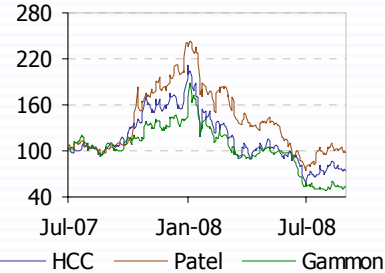
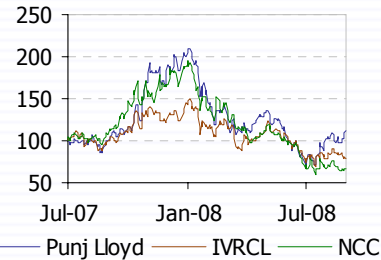


Relative Performance



Source: ENAM Research, Bloomberg

Infrastructure Sector

Already at stress case values?

Sector summary

Company (%)	Price (Rs.)	Mkt cap (USD mn)	EPS (Rs.)		P/E (x) FY09E	Tgt Price (Rs.)	(%) upside	Rel To to Sec
			FY09E	FY10E				
Punj Lloyd	305	2,112	16	22	18	345	13	N
IVRCL	310	945	19	26	10	423	36	OP
Nagarjuna	132	692	9	12	12	160	21	OP
HCC	102	596	4	6	11	113	11	N
Patel Engg	408	556	23	30	11	509	25	OP
Gammon	227	448	14	16	9	250	10	N

Stress Case Values (Rs/share)

P/E	P/B	EV/ Backlog	Core Avg.	VOI*	Stress Value	52w Low
227	172	181	194	17	210	183
248	220	307	258	86	344	250
104	114	98	105	25	131	107
49	49	34	44	54	98	68
297	269	296	288	135	423	286
122	137	152	137	86	223	199

Source: ENAM Research Note: Standalone financials except for Patel Engg and Punj Lloyd * Stress case VoI differs from target VoI (Ref slide 8 for details)

Executive Summary

- ➔ **We have attempted an exercise, using a range of methodologies to arrive at high-comfort zone entry-points for stocks, for both trading opportunities & long term investments**
- ➔ **Infrastructure sector outlook : Short term hiccups; long term intact**
 - Impact of slowing GDP growth on construction visible – spend on it has slipped to < 8% of GDP
 - Pre-electoral uncertainties and regulatory hurdles (eg NHAI road orders) are adding to short term woes
 - However, USD 500bn infra target is intact with order flows continuing to be strong in segments like power & water
 - Order backlogs at 2-3x sales provide ~2-year visibility
- ➔ **RoE has trended lower due to various rounds of fund raising**
 - Equity capital has been deployed for funding BOT and real estate subsidiaries which have a longer gestation period
 - RoE could improve in the long term as growth outweighs impact of dilution as in the past
 - While the sector continues to be in a secular growth phase, the cyclical slowdown is largely discounted by the 50-70% decline in stock prices from peak levels
 - The implied earnings growth for a 50% upside over 3 years from current prices is 15-50% p.a. which is likely for most companies; however, a 100% upside over the same period requires a 25-64% earnings CAGR which is unlikely
- ➔ **Finding cyclical trough prices: What's the appropriate methodology?**
 - We believe, P/E (based on a sustainable RoE), P/BV (based on LT growth and cost of equity) and EV/ order backlog (based on historical mean adj. for quality of backlog) are suitable metrics for EPC companies.
 - We have applied an appropriate discount for value of investments in real estate and BOT projects.
- ➔ **Based on our stress value calculations:**
 - Stocks above stress value – Punj Lloyd
 - Stocks near/below stress value – IVRCL, Nagarjuna Construction, Patel Engg, HCC and Gammon

Outlook: Short term hiccups; long term intact

➤ Infra spend: to mirror GDP slowdown?

- Infra spending so far has played catch up to a rise in GDP – going up from ~5% of GDP in 2002 to ~8% in FY08
- GDP growth now slowing dramatically i.e. ~200 bps to ~8% in 2009E from 9.6% in 2007
- Impact of slowing growth on construction already visible – spend on it has slipped < 8% of GDP as effective interest rates have gone up >500 bps

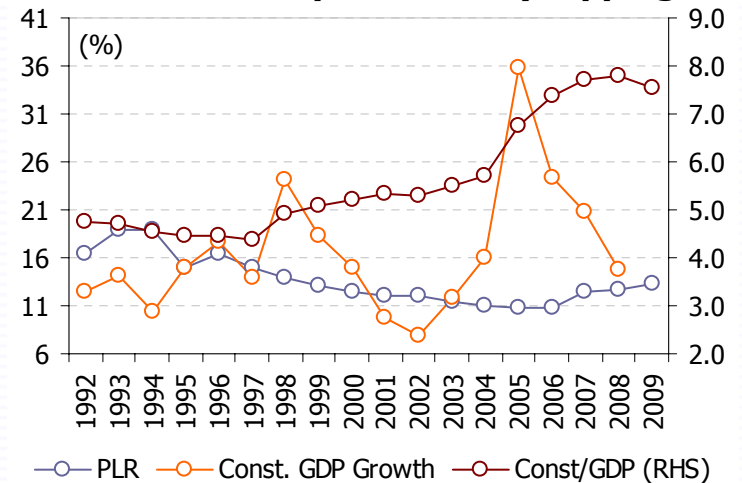
➤ Political uncertainties/ regulatory hurdles add to short term woes

