTCL to book a 312% CAGR in EBITDA in FY04F - FY07F (see Exhibit 24). The growth is to be driven by the (i) a 66% CAGR of BTCL's subscribers from a low base of estimated 205,000 in FY04F to 929,000 in FY07F and (ii) a negative 5.3% CAGR in the average interconnection cost per subscriber as CDMA subscribers increase.

	2003	2004F	2005F	2006F	2007F	CAGR '04-'07
E-TDMA	167.3	147.0	137.3	127.6	115.5	-8%
Prepaid-CDMA	0.6	10.4	104.3	221.3	334.5	218%
Postpaid-CDMA	0.8	10.7	105.3	246.4	390.9	232%
Total Revenues*	168.7	168.1	346.9	595.3	840.8	71%
Operation Expense	163.3	246.3	386.9	533.2	615.7	36%
Operating Income	5.3	(78.2)	(39.9)	62.1	225.1	nm
Depreciation	66.7	83.7	106.9	132.1	157.4	23%
EBITDA	72.0	5.5	66.9	194.2	382.5	312%
Net Interest Expense	(35.1)	(64.2)	(97.4)	(149.1)	(177.5)	nm
FX Gain (Loss)	5.1	(3.4)	0.3	(1.8)	(1.8)	nm
Others	46.7	0.0	0.0	-	0.0	nm
Other Income (Loss)	16.7	(67.6)	(97.1)	(150.8)	(179.4)	38%
Pretax Profits	22.0	(145.8)	(137.0)	(88.7)	45.7	nm
Tax	(8.9)	(169.1)	41.1	26.6	(13.7)	nm
Net Income	13.1	(314.9)	(95.9)	(62.1)	32.0	nm
Main Assumptions						
Subscriber ('000)						
E-TDMA	125	123	116	106	95	-8%
Prepaid-CDMA	1	50	200	366	548	123%
Postpaid-CDMA	1	33	122	216	287	107%
Total Subscribers	127	205	438	687	929	66%
ARPU (Rp/ '000 Month)						
ETDMA	147	151	151	151	151	0.0%
Prepaid-CDMA	91	91	87	81	75	-6.3%
Postpaid-CDMA	123	123	131	138	145	5.7%
Interconnection Expense / Subscriber ('000 Rp/month)						
E-TDMA	38	52	52	52	52	0.0%
Prepaid-CDMA	19	19	15	14	12	-13.5%
Postpaid-CDMA	19	19	15	14	12	-13.5%
Total	76	90	82	79	76	-5.3%
*Net Interconnection Cost						
Source: Company & PCR Estimates						

Exhibit 24

High capex requirement to be funded by equity, debt, sale of assets or IPO

We estimate that BTel needs to spend US\$112m capex in FY04F - FY07F to expand its coverage and capacity to take on subscribers. The capex is expected to be financed by a combination of debts and BB's right issues as well as sale of BB's investments most likely in SEA Pipe, Seamless Pipe or Bakrie Pipe. We do not rule out the possibility that BTel may raise funds through its own IPO.

Risks

Cannibalisation of E-TDMA

There is a risk that the newly launched CDMA may cannibalise existing E-TDMA. To alleviate this potential problem BTel has taken the following steps:

- (a) *Introducing a new brand.* BTel introduced a new brand "ESIA" for its CDMA service while retaining "Ratelindo" brand for its E-TDMA.
- (b) *Differentiating targeted customers.* ESIA differentiates its target customers by focusing on the middle-income segment and the cost-conscious, high-income

segment. On the other hand, its E-TDMA focuses on telecom / Internet kiosks (resellers) and households that are not well served by Telkom's fixed lines.

- (c) *Gradual migration.* Over the long term, BTel plans to gradually migrate the E-TDMA customers to CDMA platform, as it is not economical to maintain two separate systems in the long run. However, in the short term E-TDMA is a cash cow that funds the development of CDMA system.

Valuation

Valuation is based on the DCF approach

We value BB's 86.42% share in BTel at Rp1,067bn, accounting for 37% of BB's NAV (see Exhibit 25). The whole (100%) BTel is valued at Rp1.235bn based on the DCF approach with a discount rate of 14.0% and terminal growth of 4.0%, which is about the expected long term GDP growth of Indonesia (see Exhibit 26). A sensitivity analysis to changes in the terminal growth rate and discount rate is shown in Exhibit 27 and the balance sheet Exhibit 28.

The DCF approach is more sensible than EV/EBITDA or P/aBV valuation approaches

Although the DCF valuation yields high 6.2x FY05F P/aBV and 32.5x FY05F EV/EBITDA multiples (see Exhibit 25), it, nevertheless, is the most sensible approach. This is because EV/EBITDA and P/aBV suffers from distortion due to start-up losses in CDMA and an absence of a sensible revaluation of BTel's telecom assets.

BTel's Valuation Summary

	Sub Total (Rp bn)	Sub Total (Rp bn)	Total (Rp bn)
DCF Valuation			
DCF value of Equity			1,235
BB's share			<u>86.42%</u>
BB's NAV in Bakrie Pipe			1,067
EV/EBITDA Valuation			
DCF value of existing operation (equity value)	1,235		
Debt as of Dec 2005	<u>863</u>		
Total Enterprise Value		2,098	
FY05F EBITDA		<u>67</u>	
Implied FY05F EV/EBITDA (x)			31.3
Price to Adjusted Book Value (P/aBV) Valuation			
DCF value of Equity		1,235	
FY05F Book Value of Equity	1		
Assumed Conversion of Due to Parent	<u>210</u>		
FY05F Adjusted Book Value		<u>211</u>	
Implied FY05F Price/adjusted BV (x)			5.8
Source: PCR Estimates			

Exhibit 25

BTel's Operating Cash Flow is Expected to Grow Exponentially

Period	1	2	3	4	5
Year	2005	2006	2007	2008	2009
Operating Profit	(40)	62	225	376	505
+ Tax	(17)	(30)	(46)	(86)	(152)
+ Depreciation & Amortisation	107	132	157	182	202
+ Working Capital & Others	23	14	12	4	7
Operating Cash Flow	73	178	349	476	562
Capex	(331)	(341)	(333)	(315)	(221)
Free Cash Flow	(259)	(163)	15	160	340
Terminal Growth Assumption	4.0%				
Year of Terminal Growth	5				
CF @ end of forecast period	340				
WACC	14.0%				
	(Rp bn)	(Rp bn)			
PV at WACC	(71)				
PV of Terminal Value	1,833				
Total PV	1,763				
- Net Debt	(527)				
NAV		1,235			
Source: PCR Estimates					

Exhibit 26

Sensitivity Analysis of BTel's DCF Valuation

Terminal Growth	Weighted Average Cost of Capital										
	11.5%	12.0%	12.5%	13.0%	13.5%	14.0%	14.5%	15.0%	15.5%	16.0%	16.5%
0.0%	1,134	1,023	920	827	741	662	588	521	458	399	345
1.0%	1,316	1,186	1,068	960	862	772	689	613	543	477	417
2.0%	1,536	1,382	1,243	1,118	1,004	901	806	720	640	566	499
3.0%	1,807	1,621	1,455	1,307	1,173	1,053	943	844	753	669	593
4.0%	2,151	1,920	1,717	1,538	1,378	1,235	1,107	991	885	789	702
5.0%	2,600	2,304	2,049	1,826	1,631	1,458	1,304	1,167	1,043	931	830
6.0%	3,212	2,816	2,482	2,197	1,951	1,737	1,548	1,382	1,234	1,101	982
7.0%	4,095	3,532	3,072	2,691	2,369	2,095	1,857	1,651	1,470	1,309	1,167
8.0%	5,480	4,604	3,924	3,382	2,939	2,571	2,261	1,997	1,768	1,569	1,394
Source: PCR Estimates											

Exhibit 27

BTel's Balance Sheet

FY Dec 31 (Rp bn)	2003	2004F	2005F	2006F	2007F
Cash & Equivalence	8	8	8	9	9
Receivables	23	26	47	53	51
Inventories	2	6	11	17	24
Other Current Assets	230	79	61	61	58
<i>Total Current Assets</i>	<i>264</i>	<i>119</i>	<i>127</i>	<i>140</i>	<i>142</i>
Fixed Asset	686	889	1,114	1,323	1,499
Deferred Tax Assets	135	-	33	48	27
Other	24	27	24	20	15
Total Assets	1,108	1,035	1,298	1,531	1,683
Payables	60	86	77	75	72
Other Current Liabilities	43	51	86	109	115
Current Maturity - LT Debt	75	-	-	-	-
<i>Total Current Liabilities</i>	<i>178</i>	<i>137</i>	<i>163</i>	<i>184</i>	<i>187</i>
Long Term Payables	134	210	214	218	223
Deferred Tax	-	56	57	58	59
Debts	384	536	863	1,132	1,243
<i>Total Liabilities</i>	<i>696</i>	<i>938</i>	<i>1,297</i>	<i>1,592</i>	<i>1,712</i>
<i>Total Equity</i>	<i>412</i>	<i>97</i>	<i>1</i>	<i>(61)</i>	<i>(29)</i>
Liabilities & Equity	1,108	1,035	1,298	1,531	1,683

Source: Company & PCR Estimates

Exhibit 28

BAKRIE COMMUNICATION (BAKRIE COM)

Overview

Strengths in IT and has wide domestic and international networks

Operating as a holding company for telecom and IT services, Bakrie Com has many investments in domestic and overseas IT/ telecom companies. It used to owned:

- (i) *Bakrie Electronic*, which profitably managed some 112,000 fixed lines under a BOT (Build-Operate-transfer) scheme with Telkom before it was divested as part of BB's debt restructuring in 2001
- (ii) *LINK*, which profitably run a provision for cellular reseller, call centre, paging, and other telecom services in Australia before its was sold for around US\$1m in 2002,
- (iii) *R&D investment* in ART technology in the US before its was discontinued subsequent to the 1997 financial crisis

Bidding for new projects

Other than managing its investments overseas, Bakrie Com is pursuing fixed-wireless and broadband projects under a BOT scheme with Telkom. However, these projects are not expected to be EBITDA positive until FY06F (see Exhibit 29).

Earnings Model of Bakrie Communication (Holding Company)

(Rp bn)	2003	2004F	2005F	2006F	2007F	CAGR '04-'07
Total Revenues	2.3	3.2	9.6	15.9	21.4	88%
Total COGS	1.0	1.4	3.8	5.6	7.5	74%
Gross Profit	1.3	1.8	5.8	10.3	13.9	98%
Operating Expense	6.7	7.5	8.5	9.7	10.8	13%
Operating Income	(5.4)	(5.7)	(2.8)	0.6	3.1	na
Depreciation*	0.1	0.2	0.5	1.4	2.5	153%
EBITDA	(5.4)	(5.6)	(2.3)	2.1	5.6	na
Net Interest	(0.1)	(0.2)	(0.2)	(0.2)	(0.2)	10%
FX loss	(0.6)	0.6	(0.0)	0.2	0.2	-25%
Others	78.2	3.4	0.0	0.0	(0.0)	na
Total Other Expense	77.4	3.8	(0.2)	0.0	(0.0)	na
Pretax Profits	72.0	(2.0)	(3.0)	0.7	3.1	na
Tax	-	0.6	0.9	(0.2)	(0.9)	na
Net Income	72.0	(1.4)	(2.1)	0.5	2.1	na
<i>Ratio</i>						
Gross margin	56.5%	56.0%	60.0%	65.0%	65.0%	
Operating margin	-237.9%	-179.0%	-28.8%	4.0%	14.4%	
<i>Assumptions</i>						
Year End FX rate	8,465	8,900	8,874	9,051	9,233	
Average Exchange Rate	8,703	8,683	8,887	8,963	9,142	
Capex (Rp bn)	2.8	2.0	15.4	15.5	21.3	

Source: Company & PCR Estimates

Exhibit 29

Valuation

Asset are mainly in three overseas subsidiaries

BB's 96.8% stake in Bakrie Com is valued at Rp354bn (see Exhibit 30), accounting for 13% of BB's total NAV. Bakrie Com's main assets are its investments in 3 subsidiaries -- Uzbekistan International AO (UZI), Richweb Holding, which in turn owns 7.58% of BTel, and Bakrie Uzbekistan Telecom (Buztel) -- plus its own holding company operation (see Exhibit 23). Bakrie Com had little debt (estimated at Rp8bn) as of Jun 04 as most of its

old debts had been transferred to BB in 2001 debt restructuring. Its existing liabilities consist mainly of Due to BB.

The valuation is based on the sum-of-part approach

We value Bakrie Com based on its net asset value (assets minus liabilities) adjusted by an assumed conversion of Due to Parent / Receivables from Affiliates into equity, and excesses of market value of its investments over their book values (see Exhibit 30). The valuations of Bakrie Com's main subsidiaries are as follows:

- (i) *Uzbekistan International AO (UZI – 40.2% owned)*. UZI operates around 100,000 fixed lines in a joint venture with the Uzbekistan government. We value the investment at the book value recorded in Bakrie Com's balance sheet at Rp205bn. The book value is based on the valuation approved by UZI shareholders and has taken into account the write-off amounting to 40% (Rp134.8bn) of Bakrie Com's original Rp339.6bn investment in UZI.
- (ii) *Richweb Holding (100%)*. Richweb's two main assets are (i) 7.58% share in BTel which we value at Rp94bn based on BTel's DCF and (ii) Rp44bn receivables from a third party.
- (iii) *Bakrie Uzbekistan Telecom (Buztel – 86.43%)*. Buztel operates about 6,000 GSM lines in Uzbekistan. We value this investment at Rp23bn based on its 6,000 GSM line times US\$500 valuation per line and Bakrie Com's 86.43% share.
- (iv) *Bakrie Com's holding company*. We value Bakrie Com's holding company at Rp17bn based on 3x of its FY07F EBITDA (see Exhibit 29 for the EBITDA projection)
- (v) *Multi Kontrol Nusantara (MKN – 100%)*. MKN provides IT services for domestic market. However, the company was closed down and we attach zero value to it.
- (vi) *Sanmil Holding (100%)*. Sanmil Holding's main asset is its Rp430bn investment in Iridium LLC through South Pacific Iridium Holding (see Exhibit 23) . We value the investment at zero as Bakrie Com has written off its investments. Iridium, which offers global mobile telecom services through round-the-earth satellites, is in the process of liquidation.

Bakrie Communication's Valuation*

Items	Rp bn	Rp bn	Note
Total asset in 1H04		1,111	
<u>Less: Current Liabilities</u>		(9)	
<u>Less: Non Current Liabilities</u>			
Book Value	(1,046)		
Less: Due to Iridium	77		Due to Iridium is assumed to be written off as Iridium is being liquidated and BC also has written off its investment there.
Less: Due to related parties	<u>969</u>		Nearly all of Due to Related Parties are to Bakrie & Brothers. These are assumed to be converted to equity
Net Non-Current Liabilities		-	
<u>Less: Long term receivables from related parties</u>		(292)	Assumed receivables, mainly from BTel and defunct Multi Kontrol Nusantara, are converted into equity of respective subsidiaries
<u>Less: Book value of Investment in Associates</u>		(818)	Valuation of associates to be accounted separately below
<u>Add: Uzbekistan International AO (UZI) Investment</u>		205	Based on Rp339.6bn initial investment less 40% impairment provisions
<u>Add: Investment in Richweb Holding</u>			
Market Value of BTel's 7.58% stake		85	Market value of BC's 7.58% share in BTel is based on our BTel's DCF valuation
Receivable from third parties		44	Other than 7.58% share in in BTel, Richweb has Rp43.8bn Receivable from a 3rd party
<u>Add: 86.43% Share in Bakrie Uzbekistan Telecom (Buztel)</u>		23	Based on Buztel's 6,000 GSM lines at US\$500 per line times BC's 86.43% share ownership at Rp8,900/US\$ FX rate
<u>Add: Bakrie Com's Holding Company Operation</u>		<u>17</u>	3x FY07F EBITDA of Holding Company Operation
Net Asset Value		366	
BB's share in Bakrie Com		<u>96.8%</u>	
BB's NAV in Bakrie Com		354	
* Figures are based on Jun 04 consolidated balance sheet of BC and subsidiaries. Figures may differ from BC's reported balance sheet that presents BC only as a holding company			
Source: PCR Estimates			

Exhibit 30

OIL AND GAS INFRASTRUCTURE

SUMMARY

The oil and gas infrastructure unit is the largest (40%) revenue contributor in FY03 and third largest (10%) NAV contributor to BB. It consists of three companies (Bakrie Pipe, SEA Pipe, Seamless Pipe) that produce various types of steel pipes and a pipeline company (Bakrie Harper). The unit is expected to enjoy significant gains from debt restructurings in FY05F and post 78% CAGR in EBITDA during FY04F - FY07F driven by the expected recovery in the oil and gas industry. The main risks are the industry's excess capacity and the subsidiaries' little control over raw materials. However, these risks are expected to come down.

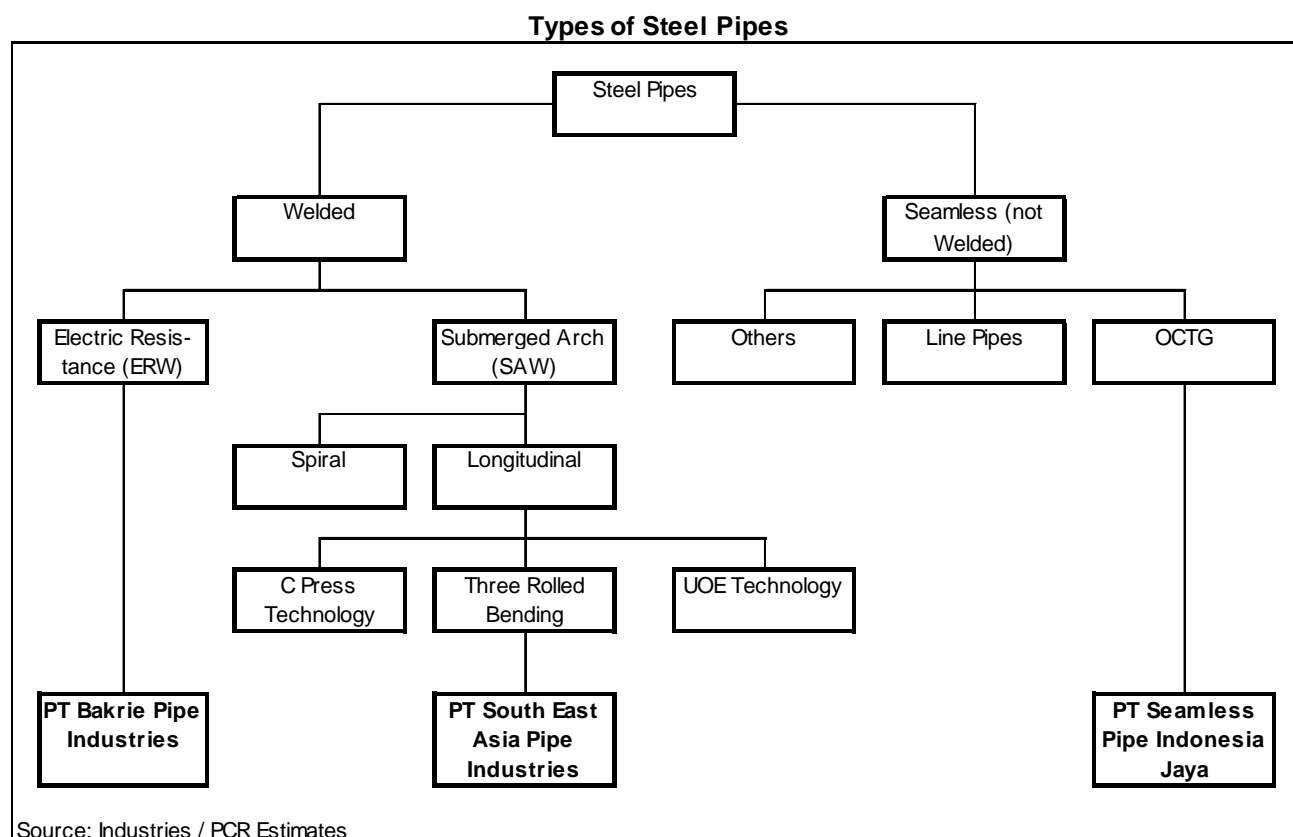


Exhibit 31

PRODUCT AND GLOBAL INDUSTRY OVERVIEW

BB produces a wide range of oil and gas pipes

BB produces two main types of pipes: seamless pipe (produced by Seamless Pipe) and welded pipes. (Bakrie Pipe and SEA Pipe) (see Exhibit 31). Seamless pipe is made by "drilling a hole" in the middle of solid steel beams (billets) and hence leaves no trace of "sewing" two ends of steel plates (see Steel Glossary in Appendix 5 for definitions of terms). Hence it is far more superior in strength than welded pipe and also more expensive (see Exhibit 33 for differences among various pipes). Seamless pipe is used for making deep oil wells and underwater oil and gas pipeline and it accounted for about one third of global pipe and tube consumption in 2002.

BB produces the higher quality welded pipes

Welded pipe is made by "sewing (welding)" two ends of steel plates / coils (see Steel Glossary in Appendix 5) after bending them (see Exhibit 32). It accounted for about two third of global pipe consumption in 2002. There are two main types of welding technologies: Electric Resistance Welded (ERW) and Submerged Arched Welded (SAW). ERW technology is generally used for producing low - medium size (diameter up to 24") pipes while SAW big (24" and bigger) pipes. There are two types of SAW pipes - spiral and longitudinal (see Exhibit 31) - with the former has a lower quality and cost than the later (see Exhibit 33). Bakrie Pipe produces ERW pipes and SEA Pipe longitudinal SAW pipes.

ERW Pipe Process

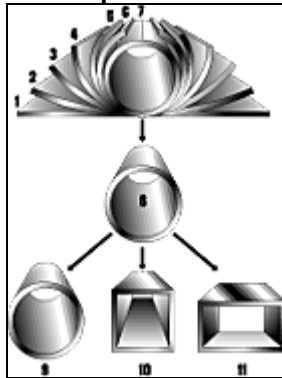


Exhibit 32

BB Produces a Wide Range of Oil & Gas Pipes

	Welded			Seamless
	Electric Resistance Welding (ERW)	Submerged Arch Welding (SAW)		
		Spiral	Longitudinal	
Quality	Low - High	Mid Low	Mid high	High
Cost	Low - High	Mid Low	Mid high	High
Raw material	Hot Rolled Coil	Hot Rolled Coil	Steel plate	Solid steel tube (blooms)
Diameter	Low - Medium	Medium - Large	Large	Low - Medium
Application	On-shore / shallow off-shore oil & gas transmission, construction	On shore oil & gas transmission line, construction	Off-shore / on-shore oil & gas transmission line, construction	Oil & gas wells, sophisticated manufacturing pipe line

Source: Industries

Exhibit 33

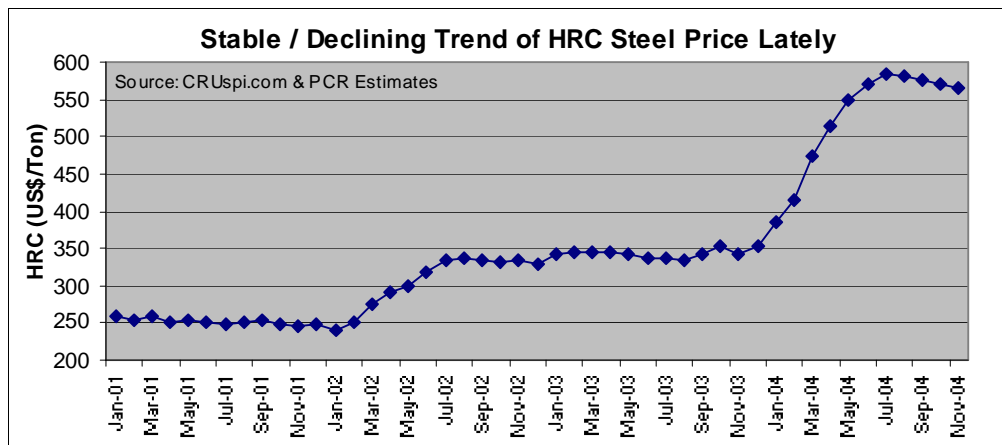


Exhibit 34

Soaring steel price

After witnessing long sluggish years due to overcapacity and lack of demand, HRC (Hot Rolled Coil - See Appendix 5 on Steel Glossary) price recovered in 2002 and then suddenly soared 71% from a low of US\$343/ton in Dec FY03 to US\$585 in Jul 2004 before cooling down 3% to US\$565 in Nov 2004 (see Exhibit 34). The soaring price was due to:

- (i) *China booming demand.* China's booming construction industry fuelled by a galloping economy has been the primarily source of global recovery in the steel price. The recent effort to cool down its economy has helped to reduce steel price.

- (ii) *Global economy recovery.* Economy recoveries in developed countries and recent post-war constructions in Middle East have boosted demand for constructions and infrastructure developments. Developed countries - the US, Europe and Japan - still accounted for more than 80% of 83m tones of steel pipe and tube productions (see Exhibit 35). Previously, the growth of pipe demand by around 2% - 3% pa had been largely driven by Latin America and Asian countries, whose consumption was relatively low (14%).

USA, Europe and Japan Accounted for More Than 80% of Global Steel Production

Country	Production (m Tons pa)	Market Share	Cumulative Market Share
USA	35.23	42%	42%
Europe	23.70	28%	71%
Japan	8.79	11%	81%
Asia Pacific	7.53	9%	90%
Latin America	4.13	5%	95%
Canada	2.38	3%	98%
Middle East	1.69	2%	100%
Total	83.45	100%	

Source: Industries

Exhibit 35

Expect a correction on the long-term steel price

We expect HRC price to increase slightly in 2005 but undergo a correction in 2006 as China construction industry cools down. The expected long-term decline in steel price will benefit non-integrated downstream players like pipe producers as it will mitigate the scarcity of materials and reduce raw material (HRC) costs, translating into lower price and greater domestic demand. The increase in steel price in the past one year has benefited upstream steel industries such as iron mining or integrated steel manufactures but not domestic pipe producers.

DOMESTIC MARKET OVERVIEW

Falling output led to the industry consolidation

Following the 1997 financial crisis, the domestic welded pipe production had halved from 560 tons 1996 to 260 tons in 1998 (see Exhibit 36). However, it has since recovered to 320 tons in 2002. The falling output had reduced the industry utilisation rate to around 20% in 2002 and led to an industry consolidation with the number players shrinking from 30 in 1996 to 23 in 2002. Of the remaining players, a majority focus on ERW pipes like Bakrie Pipe does, and only 2 companies, including SEA Pipe, produce longitudinal SAW pipes.

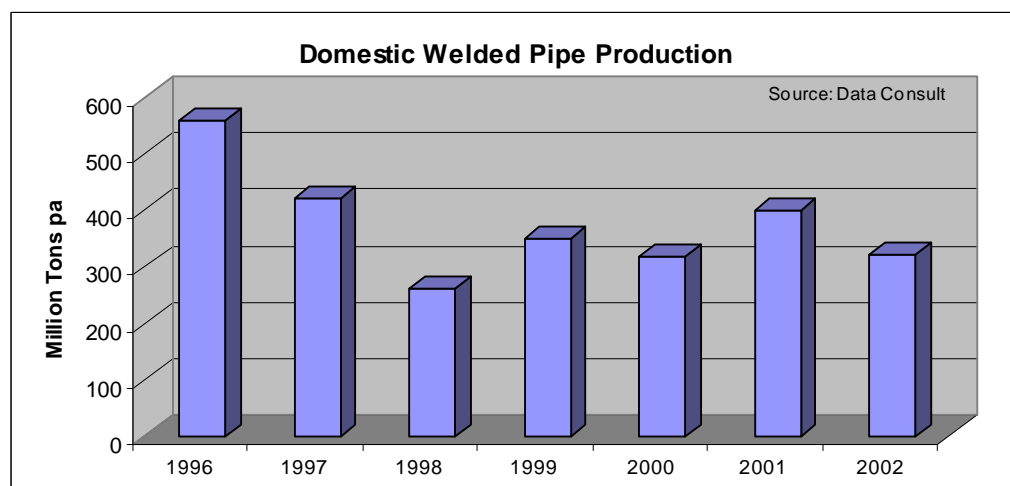


Exhibit 36

Domestic pipes dominated the pipe industry

Of total Indonesian pipe consumption in 2002, 85% came from domestic producers and only 15% from imported pipes mainly from Japan (35%) and Singapore (14%). About three quarters (76%) domestic pipe production in 2002 was welded pipes and the remaining (24%) seamless pipes.

Many reasons why export sales are not as attractive as domestic sales

Margins on export sales generally are not as attractive as those of domestic sales because of (i) high import tariffs for steel in most countries, (ii) high transportation costs, and (iii) an existence of informal control on steel. The world steel trading market is dominated and shared by large, integrated steel players that have competitive advantages in sourcing raw materials and slashing prices. These include Tenaris group of Latin America (the strategic partner of Seamless Pipe), Sumitomo of Japan, V&M Tubes (a JV between France's Vallourec SEA and Germany's Mannesmann) of Europe. Adding to the difficulty in getting good margins on export is challenges to win contracts to supply oil and gas projects overseas given a lack of business networks and knowledge of local geography.

Expect rebound in demand for oil and gas pipes

We expect demand for oil and gas pipes to improve due to:

1. *Rising oil price.* Oil price had more than doubled from US\$20 per barrel in 2001 to US\$49 in August 2004 before easing to US\$44.6 in Nov 2004 (see Exhibit 37). This has encouraged many oil producers to do more explorations and exploitations, translating into greater demand for pipes to make oil / gas wells and distribute the products. The demand has tripled consumption of seamless pipe from mere 29k tpa in 1999 to 90k tpa in 2002 (see Exhibit 38). Domestic pipes have a competitive advantage as they enjoy a 15% preferential tariff over imported pipes for many projects funded by the government. On a normal course, there are estimated 90K – 100K tons pa demand for seamless pipes based on a requirement to drill 1,200 new oil wells each year just to meet the past 1.22m barrels per day oil output given by the OPEC.

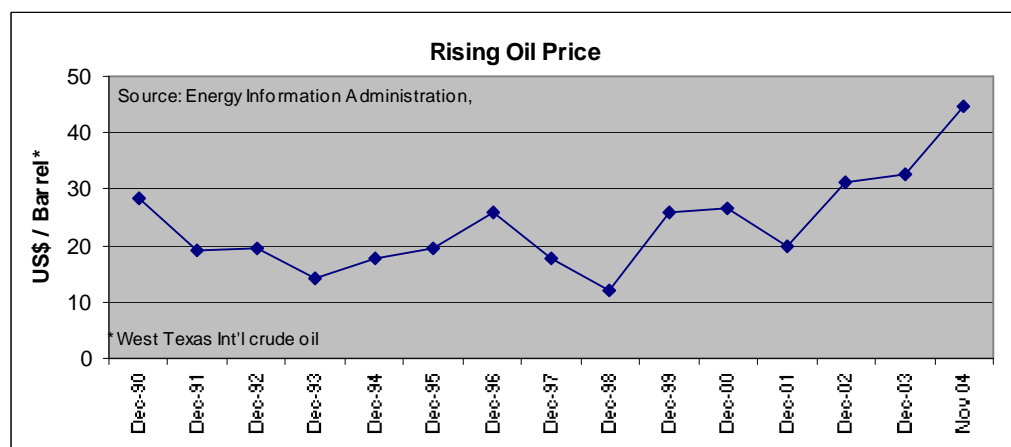


Exhibit 37

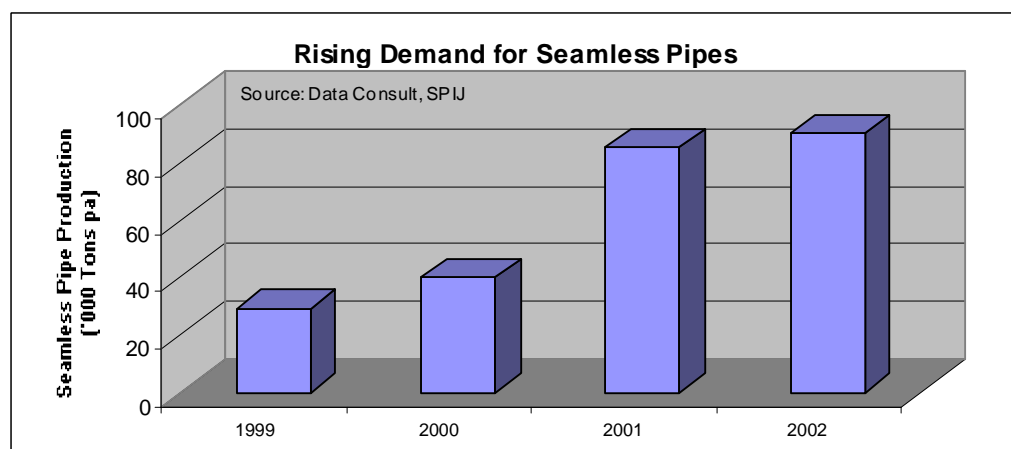


Exhibit 38

2. *More stable political outlook.* Post the presidential election, there is a more stable political landscape to push investments in the oil and gas sector. The new government's key economic team, including the vice president Jusuf Kalla, are businessmen. They are expected to have sensible approaches to bolster income from the oil and gas sector, one the main sources of the government's income.
3. *Higher import tariff protection.* We expect the government to harmonise import tariffs on steel products by rising the currently low (5% - 15%) tariff for down stream steel products like pipe while maintaining the relatively high (20%) tariff for upstream steel products like HRC. This harmonisation is needed on the ground that (i) the domestic pipe industry is suffering from a low (20% -30%) utilisation rate, (ii) Indonesian import tariffs on steel product are relatively low compared to many other countries', and (iii) the government needs to balance the high tariff for upstream steel products (HRC) with comparable tariffs for their downstream products like pipes to allow pipe producers to survive competitions with imported pipes.
4. *Liberalisation of oil and gas sector.* The liberalisation, which is expected to drive the oil and gas industry growth, came through the passing of Oil and Gas Law in 2001. The new law (i) reduced Pertamina's monopoly on upstream oil development in FY03, (ii) transferred Pertamina's regulatory and administrative functions to a new body, BP Migas, and (iii) aimed to end Pertamina's retail and distribution monopoly for petroleum products in 2004. Further, the government aims to privatise state oil Pertamina in 2006.
5. *Rising export demand for gas.* Total gas consumption in developing Asia is expected to grow at a CAGR of 3.9%, twice as fast as the world average, in the next five year. Rising demand for gas is due to (i) concerns over depleting oil reserves worldwide, (ii) rising oil price, which triggers demand to find cheaper alternatives like gas, and (iii) increasing uses of gas for many industries like automobile, cooking, heating, etc.

Meanwhile, Indonesia is the world largest LNG (*Liquefied Natural Gas*) exporter. Indonesia's LNG accounted for 22% of the world's traded LNG in 2002 with major export markets being Japan (66%), Korea (21%), and Taiwan (13%). Indonesia through a JV with British Petroleum is developing a third liquefaction plants at Tangguh (Papua - East Indonesia) to supply to China, US and Korea. Currently, LNG is processed at the two liquefaction plants, PT Arun LNG (Aceh) and Bontang LNG (S. Borneo).

6. *Rising demand to build national and international gas pipelines.* Having built one of the longest (400 mile) pipeline in the world from Natuna island (Sumatra) to Singapore, Indonesia is actively building more pipelines given:
 - (i) *Demand from power plant.* Indonesia has been facing a shortage of electricity for many years and electrify demand is projected to grow by 7% - 10% pa in the next five years from the estimated 21.4 gigawatts currently. Gas (which often requires pipelines to distribute) and coals are expected to become the main sources of energy for new power plants given their low cost and abundant supply. From the government's view, there is a need to reduce reliance on expensive fuels, which is used in more than a half of the existing power plants.
 - (ii) *Liberalisation of power sector.* The new electricity law passed in Sept 2002 should drive demand for pipelines to support more independent power plants (IPP).
 - (iii) *Privatisation and completion of restructuring in state power and gas companies.* The listing of state-owned gas pipeline Perusahaan Gas Negara (PGN) has increased its ability to raise funds to build pipelines. The completion of government's renegotiations with 26 independent power plants in FY03 and conclusion of PLN's restructuring should encourage more investments in power plants, translating into more demand for gas pipelines.
 - (iv) *Development of regional pipeline infrastructure.* There has been a plan to develop international gas pipelines such as Trans ASEAN Gas Pipeline, which connects the ASEAN countries, and Asian Gas Grid, which links Asia.

UNIT OVERVIEW

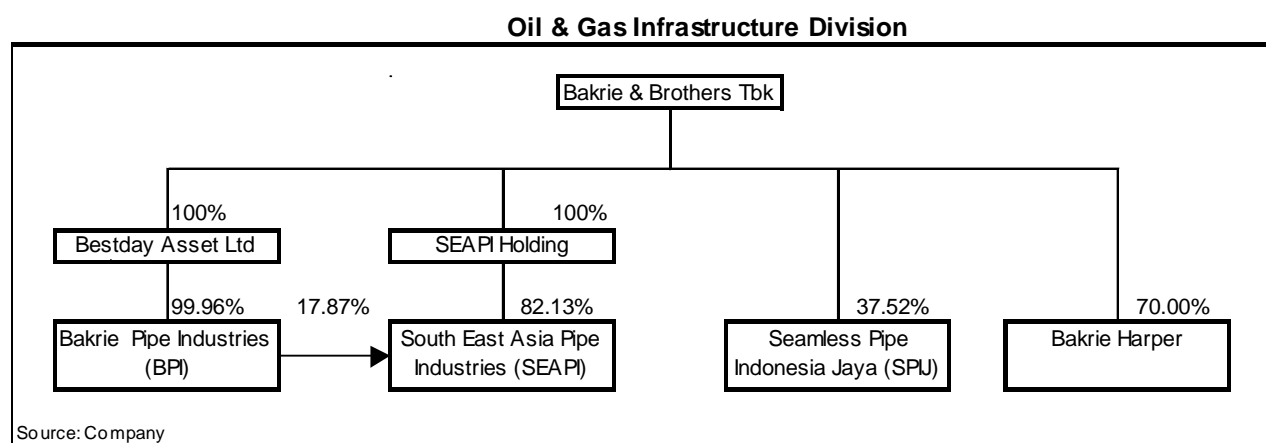


Exhibit 39

Largest revenue and second largest NAV contributor to the Group

Oil and gas infrastructure unit is the largest (40%) revenue contributor and third largest (10%) NAV contributor to BB. The unit consists of three companies (Bakrie Pipe, SEA Pipe, Seamless Pipe) that produce various types of steel pipes and a pipeline company (Bakrie Harper) (see Exhibit 40). The largest NAV come from Seamless Pipe (5.4% of BB's NAV), followed by SEA Pipe (2.5%), Bakrie Harper (1.5%), and Bakrie Pipe (0.4%) (see Exhibit 40). The largest revenues come from Bakrie Pipe, which accounted for 40% of BB's revenues in FY03, as Seamless Pipe's was accounted under the equity method and Bakrie Harper was non-operating. The unit posted positive EBITDA but were loss making in FY03 mainly due to interest expense, forex losses and low utilisation rates.

Command a significant market share

With a combined capacity of 0.52m tons pa in the three steel pipe companies, the unit is commanding an estimated 30% of the domestic production capacity. The subsidiaries have significant market share in their respective industries. Bakrie Pipe controls around 55% market share (see Exhibit 40). Seamless Pipe is operating in a market with only two major players as it and Citra Tubindo split a 77% market share with the remaining 23% shared by few small players and imported pipes. SEA Pipe is one of the only two longitudinal SAW pipe producers in Indonesia and, based on its 150,000 tons pa capacity, has a 60% theoretical market share in its type of pipe.

Summary of Oil & Gas Infrastructure Division

	Seamless Pipe Indonesia Jaya (SPIJ)	Bakrie Pipe Industries (BPI)	SEA Pipe Industries (SEAPI)	Bakrie Harper Corp	Total
Shareholding					
BB's Share	37.52%	99.96%	82.13%	70.00%	na
Other shareholders	Pertamina (28.86%), Asia Pacific Pipe Investment (19.25%), Krakatau Steel (4.73%), Asia Dev'l Bank (2.51%), Asian Finance & Investment (1.26%), Encona Engineering (5.87%)	Cooperatives (0.04%)	Bakrie Pipe Industries (17.87%)	Pertamina (30%)	na
Valuation & Investment					
NAV to BB (Rp bn)	155	10	73	44	281
% of BB's Total NAV	5.4%	0.4%	2.5%	1.5%	9.8%
Long term Investment	none	SEAPI (17.87%) Bakrie (BB) Ltd	none	none	-
Company Description					
Commenced Operation	1996	1979	1999	Not yet	-
Product	Reheating & threading seamless pipe tubing, casing, and joint coupling	ERW pipe (0.5" - 24" diameter)	SAW Pipe (24" - 48" Diameter)	Pipeline under Build & Rent with Pertamina	-
Capacity (tons pa)	170,000	200,000	150,000	na	520,000
Utilisation Rate	30%	45%	0%	na	0-45%
Market share	40%	55%	60%*	na	40-60%
Product Usage	Oil & gas wells, geothermal drilling	Oil and gas pipeline, construction, electricity pole, water	Oil and gas main distribution pipelines, big construction	na	-
Main competitors	Citra Tubindo (37% market share)	Bumi Kaya Steel, SPINDO, KHI Pipe	KHI Pipe, Indal Steel Pipe, Bumi Kaya Steel	na	-
'03 Financial (Rp bn)**					
Revenues	407	416	3	0	420
EBITDA	21	16	(15)	(1)	(0)
Operating Profit	(29)	6	(17)	(1)	(12)
Net Profit	(86)	(72)	(32)	(1)	(105)
Assets	2,919	1,129	582	239	1,950
Liabilities	2,333	1,441	496	263	2,199
Equity	585	(312)	87	(24)	(250)
% BB Consolidated**					
Revenues	na	40%	0%	0%	40%
EBITDA	na	18%	-17%	-1%	0%
Operating Profit	na	nm	nm	nm	nm
Net Profit	na	nm	nm	nm	nm
Assets	na	22%	11%	5%	38%
Liabilities	na	49%	17%	9%	75%
Equity	na	-14%	4%	-1%	-11%

*SEA Pipe is the larger of only two longitudinal SAW pipe producers in Indonesia. Market share is based on plant capacity and excludes imported pipes and substitutes such as spiral pipe

** Seamless Pipe financial statements are in USD, translated at an average exchange rate of Rp8,703/US\$ for income statement and the year-end exchange rate of Rp8,940/US\$ for balance sheet in 2003. Seamless Pipe is accounted under the equity method and hence its percentage of total consolidated figures is not applicable. Due to inter-company elimination and adjustments, sum of P&L and Balance Sheet figures do not necessarily equal to BB's consolidated figures. The same is true for the percentage contribution to BB's consolidated financial figures.

Source: Companies & PCR Estimates

Exhibit 40

SEAMLESS PIPE INDONESIA JAYA (SEAMLESS PIPE)

Summary

Within the oil and gas infrastructure unit, Seamless Pipe is the largest (5.4%) NAV contributor to BB. It is the prime beneficiary of the expected rebound in oil and gas exploitation activities as its seamless pipe is the pipe used to make oil and gas wells. Seamless Pipe commands a market leadership with a 40% market share in a market dominated by two major players. It has a strong shareholding structure and a strategic partnership with Tenaris. It is expected to post a huge improvement in its balance sheet post the conversions of estimated US\$173m debts and shareholder loans to equity potentially in FY05F. It is forecast to book a 34% CAGR of EBITDA in FY04F- FY07F. Its main risks are industry overcapacity and low import tariff protections.

Overview

Market leadership in a duopoly market

Seamless Pipe is the market leader in the seamless pipe heat and non-heat treatment industry with a 40% market share. The industry is dominated by two major players with the other being Citra Tubindo, which commands a 37% market share. The remaining 23% market share is divided by three small players and imported pipes.

Strong shareholding structure

Other than BB (38% shareholder), there are six other shareholders including the domestic oil monopoly Pertamina (29%), Asia Pacific Pipe Investment (19%), the largest domestic steel producer Krakatau Steel (5%), bank and investors (10%) (see Exhibit 40). It has a strategic partnership with one of the world largest steel player Tenaris, who supplies the main raw material (green pipe) and market Seamless Pipe's products overseas.

Secured source of raw material

Seamless Pipe's main raw material is green pipe, which accounts for 69% of COGS with the rest coming from other materials (9%), depreciation (13%), overhead (8%) and labour (1%). Although green pipes are not available locally, their supply is secured through the agreement with Tenaris, which imports them from its plant in Argentina and store them in Singapore warehouse.

Main business is adding value to green pipe

Seamless Pipe's main business is to provide cold-finishing services including heat treatments, threading and couplings to green (raw) pipes according to customers' specification (see Appendix 5 for Glossary of Steel Terminology). The non-heat treatment includes pipe coating and "carving" of threads around two ends of pipe so that the pipe becomes like a bolt. Seamless Pipe also makes coupling (similar to "nut") to link two pipes ("bolt"). The heat and non-heat treatments are for both for the *outer* walls of oil / gas wells (called casings) and for the *inner* walls (tubings) (see Appendix 5 for Glossary).

Outlook

Expect a double-digit growth in EBITDA

We expect Seamless Pipe's EBITDA to increase by a CAGR of 34.0% during FY04F – FY07F (see Exhibit 41) given a low base of US\$2m EBITDA in FY04F and the expected recovery of the oil and gas sector. Seamless Pipe is not expected to be profitable in the near future as (i) we have not factored in the debt-to-equity swap that potentially may occur in FY05F. (ii) The depreciation charges increase as volume increases given its depreciation policy, which is based on unit-of-production.

Seamless Pipe's Earnings Model

(Rp bn)	2003	2004F	2005F	2006F	2007F	CAGR '04-'07
Volume (Tons)	36,638	50,641	55,705	58,491	61,415	6.6%
Price (Rp m/ ton)	1,277.1	1,183.6	1,382.4	1,401.3	1,396.6	5.7%
Total Revenues	46.8	59.9	77.0	82.0	85.8	12.7%
Total COGS	43.0	56.2	71.3	75.8	79.1	12.0%
Gross Profit	3.8	3.7	5.7	6.2	6.7	21.7%
Operating Expense	7.2	8.7	8.5	7.8	7.9	-3.1%
Operating Income	(3.4)	(5.0)	(2.8)	(1.7)	(1.2)	-37.2%
Depreciation & Amortisation*	6.2	7.0	6.9	5.7	6.0	-4.7%
EBITDA	2.8	2.0	4.1	4.1	4.8	34.0%
Net Interest	(4.1)	(3.2)	(2.6)	(2.6)	(2.6)	-6.3%
FX loss	(0.6)	0.5	-	-	-	-100.0%
Others	(2.2)	(1.0)	(1.1)	(1.1)	(1.2)	5.0%
Total Other Expense	(6.9)	(3.7)	(3.7)	(3.7)	(3.8)	0.9%
Pretax Profits	(10.3)	(8.7)	(6.5)	(5.4)	(5.0)	-16.7%
Tax	0.4	1.3	1.9	1.6	1.5	5.0%
Net Income	(9.9)	(7.4)	(4.5)	(3.8)	(3.5)	-21.9%
<i>Ratio</i>						
Gross margin	8.2%	6.2%	7.4%	7.5%	7.8%	
Operating margin	-7.2%	-8.3%	-3.6%	-2.0%	-1.4%	
<i>Assumptions</i>						
Year End FX rate	8,465	8,900	8,874	9,051	9,233	
Average Exchange Rate	8,703	8,683	8,887	8,963	9,142	
*Depreciation is based on unit of production. Declining figures in 2005-2006 are due to decreasing amortisation of deferred charges						
Source: Company & PCR Estimates						

Exhibit 41

Expect debt restructuring in 2005

Seamless Pipe is likely to see a 323% (US\$173m) jump of its equity from US\$54m to US\$226m in FY05F (see Exhibit 42). The jump comes from (i) a potential conversion of 65% of its US\$172m debts into equity and (ii) a conversion of US\$61m due to shareholders (mainly BB) into equity (see Exhibit 43). Both of these conversions are expected to chop interest expenses and place Seamless Pipe in a stronger position to raise working capital and capex funding to bolster its low utilisation rate of 20% currently. Note that we have not factored in the impact of the debt restructuring into our earnings forecast though we have included them in our valuation (see Exhibit 43).

Debt-to-Equity Swap and Conversion of Shareholder Loan to Quadruple Equity

	Total (US\$ m)	BB's Share	BB's Equity* (US\$ m)
Seamless Pipe's Equity as of FY04F	54	37.5%	20
Assumed conversion of "Due To Parent" into Equity	61	80.7%	49
Assumed conversion of Debt to Equity	112	0.0%	-
Total Equity Post Conversion	226	30.6%	69
Change due to conversion (US\$ m)	173	na	49
Change due to conversion (%)	323%	-6.9%	245%
*Represent BB's proportionate equity in Seamless Pipe			
Source: PCR Estimates			

Exhibit 42

Potential entrance of a new strategic partner

We believe BB is looking for a new strategic partner for Seamless Pipe. One of the candidates is Tenaris as (i) Tenaris has already provided export marketing assistance and raw material procurements to Seamless Pipe, (ii) Tenaris does not have any investment in seamless pipe processing plant in the region, and (iii) Seamless Pipe is the largest player in the domestic market.

Risks

Threats of Citra Tubindo and industry excess capacity

Seamless Pipe competes with Citra Tubindo (Citra), whose shareholders include Sumitomo and Nissho Iwai of Japan, V&M Tubes of Europe. These shareholders have strong marketing networks in region and help Citra to source green pipes from Japan, which is nearer than Seamless Pipe's source from Argentina. Both Citra and Seamless Pipe have plenty of excess capacity with Seamless Pipe's alone running only at 20% - 30% utilisation rate. However, nearly all of Seamless Pipe's revenues come from domestic market, in which Seamless Pipe has well-established networks. Citra, on the other hand, derives more than a third of its revenues from exports. The seamless pipe market has only two main players and hence the competition, despite the industry overcapacity, is manageable.

Increasing competition from imported pipe

The market share of imported seamless pipe has increased from estimated 5% few years ago to around 15% currently. This is largely because raw materials (green pipe) and finished products (OCTG pipe) are subject to the same import tariff of 5% and many traders imported low-quality but cheap pipes from China and Eastern Europe. However, with the rebound of oil and gas sector, domestic producers are expected to be able to derive greater economies of scale to better compete with imported pipes.

Valuation

Valuation is based on the DCF approach adjusted by an expected debt restructuring

We value BB's 37.5% stake in Seamless Pipe at Rp155bn (see Exhibit 43). The valuation is derived from (i) negative US\$55m DCF valuation on its equity (see Exhibit 43 & 45) (ii) plus US\$112m "gains" from an expected conversion of 65% debts to equity (iii) less the impact of a 6.89 percentage point reduction in BB's share in Seamless Pipe from 37.5% to 30.6% as a result of conversion of debt and due to parent into equity (see Exhibit 42). The DCF valuation uses a 7.6% discount rate as it is based on US\$ cash flow and a 2.5% terminal growth (see Exhibit 45). A sensitivity analysis to changes in the terminal growth rate and discount rate is shown in Exhibit 44.

Debt-to-equity swap is based on the market value of debt

Our 65% debt-to-equity assumption rests on an estimate that the market value of debts is not more than 35 cents a dollar as Seamless Pipe has not serviced the debts. Further, lenders probably have no better alternative than to convert the debts into equity eventually as the debts at their face value are worth more than the company's overall valuation. Lenders have to restructure the debts to ensure that Seamless Pipe can sensibly service the debts.

The DCF valuation yields low P/aBV but high EV/EBITDA

The DCF approach results in a low 0.25x FY05F P/aBV (see Exhibit 43) after adjusting FY05F equity by the expected US\$112m debt-to-equity conversion and US\$61m conversion of due to parent into equity. The low P/aBV multiple has largely discounted Seamless Pipe's accounting policy, which depreciates machinery based on unit of production. Admittedly, the valuation yields a rather high 28.5x FY05F EV/EBITDA. However, assuming Seamless Pipe is to be divested, BB should be able to fetch the estimated valuation, which represents about 60% discount to its fixed asset value, a proxy of its replacement cost, at US\$289m.