- Infra project announcements getting affected by regulatory hurdles (eg NHA road orders)
- Impending Gen elections & formation of a new govt. (~6-8 mths) may further delay order flows

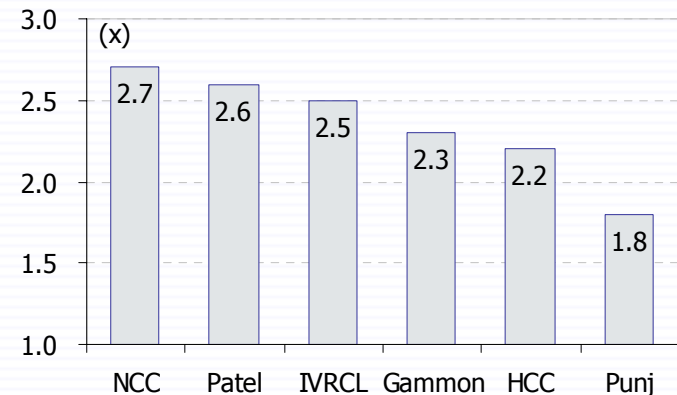
➤ However, USD 500bn infra target intact

- Order inflows in water and power segment strong
- Order backlogs are healthy at 2-3x sales and provide sufficient medium term visibility
- Any cooling off of commodity prices could arrest margin erosion

Construction spend already dipping!



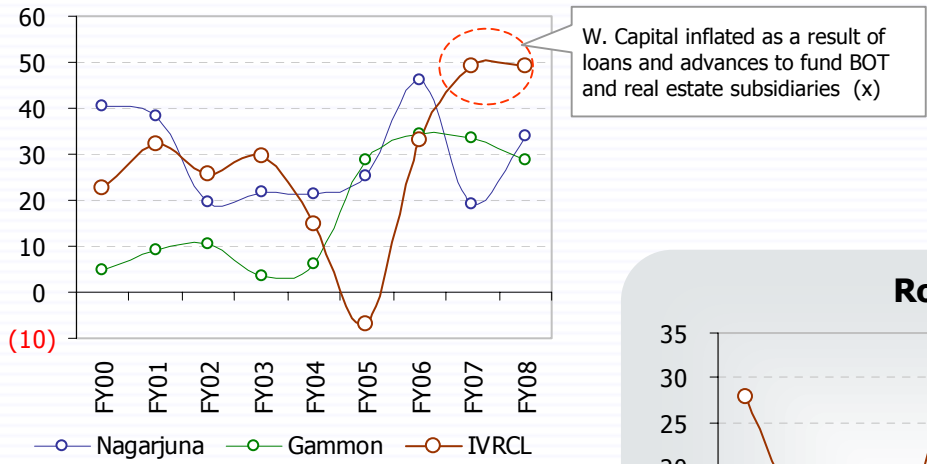
Backlog/sales healthy at 2-3x sales



Source: ENAM Research, Business Beacon

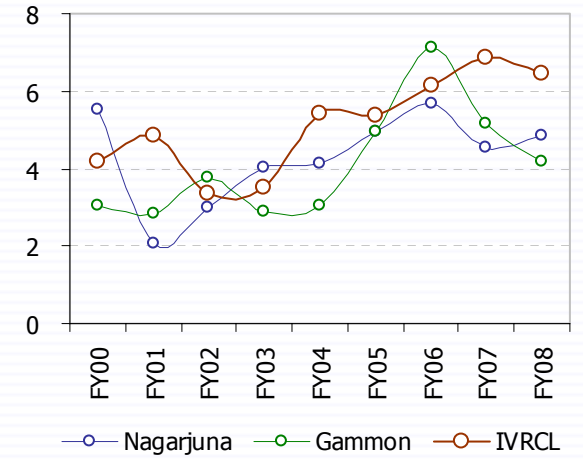
RoE trending lower due to fund raising

W. Capital Intensity (x)

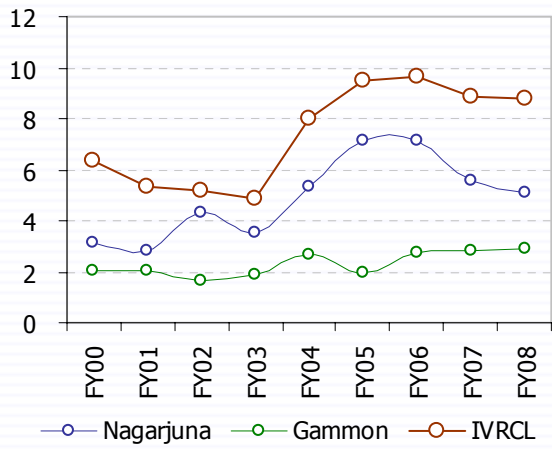


(10)