Seamless Pipe's Valuation Summary

	Sub Total (US\$ m)	Sub Total (US\$ m)	Total (US\$ m)
DCF Valuation			
DCF value of existing operation (see DCF Valuation below)			(55)
Debt as of Dec 2004F		172	
Expected debt-to-equity conversion		65%	
Reduction in debts due to debt-to-equity sw ap			112
Fair Market Value of equity (US\$ m)			56.8
FX Rate (Rp/US\$)			8,900
Fair Market Value of equity (Rp bn)			506
BB's current share in Seamless Pipe		37.5%	
Estimated dilution due to debt-to-equity conversion*		-6.9%	
BB's share post debt-to-equity conversion			30.6%
BB's NAV (Rp bn)			155
EV/EBITDA Valuation			
DCF value of existing operation (equity value)		57	
Debt as of Dec 2005F	172		
Reduction in debts due to debt-to-equity sw ap	(112)		
Fair value of Debt		60	
Total Enterprise Value			117
FY05F EBITDA			4.1
Implied FY05F EV/EBITDA (x)			28.5
Price to Adjusted Book Value (P/aBV) Valuation			
Fair Market Value of equity (US\$ m)		56.8	
FY05F Book Value of Equity	54		
Assumed conversion of "Due To Parent" into Equity	61		
Assumed conversion of Debt to Equity	112		
FY05F Adjusted Book Value of Equity		226	
Implied FY05F Price / adjusted BV (x)			0.25
*See below exhibit			
^To be conservative, we assume creditor needs some incentive, in the form of greater control over the company, to accept debt-to-equity conversion			
Source: PCR Estimates			

Exhibit 43

Sensitivity Analysis of Seamless Pipe's DCF Valuation

Terminal Growth	Weighted Average Cost of Capital										
	5.1%	5.6%	6.1%	6.6%	7.1%	7.6%	8.1%	8.6%	9.1%	9.6%	10.1%
0.500%	(32)	(46)	(58)	(68)	(77)	(84)	(90)	(95)	(100)	(104)	(108)
1.000%	(17)	(34)	(49)	(60)	(70)	(78)	(85)	(91)	(97)	(101)	(106)
1.500%	3	(19)	(37)	(51)	(62)	(72)	(80)	(87)	(93)	(98)	(103)
2.000%	29	(0)	(22)	(39)	(53)	(64)	(73)	(81)	(88)	(94)	(99)
2.500%	65	25	(3)	(25)	(42)	(55)	(66)	(75)	(83)	(90)	(95)
3.000%	118	60	21	(7)	(28)	(44)	(57)	(68)	(77)	(84)	(91)
3.500%	206	113	56	18	(9)	(30)	(46)	(59)	(70)	(78)	(86)
4.000%	376	199	107	52	15	(12)	(33)	(48)	(61)	(71)	(80)
4.500%	850	366	192	102	48	11	(15)	(35)	(51)	(63)	(73)

Source: PCR Estimates

Exhibit 44

Negative DCF Valuation for Seamless Pipe Based on Book(Instead of Market) Value of Debt

Period	1	2	3	4	5
Year	2005	2006	2007	2008	2009
Operating Profit	(2.8)	(1.7)	(1.2)	(0.8)	(0.3)
+ Tax	1.2	0.8	0.7	0.6	0.5
+ Depreciation & Amortisation	6.9	5.7	6.0	6.3	6.5
+ Others	-	-	-	-	-
+ Working Capital & Others	(3.1)	(0.6)	(0.1)	(0.3)	0.3
Operating Cash Flow	2.2	4.3	5.4	5.9	7.0
Capex	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)
Free Cash Flow	2.1	4.2	5.3	5.8	6.9
Terminal Growth Assumption	2.5%				
Year of Terminal Growth	5				
CF @ end of forecast period	7				
WACC	7.6%				
	(US\$ m)	(US\$ m)			
PV at WACC	19				
PV of Terminal Value	97				
Total PV	115				
- Net Debt	(171)				
NAV		(55)			

Source: PCR Estimates

Exhibit 45

Seamless Pipe's Balance Sheet

FY Dec 31 (US\$ m)	2003	2004F	2005F	2006F	2007F
Cash & Equivalence	2	2	2	2	2
Receivables	8	7	10	10	11
Inventories	15	14	16	17	17
Other Current Assets	2	3	4	4	4
<i>Total Current Assets</i>	26	25	31	33	34
Fixed Asset	292	285	278	273	267
Long Term Receivables	1	1	1	1	1
Other	7	6	4	4	4
Total Assets	326	317	315	311	306
S-T Loans	10	10	10	10	10
Payables	63	2	3	3	3
Other Current Liabilities	15	16	16	17	18
Current Maturity - LT Debt	30	31	32	32	33
<i>Total Current Liabilities</i>	118	59	60	62	63
Long Term Payables	1	62	62	62	62
Deferred Tax	7	7	7	7	7
Debts	135	131	132	130	127
<i>Total Liabilities</i>	262	259	261	261	259
<i>Total Equity</i>	65	58	54	50	46
Liabilities & Equity	327	317	315	311	306

Source: Company & PCR Estimates

Exhibit 46

BAKRIE PIPE INDUSTRIES (BAKRIE PIPE)

Summary

Bakrie Pipe is the largest (40%) revenue contributor to BB in FY03 although it accounts for less than 1% of BB's NAV due to its large debts. Its revenues are diversified across industries (oil and gas sector and mass market) and markets (domestic and export). It commands a market leadership with a 55% market share. Bakrie Pipe is expected to post book (Rp501bn) gains from its debt restructuring in FY05F and post a 49% CAGR of EBITDA in FY04F – FY07F due to the expected recovery of oil and gas industry. Its main risks are dependency on Krakatau Steel for its raw material and low import tariff protections.

Overview

Diversified sources of revenues

Bakrie Pipe's revenues are split into 3 categories - (i) project based revenues, which are derived mainly from oil and gas industry and accounted nearly two third (64%) of its revenues in FY03 (see Exhibit 47), (ii) revenues from mass market products, which are used mainly for commercial and residential constructions, water pipelines and electricity poles and made up 30% of revenues, and (iii) trading of pipes, which accounted for 6% of revenues. Export sales made up 18% total revenues but accounted for 24% of total volume, as export margins were thinner.

Revenues Came from Three Product Types, Part of Which Exports

	Unit	Total	%		Unit	Total	%
Revenues (2003)				Volume (2003)			
Project based	Rp bn	265	64%	Project based	Ton	60,359	63%
Mass Market	Rp bn	125	30%	Mass Market	Ton	25,138	26%
Trading	Rp bn	27	6%	Trading	Ton	9,622	10%
Total	Rp bn	416	100%	Total	Ton	95,119	100%
Revenues (2003)				Volume (2003)			
Local	Rp bn	343	82%	Local	Rp bn	72,133	76%
Export	Rp bn	73	18%	Export	Rp bn	22,986	24%
Total	Rp bn	416	100%	Total	Rp bn	95,119	100%

Source: PCR Estimates

Exhibit 47

Well-established player with a market leadership

Established in 1960, Bakrie Pipe is one of the oldest steel pipe producers in Indonesia and commands a market leadership with a 55% market share in its product range of 0.5 – 24 inches diameter ERW pipes. It is one of local producers allowed to carry the American Petroleum Institute (API) monogram on its product to signify an endorsement to its quality. Bakrie Pipe was voted the best customer by the key supplier Krakatau Steel in the last three consecutive years.

Outlook

Strong cash flow growth

We expect Bakrie Pipe's EBITDA to grow by a CAGR of 49% in FY04F - FY07F (see Exhibit 48) given (i) an expected recovery of the oil and gas industry, and (ii) forecast increased margins as it gradually passes on the raw material price increases to consumers and raises its utilisation rate. The sign of recovery is evident in its recent winning of huge US\$12m contract to supply to BP's APN gas project in April 2004.

Expect one-off gain and stronger balance sheet from the impending debt restructuring

We expect Bakrie Pipe to book Rp501 after-tax gains (see Exhibit 49) upon completion of its debt restructuring in FY05F as we believe it can get a 50% debt hair cut on its US\$152m loans. The debt restructuring will strengthen Bakrie Pipe's balance sheet and place it in a better position to raise funds to finance growths.

Bakrie Pipe's Earnings Model

(Rp bn)	2003	2004F	2005F	2006F	2007F	CAGR '04-'07
Volume (Tons)	95,119	74,193	96,451	120,563	144,676	24.9%
Price (Rp m/ ton)	503.0	714.3	642.9	546.4	548.9	-8.4%
Total Revenues	416.4	460.1	551.0	590.4	726.1	16.4%
Total COGS	377.0	418.7	490.4	506.3	621.1	14.0%
Gross Profit	39.4	41.4	60.6	84.1	105.0	36.3%
Operating Expense	33.4	23.9	26.9	28.5	31.5	9.6%
Operating Income	6.0	17.5	33.7	55.6	73.5	61.2%
Depreciation*	10.0	10.1	12.6	15.2	17.9	20.9%
EBITDA	15.9	27.6	46.2	70.8	91.4	49.0%
Net Interest	(50.4)	(58.4)	(32.9)	(38.1)	(38.5)	-12.9%
FX loss	66.3	(47.8)	2.9	(19.5)	(19.9)	-25.3%
Others	(1.9)	(50.5)	673.5	-	-	-100.0%
Total Other Expense	14.0	(156.8)	643.5	(57.6)	(58.5)	-28.0%
Pretax Profits	20.0	(139.2)	677.2	(2.0)	15.0	-147.6%
Tax	(92.3)	55.7	(203.2)	0.6	(4.5)	-143.3%
Net Income	(72.3)	(83.5)	474.0	(1.4)	10.5	-150.1%
<i>Ratio</i>						
Gross margin	9.5%	9.0%	11.0%	14.2%	14.5%	
Operating margin	1.4%	3.8%	6.1%	9.4%	10.1%	
<i>Assumptions</i>						
Year End FX rate	8,465	8,900	8,874	9,051	9,233	
Average Exchange Rate	8,703	8,683	8,887	8,963	9,142	
*Depreciation is based on unit of production						
Source: Company & PCR Estimates						

Exhibit 48

Risks

Limited number of raw material suppliers

Bakrie Pipe's COGS consists mainly of HRC (70%) with the rest coming from other materials (15%), overhead (12%), depreciation (2%) and labour (1%). Nearly all of HRC is supplied from Krakatau Steel, which controls a 78% market share with its 2m tpa capacity. Supplies from three other players Gunawan Dianjaya Steel (14% market share), Jaya Pari Steel (4%) and Gunung Raja Paksi Steel (4%) are limited. However, upon completion of its debt restructuring, Bakrie Pipe will significantly reduce its funding constraints and bolster its strengths in procuring raw materials from different sources such as overseas (imported materials) at more favourable prices.

Valuation

Valuation is based on the DCF approach adjusted by debt hair cut and long term investments

We value BB's 99.96% stake in Bakrie Pipe at Rp15bn (see Exhibit 49), accounting for only 0.4% of BB's total NAV. The small NAV is primarily due to Bakrie Pipe's huge debts. The valuation is based on a DCF approach adjusted by (i) after-tax gains from the expected 50% debt hair cut and (ii) market values of its investments in Bakrie (BB) Ltd, SEA Pipe, and project under development (a galvanising plant) (see Exhibit 49 & 52). The DCF valuation employs a 12.9% discount rate and 4% terminal growth (see Exhibit 50). A sensitivity analysis to the changes in the terminal growth rate and discount rate is shown in Exhibit 51.

Bakrie Pipe's Valuation Summary

	Sub Total (Rp bn)	Sub Total (Rp bn)	Total (Rp bn)
DCF Valuation			
DCF of equity value of existing operation (see DCF Valuation below)			(584)
Debt as of Dec 2004	1,347		
Assumed debt hair cut	<u>50%</u>		
Gain from debt hair cut	674	674	
Tax rate on gain from debt hair cut	<u>30%</u>		
Tax on gain	(202)		
Offset: Deferred tax assets as of FY04F	<u>30</u>		
Net tax paid		(172)	
Net-of-tax gain from debt hair cut			501
Book Value of 1.46% share in Bakrie (BB) Ltd		61	
Discount		<u>70%</u>	
			18
Book Value of Project Under Development*		251	
Discount to Book Value		<u>75%</u>	
Fair Market Value of Project Under Development*			63
Fair Market Value of SEA Pipe [^]		89	
Share in SEA Pipe		<u>18.0%</u>	
Market Value of share in SEA Pipe			<u>16</u>
Fair Market Value of Bakrie Pipe equity			15
BB's share			<u>99.96%</u>
BB's NAV in Bakrie Pipe			15
EV/EBITDA Valuation			
DCF value of existing operation	(584)		
Book Value of 1.46% share in Bakrie (BB) Ltd	63		
Fair Market Value of Project Under Development*	63		
Market Value of share in SEA Pipe	<u>16</u>		
Fair Equity Value		(442)	
Fair Debt Value as of FY05F		<u>803</u>	
Total Enterprise Value			361
FY05F EBITDA			<u>46</u>
Implied FY05 EV/EBITDA (x)			7.8
Price to Adjusted Book Value (P/aBV) Valuation			
Fair Market Value of Bakrie Pipe equity		15	
FY05 Book Value of Equity		<u>113</u>	
Implied FY05F Price / adjusted BV (x)			0.13
* Unfinished Galvanising plant			
^ See SEA Pipe Valuation			
Source: PCR Estimates			

Exhibit 49

Sensible P/aBV multiple despite a rather high EV/EBITDA multiple

The DCF approach yields a sensible 0.13x FY05F Price to adjusted Book Value (P/aBV), after adjusting the equity for the expected gains from the debt hair cut (see Exhibit 49). Although the valuation yields a rather high 7.8x FY05F EV/EBITDA multiple, it is sensible on the ground that (i) Bakrie Pipe has significant assets such as investments in SEA Pipe, Bakrie (BB) Ltd, and Project Under Development that do not contribute to EBITDA but do inflate EV, (ii) the replacement cost of its main assets (machinery) is in US\$, and (iii) it is projected to post a high (49%) CAGR of EBITDA in FY04F - FY07F (see Exhibit 48)

Bakrie Pipe has Negative DCF Valuation Before the Impending Debt Hair Cut

Period	1	2	3	4	5
Year	2005	2006	2007	2008	2009
Operating Profit	34	56	73	84	97
+ Tax	(10)	(11)	(13)	(15)	(17)
+ Depreciation & Amortisation	13	15	18	19	21
+ Others	-	-	-	-	-
+ Working Capital & Others	16	(13)	(31)	(16)	(11)
Operating Cash Flow	52	47	47	72	91
Capex	(10)	(4)	(1)	(2)	(3)
Free Cash Flow	43	43	46	70	88
Terminal Growth Assumption	4.0%				
Year of Terminal Growth	5				
CF @ end of forecast period	88				
WACC	12.9%				
	(Rp bn)	(Rp bn)			
PV at WACC	195				
PV of Terminal Value	560				
Total PV	756				
- Net Debt	(1,339)				
NAV		(584)			
Source: PCR Estimates					

Exhibit 50

Sensitivity Analysis of Bakrie Pipe's DCF Valuation

Terminal Growth	Weighted Average Cost of Capital										
	10.4%	10.9%	11.4%	11.9%	12.4%	12.9%	13.4%	13.9%	14.4%	14.9%	15.4%
2.0%	(478)	(532)	(579)	(622)	(660)	(695)	(727)	(756)	(783)	(807)	(830)
2.5%	(434)	(493)	(545)	(592)	(633)	(671)	(705)	(737)	(765)	(791)	(815)
3.0%	(383)	(449)	(507)	(558)	(604)	(645)	(682)	(716)	(746)	(774)	(800)
3.5%	(325)	(399)	(464)	(521)	(571)	(616)	(656)	(693)	(726)	(756)	(783)
4.0%	(258)	(342)	(415)	(478)	(534)	(584)	(628)	(667)	(703)	(735)	(765)
4.5%	(179)	(276)	(359)	(430)	(493)	(547)	(596)	(639)	(678)	(713)	(745)
5.0%	(87)	(199)	(294)	(375)	(445)	(506)	(560)	(608)	(650)	(688)	(723)
5.5%	25	(108)	(219)	(312)	(391)	(460)	(520)	(573)	(620)	(661)	(699)
6.000%	163	2	(129)	(238)	(329)	(407)	(475)	(534)	(585)	(631)	(672)
Source: PCR Estimates											

Exhibit 51

Bakrie Pipe's Balance Sheet

FY Dec 31 (Rp bn)	2003	2004F	2005F	2006F	2007F
Cash & Equivalence	8	8	8	8	8
Receivables	153	152	163	173	199
Inventories	48	53	62	64	79
Other Current Assets	21	23	27	29	36
<i>Total Current Assets</i>	<u>229</u>	<u>236</u>	<u>260</u>	<u>275</u>	<u>322</u>
Long Term Investment	90	48	48	48	48
Fixed Asset	550	543	540	529	512
Project Development Cost	251	251	251	251	251
Deferred Tax Assets	-	-	-	-	-
Other	8	39	9	9	9
Total Assets	<u>1,129</u>	<u>1,117</u>	<u>1,108</u>	<u>1,111</u>	<u>1,142</u>
Payables	87	87	95	96	109
Other Current Liabilities	17	14	17	18	21
Current Maturity - LT Debt	102	100	100	100	100
<i>Total Current Liabilities</i>	<u>206</u>	<u>201</u>	<u>212</u>	<u>213</u>	<u>231</u>
Deferred Tax	80	80	80	80	82
Debts	1,156	1,247	703	706	707
<i>Total Liabilities</i>	<u>1,441</u>	<u>1,528</u>	<u>995</u>	<u>1,000</u>	<u>1,020</u>
<i>Total Equity</i>	<u>(312)</u>	<u>(411)</u>	<u>113</u>	<u>112</u>	<u>122</u>
Liabilities & Equity	<u>1,129</u>	<u>1,117</u>	<u>1,108</u>	<u>1,111</u>	<u>1,142</u>

Source: Company & PCR Estimates

Exhibit 52

SOUTH EAST ASIA PIPE INDUSTRIES (SEA PIPE)

Summary

SEA Pipe derives its revenues mainly from oil and gas sector and accounts for 2.5% of BB's NAV. Based on its plant capacity, it has a theoretical 60% market share in the longitudinal SAW pipe. SEA Pipe is expected to book Rp46bn after-tax gains from its debt restructuring in 4Q04 / FY05F. The company is forecast to post a 68% CAGR of EBITDA in FY05F – FY07F given a strong demand for gas pipelines and the government's commitment to create huge US\$75-110bn infrastructure investments over the next five years. Its main risks are challenges in sourcing imported raw materials (steel plate) and dependency on the commencements of major oil and gas projects.

Overview

The first and largest longitudinal SAW pipe producer in Indonesia

SEA Pipe is the first producer of longitudinal SAW pipe in South East Asia. Currently there are only two producers of SAW pipe in Indonesia with the other producer DSAW has only two third of SEA Pipe's capacity (see Exhibit 53). Including spiral pipe producers that make big (24 inches and above) diameter but lower quality pipes, SEA Pipe's capacity is still ranked the second largest after KHI, a sister company of Krakatau Steel.

SEAPI the Bigger Longitudinal SAW and 2nd Largest Big*-Pipe Producer

Process	Manufacturer	Capacity (Ton pa)	% of Each Type	% of Grand Total
Longitudinal SAW	Seapi/ Lampung	150,000	60%	17%
Longitudinal SAW	DSAW/ Batam	100,000	40%	11%
<i>Total Longitudinal SAW</i>		<i>250,000</i>	<i>100%</i>	<i>28%</i>
Spiral	KHI / Cilegon	200,000	53%	23%
Spiral	Bumi Kaya/ Jkt	60,000	16%	7%
Spiral	Spindo/ Surabaya	60,000	16%	7%
Spiral	Indal/ Surabaya	60,000	16%	7%
<i>Total Spiral</i>		<i>380,000</i>	<i>100%</i>	<i>43%</i>
GRAND TOTAL		880,000		100%

* Above 24 inch diameter
Source: Industries

Exhibit 53

Has initially restructured its debts in 2001

SEA Pipe has restructured its debt in 2001, whereby its Rp325bn (US\$38m) debts were converted into convertible notes held by BB through a special purpose vehicle SEAPI Holding. Technically the debts should be treated as equity as BB owns 100% of SEA Pipe through wholly owned SEAPI Holding (82.13%) and Bakrie Pipe (17.87%) (see Exhibit 39)

Outlook

Have plenty of projects on hand and in the pipeline

We expect SEA Pipe to resume its operation and book Rp6.5bn EBITDA in FY05F and subsequently post a 68% CAGR in EBITDA from FY05F - FY07F (see Exhibit 54). SEA Pipe has already secured an order for 18,500 tons for Suban project to be delivered in 2005. Few other oil and gas projects with estimated 44,000 tons of potential order are expected to be tendered in 2005 (see Exhibit 55). In the long term, it should be able to invest in tooling equipment to produce pipes with diameters of 36 – 40 inches to penetrate new market segments.

SEA Pipe's Earnings Model

(Rp bn)	2003	2004F	2005F	2006F	2007F	CAGR '05-'07
Volume (Tons)	1,341	-	45,000	49,500	56,925	12.5%
Price (Rp m/ ton)	287.2	-	974.3	1,049.2	1,025.0	2.6%
Total Revenues	3.4	-	389.7	465.5	533.4	17.0%
Total COGS	7.5	-	364.1	436.6	498.9	17.0%
Gross Profit	(4.1)	-	25.5	28.9	34.5	16.4%
Operating Expense	12.8	12.2	31.6	27.5	31.2	-0.6%
Operating Income	(16.9)	(12.2)	(6.1)	1.4	3.4	na
Depreciation*	2.0	4.0	12.5	13.4	14.8	8.8%
EBITDA	(15.0)	(8.2)	6.5	14.8	18.2	67.9%
Net Interest	(4.8)	(5.5)	(5.3)	(3.5)	(3.5)	-18.7%
FX loss	(21.1)	(22.7)	1.4	(9.3)	(9.4)	na
Others	0.5	(1.2)	45.6	-	-	na
Total Other Expense	(25.3)	(29.4)	41.7	(12.8)	(12.9)	na
Pretax Profits	(42.2)	(41.6)	35.7	(11.4)	(9.5)	na
Tax	10.2	6.2	(7.1)	2.9	2.9	na
Net Income	(32.0)	(35.4)	28.6	(8.6)	(6.7)	na
<i>Ratio</i>						
Gross margin	-122.5%	na	6.5%	6.2%	6.5%	
Operating margin	-504.4%	na	-1.6%	0.3%	0.6%	
<i>Assumptions</i>						
Year End FX rate	8,465	8,900	8,874	9,051	9,233	
Average Exchange Rate	8,703	8,683	8,887	8,963	9,142	
Capex (Rp bn)	2.8	0.2	1.6	1.3	2.2	
*Depreciation is based on unit of production						
Source: Company & PCR Estimates						

Exhibit 54

Potential 1.3m Tons SAW Pipes Needed During 2004-2009

No	Project	Contractor	Off/On Shore	Length (km)	Pipe Needed ('000 tons)	Delivery
1	Musi-W.Prabumulih-Pagardewa	Pertamina	On	200	45,000	'04-'05
2	Tangguh (Irian)	BP	Piling	na	12,268	'04
3	Tuban Aromatic	TPPI	On	na	745	'04
4	Suban 2	Conoco Phillips	On	44	8,000	'05
5	Pagardewa-Labuhan Maringgal	JBIC	On	270	74,275	'05
6	Labuhan Maringgal - Teluk Banten	PGN	Off/On	100	37,569	'05
7	Labuhan Maringgal - Muara Tawar - Muara	PGN	Off	189	63,000	'05-'06
8	Terang Simasun / Madura	BP	Off	na	17,520	'06-'07
9	Pemping - Tg. PIAI - Johor (Malaysia)	TGI	On	70	15,330	'07
10	Pemping - Grissik	TGI	On/Off	400	80,000	'07
11	Kalimantan - Java Onshore	PGN	On	920	421,000	'08-'09
12	Kalimantan - Java Onshore	PGN	Off	622	379,400	'08-'09
13	Gresik - Semarang	PGN	On	390	58,890	'08
14	Cirebon - Semarang	PGN	On	200	30,200	'08
15	Pagardewa - Labuhan Maringgal	PGN	On	185	39,000	na
16	Grissik - Pagardewa	PGN	Off	270	60,000	na
	Total			3,860	1,342,197	

Source: SEA Pipe

Exhibit 55

Expect gains from cut from second debt restructuring

SEA Pipe is expected to book Rp45.6bn after-tax gains upon completion its second debt restructuring in FY05F (see Exhibit 56). The gains are based on an assumption of a 50% debt hair cut and ability to use its deferred tax assets to partially offset of tax on gains.

BB likely to bring in strategic partner into SEA Pipe

We believe BB is looking to bring in a strategic partner to SEA Pipe post its debt restructuring. The expected boom in the pipeline investments starting 2005 will make SEA Pipe a much more attractive given that (i) it is the largest longitudinal SAW pipe in south east Asia and China and (ii) it is the larger of only two local longitudinal DSAW pipe producers and has a better capacity to produce top quality pipes needed for the most stringent oil and gas pipelines.

Risks

Challenges in sourcing imported raw material at good prices

SEA Pipe's COGS consists largely of raw material steel plate (76%) with the rest coming from other materials (8%), overhead (7%), depreciation (5%), and labour (4%). Steel plates must be imported and they require a minimum quantity and funding, which are lacking in SEA Pipe. However, the completion of debt restructuring will significantly reduce its funding constraints and bolster its strengths in procuring raw materials at favourable prices.

Demand comes only from oil and gas projects

Demand for SEA Pipe's SAW pipe come almost entirely from oil and gas pipeline projects that require large diameter pipes. These are usually projects to link few major points as smaller-diameter pipes are more economically used for typical gas distributions. However, expected commencements of oil and gas projects after 2004 should mitigate the risk of not securing sales. Further, SEA Pipe has a tract record in exports. It should be noted that SEA Pipe has not lost in most tenders that requires SAW pipes. The problem was no such project commenced operation in 2004.

Valuation

Valuation is based on the DCF approach adjusted by a debt hair cut

We value BB's 82% direct stake in SEA Pipe (held by SEAPI Holding) at Rp72.6bn (see Exhibit 56). The remaining 18% share, which is indirectly held through Bakrie Pipe, is valued at Rp16bn and is treated as part of Bakrie Pipe's valuation. The valuation is based on the DCF approach adjusted by Rp46bn after-tax gains from the expected 50% debt hair cut (see Exhibit 56). The DCF valuation employs a 12.9% discount rate (WACC) and 3% terminal growth (see Exhibit 58). A sensitivity analysis to the changes in the terminal growth rate and discount rate is shown in Exhibit 57.

Reasonable P/aBV multiple despite a high EV/EBITDA multiple

Although our valuation yields a rather high 19.8x FY05F EV/EBITDA multiple, it translates into reasonable 0.21x FY05F P/aBV (see Exhibit 56) after adjusting equity for:

- (i) Rp348bn assumed conversion of "Convertible Note to Parent (BB)" into equity (see Exhibit 59 for the Balance Sheet).
- (ii) Rp46bn expected after-tax gain from the debt hair cut (see Exhibit 56).

Likely to be able to sell SEA Pipe at the estimated valuation

We believe BB is likely to be able to divest SEA Pipe at the estimated 0.21x FY05F P/aBV because:

- (i) *The valuation is a fraction of replacement cost.* Our valuation effectively yields US\$14.3m (Rp128bn) enterprise value (see Exhibit 56), or about a quarter of its replacement cost at US\$55m. The replacement cost is based on the historical cost in building the plant few years ago when the steel price was much lower. As there is no major technology breakthrough in SAW pipe production over the past few years since the plant was set up, the historical cost is a reasonable estimate of the current replacement cost.
- (ii) *The plant can be relocated.* The whole plant (including the building) can be dismantled and reassembled at another location within 6-9 months.

- (iii) The plant is relatively new. Commenced operation only in late 1999, the plant was used very little in 2001 (to produce 2.8K tons), 2002 (42.3K tons) and FY03 (1.3K tons).

SEA Pipe's Valuation Summary

	Sub Total (Rp bn)	Sub Total (Rp bn)	Total (Rp bn)
DCF Valuation			
DCF value of existing operation (see DCF Valuation below)			42.9
Debt as of Dec 2004	130.4		
Assumed debt hair cut	50%		
Gain from debt hair cut	65	65	
Tax rate on gain from debt hair cut	30%		
Tax on gain	(20)		
Offset: Deferred tax assets as of FY04F	9		
Net tax paid		(11)	
Net-of-tax gain from an expected debt hair cut			46
Fair Market Value of equity			89
BB's direct share*			82%
BB's NAV in SEA Pipe			73
EV/EBITDA Valuation			
DCF (Equity) value of existing operation		43	
Debt as of Dec 2004F	130		
Net-of-tax gain from an expected debt hair cut	(46)		
Fair Debt Value in 2005F		85	
Total Enterprise Value			128
FY05F EBITDA			6.5
Implied FY05F EV/EBITDA (x)			19.8
Price to Adjusted Book Value (P/aBV) Valuation			
Fair Market Value of equity		89	
FY05F Book Value of Equity after the debt hair cut	80		
Assumed conversion of "Convertible Notes to BB" into equity	348		
FY05F Adjusted Book Value of Equity		428	
Implied FY05F Price / adjusted BV (x)			0.21
* The remaining 16% is held through BPI			
Source: PCR Estimates			

Exhibit 56

Sensitivity Analysis of SEA Pipe's DCF Valuation

Terminal Growth	Weighted Average Cost of Capital										
	10.4%	10.9%	11.4%	11.9%	12.4%	12.9%	13.4%	13.9%	14.4%	14.9%	15.4%
1.0%	66	55	45	35	27	19	12	6	(0)	(6)	(11)
1.5%	76	63	52	42	33	24	17	10	3	(3)	(8)
2.0%	86	72	60	49	39	30	22	14	8	1	(5)
2.5%	97	82	69	57	46	36	27	19	12	5	(1)
3.0%	110	93	78	65	53	43	33	25	17	10	3
3.5%	125	106	90	75	62	50	40	31	22	15	7
4.0%	143	121	102	86	72	59	47	37	28	20	12
4.5%	163	138	117	98	82	68	56	45	35	26	17
5.0%	187	158	133	112	94	79	65	53	42	32	23

Source: PCR Estimates

Exhibit 57

Positive Free Cash Flow Expected from 2005 onward for SEA Pipe

Period	1	2	3	4	5
Year	2005	2006	2007	2008	2009
Operating Profit	(6)	1	3	6	8
+ Tax	(1)	(1)	(1)	(1)	(1)
+ Depreciation & Amortisation	13	13	15	16	17
+ Working Capital & Others	(2)	3	2	1	0
Operating Cash Flow	3	17	19	21	24
Capex	(2)	(1)	(2)	(11)	(1)
Free Cash Flow	2	16	17	10	23
Terminal Growth Assumption	3.0%				
Year of Terminal Growth	5				
CF @ end of forecast period	23				
WACC	12.9%				
	(Rp bn)	(Rp bn)			
PV at WACC	44				
PV of Terminal Value	129				
Total PV	173				
- Net Debt	(130)				
NAV		43			
Source: PCR Estimates					

Exhibit 58

SEA Pipe's Balance Sheet

FY Dec 31 (Rp bn)	2003	2004F	2005F	2006F	2007F
Cash & Equivalence	0	0	0	0	0
Receivables	0	-	9	11	12
Inventories	9	9	15	18	21
Other Current Assets	0	0	1	1	2
<i>Total Current Assets</i>	<u>9</u>	<u>9</u>	<u>25</u>	<u>30</u>	<u>35</u>
Fixed Asset	546	543	532	520	507
Deferred Tax Assets	17	9	2	5	8
Other	10	9	7	6	5
Total Assets	582	569	566	561	554
Payables	27	40	51	54	55
Other Current Liabilities	2	2	1	2	2
Current Maturity - LT Debt	43	35	34	34	33
<i>Total Current Liabilities</i>	<u>72</u>	<u>77</u>	<u>87</u>	<u>89</u>	<u>90</u>
Due to Parent	329	345	348	351	355
Others	1	1	1	1	1
Debts	94	95	51	48	44
<i>Total Liabilities</i>	<u>496</u>	<u>518</u>	<u>487</u>	<u>490</u>	<u>490</u>
<i>Total Equity</i>	<u>87</u>	<u>51</u>	<u>80</u>	<u>71</u>	<u>65</u>
Liabilities & Equity	583	569	566	561	554
Source: Company & PCR Estimates					

Exhibit 59

BAKRIE HARPER CORPORATION (HARPER)

Main asset is the trans-Sumatra pipeline

Harper's main asset is its 300km, trans-Sumatra oil pipeline that connect Kertapati and Jambi. Commencing construction in 1997, the project supposedly operated under a build-and-rent agreement with Pertamina, whereby Harper built it and Pertamina rented it. However, the project was halted due to adverse economic conditions following the 1997 economic crisis.

Value at a 41% discount to investment cost

We value BB's 70% share in Harper at Rp44bn, accounting for 1.5% of BB's NAV. The valuation is based on a salvage value of US\$7m, or 0.26x of its Rp238bn book value of asset, times BB's 70% share. We believe this is a fair value because (i) the book value of asset has already been written down by 35% (Rp126.5bn) to account for impairments. Hence our valuation at 0.26x of book value effectively has discounted the Rp365bn original value of investment by 83%. (ii) Harper has no debt but Due to Shareholders (BB), which we assume is the same as equity in the valuation. (iii) The asset valuation was affirmed by Pertamina.

PLANTATION

SUMMARY

The plantation operation represents BB's re-acquisition of a 60% stake in Bakrie Sumatra Plantation (Bakrie Sumatra) in 4Q04. We estimate BB will add Rp252bn to its NAV by acquiring the stake at Rp371bn, which is 41% below our fair value estimate. Bakrie Sumatra is expected to contribute 67% EBITDA, 27% revenues and 22% NAV to BB in FY05F and support BB's growth with its double-digit (10.3%) CAGR growth of EBITDA in FY04F - FY07F. The acquisition of Bakrie Sumatra, which earns steady US\$ revenues against rupiah production cost, provides hedging against BB's currency exposure and reduces BB's dependency on fluctuating revenues from infrastructure units.

OVERVIEW

BB is re-acquiring ex-jewel Bakrie Sumatra

Bakrie Sumatra was one of BB's jewel before it was divested in 2001 as part of BB's debt restructuring (see Appendix 1 for the restructuring). In September 2004, BB announced its intention to re-acquire up to 60% of Bakrie Sumatra by buying its rights issues and vendor share. We expect the acquisition to be completed by December 2004 and hence Bakrie Sumatra will contribute one-month profit to BB in 2004.

Acquisition to smoothen earning base and hedge currency exposure

Bakrie Sumatra's acquisition will yield four main benefits for BB. (i) It will smoothen BB's earning base as it increases BB's recurring (consumer-driven) income and reduces BB's reliance on lumpy (project driven) revenues from its infrastructure units. (ii) It will hedge BB's currency exposure as Bakrie Sumatra earns US\$ revenues while paying rupiah expenses, just the reverse of most of BB's other subsidiaries that pay US\$-based cost (steel, asbestos, telecom equipment) and largely earn Rupiah revenues. (iii) Bakrie Sumatra will bolster BB's operating performance, accounting for 98% and 67% of BB's FY05F operating income and EBITDA respectively. (iv) Bakrie Sumatra is expected to post a double-digit 10.3% CAGR in EBITDA in FY04F - FY07F.

Well managed plantations

Established in 1911 as a rubber plantation by a Dutch company, Bakrie Sumatra is one of the oldest Indonesian plantations and inherits plant management culture from its predecessor. The culture has helped Bakrie Sumatra's rubber plantation to yield 1.4 ton rubber per ha, which was above the national average at around 1.2, in FY03. The average yield on the Bakrie Sumatra Group's oil palm plantations at 4.3 ton per ha was also higher than the national average.

Balanced CPO and Rubber Play

Plantation (2003)				Gross Profit (2003)			
	Unit	Total	%		Unit	Total	%
Rubber	Ha	14,124	41%	Rubber	Rp bn	67	43%
CPO	Ha	20,597	59%	CPO	Rp bn	88	57%
Total	Ha	34,721	100%	Total	Rp bn	155	100%
Revenues (2003)				Revenues (2003)			
Rubber	Rp bn	172	38%	Domestic	Rp bn	384	84%
CPO	Rp bn	285	62%	Export	Rp bn	73	16%
Total	Rp bn	457	100%	Total	Rp bn	457	100%

Source: Company & PCR Estimates

Exhibit 60

A balanced rubber and CPO play

Unlike other listed CPO players, Bakrie Sumatra is a more balanced plantation player deriving 62% of revenues from CPO and 38% from rubber in FY03 (see Exhibit 60). Of its total 34,721 ha of plantation area in FY03, 59% was oil palm plantation and 41% rubber plantation. The diversification reduces its dependency on one single commodity.

Derives revenues from diversified markets and industries

Bakrie Sumatra serves both export and domestic markets and its products cater to many industries. Of its total FY03 revenues, 84% came from domestic sales and the remaining 16% exports (see Exhibit 60) although all of them earned US\$ revenues. Of its total rubber revenues in FY03, 54% was in a form of latex and 40% crumb rubber (See Exhibit 61). Latex is sold primarily to domestic glove manufacturers, which largely export their products, while crumb rubber eventually to industrial and tyre manufacturers either directly or indirectly. Latex generally earns 5% - 10% higher margins than crumb rubber. Bakrie Sumatra's plant has a capacity to produce a different mix of rubber to cater to the market demand. In FY03 it increased its latex sales by 6% at a decline of its crumb rubber revenues (see Exhibit 61).

Able to Change Sales Mix to Meet Demand

	Sales Volume		
	2002 (Tons)	2003 (Tons)	Change
Centrifuged Latex	39%	50%	10%
Cream Latex	9%	5%	-4%
<i>Total Latex</i>	<u>48%</u>	<u>54%</u>	<u>6%</u>
Crumb rubber - SIR 10/20	33%	28%	-4%
Crumb rubber - SIR 3 CV	<u>12%</u>	<u>12%</u>	<u>-1%</u>
<i>Total Crumb Rubber</i>	<u>45%</u>	<u>40%</u>	<u>-5%</u>
<i>Block Skim Rubber</i>	<u>7%</u>	<u>6%</u>	<u>-1%</u>
Total	100%	100%	

Source: Company

Exhibit 61

OUTLOOK

Rights issue for expanding core businesses and slashing excessive gearing

Bakrie Sumatra is expected to have just completed its 5-for-1 stock split, which is followed by a 7-for-8 (new-for-old ratio) rights issue at Rp200 in 4Q04. The rights issue raised Rp218bn (see Exhibit 62) and will slash net gearing from 5.6x in FY03 to estimated 0.22x in FY05F. The proceeds will be used to (i) acquire a new rubber plantation (41%), (ii) buy the remaining 85% share in CPO refinery in Jambi (23%), (iii) develop a new CPO refinery in its Kisaran plantation to process internally produced fresh fruit bunches (21%), (iv) to repay loans (12%), and (v) cover rights issue cost (3%).

Rights Issue Proceeds to be Used Mainly to Expand Business

	Name of Target Company	Share Acquired	Location	Amount*	
				(Rp bn)	%
Acquisition of new rubber plantation	Huma Indah Mekar	100%	Lampung, S. Sumatra	90	41%
Acquisition of CPO Refinery	Asia Makmur Lestari	85%	Jambi, C. Sumatra	50	23%
Development of CPO Refinery	na	100%	Kisaran, N. Sumatra	45	21%
Payment loan				27	12%
Rights issue cost				6	3%
Total				<u>218</u>	<u>100%</u>

Source: Company

Exhibit 62

Summary Bakrie Sumatra Plantation

	Unit	Bakrie Sumatra Plantation	Agrowiyana	Agro Mitra Madani*	Bakrie Pasaman Plantation	Huma Indah Mekar*	Patriot Andalas	**Kilang Vecolina	Total
BB's ownership		52%	na	na	na	na	na	na	
BSP's ownership		na	99.90%	100.00%	98.26%	100.00%	99.00%	96.25%	
NAV to BB									623
% of BB's Total NAV									21.8%
Location		Kisaran	Jambi	Jambi	Pasaman	Lampung	Sanggau	Krawang	
Region/province		N. Sumatra	C. Sumatra	C. Sumatra	W. Sumatra	S. Sumatra	W. Borneo	W. Java	
Rubber plantation									
Mature	Ha	11,569	-	-	-	3,694	-	-	15,263
Non-Mature	Ha	2,555	-	-	-	-	-	-	2,555
Total	Ha	14,124	-	-	-	3,694	-	-	17,818
Field Production									
Home Grow n	Ton	16,657	-	-	-	5,726	-	-	22,383
Purchase/Trading	Ton	1,978	-	-	-	-	-	-	1,978
Total	Ton	18,635	-	-	-	5,726	-	-	24,361
Yield (ton/ ha)		1.4	-	-	-	1.6	-	-	1.5
Rubber Plant Capacity									
Centrifuge Latex	tpa	19,000	-	-	-	na	-	-	na
Cream Latex	tpa	19,083	-	-	-	na	-	-	na
SIR 3CV	tpa	4,275	-	-	-	na	-	-	na
SIR 10/20	tpa	12,600	-	-	-	na	-	-	na
Block Skim Rubber	tpa	3,078	-	-	-	na	-	-	na
Total	tpa	58,036	-	-	-	na	-	-	na
Oil Palm Plantation									
Mature	Ha	4,960	3,855	-	8,663	-	-	-	17,478
Non-Mature	Ha	769	260	-	-	-	2,090	-	3,119
Total	Ha	5,729	4,115	-	8,663	-	2,090	-	20,597
FFB Produced									
Home Grow n	Ton	122,882	87,419	-	142,000	-	-	-	352,301
Purchase/Trading	Ton	-	69,525	-	68,282	-	-	-	137,807
Total	Ton	122,882	156,944	-	210,282	-	-	-	490,108
FFB Yield (Home Grow n)	Ton/Ha	25	23	-	16	-	-	-	20
CPO Yield	Ton/Ha	6.0	6.1	-	4.3	-	-	-	5.3
CPO Refinery Capacity									
	Tons/hr	none	none	60	40^	none	none	200*	300

*Acquired after rights issues in 4Q04
 **Value added refinery that converts CPO to RDB Olein
 ^To be increased to 60 tons / hout
 ^85% to be held directly by Bakrie Sumatra after raising funding from the current rights issue and the other 15% already own by subsidiary Agrowiyana.
 Source: Companies & PCR Estimates

Exhibit 63

Remained a balanced CPO and rubber play after rights issue

Post rights issue, Bakrie Sumatra will remain a balanced rubber and CPO player. It will manage 6 subsidiaries through its parent company Bakrie Sumatra (see Exhibit 63) in the following ways:

- (i) *Bakrie Sumatra plantation - Kisaran (Kisaran / parent company).* Kisaran has 14,124 ha of rubber plantation and 5,729 ha of oil palm plantation in North Sumatra. It has its own rubber processing plant and, funded by the rights issue proceeds, is building its own CPO refinery.

- (ii) *Agrowiyana (99.9% owned subsidiary).* Agrowiyana has 4,115 ha of oil palm plantation, which commenced production in 1998, in Jambi, Sumatra. Agrowiyana has a 15% stake in Asia Makmur Madani (Madani) CPO refinery. Funded by the rights issue proceeds, Bakrie Sumatra is directly (not through Agrowiyana) buying the remaining 85% share in Madani.
- (iii) *Agro Mitra Madani (Madani- 100%).* Madani will be 100% owned after Bakrie Sumatra's acquisition of its remaining 85% share. Madani operates a CPO refinery, which commenced operation in Aug FY03 with a capacity of 60 tons per hour. It processes fresh fruit bunches from Agrowiyana and other surrounding plantations.
- (iv) *Bakrie Pasaman Plantation (Pasaman - 98.26%).* Commenced operation in 1996, Pasaman has 8,663 ha of oil palm plantation and a CPO refinery with a capacity of 40 tons per hour in West Sumatra. Pasaman is currently upgrading its CPO refinery to 60 tons pa.
- (v) *Huma Indah Mekan (Huma - 100%).* One of the main reasons for Bakrie Sumatra's rights issue is to acquire a 100% share in Huma. Huma is a profitable company, which has 3,694 ha of mature rubber plantation in Lampung, South Sumatra.
- (vi) *Patriot Andalas (Patriot - 99%).* Patriot has oil palm plantation in Sanggau, West Borneo but the plantation has not commenced operation. We expect Bakrie Sumatra to divest the company in FY05F at Rp10bn profit
- (vii) *Kilang Vecolina (Vecolina – 96.25%).* Vecolina was supposed to operate the first refinery in Indonesia to convert CPO to RDB Olein with a capacity of 200 tons per hour. Due to the financial crisis and low price of RDB oil, the company has not started production. Bakrie Sumatra is expected to divest it at Rp10bn net profit in 4Q04.

Bakrie Sumatra to contribute a steady growth to BB

We expect Bakrie Sumatra to post a 12.5% CAGR in net profit in FY04F - FY07F (see Exhibit 64) driven by:

- (i) *Up trend in rubber price.* Average rubber piece is expected to increase by 35% in FY04F to US\$1,349 / ton and another 2% - 5% pa in FY05F - FY07F (see Exhibit 65). The increase is partly driven by rising demand from China and efforts by three world largest rubber producers Thailand, Indonesia and Malaysia to constraint outputs.
- (ii) *Slight increase in CPO price.* Average CPO price is projected to increase 24% in 2004 to US\$418/ton and inch up by 2% pa in FY05F - FY07F (see Exhibit 65). The increase is driven by rising demand for exports primarily to India, which has recently reduced its import tax, and booming demand from China.
- (iii) *Consolidation of Madani.* The acquisition of 85% share of Madani will allow Bakrie Sumatra to consolidate Madani's earnings as opposed to account it under the cost method when it had only 15% stake (through subsidiary Agrowiyana). Further increase in contribution from plasma plantations that supplies FFB to the refinery over time will further increase its earnings.
- (iv) *Fresh contribution from Huma.* The newly acquired, profitable rubber plantation Huma will make a full year contribution in FY05F.
- (v) *Divestment of loss making Vecolina.* Divestment of loss-making Kilang Vecolina by 4Q04 is projected to result in net gain of Rp10bn and eliminate annual depreciation charges estimated at Rp6-7bn.
- (vi) *Divestment of loss making Patriot.* Bakrie Sumatra is expected to divest its non-operating plantation Patriot Andalas in Borneo in FY05F at estimated Rp10bn net gains.
- (vii) *Commencement of new refinery in Kisaran.* The expected to completion of palm oil refinery at Kisaran plantation in 2005 will allow Kisaran to process its own FFB in house and hence improve margin.

- (viii) *Increased capacity of Pasaman refinery.* The expected completion of capacity expansion from 40 to 60 tons / hour by end of FY04F at Pasaman CPO refinery will increase its output starting FY05F.
- (ix) *Construction of a storage tank at port.* Bakrie Sumatra is planning to build a storage tank at Teluk Bayur port. The tank will improve Bakrie Sumatra's shipments of internally produced CPO as well as allow it be more active in trading and shipping CPO purchased from third parties.

Strong cash flow to drive dividend payments and acquisitions

We believe Bakrie Sumatra will start paying dividend in FY04 and maintain a 20% dividend payout thereafter (see Exhibit 67) while acquiring more rubber and / or oil palm plantations in the near future. Currently it is negotiating to acquire 10,000 ha of land to plant oil palm trees. These strategies will likely be pursued in light of its strong cash flow with EBITDA of Rp343bn - Rp409bn pa in FY05F- FY07F (see Exhibit 64) and net cash position in 2007F (see Exhibit 67). The acquisitions will boost its bottom line, ROE and growth, as we have not factored them into our forecast.

Bakrie Sumatra's Income Statement Projection

(Rp bn)	2003	2004F	2005F	2006F	2007F	CAGR '04-'07	CAGR 05-'07
Total Revenues	457.2	638.7	746.5	795.6	831.6	6.8%	5.5%
Total COGS	302.0	329.8	368.3	381.3	389.3	4.2%	2.8%
Gross Profit	155.2	308.9	378.2	414.2	442.3	9.4%	8.1%
Operating Expense	59.7	61.7	63.8	67.8	70.7	3.5%	5.2%
Operating Income	95.4	247.2	314.4	346.4	371.6	10.7%	8.7%
Depreciation	25.0	29.2	28.7	32.2	37.0	6.1%	13.6%
EBITDA	120.4	276.4	343.1	378.6	408.6	10.3%	9.1%
Net Interest	(31.2)	(26.3)	(18.3)	(10.7)	1.7	na	na
FX loss	34.1	(31.2)	1.9	(12.7)	(13.0)	-19.7%	na
Others	17.5	30.6	4.8	(5.2)	(5.2)	na	na
Total Other Expense	20.4	(26.9)	(11.7)	(28.7)	(16.5)	na	19.1%
Pretax Profits	115.8	220.3	302.7	317.7	355.1	12.7%	8.3%
Tax	(38.6)	(66.1)	(92.4)	(96.9)	(108.1)	13.1%	8.2%
Minority Interest	2.8	-	-	-	-	na	na
Net Income	80.1	154.2	210.3	220.8	247.0	12.5%	8.4%
Ratio							
Gross margin	33.9%	48.4%	50.7%	52.1%	53.2%		
Operating margin	20.9%	38.7%	42.1%	43.5%	44.7%		

Source: Company & PCR Estimates

Exhibit 64

Bakrie Sumatra's Earnings Model

	2003	2004F	2005F	2006F	2007F
FX rate	8,558	8,900	8,874	9,051	9,233
Rubber					
Mature hectare	11,569	10,272	13,966	13,966	13,966
Immature hectare	<u>2,555</u>	<u>3,340</u>	<u>3,340</u>	<u>3,340</u>	<u>3,340</u>
Total	14,124	13,612	17,306	17,306	17,306
Yield per hectare (Ton)	1.44	1.50	1.51	1.53	1.53
Field Production - Rubber					
Home grow n	16,657	15,408	21,134	21,318	21,318
Purchase	<u>1,978</u>	<u>2,343</u>	<u>2,343</u>	<u>2,343</u>	<u>2,343</u>
Total	18,635	17,751	23,477	23,661	23,661
Sales Volume (tons)	20,161	17,659	23,283	23,463	23,463
Price / Ton (US\$)	<u>995</u>	<u>1,349</u>	<u>1,372</u>	<u>1,436</u>	<u>1,479</u>
Rubber revenues (Rp bn)	172	212	283	305	320
COGS	<u>104</u>	<u>88</u>	<u>119</u>	<u>122</u>	<u>125</u>
Gross Profit	67	124	164	182	196
<i>Gross Margin</i>	39.3%	58.6%	58.0%	59.8%	61.0%
CPO					
Mature hectare	17,478	17,518	17,618	18,038	18,338
Immature hectare	<u>1,029</u>	<u>989</u>	<u>1,489</u>	<u>1,069</u>	<u>769</u>
Total	18,507	18,507	19,107	19,107	19,107
Yield per Ha (tons of FFB)	20.2	21.3	21.5	21.0	20.7
Yield per Ha (tons of CPO)	4.3	5.3	5.3	5.2	5.2
Field Production - (Ton FFB)					
Home grow n	352,301	373,468	378,862	379,581	380,303
Purchase + Plasma	<u>137,807</u>	<u>137,662</u>	<u>146,576</u>	<u>155,491</u>	<u>155,491</u>
Total	490,108	511,130	525,438	535,071	535,793
Sales Volume (Tons)					
FFB	115,558	136,900	0	0	0
CPO	66,766	78,113	109,804	111,834	111,993
PKO	13,927	14,710	20,749	21,134	21,163
Price (US\$/ton)					
FFB	77	84	0	0	0
CPO (Net of Export tax)	336	418	426	435	444
PK (Net of Export tax)	144	253	258	263	269
Revenues					
FFB	76	103	0	0	0
CPO	192	291	416	440	459
PK	<u>17</u>	<u>33</u>	<u>48</u>	<u>50</u>	<u>52</u>
Total CPO-Related Revenues	285	427	463	491	511
COGS	<u>198</u>	<u>242</u>	<u>249</u>	<u>259</u>	<u>264</u>
Gross Profit	88	185	214	232	247
<i>Gross Margin</i>	30.7%	43.3%	46.2%	47.2%	48.3%
Source: PCR Estimates					

Exhibit 65

VALUATION

Bakrie Sumatra acquisition bolsters BB's NAV

We estimate that BB's acquisition of 60% share of Bakrie Sumatra will add Rp252bn to BB's NAV (see Exhibit 66). This gain is calculated based on a fair valuation of Bakrie Sumatra's 60% stake at Rp623bn against BB's expected acquisition price of Rp371bn. Our Rp623bn valuation is within the range of Rp583bn - Rp689bn estimate given by an independent party Ernst and Young. We value the 60% share at 4.5x Bakrie Sumatra's FY05F P/E (see Exhibit 67) plus a 10% premium of control to account for BB's majority ownerships in Bakrie Sumatra. The 4.5x FY05F P/E valuation translates into a share price of Rp405 after the stock split and rights issues (see Exhibit 66).