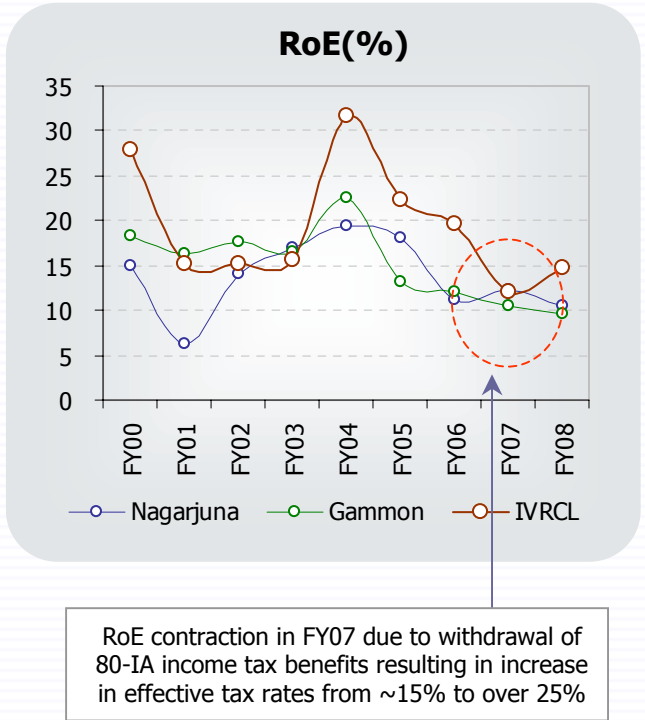
NPM (%)



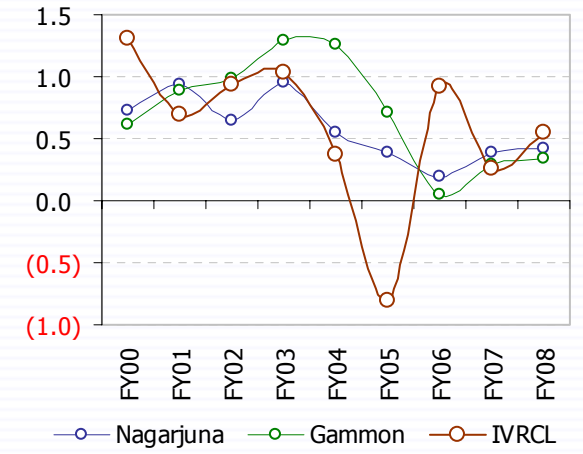
Fixed Asset turns (x)



RoE(%)



Net Debt: Equity (x)



Source: ENAM Research, Capitaline

RoE decomposition reflects impact of dilution

	FY00	FY04	FY08
IVRCL			
PAT Margins	4.2	5.4	6.5
Total Asset Turns	2.5	2.5	1.4
Asset/Equity	2.7	2.3	1.7
RoE	28	32	15
NCC			
PAT Margins	5.5	4.1	4.8
Total Asset Turns	1.4	2.4	1.1
Asset/Equity	1.9	1.9	1.9
RoE	15	19	10
GMON			
PAT Margins	3.1	3.0	4.2
Total Asset Turns	2.1	2.5	1.6
Asset/Equity	2.9	2.9	1.4
RoE	18	22	10

	FY00	FY04	FY08
HCC			
PAT Margins	4.8	3.4	2.5
Total Asset Turns	1.1	1.8	1.0
Asset/Equity	4.1	3.6	3.0
RoE	23	22	8
PEC			
PAT Margins *	12.7	3.8	8.8
Total Asset Turns	3.3	1.8	1.0
Asset/Equity	1.7	4.0	2.1
RoE	70	27	18
PUNJ			
PAT Margins	5.5	2.2	3.9
Total Asset Turns	1.0	1.0	1.7
Asset/Equity	2.5	4.9	1.6
RoE	14	11	11

Source: ENAM Research, Bloomberg Note: Standalone financials except for Patel Engg and Punj Lloyd. * Patel Engg pays tax at MAT rate

➤ RoE has contracted over FY04-08 largely due to fund raising by companies

- Overall PAT Margins have improved but asset turns have been lower since equity capital has been deployed for funding BOT and real estate subsidiaries which have longer gestation period
- Low gearing levels give scope for increasing in borrowings to fund increased working capital requirements; albeit at high interest rates – to hurt earnings growth in FY09-10E

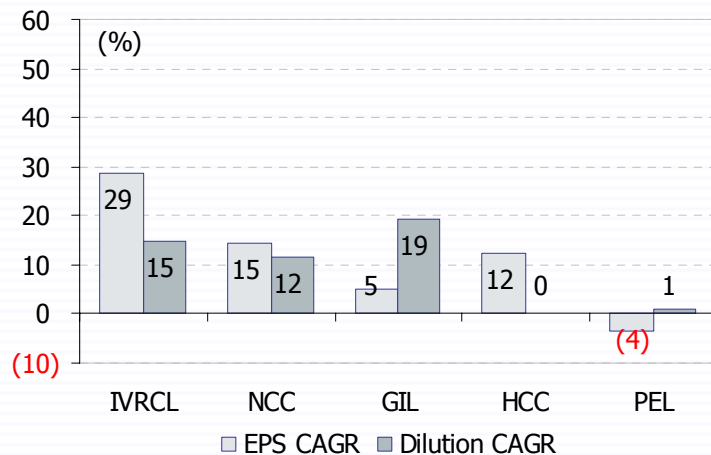
➤ RoE could improve as growth outweighs impact of dilution in the long term

Can growth outweigh impact of dilution?