Acquisition of Bakrie Sumatra Significantly Increases BB's Valuation

	Share Outstanding	Fair Share Price	Market Cap	Total
	Million	Rp	Rp bn	Rp bn
Existing Share Fair Value*	2,331	405	944	
BB's acquisition**			60.0%	
BSP NAV to BB			566	
Add: 10% premium of control BB has over BSP			57	
Fair Value of BSP to BB				623
BB's estimated acquisition price of BSP**				371
BB's Value added from BSP acquisition				252
<i>Discount of acquisition price to our estimated fair value</i>				41%

*Fair value is based on 4.0x FY05F PE
** Assumed the planned acquisition is materialised at the indicated price
Source: PCR Estimates

Exhibit 66

BSP's Financials at Our Fair Value of Rp405*

FY end Dec 31	2003	2004F	2005F	2006F	2007F
Turnover (Rp bn)	457.2	638.7	746.5	795.6	831.6
EBITDA (Rp bn)	120	276	343	379	409
Operating Profit (Rp bn)	95.4	247.2	314.4	346.4	371.6
Net Profit (Rp bn)	80.1	154.2	210.3	220.8	247.0
F. dil EPS (Rp)	46.4	83.2	90.2	94.7	105.9
Change (%)	5.4	79.5	8.4	5.0	11.8
Book Value / Share (Rp)	78	270	229	307	394
Dividend / Share (Rp)	-	4.3	18.0	18.9	21.2
F.dil P/E (x)	8.7	4.9	4.5	4.3	3.8
Price / Book Value (x)	7.26	2.09	1.77	1.32	1.03
EV / EBITDA	9.0	3.4	3.4	2.9	2.6
Adj. Yield (%)	-	1.1	4.5	4.7	5.2
ROE (%)	135.7	55.5	38.9	31.0	27.4
Net Gearing (x)	5.6	0.8	0.3	0.1	na

*Before accounting for a 10% control premium

Exhibit 67

Bakrie Sumatra's Balance Sheet

FY Dec 31 (Rp bn)	2003	2004F	2005F	2006F	2007F
Cash & Equivalence	23	23	24	100	250
Receivables	38	54	63	67	70
Inventories	31	33	37	39	39
Other Current Assets	11	15	17	18	19
<i>Total Current Assets</i>	<u>102</u>	<u>125</u>	<u>141</u>	<u>224</u>	<u>378</u>
Fixed Asset	644	808	851	889	941
Goodwill	3	97	92	87	81
Other	96	45	46	47	47
Total Assets	<u>844</u>	<u>1,075</u>	<u>1,129</u>	<u>1,246</u>	<u>1,448</u>
S-T Loans	42	42	42	42	-
Payables	55	60	67	69	71
Other Current Liabilities	56	61	68	71	72
Current Maturity - LT Debt	47	-	-	-	-
<i>Total Current Liabilities</i>	<u>200</u>	<u>164</u>	<u>178</u>	<u>183</u>	<u>143</u>
Long Term Payables	53	53	53	-	-
Deferred Tax	6	39	85	134	188
Debts	486	362	188	128	118
<i>Total Liabilities</i>	<u>745</u>	<u>618</u>	<u>504</u>	<u>444</u>	<u>449</u>
<i>Total Equity</i>	<u>99</u>	<u>457</u>	<u>625</u>	<u>802</u>	<u>999</u>
Liabilities & Equity	<u>844</u>	<u>1,075</u>	<u>1,129</u>	<u>1,246</u>	<u>1,448</u>

Source: Company & PCR Estimates

Exhibit 68

AUTOMOTIVE COMPONENT

SUMMARY

Automotive component operation represents Bakrie Tosanjaya (Tosanjaya) and subsidiaries that produce steel-based auto components mostly for domestic Japanese auto assemblers. Although it accounts for only for 5% of BB's NAV, it is expected support BB's growth with its high (32%) CAGR of EBITDA in FY04F - FY07F. The growth is to be driven by increased capacity and the robust growth of automotive industry. Tosanjaya's competitive advantages are its market leadership in the OEM component market, strategic partnership with Japanese auto principals, and long established brand in an industry that has a long learning curve. Tosanjaya's main risks are its limited control over the raw material (scrap steel) and reliance on Mitsubishi.

Summary of Bakrie Tosanjaya

Share holding		Valuation & Investment	
BB's Share	: 99.99%	NAV to BB (Rp bn)	: 149
Long term Investments	: Braja Multi Cakra (50%) Jibuhin Bakrie Indonesia (40%)	% of BB's Total NAV	: 5%
Company Description		Market & Product	
Commenced Operation	: 1976	Market share	: 19% (Market Leader)
Product Usage	: Automotive component	Main competitors	: Pakarti Riken, Aisin Takaoka, Toyota Astra Motor
Product technique	: Steel casting (foundry)		
Finished product	: Brake Drums, Fly Wheel, Disc Brake Hub		
Capacity (tons of molten metal pa)	: 35,600		
'03 Utilisation Rate	: 83%		
'03 Financial (Rp bn)		% BB Consolidated*	
Revenues	: 134.3	Revenues	: 13%
EBITDA	: 27.7	EBITDA	: 31%
Operating Profit	: 18.9	Operating Profit	: nm
Net Profit	: 7.0	Net Profit	: nm
Assets	: 160	Assets	: 3%
Liabilities	: 82	Liabilities	: 3%
Equity	: 79	Equity	: 4%
*Percentage of total consolidated financial statement is not adjusted by inter-company eliminations or other adjustments			
Source: Company, PCR estimates			

Exhibit 69

OVERVIEW

Synergistic operation

Tosanjaya operates a synergistic, integrated operation that produces semi-finished and finished, steel-based automotive components (see Exhibit 69). The operations are split into three separate companies:

- (i) *Parent Bakrie Tosanjaya* (99.99% owned). Tosanjaya produces steel-based auto components through casting processes. Its main products are brake drums (53% of total production in FY03), fly wheels (16%), hubs (14%), disc brakes (9%), and others (9%) (see Exhibit 70). Tosanjaya mainly produces semi-finished components for subsidiary Braja Multi Cakra (Cakra) although it also produces finished components for other customers.
- (ii) *Braja Multi Cakra* (Cakra – 50% owned by Tosanjaya). Cakra is a JV with Krama Yudha Tiga Berlian Motor, the sole assembler and distributor for Mitsubishi in Indonesia. Cakra obtains most of its materials (semi-finished components) from Tosanjaya and does the finishing according to its principal Mitsubishi's requirements.
- (iii) *Jibuhin Bakrie Indonesia* (Jibuhin – 40%). Jibuhin is a joint venture with Jidosha Buhin Kogyo, which is part of Isuzu Group (General Motors). Jibuhin obtains its materials from Tosanjaya and parent Isuzu and sell all its finished products to Isuzu Group. Export accounted for the bulk (60%) its sales. Some of the products Jibuhin makes are complementary to Tosanjaya's. For

example, Tosanjaya produces fly wheels and Jibuhin produces ring gears for fly wheels. Jibuhin's main products are gear for fly wheels, rocker arm assemblies, drive shafts and final drive assemblies.

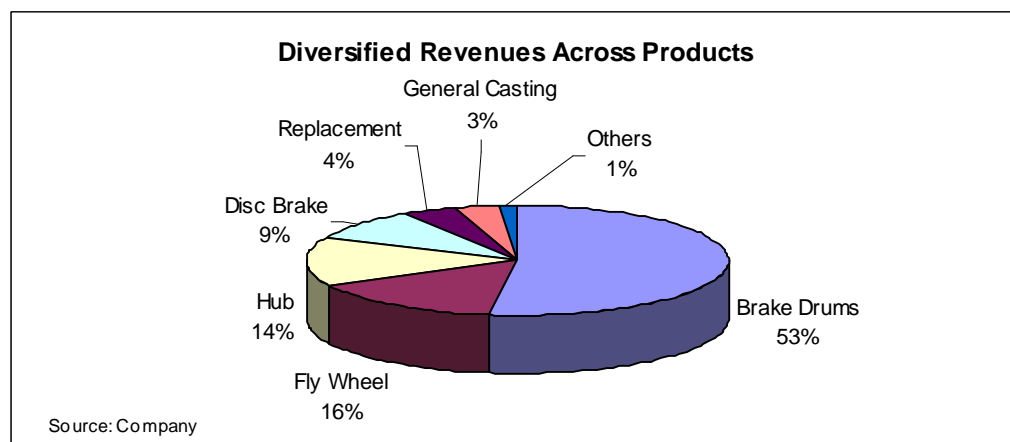


Exhibit 70

Long established relationship with Japanese principals

Founded in 1976, Tosanjaya is one of the most established foundries that has strong strategic partnerships with Japanese principals. Its subsidiary Cakra is a JV with the sole assembler and distributor for Mitsubishi in Indonesia. Similarly, Jibuhin is a JV with Jidosha Buhin Kogyo of Isuzu Group. The partnership allows Tosanjaya to secure a captive market, reputation and technical assistance. Many new players find it difficult to enter into the foundry industry not only because of the operation requires a long learning curve and consistent manual procedures to produce quality casting but also because of a lack of strategic partnerships.

Sales Mainly from OEM (93%) and Domestic Sales (94%)

	Sales Volume*	
	(Tons)	%
OEM	12,844	89%
General Casting	308	2%
Replacement	558	4%
Domestic	13,710	96%
OEM	512	4%
General Casting	133	1%
Export	645	4%
Total	14,355	100%
OEM	13,356	93%
General Casting	441	3%
Replacement	558	4%
Total	14,355	100%

Source: Company *As of 2003

Exhibit 71

Diversified markets and customers with a focus on OEM market

Tosanjaya derived most (93%) of its FY03 revenues from OEM market with the remaining from replacement market (4%) and general casting such as for power generator (3%) (see Exhibit 71). Domestic sales accounted for 96% of revenues and exports 4%. Domestic OEM revenues, which accounted for the bulk (89%) of total revenues, came mainly from strategic partner Mitsubishi (60% of total sales) with the rest from Toyota (15%), Suzuki (6%), Isuzu (6%), Daihatsu (2.5%), Nissan (2%), and others (11%) (see Exhibit 72). Tosanjaya supplies to many of the 17 Indonesian auto assemblers, which produces 21 brands of automobiles, but focuses on Japanese principals that produced more than 90% of car in Indonesia (see Exhibit 73).

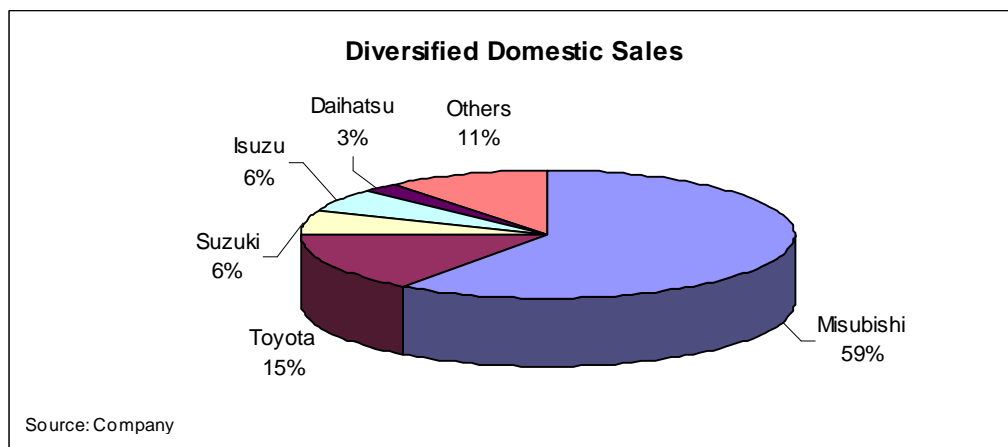


Exhibit 72

17 Car Assembler with 770,000 unit pa Productin Capacity

No	Car Assemblers	Capacity (unit/Year)*	Brand
1	Astra Daihatsu Motor	105,000	Daihatsu
2	Astra Nissan Diesel Indoneisa	6,500	Nissan
3	Hyundai Indonesia Motor	10,000	Hyundai
4	Daimler Chrysler	8,000	Mercedes Benz
5	Gaya Motor	56,000	BMW, Isuzu, Peugeot, Daihatsu, Nissan
6	General Motor Indonesia	30,400	GM & Opel
7	Hino Indonesia Manufacturing	10,000	Hino
8	Honda Prospect Motor	30,000	Honda
9	Indomobil Suzuki Int'l	100,000	Suzuki
10	Ismac Nissan Manufacturing	12,000	Audi, Sangyon, Volvo, Nissan, Volksw agen
11	Krama Yudah Keduma Motor	36,000	Misubishi
12	Krama Yudah Ratu Motor	100,000	Colt T120 SS, Mitsubishi Fuso
13	Nasioanl Asemblers	21,000	Hino, Mazda
14	Panca Motor	45,000	isuzu
15	Toyota Astra Motor	170,000	Toyota
16	Starsauto Union	15,000	Daew oo
17	Trijaya Union	15,000	Misubishi buses
	Total	769,900	

*As of 2002
Source: Indocommerical, Data Consult

Exhibit 73

Market leader in OEM

Tosanjaya is estimated to be the largest foundry with a market share of 30% in the OEM market (see Exhibit 74). Only Pakarti Riken has a comparable market share while Aisin Takaoka and Toyota Astra Motors (TAM) have much smaller market shares. However, players like TAM produces only for in-house consumption. As such, competition from other independent foundries is limited.

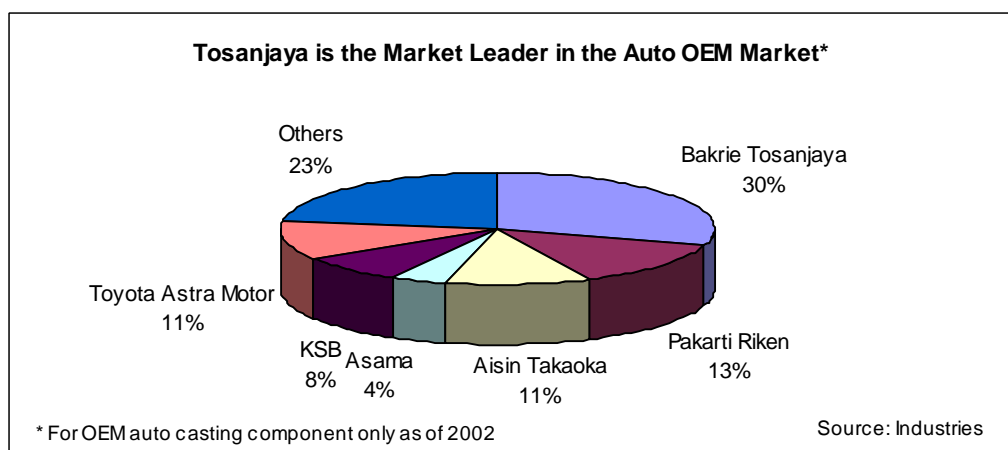


Exhibit 74

Runs at a high utilisation rate

Tosanjaya's 20,300 tons pa (tpa) installed plant capacity run at a 83% utilisation rate in FY03. In mid 2004, it started a trial operation on the new Plant III, which has a capacity of 15,300 tpa or 75% of the existing capacity. The new plant has a better casting technology but it is not expected to run at a high utilisation rate until 2005 when it has ironed out the trial problems. Subsidiary Cakra also runs at a relatively high utilisation rate of 80% on its 14,138 tpa plant while Jibuhin runs almost at full capacity.

OUTLOOK

High growth of domestic auto industry

Car sales are estimated to have increased by CAGR of 39% in the past four years (2000- 2004F) to 420,000 units in 2004F. They are expected to grow by a CAGR of 12% in the next three years to 2007F. Growth of car sales will be driven by low interest rate, banks' high appetite for consumer financing, lacks of reliable public transportation, and a healthy economic growth. Tosanjaya's 75% increase in capacity in 2004 is a timely expansion to tap into the growing market.

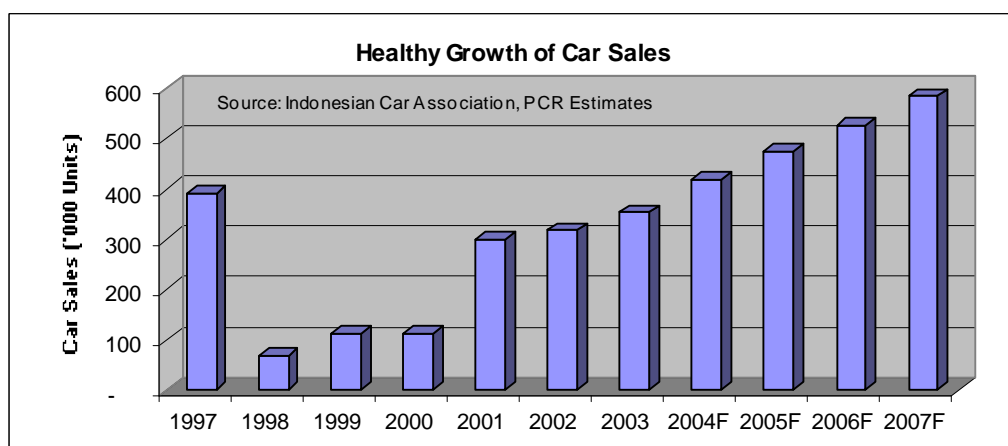


Exhibit 75

Has potentials to boost export sales

Tosanjaya has a capacity to increase its export revenues given its strategic alliances with major auto principals, liberalisation of regional auto component markets with a 0% import duty post the introduction of AFTA. It has a room to increase its export from a low base of 4% of total revenues currently given its past record of 10%-15%.

Looking into the replacement market and steel alloyed products

Tosanjaya expects to increase its revenues from replacement and general (non-automotive) components, which accounted only for 7% of total revenues in FY03. The growth will be supported by its strong brand image and a long-term plan to develop steel-alloy casting facility, which can mould a mixture of steel with other materials.

Strong EBITDA growth

We expect Tosanjaya's EBITDA to post a CAGR of 32% in FY04F - FY07F (see Exhibit 76) driven by (i) the commencement of Plant 3 that increases the capacity by 75% in 3Q04, (ii) price increases as Tosanjaya passes on increases of raw material prices to customers in new contracts, and (iii) a low base in 2004.

Bakrie Tosanjaya's Earnings Model

(Rp bn)	2003	2004F	2005F	2006F	2007F	CAGR '04 -'07
Bakrie Tosanjaya						
Volume (' tons)	13,956	16,127	18,920	21,717	22,803	12.2%
Price/ ton m ('000 Rp)	7,069	7,601	7,870	8,099	8,234	2.7%
Revenues	98.7	122.6	148.9	175.9	187.8	15.3%
COGS	80.7	111.4	126.6	146.0	154.0	11.4%
Gross Profit	18.0	11.2	22.3	29.9	33.8	44.7%
Braja Mukti Cakra (Incremental Revenues)						
Volume (' tons)	9,305	10,235	10,542	10,859	11,182	3.0%
Price/ ton m ('000 Rp)	3,828	4,402	4,558	4,691	4,769	2.7%
Revenues	35.6	45.1	48.1	50.9	53.3	5.8%
COGS	12.7	24.8	25.9	27.0	27.7	3.8%
Gross Profit	23.0	20.3	22.1	23.9	25.6	8.1%
Consolidation						
Total Revenues	134.3	167.6	197.0	226.8	241.1	12.9%
Total COGS	93.3	136.2	152.5	173.0	181.7	10.1%
Gross Profit	40.9	31.4	44.4	53.8	59.4	23.6%
Operating Expense	22.0	24.1	28.1	32.1	33.8	11.8%
Operating Income	18.9	7.3	16.3	21.8	25.6	52.0%
Depreciation	8.8	9.9	11.7	12.8	14.0	12.0%
EBITDA	27.7	17.2	28.1	34.6	39.6	32.0%
Net Interest	2.8	1.3	0.8	1.2	2.2	18.7%
Others	(5.2)	(0.6)	2.3	2.4	2.5	-264.7%
Total Other Expense	(2.3)	0.8	3.1	3.6	4.7	82.4%
Pretax Profits	16.5	8.1	19.4	25.4	30.3	55.5%
Tax	(4.6)	6.5	(5.8)	(7.6)	(9.1)	-211.9%
Minority Interest	(5.0)	(3.8)	(4.1)	(4.4)	(4.7)	7.5%
Net Income	7.0	10.7	9.5	13.4	16.5	15.4%
Ratio						
Gross margin	30.5%	18.7%	22.6%	23.7%	24.6%	
Operating margin	14.1%	4.3%	8.3%	9.6%	10.6%	

Exhibit 76

RISKS

Lack of control on raw material

The raw materials (scrap steel), which made up the largest (45%) component of cost of goods sold (see Exhibit 77), is controlled by an informal cartel of scrap collectors (usually peoples from Madura - East java). The quality of scraps varies from time to time depending on the sources of scrap. The rising raw material price, which was in line with surging steel price worldwide, contributed to net losses to Tosanjaya in 1H04. However, it has since managed to negotiate price increases with its customers and we expect it to turn profitable in 2H04. In general, Tosanjaya is better placed than its competitors in sourcing material as it gets some raw materials from sister companies Bakrie Pipe and Bakrie Corrugated.

Reliance on Mitsubishi

Sixty percent of Tosanjaya's revenues came from one single customer Mitsubishi. Tosanjaya's loss in 1H04 was partly due to a difficulty to negotiate price increases to Mitsubishi. Nevertheless, sales to Mitsubishi are done through a JV Braja Multi Cakra, in which Tosanjaya has a 50% cut on its profit. It is not easy for Mitsubishi to alter its supplier given a limited number of high quality foundries in Indonesia. Tosanjaya is looking forward to further diversifying its customers by producing steel-alloyed components and increasing revenues from exports, replacement and general markets.

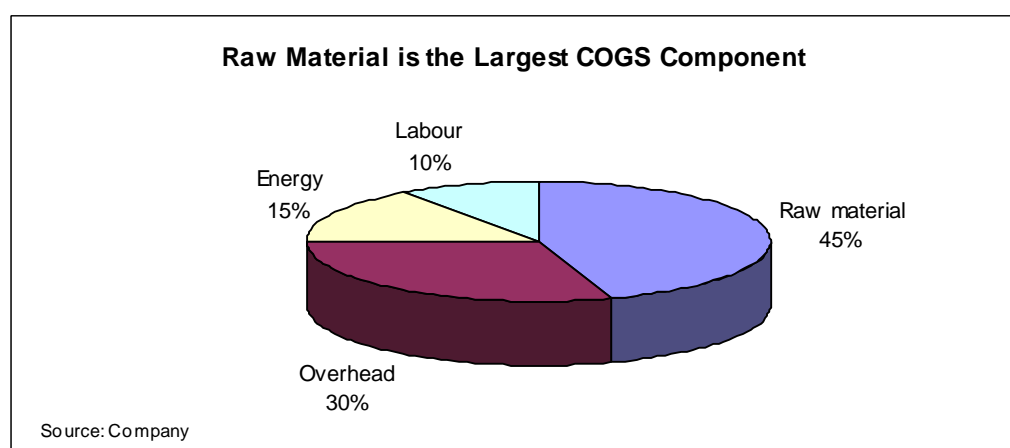


Exhibit 77

Bakrie Tosanjaya's Valuation Summary

	Rp bn	Rp bn
DCF Valuation		149
BB's stake		99.99%
NAV to BB		149
Total Market Value of Equity	149	
FY05F Debt	40	
Enterprise Value		188
FY05F EBITDA		28.1
Implied FY05F EV/EBITDA		6.7
Total Market Value of Equity		149
FY05F Equity	99	
Assumed conversion of due to parent into equity	12	
FY05F Adjusted Equity		111
Implied FY05F Price / adjusted BV		1.3
*Braja Multi Cakra (50%) and Jibuhin Bakrie Indonesia (40%)		
Source: PCR Estimates		

Exhibit 78

VALUATION

We value BB's 99.99% stake at Tosanjaya at Rp149bn (see Exhibit 78). The valuation is based on the DCF approach with a discount rate of 14.9% and terminal growth rate of 4% (see Exhibit 79). The sensitivity analysis of the DCF valuation to changes in the discount rate and terminal growth rate is shown in Exhibit 80. The DCF valuation places Tosanjaya at sensible 6.7x FY05F EV/EBITDA and 1.4x FY05F P/aBV after adjusting equity by assuming conversions of Rp12bn Due to Parent (see Exhibit 81) into equity.