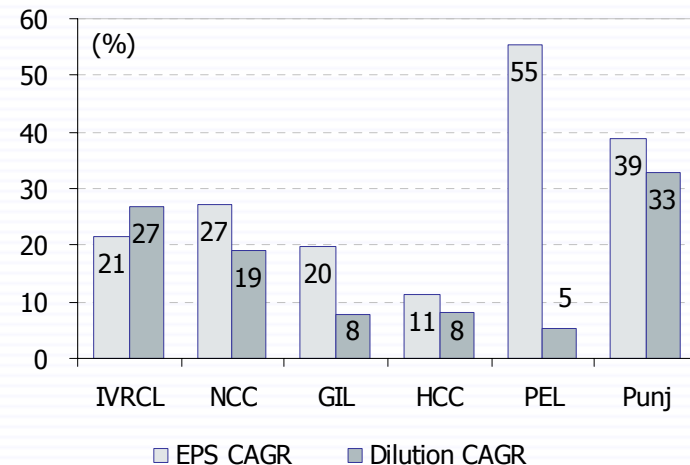
➤ **Rate of dilution vs earnings growth in the past shows that dilution has paid off**

- In the steady growth phase from FY00-04, dilution has paid off in case of IVRCL and NCC
- In the high growth phase from FY04-08, earnings growth has outweighed the impact of dilution for all companies except IVRCL

FY00-04 – EPS growth vs dilution



FY04-08 – EPS growth vs dilution



Source: ENAM Research, Capitaline

- **Going forward, companies in our infra universe are expected to post earnings CAGR of 19-55% over FY08-10E without any further dilution. However, they may need infusion for maintaining growth beyond FY10.**

Is the expected growth in the price?

- Our “required growth” exercise suggests that a 50% upside over 3 years from current prices is likely in case of Punj Lloyd, IVRCL, Nagarjuna Construction and Patel Engg
- However, for a 100% upside over 3 years, the required earnings CAGR is 26-64% which is unlikely in all cases

Required EPS CAGR for 50% and 100% upside from current prices over the next 3 years

Company	M.Cap* (Rs bn)	PE (x) FY09E	Tgt PE (x) FY11E	Regd EPS CAGR FY08-11E		Likely/ Unlikely	Comments
				50% Case	100% Case		
Punj Lloyd	93	18	14	49	64	Likely	Mgmt target of Rs200bn topline and 10% PBT margin by 2012 implies a ~50% earnings CAGR over FY08-12E. Current backlog of Rs200bn to support ~55% earnings CAGR till FY10E
IVRCL	31	12	13	15	26	Likely	Mgmt target of 35-40% CAGR in topline and marginal dip in profitability implies ~30% earnings CAGR over FY08-10E. Current backlog of Rs140bn to support ~30% earnings CAGR till FY10E
Nagarjuna	26	13	12	23	36	Likely	Current backlog of Rs125bn to support ~30% earnings CAGR till FY10E
Patel #	16	12	13	14	25	Likely	Current backlog of Rs 60bn to support ~20% earnings CAGR till FY10E
Gammon	16	10	9	29	42	Unlikely	Current backlog of Rs 100bn to support ~20% earnings CAGR till FY10E
HCC	14	11	11	34	47	Unlikely	Current backlog of Rs 83bn to support ~30% earnings CAGR till FY10E but non-conversion of FCCB could impact FY11E earnings

Note: # For calculating EPS CAGR, FY08 PAT has been adjusted for full tax. * Mcap adjusted for Value of Investments

Finding cyclical trough prices: Methodology

⇒ P/E and sustainable RoE

- Historically, infrastructure stocks have traded in a band of 0.4-1.5x RoE
- We have valued EPC companies at 0.6 – 0.8x LT sustainable RoE based on resilience of their business models

⇒ P/B and cost of Equity

- We have considered long-term sustainable growth of companies (7-12%) , cost of equity (14-16%) and sustainable RoE and valued the companies at 1-2x FY09E book
 - Target P/B = (Sustainable RoE- LT growth)/(Cost of Equity – LT growth)

⇒ EV/Backlog

- Captures visibility for near-to-medium revenue growth
- We have valued EPC companies at 0.2 – 0.4x backlog depending on the average age of execution and proportion of variable contracts

Stress case Value of Investments

	Base case VoI	Stress case VoI	Of which			Comments *
			BOT	Realty	Others	
PUNJ	17	17	0	6	11	Investments in Ramprastha JV and Pipavav Shipyard at 1x P/BV
IVRC	110	86	30	43	13	BOT projects at 1.6x P/BV , 62% stake in IVR PUDL at CMP of Rs167, 52.8% stake in Hind Dorr at CMP of Rs 105 (both with holdco discount of 10%)
NCC	28	25	18	8	0	BOT projects at 1.3x P/BV , real estate -DCF using 16% CoE and factoring in delays in various projects
HCC	54	54	2	52	0	BOT projects at 1x P/BV , real estate - DCF using 16% CoE - Lavasa(Rs 36/share), Vikhroli (Rs 16/share)
PEC	164	135	23	112	0	BOT projects at 1x P/BV , real estate- value of Jogeshwari, B'lore and Hyd land which have high visibility or are city centric
GMON	100	86	66	0	19	BOT projects at 2x P/BV ; treasury stock (5.85mn shares at Rs 220);~51% stake in Gammon & Billimoria at FY10 P/E of 6x; Inv. in Sadbhav Engg at CMP of Rs 800 (after 10% holdco discount)