Bakrie Tosanjaya's Free Cash Flow to Turn Around and Grow Rapidly

Period	1	2	3	4	5
Year	2005	2006	2007	2008	2009
Operating Profit	16	22	26	27	28
+ Tax	(2)	(3)	(4)	(4)	(4)
+ Depreciation & Amortisation	12	13	14	15	16
+ Others	(4)	(4)	(4)	(5)	(5)
+ Working Capital & Others	(6)	(6)	(1)	(0)	(1)
Operating Cash Flow	16	21	31	33	34
Capex	(17)	(17)	(17)	(13)	(9)
Free Cash Flow	(1)	4	13	20	24
Terminal Growth Assumption	4.0%				
Year of Terminal Growth	5				
CF @ end of forecast period	24				
WACC	14.9%				
	(Rp bn)	(Rp bn)			
PV at WACC	35				
PV of Terminal Value	116				
Total PV	151				
- Net Debt	(3)				
NAV		149			

Source: PCR Estimates

Exhibit 79

Sensitivity Analysis of Bakrie Tosanjaya's DCF Valuation

Terminal Growth	Weighted Average Cost of Capital										
	12.4%	12.9%	13.4%	13.9%	14.4%	14.9%	15.4%	15.9%	16.4%	16.9%	17.4%
2.000%	169	159	151	143	135	129	122	117	111	106	102
2.500%	176	166	157	148	140	133	126	120	115	110	105
3.000%	185	173	163	154	145	138	131	124	118	113	108
3.500%	194	181	170	160	151	143	135	128	122	116	111
4.000%	204	190	178	167	157	149	140	133	126	120	114
4.500%	216	200	187	175	164	155	146	138	131	124	118
5.000%	229	212	197	184	172	162	152	144	136	129	122
5.500%	244	225	208	194	181	169	159	150	141	133	126
6.000%	261	239	221	204	190	178	166	156	147	139	131

Source: PCR Estimates

Exhibit 80

Bakrie Tosanjaya's Balance Sheet

FY Dec 31 (Rp bn)	2003	2004F	2005F	2006F	2007F
Cash & Equivalence	37	38	39	60	90
Receivables	15	19	23	26	28
Inventories	21	30	34	38	40
Other Current Assets	2	3	3	4	4
<i>Total Current Assets</i>	<u>75</u>	<u>90</u>	<u>98</u>	<u>128</u>	<u>162</u>
Long Term Investment	2	3	4	5	5
Fixed Asset	78	106	111	116	119
Other	5	6	6	7	6
Total Assets	160	205	220	256	293
Payables	12	17	19	22	23
Other Current Liabilities	7	8	9	10	11
Current Maturity - LT Debt	1	-	-	-	-
<i>Total Current Liabilities</i>	<u>20</u>	<u>25</u>	<u>28</u>	<u>32</u>	<u>34</u>
Deferred Tax	13	9	12	16	21
Debts	10	40	40	55	68
Due to Parent	12	12	12	12	12
Minority Interest	28	28	28	29	29
Tot. LT Liabilities+Minority	62	90	92	111	130
<i>Total Liabilities</i>	<u>82</u>	<u>115</u>	<u>121</u>	<u>143</u>	<u>164</u>
<i>Total Equity</i>	<u>79</u>	<u>90</u>	<u>99</u>	<u>112</u>	<u>129</u>
Liabilities & Equity	160	205	220	256	293

Source: Company & PCR Estimates

Exhibit 81

HOUSING & STRUCTURE

SUMMARY

Housing and structure represents Bakrie Building Industries (Bakrie Building's) operation that produces roof, ceiling, fence / wall and marble. Although it accounts only for 4% of total BB's NAV, the operation is a cash cow and is expected to a post doubled-digit (21%) CAGR in EBITDA in FY04F - FY 07F. The plant is running at a full capacity, using much depreciated equipment. Despite a risk of producing asbestos-related products, the outlook is encouraging as a ban or lawsuit on asbestos product is not expected in the near future, the government is committed to build low-end housings, and there is plenty room to expand in the domestic and export markets.

Summary of Bakrie Building Industries

Shareholding		Valuation	
BB's Share	: 99.99%	NAV to BB (Rp bn)	: 114
Long-term Investments	: Bakrie Prima Moramo (Marble - Sold Recently) Bakrie Anugrah Batualam (Marble - 51%) Bakrie Batualam Nusantara (Marble - 51%) Bakrie Brycon Indonesia (Building Product - 90%) Bakrie Mitra Satmakura (Building Product - 60%)	% of BB's Total NAV	: 4%
Company Description		Market & Product	
Commenced Operation	: 1974	Market share	: 25% (Second Largest)
Product Usage	: Housing / Building Materials, Structure	Main competitors	: Djabetesment (29%), Atrisco (16%), Gajah Siamindo (14%)
Finished product	: Roof, wall / fence, marble		
Capacity (tons pa)	: 120,000		
03 Utilisation Rate	: 100%		
'03 Financial (Rp bn)		% BB Consolidated*	
Revenues	: 141	Revenues	: 14%
EBITDA	: 11	EBITDA	: 12%
Operating Profit	: 5	Operating Profit	: nm
Net Profit	: -4	Net Profit	: nm
Assets	: 181	Assets	: 4%
Liabilities	: 125	Liabilities	: 4%
Equity	: 56	Equity	: 3%
*Percentage of total consolidated financial statement is not adjusted by inter-company eliminations or other adjustments			
Source: Company, PCR estimates			

Exhibit 82

OVERVIEW

Main product is roof from the parent company

Bakrie Building's main operation is at its parent company with a few non-active subsidiaries as follows:

- (i) Bakrie Building (parent). Bakrie Building's products consist of a mixture of cement, asbestos and fibre to produce roof (85%), ceiling (8%) and wall / fence (7%). The roofs have three main shapes: corrugated (in local term "bergelombang") (77% of total main revenues in FY03), traditional ("genteng") (7%), and flat (like "sirap") (1%). Within the corrugated roofs, the most dominant is the medium size (60% of total revenues), followed by small (11%) and large (6%).
- (ii) Bakrie Prima Moramo (Moramo - sold). Bakrie Building recently sold Moramo, the only active subsidiary, which produces high quality marbles but was loss making due to a high production cost and low economy of scale. Bakrie Building reduced its stakes from 99% in FY03 to 19.9% in early 2004 and completely divested it in 3Q04 at Rp15bn gains.
- (iii) Bakrie Anugrah Batualam (51%) & Bakrie Batualam Nusantara (51%). Both produce marble but are non-active
- (iv) Bakrie Brycon Indonesia (90%) and Bakrie Mitra Satmakura (60%). Both are supposed to produce building materials but are non-active currently.

Focus on Medium-Size Corrugated Roof

Products	% of Total Revenues		
Small Size (Harflex 11)	11%		
Medium Size (Harflex 14)	60%		
Large Size (Super Harflex)	6%		
Corrugated Roof		77%	
Traditional (Genteng-Shape Roof)		7%	
Flat Roof		1%	
<i>Total Roof</i>			85%
<i>Ceiling (Harflex Prima)</i>			8%
<i>Wall / Fence (Arcon)</i>			7%
Total			100%

Source: Company

Exhibit 83

Widely available raw materials and low depreciation

Raw materials, which accounted for 60% of COGS in FY03F, are widely available at reasonably predictable prices. The remaining came from overhead (33%), direct labour (5%), and depreciations (1%). The low depreciation charges were because the plant has been significantly depreciated. Raw materials consist mainly of asbestos (27%), cement (25%), pulp (6%) and others (5%)(see Exhibit 84). Asbestos is imported from countries like Russia, Brazil, Zimbabwe, Kazakhstan and a shortage is unlikely given a declining asbestos consumption in developed countries. Cement is largely secured from nearby Semen Cibinong and the government controls its price. A mixture of short and long fibre pulps made up another 6% of COGS with the short-fibre being sourced locally and long fibre imported.

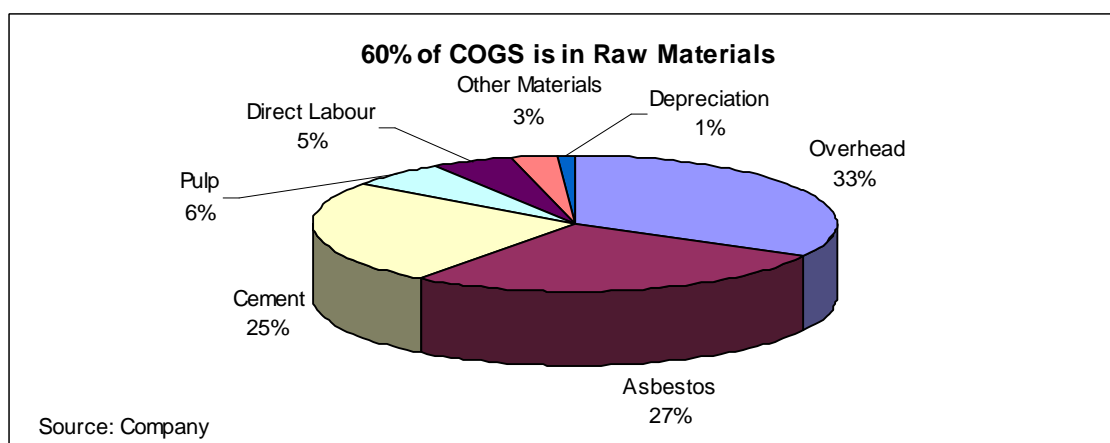


Exhibit 84

Competitive advantages in installation and price

Bakrie Building's roof can be easily and speedily installed and this makes its overall cost (including installation) cheaper than the traditional clay roof (genteng). Compared to roofs made of fibreglass or zinc, Bakrie Building's roofs are cheaper or comparable, longer lasting and have more variety of shape though are heavier and more fragile. Hence the product generally appeals to low-cost housings, factories, and warehouses although Bakrie Building has successfully introduced a high-end roof by adding colours on flat roofs. Similarly, Bakrie Building's moulded, uniform wall / fence offers ease of installation to build fences alongside toll road and surrounding factories.

Leveraging on strong distribution networks

Founded 30 years ago by James Hardy of Australia, Bakrie Building has established 35 strong distributor networks that cater to 60,000 outlets throughout Indonesia. More than a half (55%) of its revenues came from the Greater Jakarta, which has the highest density area needed to minimise transportation cost, and the rest from Sumatra (23%), West and East Java (19%), and others (3%). Bakrie Building is leveraging on its strong

distribution networks to sell other building materials such as paints and we expect such trading revenues to increase in the future to reduce its reliance on asbestos-related products.

Large player with a premium quality

Bakrie Building is the second largest player with a 25% market share (see Exhibit 85). Its market share is close to that of the market leader Djabesmen (29%) but much higher than third and fourth largest players Atrisco (16%) and Gajah Siamindo (14%) respectively. Compared to other smaller players that account for the remaining 16% market share, Bakrie Building's Harflex brand enjoys up to 20% higher price.

High utilisation rate

Operating a plant with a capacity of 120,000 tpa, Bakrie Building is running at full capacity. Its utilisation rate is higher than to the market leader Djabesmen's at 70%-80% and the third biggest player Atrisco's at 60% - 70%. Bakrie Building continues de-bottlenecking and improving labour efficiency and this contributed to few-percentage increase in its annual outputs in the last few years.

Bakrie Building is the Second Largest but More Efficient Player

	Market Share	Capacity Tons pa	Utilisation rate
Djabesmen	29%	180,000	70%-80%
Bakrie Building	25%	120,000	100%
Atrisco	16%	120,000	60%-70%
Gajah Siamindo	14%	70,000	100%
Other	16%	110,000	na
Total	100%	600,000	82%*

*Average Utilisation of the four largest players
Source: Industries

Exhibit 85

OUTLOOK

Plan to increase capacity to meet export demand

To resolve a capacity constraint, Bakrie Building is planning to add machinery that will expand capacity by 28% to around 150,000 tpa in FY05F. The new capacity will expand its export revenues, which accounted for less than 1% of revenues in FY04F compared to 11% - 15% prior to FY03. Currently, the capacity constraints is forcing Bakrie Building to focus on the more profitable domestic market although there is plenty of demand from Hong Kong, Malaysia, Maldives, Sri Lanka, and Sudan

Double-digit growth prospect

We expect Bakrie Building to book a 20.8% CAGR in EBITDA from FY04F - FY07F due to improving margin and additional capacity in FY05F (see Exhibit 86). Gross margin is expected to improve due to (i) a low base of 20% in FY04F compared to 26% - 32% in 2000 - 2001, (ii) rising prices of substitutes such as zinc and plywood roofs, and (iii) an industry pressure to raise price as the utilisation rates of the four largest players, which command an 86% market share, increases.

Bakrie Building's Earnings Model

(Rp bn)	2003	2004F	2005F	2006F	2007F	CAGR '04-'07
Volume ('000 tons)	136.2	140.7	155.3	174.7	179.9	8.5%
Price/ ton m ('000 Rp)	1,037.4	1,058.3	1,084.7	1,111.8	1,139.6	2.5%
Revenues	141.3	148.9	168.4	194.2	205.0	11.3%
COGS	116.2	119.2	133.3	152.9	160.1	10.4%
Gross Profit	25.1	29.8	35.1	41.3	44.9	14.7%
Operating Expense	19.8	20.0	21.7	24.4	25.3	8.1%
Operating Income	5.3	9.7	13.4	16.9	19.6	26.4%
Depreciation	5.3	5.7	6.6	7.4	7.6	10.0%
EBITDA	10.6	15.4	19.9	24.3	27.2	20.8%
Net Interest	(6.1)	(4.4)	(8.2)	(8.5)	(7.5)	19.7%
Others	(1.4)	15.3	-	-	-	-100.0%
Total Other Expense	(7.5)	10.9	(8.2)	(8.5)	(7.5)	-188.2%
Pretax Profits	(2.2)	20.6	5.1	8.4	12.1	-16.3%
Tax	(2.4)	(1.0)	(1.5)	(2.5)	(3.6)	52.1%
Minority Interest	0.3	0.3	0.4	0.5	0.6	20.0%
Net Income	(4.3)	20.0	4.0	6.3	9.1	-23.1%
Ratio						
Gross margin	17.8%	20.0%	20.8%	21.3%	21.9%	
Operating margin	3.8%	6.5%	7.9%	8.7%	9.6%	

Source: Company & PCR Estimates

Exhibit 86

RISKS

Asbestos risks are not in the near future

Asbestos, one of the materials used to produce Bakrie Building's products, is known to pose health risks over a long period of time. Governments in many developed countries have banned its use and a few of its producers faced lawsuits. However, the affordability and strength of asbestos-related products remain an appeal in many developing countries including India, Indonesia and Thailand. A ban on asbestos or lawsuits on BBI appear limited in the near future because (i) Bakrie Building has taken preventive safety measures that meet the international and local standards, (ii) the current state of Indonesian economy that still requires low-cost roofs. (iii) Indonesia's current legal system makes a class action suit by consumers costly, impractical, and lengthy. So far, no major consumer class action suit (like one on more profitable cigarette industry) has been filled in the court. Bakrie Building's long-term strategy to address this issue is to leverage on its strong distribution networks to increase sales of non-asbestos building materials.

VALUATION

Valuation is based on the DCF approach adjusted by non-active assets

We value BB's 99.99% stake at Bakrie Building at Rp114bn (see Exhibit 87). The valuation is based on the DCF approach with a discount rate of 14.4% and terminal growth rate of only 2% (see Exhibit 89). The sensitivity analysis to changes in the discount rate and terminal growth rate is shown in Exhibit 88. Our valuation takes into account Rp25bn net-of-tax revaluation of unused land and Rp11bn NAV of investments in non-active subsidiaries (see Exhibit 89).

The DCF valuation translates into sensible P/aBV and adjusted EV/EBITDA multiples

The DCF valuation translates into a reasonable 0.85x FY05F P/aBV after assuming conversion of Rp55bn convertible bonds, which are being restructured by BB, into equity in FY05. The DCF valuation yields rather high 8.0x FY05F EV/EBITDA. However, if non-operating assets (unused land plus non-operating subsidiaries) were taken out, the FY05F EV/EBITDA would drop to 5.7x, which is reasonable given the 20.8% projected CAGR of EBITDA in the next three years.

Bakrie Building's Valuation Summary

	Rp bn	Rp bn	Rp bn
DCF value of existing operation			78.6
Estimated fair value of unused land	35	35	
Estimated Book Value	<u>1.0</u>		
Net Gain	34		
Tax	<u>30%</u>		
Tax on gain		<u>(10)</u>	
Net Asset Value (NAV) of unused land net of tax on gain			25
Book Value of Asset in Subsidiaries**	42		
Discount	<u>50%</u>		
Net Book Value		21	
Bakrie Building's Stake		<u>51%</u>	
NAV of subsidiaries			<u>11</u>
Total NAV			114
BB's stake			<u>99.99%</u>
NAV to BB			114
Total NAV (Equity Value)		114	
FY05F Debt	65		
Less: Assumed conversion of convertible bonds**	<u>(55)</u>		
Debt Value		<u>10</u>	
Enterprise Value			124
FY05F EBITDA			<u>15.4</u>
Implied FY05F EV/EBITDA			8.0
Total NAV			114
FY05F Equity		79	
Add: Assumed conversion of convertible bonds**		<u>55</u>	
FY05F Adjusted Equity			<u>134</u>
Implied FY05F Price / adjusted BV			0.85
* Mainly in Bakrie Anugerah Batu Alam (5% owned) and Bakrie Batualam Nusantara (5% owned)			
** To be bought back by BB			
Source: PCR Estimates			

Exhibit 87

Sensitivity Analysis of Bakrie Building's DCF Valuation

Terminal	Weighted Average Cost of Capital										
	11.9%	12.4%	12.9%	13.4%	13.9%	14.4%	14.9%	15.4%	15.9%	16.4%	16.9%
Growth											
0.0%	95.0	87.8	81.2	75.1	69.5	64.2	59.4	54.8	50.6	46.6	42.9
0.5%	100.2	92.5	85.4	79.0	73.0	67.4	62.3	57.5	53.1	48.9	45.0
1.0%	105.8	97.6	90.0	83.1	76.8	70.9	65.4	60.4	55.7	51.3	47.2
1.5%	112.0	103.1	95.0	87.6	80.8	74.6	68.8	63.5	58.6	53.9	49.7
2.0%	118.8	109.2	100.5	92.5	85.3	78.6	72.5	66.8	61.6	56.7	52.2
2.5%	126.3	115.8	106.4	97.9	90.1	83.0	76.4	70.4	64.9	59.7	55.0
3.0%	134.7	123.2	113.0	103.7	95.3	87.7	80.7	74.3	68.4	63.0	57.9
3.5%	144.0	131.4	120.2	110.2	101.1	92.9	85.4	78.5	72.2	66.4	61.1
4.0%	154.5	140.6	128.3	117.3	107.4	98.5	90.4	83.1	76.3	70.2	64.5
Source: PCR Estimates											

Exhibit 88

Bakrie Building's DCF Valuation is Based on a Steady Growth of Cash Flow

Period	1	2	3	4	5
Year	2005	2006	2007	2008	2009
Operating Profit	13	17	20	23	26
+ Tax	(2)	(3)	(3)	(3)	(3)
+ Depreciation & Amortisation	7	7	8	8	8
+ Working Capital & Others	(5)	(6)	(3)	(3)	(3)
Operating Cash Flow	13	15	21	24	28
Capex	(15)	(3)	(4)	(4)	(4)
Free Cash Flow	(3)	10	16	19	22
Terminal Growth Assumption	2.0%				
Year of Terminal Growth	5				
CF @ end of forecast period	22				
WACC	14.4%				
	(Rp bn)	(Rp bn)			
PV at WACC	38				
PV of Terminal Value	93				
Total PV	131				
- Net Debt	(52)				
NAV		79			

Source: PCR Estimates

Exhibit 89

Bakrie Building's Balance Sheet

FY Dec 31 (Rp bn)	2003	2004F	2005F	2006F	2007F
Cash & Equivalence	4	4	4	4	4
Receivables	39	42	46	51	54
Inventories	25	25	28	33	34
Other Current Assets	5	5	6	7	8
<i>Total Current Assets</i>	<u>73</u>	<u>77</u>	<u>85</u>	<u>95</u>	<u>100</u>
Fixed Asset	43	29	44	40	37
Project Development Cost	42	38	31	31	31
Long Term Receivables	15	60	61	62	64
Deferred Tax Assets	5	1	-	-	-
Other	3	3	3	3	3
Total Assets	181	207	224	232	234
Payables	14	14	16	18	19
Other Current Liabilities	21	18	20	23	24
Current Maturity - LT Debt	1	-	-	-	-
<i>Total Current Liabilities</i>	<u>36</u>	<u>32</u>	<u>36</u>	<u>41</u>	<u>43</u>
Debts	78	56	65	61	50
Other	0	31	32	33	35
Minority Interest	11	13	13	12	12
<i>Total Liabilities</i>	<u>125</u>	<u>132</u>	<u>146</u>	<u>148</u>	<u>141</u>
<i>Total Equity</i>	<u>56</u>	<u>75</u>	<u>79</u>	<u>85</u>	<u>93</u>
Liabilities & Equity	181	207	224	232	234

Source: Company & PCR Estimates

Exhibit 90

ENGINEERING & TRANSPORT INFRASTRUCTURE

SUMMARY

The engineering and transport infrastructure unit consists of two companies - Trans Bakrie and Bakrie Corrugated - that provide construction-engineering services and produce transport-related infrastructures such as bridges and nestable flanges (see Exhibit 91). The unit is the smallest (2.4%) in term of NAV contribution to BB but accounted for decent 9% of the Group's FY03 revenues. The two companies command significant market shares ranging from 15% - 80%. We expect the unit to post a 29% CAGR in EBITDA in FY04F - FY07F, driven by the expected recovery of oil and gas, mining and plantation sectors. The risks are a fluctuation of raw material (steel) price and an uneven cash flow due to project-driven activities.

Summary of Engineering & Transport Infrastructure Division

	Trans Bakrie	Bakrie Corrugated Metal Indonesia	Total
Shareholding			
BB's Share	51%	99.8%	na
Other shareholders	Asia Fabricator Holding (49%)	Bakrie Building Indonesia (0.2%)	na
Valuation & Investment			
NAV to BB (Rp bn)	22	46	68
% of BB's Total NAV	0.8%	1.6%	2.4%
Long term Investment	none	none	
Company Description			
Commenced Operation	1986	1982	
Product	Engineering, steel fabrication, large-scale bridge, project management	Nestable flange, small-scale bridge, guard rail	na
Capacity (Ton pa)	20,000	12,000	32,000
'03 Utilisation Rate	na	13%	na
Market share	15% - 80%	65%	na
Product Usage	Offshore rigs, port crane, conveyor belt, bridge, telecom tower	Drainage, irrigation, pipe cover, conveyor belt cover, underpass, bridge, road fence	
Main competitors	KBI, Bukaka, Wijaya Karya, Warna Biru, Adi Guna, Guna Nusa	Armindo, Wijaya Karya, KBI, Bukaka	na
'03 Financial (Rp bn)*			
Revenues	53	39	92
EBITDA	(8)	4	(4)
Operating Profit	(12)	3	(9)
Net Profit	(18)	0	(18)
Assets	62	35	96
Liabilities	14	34	47
Equity	48	1	50
% BB Consolidated*			
Revenues	5%	4%	9%
EBITDA	nm	5%	na
Operating Profit	nm	nm	nm
Net Profit	nm	nm	nm
Assets***	1%	1%	2%
Liabilities	0%	1%	2%
Equity	2%	0%	2%

*Due to inter-company elimination and adjustments, sum of P&L and Balance Sheet figures do not necessarily equal to BB's consolidated figures. The same is true for the percentage contribution to BB's consolidated financial figures.

Source: Company, PCR estimates

Exhibit 91

TRANS BAKRIE

Overview

Long established player with a strong shareholders' support

Founded in 1985, Trans Bakrie benefits supports from its two founding shareholders Bakrie Group (51%) and Transfield (49%) of Australia. The company has completed many construction projects in the domestic and overseas markets in its nearly 20 years of operation. In early 2004, Transfield sold its share to Asia Fabricator but the brand name remains.

Servicing diversified sectors

Trans Bakrie provides services such as general steel fabrications, construction engineering and project managements to diversified industries (see Exhibit 92). The main industries it serves are (i) oil and gas (e.g. building rigs), (ii) port / material handling (producing cranes to transport containers), (iii) mining (constructing steel structure), (iv) transportations (fabricating steel bridges), and (v) power and telecom (building power plant and telecom / electricity towers). (vi) It also provides project management services. Revenues contribution from each sector varies from time to time but historically revenues from port / material handling was the largest (47% in 2000-2002), followed by oil and gas (30%), mining (14%), bridge (6%) and others (3%) (see Exhibit 92).

Significant market shares in many sectors

Trans Bakrie enjoys large market shares in most of industries it services. In sophisticated steel bridge fabrication it has an 80% market share, port and material handling 40%, and oil and gas 15% (see Exhibit 92). Its local competitors are few. Its foreign competitors are often too large to handle the medium-scale works that Trans Bakrie undertakes and at a disadvantage in term of regulation and on-the-ground facility / manpower. One of the regulation advantages is in domestic ports, whereby the government requires the use of domestic cranes. Another advantage is Trans Bakrie' steel fabrication facility, which is accessible by road, sea and air and has a capacity of 20,000 tons pa at Banten province.

Trans Bakrie Commands Significant Market Shares in Industries It Serves

No	Sector	Type of Works	Clients	Market Share	Gross Margin	Revenue ('00-'02)	Competitor	
							Local	Foreign
1	Oil & Gas	Offshore Rigs, Tank Farm, Monopod Platform, Gas Compression Module	Caltex, Maxus, Total, Unocal, Bouygues	15%	6%-7%	30%	Adi Guna, Guna Nusa	Nisconi, Mc. Dermott
2	Port / Material Handling	Container Crane, Conveyor System	BH Arutmin, Port of Tj. Priok, Tj. Emas, Tj. Perak, Belawan	40%	10% & up	47%	Guna Nusa, PT PAL, Cilegon Fabrication	Doosan
3	Processing / Project Management	Engineering, procurement, construction & installation (EPCI), fabrication	Krakatau Steel, Seamless Pipe Indonesia	na	na		na	na
4	Mining	Civil, steel structure, mechanical, electrical, instrumentation	New mount, Kelian Equatorial	na	10% - 30%		14%	na
5	Land Transportation Infrastructure	Large scale steel bridges	Various	80%	8%-25%	6%	KBI, Bukaka, Wijaya Karya, Warna Biru	DSD Dillinger Stahlbau
6	Power and telecom	Power plant, steel tower for telecom and electricity lines	Suralaya & Paiton Power plants	na	na	na	na	na
7	Others	na	na	na	na	3%	na	na

Source: Company & PCR Estimates

Exhibit 92

Prospect

Expect a rebound in FY05F

After suffering a loss in FY04F due to few number of projects secured, Trans Bakrie is expected to turn profitable in FY05F and post a 14.6% CAGR in EBITDA in FY05F - FY07F (see Exhibit 93). The rebound is due to (i) the government's target to create US\$75bn - US\$110bn investments in infrastructure - roads, railways, ports, airports, power plants, irrigation facilities and housing - in the next five years to stimulate economic growths and reduce the high unemployment rate. (ii) The expected recovery of investments in the oil, gas and mining sector given rising oil and coal prices. (iii) Trans Bakrie's more aggressive strategy to cultivate relationships with sister companies like Bumi Resources coal mining. (iv) A low base of Rp0.6bn EBITDA in FY04F.