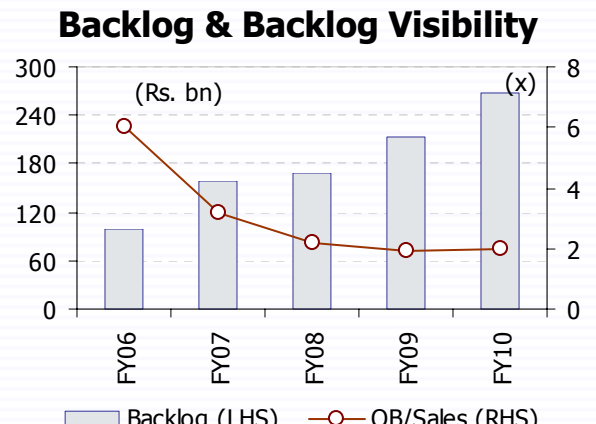
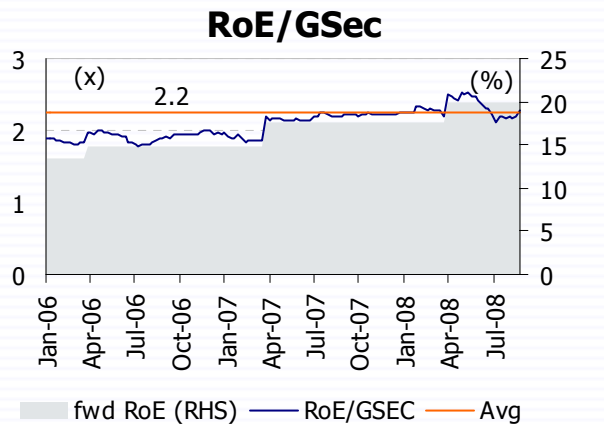
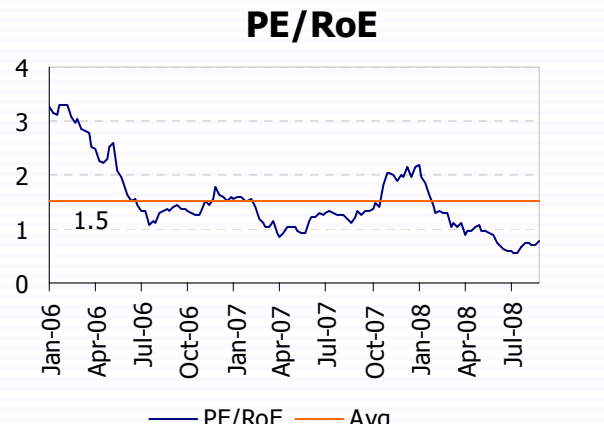
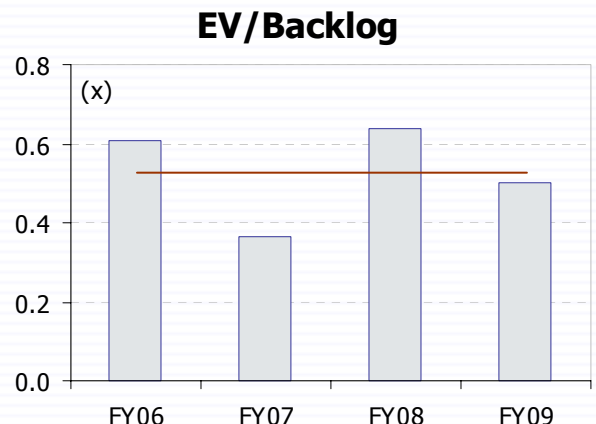
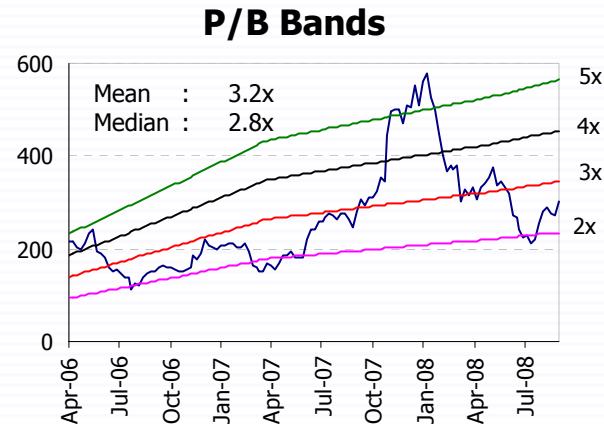
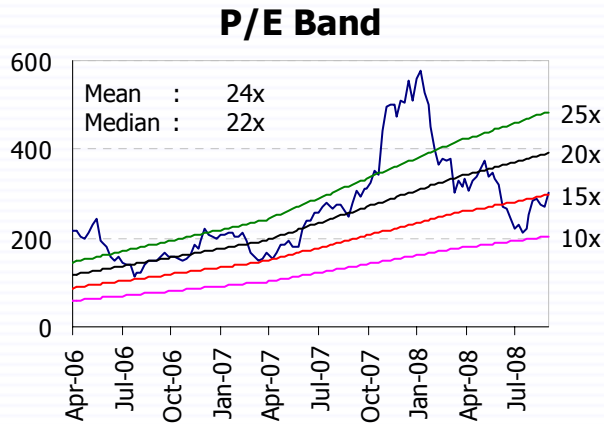
Note: * For BOT projects, only operational /under construction projects have been valued.



Stress Case Values

Punj Lloyd

CMP : Rs 305
Target Price : Rs 345
52-wk H/L : Rs 589/183



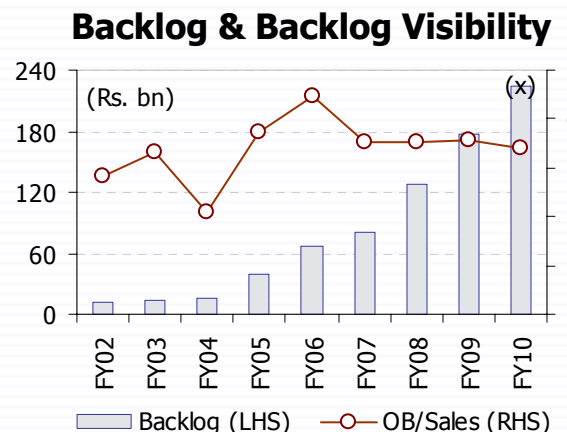
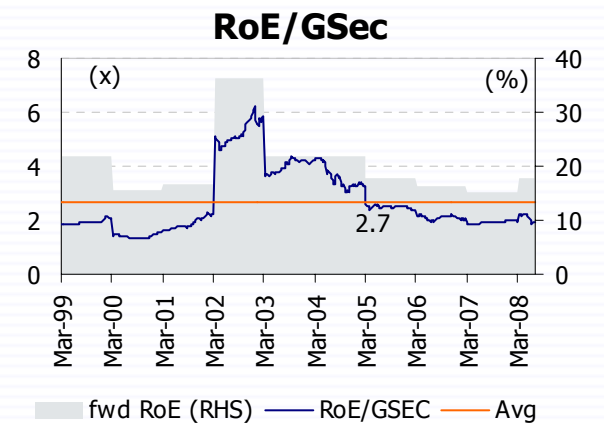
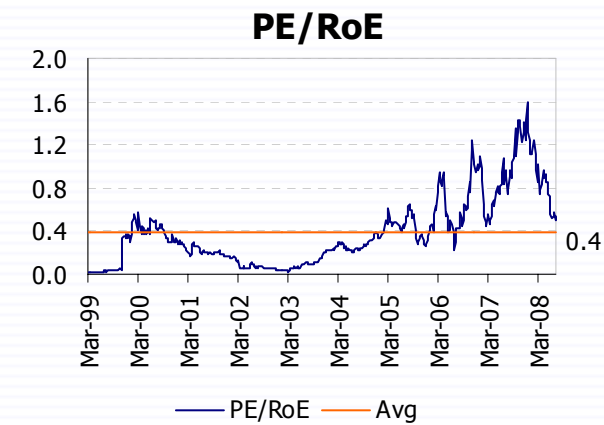
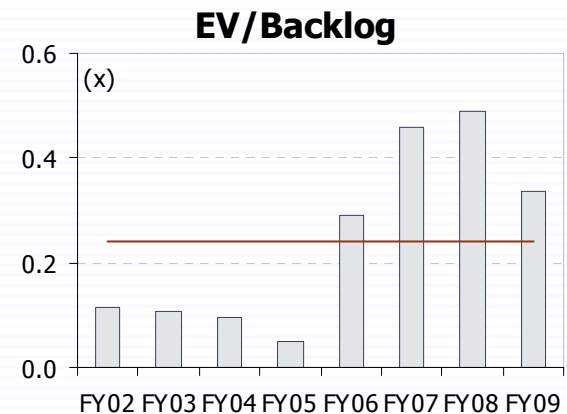
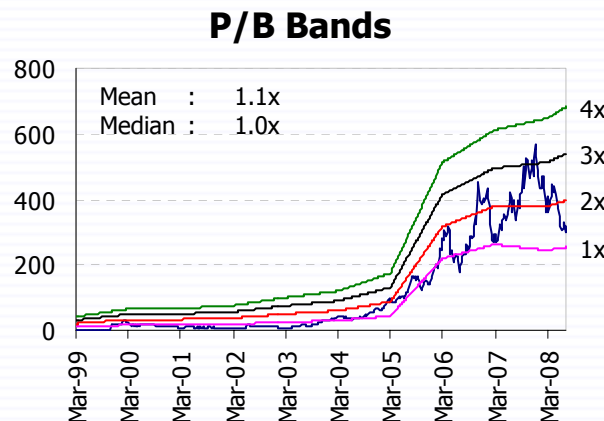
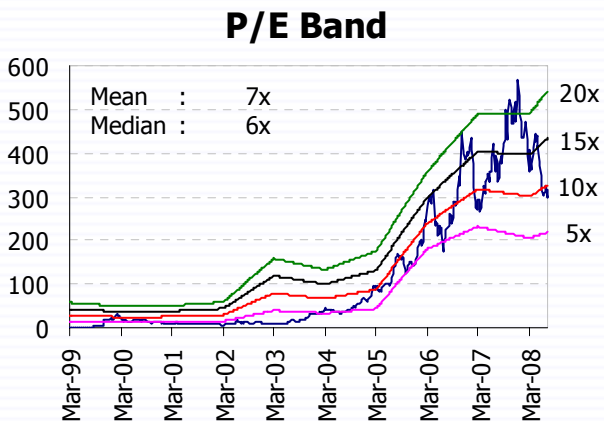
Sustainable RoE = 18%
 Target PE = 14x
 Target = 227