Potential acquisition of remaining share at a minimal cost

BB is looking to acquire the remaining 49% share of Trans Bakrie at a nominal cost. Should this happen, BB is expected to book estimated Rp22bn pretax gains based on Trans Bakrie's FY05 book value (see Exhibit 94).

Trans Bakrie's Earnings Model

(Rp bn)	2003	2004F	2005F	2006F	2007F	CAGR '04-'07	CAGR '05-'07
Total Revenues	53.2	56.7	109.5	138.0	179.2	46.7%	17.8%
Total COGS	54.4	47.1	89.8	113.2	146.9	46.1%	17.8%
Gross Profit	(1.1)	9.6	19.7	24.8	32.3	49.5%	17.8%
Operating Expense	11.3	13.3	18.2	22.5	28.5	28.9%	16.1%
Operating Income	(12.5)	(3.7)	1.5	2.4	3.8	na	36.3%
Depreciation	4.2	4.3	4.4	4.7	5.0	5.7%	4.9%
EBITDA	(8.3)	0.6	5.8	7.1	8.8	143.6%	14.6%
Net Interest	0.2	0.3	0.4	0.3	0.3	-5.4%	-12.0%
FX loss	(4.6)	2.2	(0.2)	1.2	1.2	-19.1%	na
Others	(2.7)	-	-	-	-	na	na
Total Other Expense	(7.1)	2.5	0.2	1.4	1.4	-17.1%	84.9%
Pretax Profits	(19.5)	(1.1)	1.7	3.8	5.2	na	44.9%
Tax	1.4	0.3	(0.5)	(1.1)	(1.6)	na	44.9%
Net Income	(18.1)	(0.8)	1.2	2.7	3.6	na	44.9%
Ratio							
Gross margin	-2.1%	17.0%	18.0%	18.0%	18.0%		
Operating margin	-23.4%	-6.4%	1.4%	1.7%	2.1%		

Source: Company & PCR Estimates

Exhibit 93

Risks

Fluctuating revenues and costs

Operating on project basis, Trans Bakrie's revenues and capacity utilisation are fluctuating, posting a lot of challenges. Cost of production also varies as around 40% of it came from raw materials, of which 70% is imported materials such as special steel structures. To minimise the impact of fluctuating revenues and to better manage labour cost, which still accounted for about one third of its production cost, Trans Bakrie has increasingly adopted a strategy of hiring labours on contract basis to.

Valuation

We value BB's 51% stake in Trans Bakrie at Rp22.4bn (see Exhibit 94). The valuation is based on 0.9x FY05F book value (see Exhibit 94 & 95) considering that it has goodwill from its long established operation despite loss making operation in FY04F. Our valuation translates into a rather high 7.5x FY05F EV/EBITDA but this could be explained by its projected double-digit of EBITDA in FY05F-FY07F (see Exhibit 93).

Trans Bakrie's Valuation Summary

	Rp bn	Rp bn
FY05 Equity	48.7	
Fair Price to Book Value (x)	<u>0.9</u>	
Fair Equity Market Value		43.8
BB's Share		<u>51%</u>
NAV to BB		22.4
Fair Equity Market Value	43.8	
FY05F Debt	<u>0.2</u>	
FY05F Enterprise Value (EV)		44.1
FY05F EBITDA		<u>5.8</u>
Implied FY05F EV / EBITDA (x)		7.5

Source: PCR Estimates

Exhibit 94

Trans Bakrie's Balance Sheet

FY Dec 31 (US\$ m)	2003	2004F	2005F	2006F	2007F
Cash & Equivalence	5	6	8	4	10
Receivables	20	20	27	31	36
Inventories	3	3	6	7	10
Other Current Assets	<u>10</u>	<u>11</u>	<u>14</u>	<u>16</u>	<u>19</u>
<i>Total Current Assets</i>	38	40	55	59	75
Fixed Asset	22	20	17	23	20
Other	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>
Total Assets	62	62	75	84	97
Payables	6	7	13	16	21
Other Current Liabilities	<u>5</u>	<u>6</u>	<u>11</u>	<u>14</u>	<u>18</u>
<i>Total Current Liabilities</i>	11	12	23	30	38
Long Term Payables	2	2	2	2	2
Debts	<u>-</u>	<u>(0)</u>	<u>0</u>	<u>1</u>	<u>2</u>
<i>Total Liabilities</i>	14	14	26	32	42
<i>Total Equity</i>	<u>48</u>	<u>48</u>	<u>49</u>	<u>51</u>	<u>55</u>
Liabilities & Equity	62	62	75	84	97

Source: Company & PCR Estimates

Exhibit 95

BAKRIE CORRUGATED METAL INDUSTRIES

Overview

Focuses on nestable flanges and small-scale bridges

Founded in 1981, Bakrie Corrugated has longed focused on producing corrugated-steel products and bridges. Its three main products are:

- (i) *Nestable flange (in local terms “gorong – gorong”)*. Nestable flange accounted for the bulk (59%) of revenues and sales volume (52%) in FY03 (see Exhibit 96). It yields the second highest metal margin (the difference between selling price and cost of metal) of 57.6%. Flange are an arch / round-shape, corrugated iron plate used mainly for drainage and irrigation although it can also be used for making underpass and small bridges. These flanges are most commonly found in drainages alongside plantations and toll roads. Unlike the conventional cement flange, steel flange can last up to 50 years, is more portable and easier to install in various whether condition.
- (ii) *Steel bridge*. Bridge accounted for 25% of total revenues and 29% of total sales volume in FY03 (see Exhibit 96). It yields the highest metal margin of 64.8%. Unlike Trans Bakrie, Bakrie Corrugated produces only simple bridges that do not require much engineering expertise. It is mainly used for short bridges in plantation or public roads.
- (iii) *Guard rail*. Partly due to its low metal margin of 16%, guard rail accounted for small (16%) portion of total revenues in FY03 (see Exhibit 96). It is mainly used as fences alongside roads to prevent vehicles from crossing to the other side or plunging from a hill. Bakrie Corrugated’s main customer for this product is state-owned Jasa Marga, who is responsible to build nationwide roads.

Only One Competitor in the Main Product Nestable Flange

	Sales Volume		Revenues		Metal Margin	Competitor	Usage
	Ton	%	Rp bn	%			
Nestable Flange	2,415	52%	22,778	59%	57.6%	Armindo	Drainage, irrigation, pipe cover, conveyor belt cover, underpass, bridge
Steel Bridge	1,336	29%	9,625	25%	64.8%	Wijaya Karya, KBI, Bukaka	Short bridge
Guard Rail	882	19%	6,145	16%	42.6%	Armindo, Alim Ampuh, Amarta Karya, Bumi Karya	Fence along toll or dangerous (hilly) road. Road dividers
Total	4,632	100%	38,548	100%	54.4%		

Exhibit 96

Market leader in an the market of nestable flanges

In the nestable flange industry, Bakrie Corrugated commands an estimated 65% market share and faces only one major competitor Armindo (see Exhibit 96). In the steel bridge industry if faces three main competitors - Wijaya Karya, Bukaka, and KBI - although most of them cater to more sophisticated bridges. Its market leadership is attributed to strong networks it builds with the regional governments, Jasa Marga and plantation players over its long 23 years of operation.

Outlook

Double-digit growth

We expect Bakrie Corrugated to post a 13.4% CAGR of EBITDA from FY04F - FY07F (see Exhibit 97). The growth will be driven by (i) a recovery of plantation investments as CPO and rubber prices rise and (ii) increased pressures in the central and provincial government to spend more on infrastructure to drive the economic growth.

Bakrie Corrugated's Earnings Model

(Rp bn)	2003	2004F	2005F	2006F	2007F	CAGR '04-'07
Volume (Tons)	4,632	6,022	6,082	6,675	7,312	6.7%
Price (RRp m/ ton)	8.34	11.34	11.95	12.55	13.26	5.3%
Total Revenues	38.6	68.3	72.7	83.8	97.0	12.4%
Total COGS	29.6	50.9	54.1	62.4	72.5	12.5%
Gross Profit	9.1	17.4	18.5	21.4	24.5	12.0%
Operating Expense	5.9	7.3	7.7	8.6	9.6	9.9%
Operating Income	3.2	10.2	10.8	12.8	14.9	13.5%
Depreciation	0.9	0.9	1.0	1.2	1.3	12.5%
EBITDA	4.1	11.1	11.9	14.0	16.2	13.4%
Net Interest	(1.4)	(1.4)	(0.8)	(0.0)	0.9	-187.3%
FX loss	1.0	(0.9)	0.1	(0.5)	(0.5)	-19.1%
Others	(0.5)	0.5	0.5	0.5	0.6	3.0%
Total Other Expense	(0.9)	(1.7)	(0.2)	0.1	1.0	-183.5%
Pretax Profits	2.3	8.5	10.6	12.8	15.9	23.3%
Tax	(1.9)	(2.5)	(3.2)	(3.8)	(4.8)	23.3%
Net Income	0.4	5.9	7.4	9.0	11.1	23.3%
Ratio						
Gross margin	23.4%	25.5%	25.5%	25.5%	25.2%	
Operating margin	8.3%	14.9%	14.9%	15.2%	15.3%	

Source: Company & PCR Estimates

Exhibit 97

Risk

Raw material dependency

Bakrie Corrugated's main raw materials, i.e. plate and fabricated steels, accounted for the bulk (72%) of COGS (see Exhibit 98). These materials come primarily from giant Krakatau Steel, with which Bakrie Corrugated has little bargaining power. However, Bakrie Corrugated has maintained a good relationship with Krakatau Steel over its 23 years of operation and its projected improvement in cash flow will allow to better manage its raw material inventory.

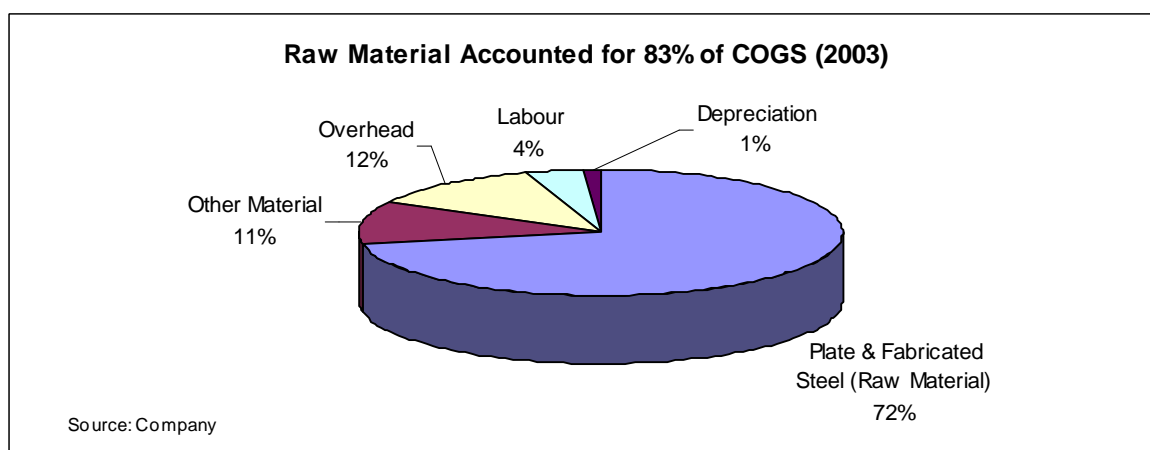


Exhibit 98

Valuation

We value BB's 99.8% stake in Bakrie Corrugated at Rp46.0bn (see Exhibit 99), accounting for 1.6% of BB's total NAV. The valuation is based on 4.0x FY05F EV/EBITDA after deducting Rp1.3bn net debt (see Exhibit 99). The

valuation translates into reasonable 6.2x FY05F P/E albeit a rather high 3.2x FY05F P/aBV. The high P/aBV is largely because Bakrie Corrugated's plant sits on a large parcel of land that has not been revalued for many years (probably since its establishment 23 years ago).

Bakrie Corrugated's Valuation Summary

	Rp bn	Rp bn
FY05F EBITDA	11.9	
FY05F EV / EBITDA (x)	<u>4.0</u>	
Fair Enterprise Value		47.4
FY05F Net Debt		<u>1.3</u>
Fair Equity Market Value		46.1
BB's Share		<u>99.8%</u>
NAV to BB		46.0
<hr/>		
Fair Equity Market Value	46.1	
FY05F Net Profit	<u>7.4</u>	
Implied FY05F P/E (x)		6.2
<hr/>		
Fair Equity Market Value	46.1	
FY05F Equity	<u>14.6</u>	
Implied FY05F P/BV (x)		3.2
Source: PCR Estimates		

Exhibit 99

Bakrie Corrugated's Balance Sheet

FY Dec 31 (Rp bn)	2,003	2004F	2005F	2006F	2007F
Cash & Equivalence	9	9	9	9	20
Receivables	6	11	11	13	15
Inventories	10	18	19	21	25
Other Current Assets	<u>1</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>
<i>Total Current Assets</i>	26	39	41	46	62
Fixed Asset	5	5	8	9	9
Deferred Tax Assets	<u>4</u>	<u>2</u>	-	-	-
Total Assets	35	46	49	55	72
Payables	7	11	12	14	16
Other Current Liabilities	5	9	9	11	12
Current Maturity - LT Debt	<u>4</u>	-	-	-	-
<i>Total Current Liabilities</i>	15	20	21	24	28
Deferred Tax	-	1	3	5	7
Debts	<u>19</u>	<u>17</u>	<u>10</u>	<u>2</u>	<u>1</u>
<i>Total Liabilities</i>	34	39	34	31	37
<i>Total Equity</i>	<u>1</u>	<u>7</u>	<u>15</u>	<u>24</u>	<u>35</u>
Liabilities & Equity	35	46	49	55	72
Source: Company & PCR Estimates					

Exhibit 100

BAKRIE & BROTHERS HOLDING COMPANY

BB Holding is the listed parent company that owns all of the subsidiaries we have valued so far plus other assets. For the purpose of valuation, we value the other asset at Rp197bn (See Exhibit 101), accounting for 7% of the Group's total NAV. We exclude the valuation of all subsidiaries we have valued so far. Interestingly, these investments in subsidiaries and associates were recorded at *negative* Rp694bn in June 2004 Balance Sheet. The Rp197bn valuation of other assets is based on Rp51bn current asset as of June 04 adjusted by:

- (i) *Adding recoverable value of Due from Affiliates.* We assume only 5% (Rp126bn) of due from affiliates can be recovered and the remaining 95% to be converted to equity or cannot be collected.
- (ii) *Adding Other Long Term Receivables.* We discount Rp71bn book value of Other Long Term Receivables by Rp59bn (84%) to arrive at a fair market value Rp29bn after taking into account the 30% tax benefit from the write down of asset value.
- (iii) *Adding Fixed Asset.* This is Rp89bn fixed assets that belong to the holding company (not subsidiaries) and consists primarily of land and building.
- (iv) *Adding deferred tax assets.* We include Rp63bn deferred tax asset as we assume these can be used to offset future gains.
- (v) *Adding after-tax gain from debt settlement.* The Rp87bn after-tax gain arises as BB Holding settled its Rp194bn debt in 3Q04 by selling its headquarter building and few parcels of lands recorded at estimated book value of Rp71bn. The gains take into account a 30% tax deduction.
- (vi) *Subtracting liabilities.* Liabilities of the holding company only as shown in the holding company balance sheet amounted to Rp248bn as of June 2004.

Valuation of BB's Holding Company

No	Balance Sheet Items*	Sub Total	Sub Total	Sub Total	Total	Note
		(Rp bn)	(Rp bn)	(Rp bn)	(Rp bn)	
1	Current Asset			51		
2	Due from Affiliates Assumed portion to be collected Add: Recoverable Value of Due from Affiliates		2,517 <u>5.0%</u>	126		Due from Affiliates arising from taking over subsidiaries' debt during debt restructuring are assumed to be converted into equity of subsidiaries and hence valued as zero
3	Market value - Long Term Receivables Book value - Long Term Receivables Loss on write off Tax rate on write off Tax Benefit on Loss Add: Other Long Term Receivables	11 <u>71</u> (59) <u>30%</u>	11 <u>18</u>	29		Market value of Rp71bn non-interest bearing long term receivable from Far Eastern Hydrocarbon due in 2019 is discounted at 13% to arrive at the present market value. Tax benefit from Loss on Write Off is added back.
4	Add: Fixed Asset			89		
5	Add: Deferred Tax assets			63		
6	Amount of debts repaid Book value of asset given up to lenders Gain from debts settlement in 3Q04 Less: 30% Tax Add: After-tax Gain from debt settlement	194 <u>(71)</u> 124 <u>(37)</u>		87		BB has settled its Rp194bn debts by selling its land and building recorded at book value of Rp103bn in 3Q04. The gain from the debt settlement is added to the valuation
	Fair Asset Value				445	
	Less: Liabilities				<u>(248)</u>	
	Fair Market Value of Holding Company Holding Co NAV as % of BB's Total NAV				197 8%	

*Balance sheet figures are as of Jun 2004

Source: Company & PCR Estimates

Exhibit 101

APPENDIX 1. 2001 GRAND DEBT RESTRUCTURING

One of the first few companies to complete debt restructuring

BB is one of the first few listed companies to complete its grand debt restructuring early in November 2001. The approximately US\$1,146m debts (see Exhibit 102) that originated from both the parent and subsidiaries were restructured in the following ways:

- (i) *Debt restructuring at the parent level.* The bulk (84% - US\$961) of the debts were restructured at the parent company level (listed BB) (see Exhibit 102). These debts were repaid by:
 - (a) *Issuing 38.6bn of series B common shares.* The common shares were issued at a par value of Rp70 compared to Rp500 par value of outstanding shares then. The issued price was Rp79.98, valuing the new shares at Rp2.94trn or US\$307m (at Rp9,595/US\$ exchange rate then). The new shares issued to creditors made up 95% of the total enlarged shares (see Exhibit 6).
 - (b) *Giving up 4 subsidiaries.* BB transferred to creditors four of its subsidiaries: Bakrie Electronics (70% owned), Bakrie Sumatra Plantation (52.5%), Arutmin Indonesia (20%), Bakrie Kasei Corp (25.5%). Ninety five percent of the proceeds from divestments of the 4 subsidiaries, net of selling commissions, were distributed to the creditors and the remaining 5% returned to BB.
- (ii) *Retaining debts at the subsidiary.* About 16% (US\$185m) of debts were retained at the subsidiaries including Bakrie Pipe, SEA Pipe and BTel. They were not transferred to parent because creditors then believed the subsidiaries could repay them. However, the pipe industry did not turn around as fast as what creditors predicted. Bakrie Pipe and SEA Pipe could not service the debts and the parent company (BB) is expected to buy back the loans (see Debt Restructuring and Rights Issue section).

The Bulk of Debt Restructuring Was Done at the Parent Company Level

	Debts (US\$ m)	% of Total	Done at
<i>Parent and subsidiaries' debts restructured by Parent (BB)</i>	961	84%	<i>Holding Co. Level</i>
Bakrie Pipe	142	12%	Holding Co. & Subsidiary level
Bakrie Tel	30	3%	Holding Co. & Subsidiary level
SEA Pipe	13	1%	Holding Co. & Subsidiary level
<i>Remaining subsidiaries' debts after debt transfers to Parent</i>	185	16%	
Total Debt Restructured	1,146	100%	

Source: Company & PCR Estimates

Exhibit 102

Extraordinary gains and greater free float post restructuring

The debt restructuring yielded many positive impacts:

- (i) *Rp3.3trn extraordinary gains in 2001*
- (ii) *Increased free float.* With the issuance of 36.8bn new shares, total shares outstanding increased 19 folds from 1.9bn to 38.75bn (see Exhibit 6).
- (iii) *Change of control.* Subsequent to the restructuring, the Bakrie family diluted its share in the company from 64.7% in 2000 to 2.4% in 2001 and remained at an insignificant level of 1.7% in Sept 2004 (see Exhibit 7).
- (iv) *Sustainable gearing ratio.* Post restructuring, equity turned positive and net gearing ratio was at 0.73x as of Dec 2001 and remained sustainable at 0.84x as of Dec FY03.

APPENDIX 2. CDMA TECHNOLOGY

Comparison the Three Technologies: CDMA, TDMA and FDMA

CDMA (Code Division Multiple Access) is the most advanced cellular technology. With CDMA, spectrum is best used, as conversations are distributed (or spread) over the whole radio band, and each voice or data call is assigned a unique *code* that differentiates it from the many other calls simultaneously carried over the same spectrum. The earlier technology is Time Division Multiple Access (TDMA), which uses spectrum less efficiently than CDMA does as it splits each frequency into *time* slots. The three main versions of TDMA are TDMA (IS-136) or D-AMPS (mainly in the US), GSM (Europe), and PHS/PDC (Japan). The oldest technology is called Frequency Division Multiple Access (FDMA), which is used in the analogue system like NMT, AMPS, and TACS. With FDMA, spectrum use is the least efficient as only one subscriber is assigned to a channel at a time. The channel cannot be accessed for other conversations until the subscriber's call is finished, or until the original call is handed-off to a different channel.

CDMA is the chosen technology for 3G

CDMA offers a migration path for TDMA (the one used by Ratelindo) and GSM systems (by Telkomsel, Satelindo / IM3, and Excelcomindo) to the 3G (third generation) system (see Exhibit 103). The two established CDMA systems in the world are CDMA2000 offered by Qualcomm of the US and W-CDMA of the Europe, which is the main choice for GSM migration in Europe. China is developing another CDMA version called TD-SCDMA but the fate of the version is unknown yet.

Migration Path of TDMA and GSM to CDMA

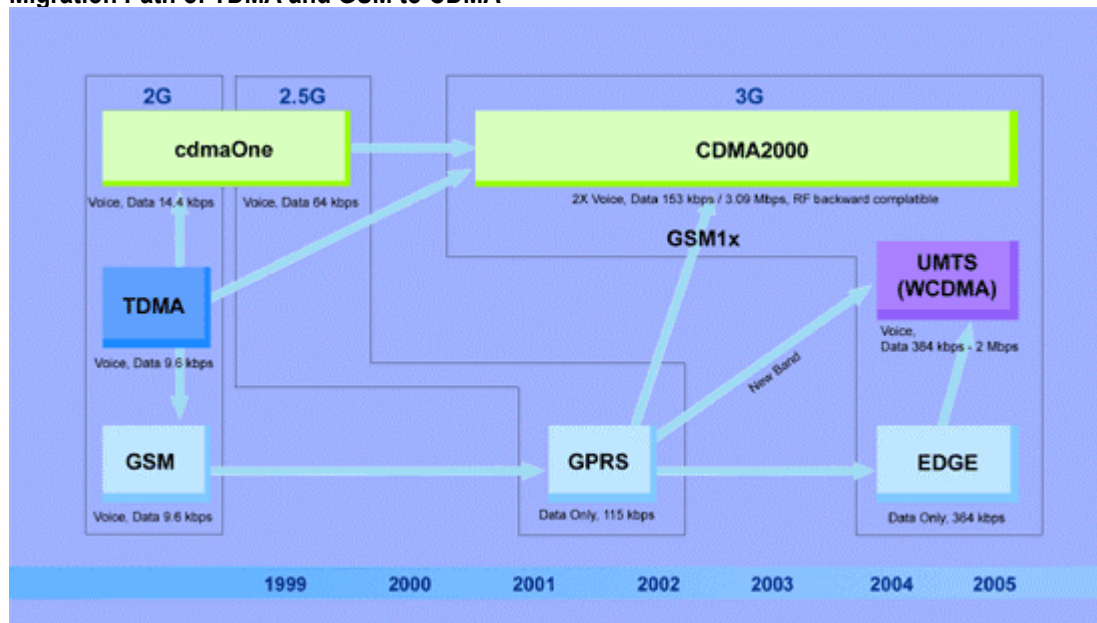


Exhibit 103

Evolution of CDMA2000

CDMA2000 system evolves from (i) cdmaOne IS95A to (ii) cdmaOne IS95B to (iii) CDMA2000 1X, and finally (iv) CDMA2000 1X EV-DO (See Exhibit 104). The world's first 3G commercial system was CDMA2000 1X launched by SK Telecom (Korea) in October 2000. CDMA2000 systems are currently being deployed in the 450 MHz, 800 MHz, 1700 MHz, 1900 MHz and 2100 MHz bands.

CDMA Evolution

cdmaOne IS95A	cdmaOne IS95B	CDMA2000 1x*	CDMA2000 1x-EV DO (Evolution Data Optimised)
Voice	Voice	2x increases in voice capacity	Integrated voice and data (Phase 2); up to 3.09 Mbps
Data up to 14.4 Kbps	Data up to 115 Kbps	Up to 307 kbps* packet data on a single (1.25 MHz) carrier Supports e-mail, games, GPS-based location services, picture and music download	Up to 2.4Mbps* packet data on a single (1.25 MHz) carrier. "always on" Internet
*The First 3G (third Generation) system Source: CDMA Development Group			

Exhibit 104

Asia has the largest CDMA users

CDMA is the main system in the US, where it was invented, while GSM in Asia, Australia and Europe. Nevertheless, the largest (42%) CDMA subscriber is in the Asia, including in China, S. Korea, Japan, India, Taiwan, Australia, New Zealand, Malaysia, Thailand and Vietnam. CDMA subscribers grew 31% (47.8m subscribers) from 154m in Mar FY03 to 202m in Mar 2004 (see Exhibit 105).