LT growth = 12%
 Cost of Equity = 16%
 Target P/B = 1.7x
 Target = 172

FY08 Backlog = 169bn
 Target EV/OB = 0.4x
 Target = 181

Average : Rs 194 (Core bus.) + Rs.17 (VoI)= Rs 210

Note: P/E and P/B bands have been adjusted for the Value of Investments



Sustainable RoE = 18%
 Target PE = 13x
 Target = 248

LT growth = 7%
 Cost of Equity = 13.7%
 Target P/B = 1.6x
 Target = 220

Current Backlog = 128bn
 Target EV/OB = 0.4x
 Target = 307

Average : Rs 258 (Core bus.) + Rs.86 (VoI) = Rs 344

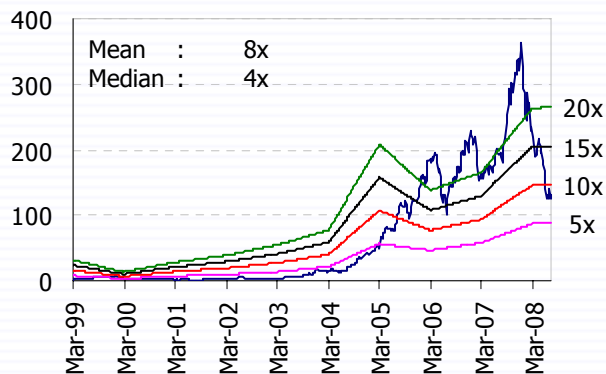
Note: P/E and P/B bands have been adjusted for the Value of Investments

Nagarjuna

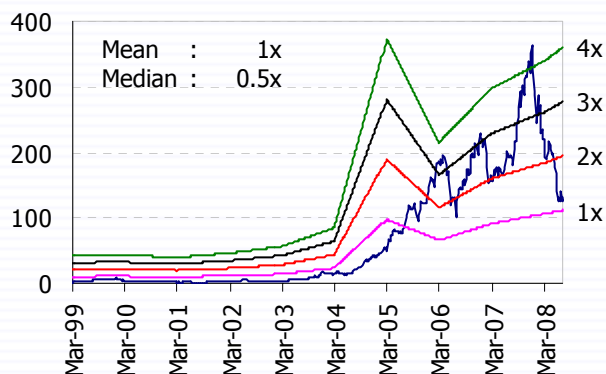
CMP : Rs 132
Target Price : Rs 160
52-wk H/L : Rs 373/107



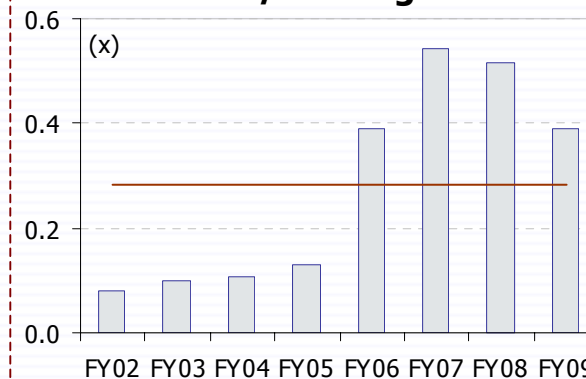
P/E Band



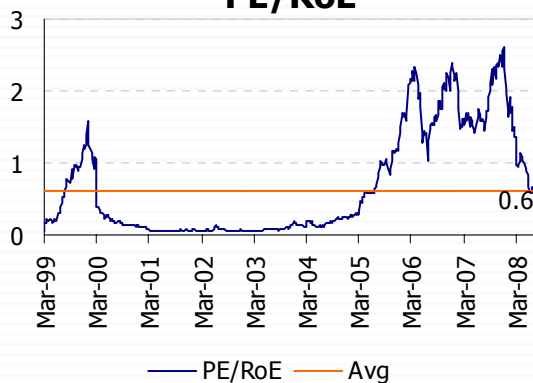
P/B Bands



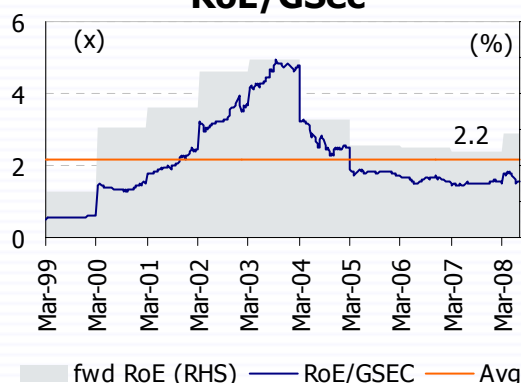
EV/Backlog



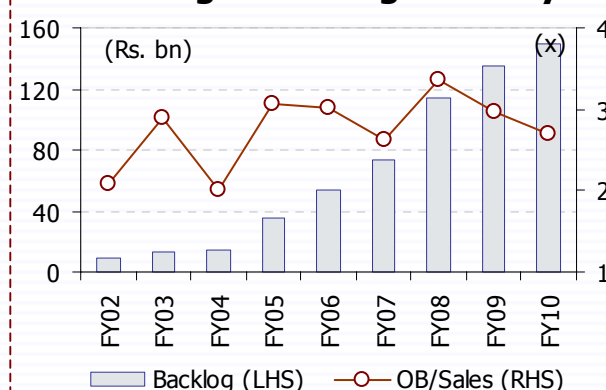
PE/RoE



RoE/GSec



Backlog & Backlog Visibility



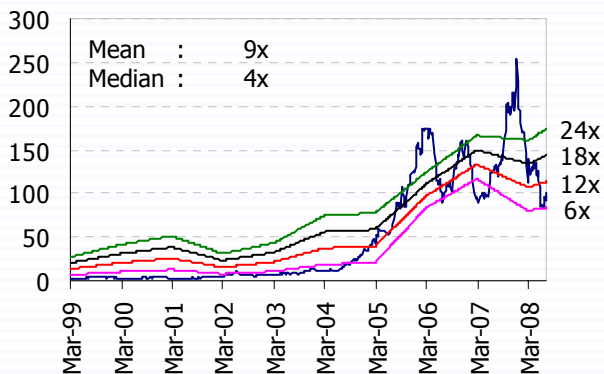
Sustainable RoE = 17%
 Target PE = 12x
 Target = 104