CDMA Subscriber Grew 31% pa to 202m as of Mar 2004

	Subscriber (As of Mar 04) ('000)	%	Worldwide Growth			
			One Year (Mar 03- Mar 04)		One Quarter (Dec 03 - Mar 04)	
			Subscriber ('000)	Growth	Subscriber ('000)	Growth
Asia Pacific	84,400	42%	25,699	44%	6,100	8%
North America	81,400	40%	16,950	26%	6,200	8%
Caribbean & Latin America	33,000	16%	4,380	15%	1,000	3%
Europe, Middle East & Africa	3,250	2%	800	33%	150	5%
Total	202,050	100%	47,829	31%	13,450	7%
Source: CDMA Development Group						

Exhibit 105

APPENDIX 3. FINANCIAL FORECAST AND RATIO

Profit & Loss Forecast (Bakrie & Brothers Tbk)

FY 31 Dec (Rp bn)	2002	2003	2004F	2005F	2006F	2007F	CAGR	
							'04-07	'05-'07
Revenues	1,513	1,042	1,221	2,715	3,265	3,863	47%	19%
Cost of Goods Sold	(1,008)	(755)	(894)	(1,776)	(1,985)	(2,258)	36%	13%
Gross Profit	505	287	327	939	1,280	1,605	70%	31%
Operating Expense	(448)	(298)	(382)	(617)	(779)	(883)	32%	20%
Operating Profit	58	(11)	(55)	322	501	722	na	50%
Depreciation / Amortisation	(102)	(100)	(125)	(188)	(224)	(261)	28%	18%
EBITDA	159	89	69	510	725	983	142%	39%
Net Interest Income (Expense)	(71)	(95)	(140)	(162)	(209)	(222)	17%	17%
Forex (Gain) Losses	188	39	(57)	5	(33)	(34)	-16%	na
Gain (Loss) on Sale of Asset	15	251	32	-	-	-	-100%	na
Associate Income	22	33	(23)	(12)	(7)	(5)	-40%	-36%
Others	(47)	(108)	97	716	(7)	(7)	na	na
Total Other Income (Expense)	107	119	(91)	546	(257)	(268)	43%	na
Pretax Profit	165	107	(146)	867	245	453	na	-28%
Tax	(176)	(93)	(162)	(258)	(75)	(137)	-5%	-27%
Minority Int.	(6)	8	11	(88)	(93)	(104)	na	8%
Net Income	(17)	23	(297)	521	77	213	na	-36%

Exhibit 106

Financial Ratio (Bakrie & Brothers Tbk)

FY Dec 31	2002	2003	2004F	2005F	2006F	2007F
Sales Growth (%)	11.0	(31.1)	17.2	122.3	20.3	18.3
Gross Margin (%)	33.4	27.5	26.8	34.6	39.2	41.5
EBITDA Margin (%)	10.5	8.5	5.7	18.8	22.2	25.4
Operating Margin (%)	3.8	(1.1)	(4.5)	11.8	15.3	18.7
Net Margin (%)	(1.1)	2.2	(24.3)	19.2	2.3	5.5
ROE (%)	(73.2)	100.2	(1,417.5)	2,322.2	301.3	790.8
Earnings Yield	(0.7)	0.9	(11.8)	20.6	3.0	8.4
ROA (%)	(31.8)	43.9	(554.6)	873.8	116.5	301.0
Net Debt/Equity (x)	0.70	0.84	1.01	0.65	0.69	0.65
Net Debt / EBITDA	10.50	21.85	31.99	3.59	2.83	2.14
Interest Coverage (x)	3.33	2.13	na	6.34	2.17	3.04
Current Ratio (x)	0.70	0.87	0.67	0.81	0.88	0.97
Inventory Turnover (Day)	34	48	48	44	53	50
Receivable Turnover (Day)	100	137	136	121	140	141
Payable Turnover (Day)	150	128	101	67	69	53

Source: Company & PCR Estimates

Exhibit 107

Balance Sheet (Bakrie & Brothers Tbk)

FY Dec 31 (Rp bn)	2002	2003	2004F	2005F	2006F	2007F
Cash & Equivalence	141	78	102	104	106	108
Receivables	283	249	331	735	884	1,046
Inventories	125	125	177	354	384	408
Other Current Assets	188	271	136	181	204	241
<i>Total Current Assets</i>	<i>738</i>	<i>723</i>	<i>745</i>	<i>1,374</i>	<i>1,577</i>	<i>1,804</i>
Long Term Investment	215	205	222	214	211	210
Other Long term Invesment	418	275	275	275	275	275
Fixed Asset	2,118	2,172	2,398	2,685	2,927	3,140
Project Development Cost	551	552	593	596	599	602
Goodw ill	4	3	120	113	107	100
Long Term Receivables	700	676	775	814	855	897
Other Receivables	73	108	120	119	118	116
Deferred Tax Assets	299	290	187	-	20	20
Other	834	842	903	1,520	1,714	1,935
Total Assets	5,210	5,123	5,594	6,336	6,826	7,297
LIABILITIES & EQUITY						
Shor Term Loans	203	6	48	48	48	48
Payables	424	309	364	627	599	526
Customer Deposit & Deferred Charge	193	168	227	506	608	720
Other Current Liabilities	166	122	163	200	220	261
Current Maturity - Long Term Debt	74	224	310	310	310	310
<i>Total Current Liabilities</i>	<i>1,061</i>	<i>828</i>	<i>1,112</i>	<i>1,691</i>	<i>1,785</i>	<i>1,864</i>
Long Term Payables	136	13	103	109	114	120
Deferred Tax Liabilities	12	92	86	26	48	90
Debts	1,611	1,892	2,085	1,694	1,916	1,970
Minority Interest	77	88	224	312	381	459
<i>Total Long Term Liabilites</i>	<i>1,836</i>	<i>2,085</i>	<i>2,498</i>	<i>2,140</i>	<i>2,459</i>	<i>2,638</i>
<i>Total Liabilities</i>	<i>2,897</i>	<i>2,914</i>	<i>3,610</i>	<i>3,831</i>	<i>4,244</i>	<i>4,502</i>
<i>Total Equity</i>	<i>2,313</i>	<i>2,209</i>	<i>1,984</i>	<i>2,505</i>	<i>2,582</i>	<i>2,794</i>
Liabilities & Equity	5,210	5,123	5,594	6,336	6,826	7,297

Source: Company & PCR Estimates

Exhibit 108

Statement of Cash Flow (Bakrie & Brothers Tbk)

FY Dec 31 (Rp bn)	2002	2003	2004F	2005F	2006F	2007F
Operating Profits	57.8	(11.3)	(55.2)	321.6	501.1	721.6
Tax	11.8	(21.1)	(46.3)	(105.4)	(65.1)	(68.6)
Depreciation	101.7	99.9	124.6	188.2	223.9	261.1
Change in Working Capital	(143.8)	(215.5)	138.3	(74.3)	(114.5)	(172.1)
Others - Operating	144.5	(127.2)	198.0	18.0	(9.4)	(15.1)
<i>Cash Flow from Operation</i>	<i>171.9</i>	<i>(275.3)</i>	<i>359.4</i>	<i>348.2</i>	<i>536.0</i>	<i>726.8</i>
Long Term Investment	44.7	42.7	(39.9)	(4.4)	(4.3)	(4.2)
Capital Expenditure	(62.8)	(154.0)	(350.6)	(475.5)	(465.7)	(474.3)
Others - Investments	123.0	272.6	(244.6)	(49.3)	(45.1)	(47.1)
<i>Cash Flow from Investment</i>	<i>104.9</i>	<i>161.3</i>	<i>(635.2)</i>	<i>(529.2)</i>	<i>(515.1)</i>	<i>(525.6)</i>
Short Term Debt	(31.6)	(197.8)	42.3	-	-	-
Long Term Debt	(233.3)	431.4	277.8	(390.5)	221.5	54.8
Equity	(102.5)	(127.0)	52.0	-	-	-
Interest Expenses	(70.7)	(94.8)	(139.6)	(162.4)	(209.0)	(221.8)
Forex Gain (losses)	187.7	38.5	(57.4)	4.9	(33.4)	(34.1)
Others - Financing	(0.0)	(0.0)	124.8	731.2	2.1	2.0
<i>Cash Flow from Financing</i>	<i>(250.3)</i>	<i>50.3</i>	<i>300.0</i>	<i>183.1</i>	<i>(18.9)</i>	<i>(199.1)</i>
Change in Cash	26.6	(63.7)	24.2	2.0	2.1	2.1
Beginning Cash	173.1	199.7	136.0	160.2	162.2	164.3
Ending Cash	199.7	136.0	160.2	162.2	164.3	166.4

Source: Company & PCR Estimates

Exhibit 109

APPENDIX 4. EARNINGS MODEL

Earnings Model (Part 1)

Industry	No	Company	2002	2003	2004F	2005F	2006F	2007F
Oil & Gas Infrastructure	1	BPI	379	416	460	551	590	726
	2	SEAPI	200	3	-	390	465	533
Telecom	3	BT	171	232	255	458	739	1,008
	4	BC	3	2	3	10	16	21
Plantation	5	BSP	-	-	53	747	796	832
Housing & Structure	6	BBI	137	141	149	168	194	205
Engineering & Transport Infrastructure	7	TB	217	53	57	109	138	179
	8	BCMI	31	39	68	73	84	97
Auto Component	9	BTJ	90	134	168	197	227	241
Investment	10	BB	16	17	8	13	16	20
	11	Adjustment	234	(3)	-	-	-	-
Total Revenues			1,477	1,036	1,221	2,715	3,265	3,863
Oil & Gas Infrastructure	1	BPI	43	39	41	61	84	105
	2	SEAPI	27	(4)	-	26	29	35
Telecom	3	BT	123	166	168	347	595	841
	4	BC	2	1	2	6	10	14
Plantation	5	BSP	-	-	26	378	414	442
Housing & Structure	6	BBI	32	25	30	35	41	45
Engineering & Transport Infrastructure	7	TB	15	(1)	10	20	25	32
	8	BCMI	7	9	17	19	21	24
Auto Component	9	BTJ	17	41	31	44	54	59
Investment	10	BB	3	8	2	4	6	7
	11	Adjustment	211	(5)	-	-	-	-
Gross Profit			480	281	327	939	1,280	1,605
Oil & Gas Infrastructure	1	BPI	31	26	28	46	71	91
	2	SEAPI	7	(15)	(8)	6	15	18
Telecom	3	BT	117	144	5	67	194	382
	4	BC	(6)	(5)	(6)	(2)	2	6
Plantation	5	BSP	-	-	23	343	379	409
Housing & Structure	6	BBI	23	7	16	21	25	28
Engineering & Transport Infrastructure	7	TB	4	(12)	1	6	7	9
	8	BCMI	4	4	11	12	14	16
Auto Component	9	BTJ	6	19	17	28	35	40
Investment	10	BB	(23)	(12)	(18)	(17)	(16)	(16)
	11	Adjustment	24	(18)	-	-	-	-
EBITDA			186	136	69	510	725	983
Oil & Gas Infrastructure	1	BPI	20	16	18	34	56	73
	2	SEAPI	6	(16)	(12)	(6)	1	3
Telecom	3	BT	61	76	(78)	(40)	62	225
	4	BC	(7)	(5)	(6)	(3)	1	3
Plantation	5	BSP	-	-	21	314	346	372
Housing & Structure	6	BBI	20	6	11	14	18	21
Engineering & Transport Infrastructure	7	TB	4	(12)	(4)	1	2	4
	8	BCMI	3	4	10	11	13	15
Auto Component	9	BTJ	6	19	7	16	22	26
Investment	10	BB	(24)	(15)	(22)	(21)	(20)	(20)
	11	Adjustment	25	(9)	-	-	-	-
Operating Profit			116	63	(55)	322	501	722

Source: Company & PCR Estimates

Exhibit 110

Earnings Model (Part 2)

Industry	No	Company	2002	2003	2004F	2005F	2006F	2007F
Oil & Gas Infrastructure	1	BPI	132	14	(157)	643	(58)	(58)
	2	SEAPI	18	(26)	(29)	42	(13)	(13)
Telecom	3	BT	34	14	(68)	(97)	(151)	(179)
	4	BC	6	77	4	(0)	0	(0)
Plantation	5	BSP	-	-	(2)	(12)	(29)	(17)
Housing & Structure	6	BBI	(11)	(8)	11	(8)	(9)	(7)
Engineering & Transport Infrastructure	7	TB	(4)	(7)	3	0	1	1
	8	BCMI	2	(1)	(2)	(0)	0	1
Auto Component	9	BTJ	12	(2)	1	3	4	5
Investment	10	BB	42	35	149	(25)	(3)	(1)
	11	Adjustment	(120)	22	-	-	-	-
Total Other Income (Expense)			111	119	(91)	546	(257)	(269)
Oil & Gas Infrastructure	1	BPI	153	30	(139)	677	(2)	15
	2	SEAPI	24	(42)	(42)	36	(11)	(10)
Telecom	3	BT	95	90	(146)	(137)	(89)	46
	4	BC	(1)	72	(2)	(3)	1	3
Plantation	5	BSP	-	-	18	303	318	355
Housing & Structure	6	BBI	10	(2)	21	6	9	13
Engineering & Transport Infrastructure	7	TB	1	(20)	(1)	2	4	5
	8	BCMI	5	3	8	11	13	16
Auto Component	9	BTJ	18	16	8	19	25	30
Investment	10	BB	18	20	127	(46)	(23)	(21)
	11	Adjustment	(95)	13	-	-	-	-
Pretax Profit			227	181	(146)	867	245	453
Oil & Gas Infrastructure	1	BPI	57	(62)	(84)	474	(1)	11
	2	SEAPI	13	(31)	(35)	29	(9)	(7)
Telecom	3	BT	95	81	(315)	(96)	(62)	32
	4	BC	(1)	72	(1)	(2)	0	2
Plantation	5	BSP	-	-	13	210	221	247
	6	0	-	-	-	-	-	-
Housing & Structure	6	BBI	7	(4)	20	4	7	9
Engineering & Transport Infrastructure	7	TB	2	(18)	(1)	1	3	4
	8	BCMI	3	2	6	7	9	11
Auto Component	9	BTJ	15	12	15	14	18	21
Investment	10	BB	27	25	74	(32)	(16)	(15)
Other / Non-Core	0	BHC	(1)	(1)	-	-	-	-
	0	BPC	(0)	-	-	-	-	-
	0	MPS	-	-	-	-	-	-
Other	0	Other	(1)	(1)	-	-	-	-
	11	Adjustment	(120)	13	-	-	-	-
Profit Before Minority Interest			97	88	(308)	609	169	316
Oil & Gas Infrastructure	1	BPI	57	(62)	(84)	474	(1)	11
	2	SEAPI	13	(31)	(35)	29	(9)	(7)
Telecom	3	BT	95	81	(315)	(96)	(62)	32
	4	BC	(1)	72	(1)	(2)	0	2
Plantation	5	BSP	-	-	13	210	221	247
Housing & Structure	6	BBI	7	(4)	20	4	7	9
Engineering & Transport Infrastructure	7	TB	2	(18)	(1)	1	3	4
	8	BCMI	3	2	6	7	9	11
Auto Component	9	BTJ	15	7	11	10	13	16
Investment	10	BB	27	25	69	(116)	(104)	(113)
	11	Adjustment	(121)	26	20	-	-	-
Net Profit			96	97	(297)	521	77	212

Source: Company & PCR Estimates

Exhibit 111

APPENDIX 5. STEEL GLOSSARY

No	Terms	Meaning
1	API	American Petroleum Institute - issues standards for oil & gas industry
2	ASTM	American Society for Testing Materials - issues standards for line pipe
3	Bars	Long steel products that are rolled from billets. Merchant bar and reinforcing bar (rebar) are two common categories of bars, where merchants include rounds, flats, angles, squares, and channels that are used by fabricators to manufacture a wide variety of products such as furniture, stair railings, and farm equipment. Rebar is used to strengthen concrete in highways, bridges and buildings (see Sheet Steel).
4	Billet	Round, solid bar of steel which is pierced to form a seamless tube or pipe. A semi-finished steel form that is used for "long" products: bars, channels or other structural shapes. A billet is different from a slab because of its outer dimensions; billets are normally two to seven inches square, while slabs are 30-80 inches wide and 2-10 inches thick. Both shapes are generally continually cast, but they may differ greatly in their chemistry.
5	Black pipe	Denotes lacquered outside diameter finish (as opposed to bare or galvanized)
6	Blast Furnace	A towering cylinder lined with heat-resistant (refractory) bricks, used by integrated steel mills to smelt iron from its ore. Its name comes from the "blast" of hot air and gases forced up through the iron ore, coke and limestone that load the furnace.
7	Capacity	Normal ability to produce steel in a given time period. This rating should include maintenance ENGINEERED CAPACITY The theoretical volume of a mill, given its constraints of raw material supply and normal working speed. "TRUE" CAPACITY Volume at full utilization, allowing for the maintenance of equipment and reflecting current material constraints. (Bottlenecks of supply and distribution can change over time--capacity will expand or reduce.)
8	Casing	Pipe used as a structural retainer for the walls of a drilled hole
9	Coils	Steel sheet that has been wound. A slab, once rolled in a hot-strip mill, is more than one-quarter mile long; coils are the most efficient way to store and transport sheet steel.
10	Coke	WHAT The basic fuel consumed in blast furnaces in the smelting of iron. Coke is a processed form of coal. About 1,000 pounds of coke are needed to process a ton of pig iron, an amount which represents more than 50% of an integrated steel mill's total energy use. WHY Metallurgical coal burns sporadically and reduces into a sticky mass. Processed coke, however, burns steadily inside and out, and is not crushed by the weight of the iron ore in the blast furnace. HOW Inside the narrow confines of the coke oven, coal is heated without oxygen for 18 hours to drive off gases and impurities.
11	Cold Reduction	WHAT Finishing mills roll cold coils of pickled hot-rolled sheet to make the steel thinner, smoother, and stronger, by applying pressure, rather heat. HOW Stands of rolls in a cold-reduction mill are set very close together and press a sheet of steel from one-quarter inch thick into less than an eighth of an inch, while more than doubling its length.
12	Cold Working (Rolling)	WHAT Changes in the structure and shape of steel achieved through rolling, hammering, or stretching the steel at a low temperature (often room temperature). WHY To create a permanent increase in the hardness and strength of the steel. HOW The application of forces to the steel causes changes in the composition that enhance certain properties. In order for these improvements to be sustained, the temperature must be below a certain range, because the structural changes are eliminated by higher temperatures
13	Cold-Rolled Strip (Sheet)	Sheet steel that has been pickled and run through a cold-reduction mill. Strip has a final product width of approximately 12 inches, while sheet may be more than 80 inches wide. Cold-rolled sheet is considerably thinner and stronger than hot-rolled sheet, so it will sell for a premium (see Sheet Steel).
14	Continuous (butt)-Weld Pipe	The standard pipe used in plumbing. Heated skelp is passed continuously through welding rolls, which form the tube and squeeze the hot edges together to make a solid weld.
15	Coupling	Short piece used to connect two lengths of pipe
16	CW	continuous weld - a method of producing small diameter pipe (1/2-4")
17	Electric Resistance Welded (ERW) Pipe	Pipe made from strips of hot-rolled steel which are passed through forming rolls and welded. While seamless pipe is traditionally stronger and more expensive than comparable ERW pipe, ERW technology is improving and the technique now accounts for approximately 48% of OCTG shipments by tonnage.

Steel Glossary (Cont' 1)

No	Terms	Meaning
21	ELECTRO-GALVANIZED	Zinc plating process whereby the molecules on the positively charged zinc anode attach to the negatively charged sheet steel. The thickness of the zinc coating is readily controlled. By increasing the electric charge or slowing the speed of the steel through the plating area, the coating will thicken. DIFFERENCES. Electro galvanizing equipment is more expensive to build and to operate than hot dipped, but it gives the steelmaker more precise control over the weight of the zinc coating. The automotive manufacturers, because they need the superior welding, forming and painting ability of electrogalvanized steel, purchase 90% of all tonnage produced.
22	ERW	electric resistance weld - most common form of manufacture for pipe in sizes from 2 3/8-22" OD
23	Ferrous	Metals that consist primarily of iron.
24	Flat-Rolled Steel	Category of steel that includes Sheet, Strip, and Tin Plate, among others.
25	Galvanized Steel	Steel coated with a thin layer of zinc to provide corrosion resistance in underbody auto parts, garbage cans, storage tanks, or fencing wire. Sheet steel normally must be cold-rolled prior to the galvanizing stage.
26	Greenfield Steel	New mill that is built "from scratch," presumably on a green field.
27	Hardening	WHAT Process that increases the hardness of steel, i.e., the degree to which steel will resist cutting, abrasion, penetration, bending, and stretching. WHY The increased endurance provided by hardening makes steel suitable for additional applications. HOW Hardening can be achieved through various methods, including (1) heat treatment, where the properties of steel are altered by subjecting the steel to a series of temperature changes; and (2) cold working, in which changes in the structure and shape of steel are achieved through rolling, hammering, or stretching the steel at a relatively low temperature. WHAT Process that increases the hardness of steel, i.e., the degree to which steel will resist cutting, abrasion, penetration, bending, and stretching. WHY The increased endurance provided by hardening makes steel suitable for additional applications. HOW Hardening can be achieved through various methods, including (1) heat treatment, where the properties of steel are altered by subjecting the steel to a series of temperature changes; and (2) cold working, in which changes in the structure and shape of steel are achieved through rolling, hammering, or stretching the steel at a relatively low temperature.
28	Heat (of steel)	A batch of refined steel. A basic oxygen or electric furnace full of steel. One heat of steel will be used to cast several slabs, blooms or billets.
29	Heat Treatment	WHAT Altering the properties of steel by subjecting it to a series of temperature changes. WHY To increase the hardness, strength, or ductility of steel so that it is suitable for additional applications. HOW The steel is heated and then cooled as necessary to provide changes in the structural form that will impart the desired characteristics. The time spent at each temperature and the rates of cooling have significant impact on the effect of the treatment. WHAT Altering the properties of steel by subjecting it to a series of temperature changes. WHY To increase the hardness, strength, or ductility of steel so that it is suitable for additional applications. HOW The steel is heated and then cooled as necessary to provide changes in the structural form that will impart the desired characteristics. The time spent at each temperature and the rates of cooling have significant impact on the effect of the treatment.
30	High-Carbon Steel	Steel with more than 0.3% carbon. The more carbon that is dissolved in the iron, the less formable and the tougher the steel becomes. High-carbon steel's hardness makes it suitable for plow blades, shovels, bedsprings, cutting edges, or other high-wear applications.
31	HOME SCRAP	Waste steel that is generated from within the steel mill, through edge trimming and rejects. It normally is sent directly back to the furnace.
32	Hot-Rolled (Hot Band) Steel	A coil of steel rolled on a hot-strip mill (hot-rolled steel). It can be sold in this form to customers or further processed into other finished products.
33	Hot-Strip Mill	A rolling mill of several stands of rolls that converts slabs into hot-rolled coils. The hot-strip mill squeezes slabs, which can range in thickness from 2-10 inches, depending on the type of continuous caster, between horizontal rolls with a progressively smaller space between them (while vertical rolls govern the width) to produce a coil of flat-rolled steel about a quarter-inch in thickness and a quarter mile in length.

Exhibit 113

Steel Glossary (Cont' 2)

No	Terms	Meaning
34	ID	Inside diameter
35	Ingot	A form of semi-finished steel. Liquid steel is teemed (poured) into molds, where it slowly solidifies. Once the steel is solid, the mold is stripped, and the 25- to 30-ton ingots are then ready for subsequent rolling or forging.
36	Iron Ore	Mineral containing enough iron to be a commercially viable source of the element for use in steelmaking. Except for fragments of meteorites found on Earth, iron is not a free element; instead, it is trapped in the earth's crust in its oxidized form.
37	Line Pipe	Pipe used in the surface transmission of oil, natural gas and other fluids.
38	Long Products	Classification of steel products that includes bar, rod and structural products, that are "long", rather than "flat".
39	Low-Carbon Steel	Steel with less than 0.005% carbon is more ductile (malleable): It is capable of being drawn out or rolled thin for use in automotive body applications. Carbon is removed from the steel bath through vacuum degassing.
40	OCTG	Oil country tubular goods - pipe made to API specifications
41	OD	Outside diameter
42	Oil Country Tubular Goods	Label applied to the pipe products used by petroleum exploration customers.
43	Pipe	Technically a tube used to transport fluids or gases. However, pipe and tube are often used interchangeably in steel lexicon, with a given label applied primarily as a matter of historical use.
44	Plate	Sheet steel with a width of more than eight inches, with a thickness ranging from one quarter of an inch to more than one foot (see Sheet Steel).
45	PROMPT (INDUSTRIAL) SCRAP	Excess steel that is trimmed by the auto and appliance stampers and auctioned to scrap buyers as factory bundles. This is a high-quality scrap as the result of its low-residual content and consistent chemistry.
46	SAW	Submerged arc weld - a method of producing very large OD pipe
47	Scrap (Ferrous)	Ferrous (iron-containing) material that generally is remelted and recast into new steel. Integrated steel mills use scrap for up to 25% of their basic oxygen furnace charge; 100% of the mini-mills' raw material for their electric furnaces generally is scrap.
48	Seamless Pipe	Pipe made from a solid billet, which is heated, then rotated under extreme pressure. This rotational pressure creates an opening in the center of the billet, which is then shaped by a mandrel to form pipe.
49	Sheet Steel	Thin, flat-rolled steel. Coiled sheet steel accounts for nearly one-half of all steel shipped domestically and is created in a hot-strip mill by rolling a cast slab flat while maintaining the side dimensions. The malleable steel lengthens to several hundred feet as it is squeezed by the rolling mill. The most common differences among steel bars, strip, plate, and sheet are merely their physical dimensions of width and gauge (thickness).
50	Slab	The most common type of semi-finished steel. Traditional slabs measure 10 inches thick and 30-85 inches wide (and average about 20 feet long), while the output of the recently developed "thin slab" casters is approximately two inches thick. Subsequent to casting, slabs are sent to the hot-strip mill to be rolled into coiled sheet and plate products.
51	Slitting	Cutting a sheet of steel into narrower strips to match customer needs. Because steel mills have limited flexibility as to the widths of the sheet that they produce, service centers normally will cut the sheet for the customer.
52	Ton	Unit of measure for steel scrap and iron ore. GROSS TON 2,240 pounds. LONG (NET) TON 2,240 pounds. SHORT (NET) TON 2,000 pounds. Normal unit of statistical raw material input and steel output in the METRIC TON 1,000 kilograms. 2,204.6 pounds or 1.102 short tons.
53	Tubing	When referring to OCTG, tubing is a separate pipe used within the casing to conduct the oil or gas to the surface. Depending on conditions and well life, tubing may have to be replaced during the operational life of a well.

Source: <http://www.steel.org/learning/glossary/c.htm>; Inter-Mountain Pipe & Trading Co.; American Iron & Steel Institute

Exhibit 114

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