LT growth = 7%
 Cost of Equity = 13.8%
 Target P/B = 1.5x
 Target = 114

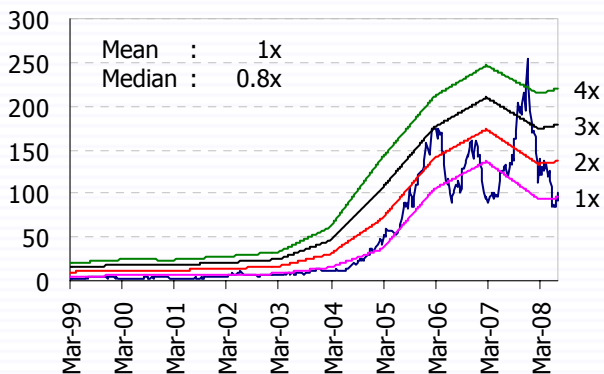
Current Backlog = 114bn
 Target EV/OB = 0.3x
 Target = 98

Average : Rs 105 (Core bus.) + Rs.25 (VoI) = Rs 131

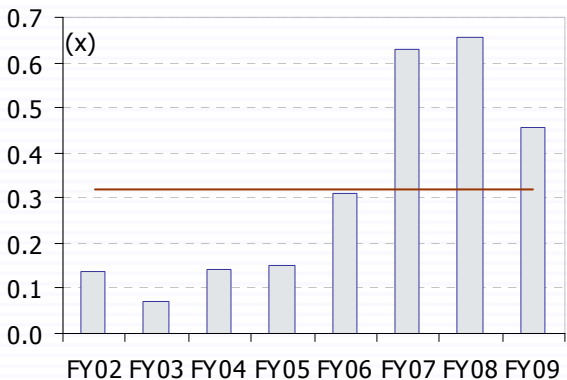
P/E Band



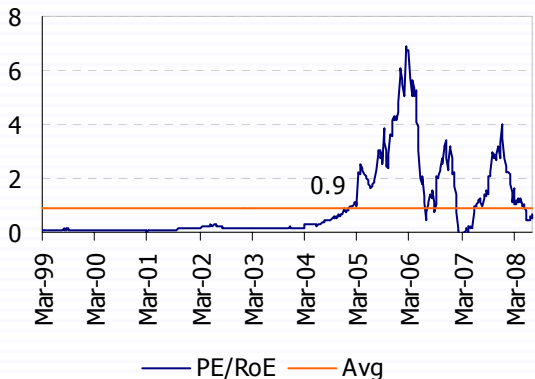
P/B Bands



EV/Backlog

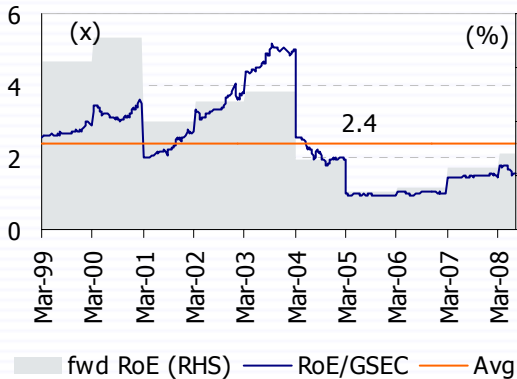


PE/RoE



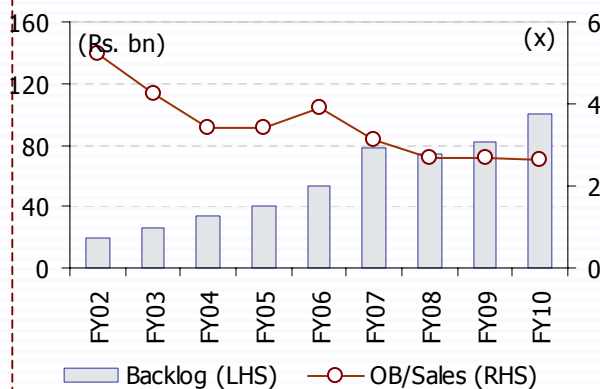
Sustainable RoE = 15%
 Target PE = 11x
 Target = 49

RoE/GSec



LT growth = 7%
 Cost of Equity = 13.6%
 Target P/B = 1.2x
 Target = 49

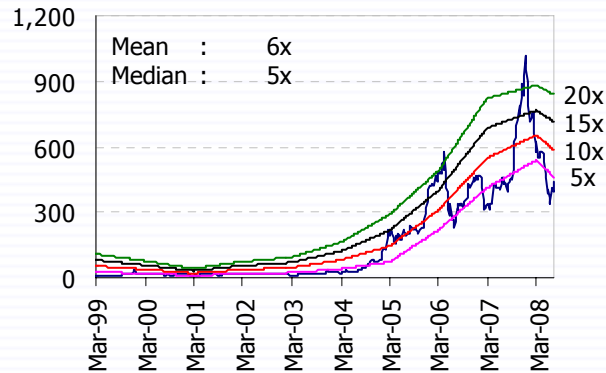
Backlog & Backlog Visibility



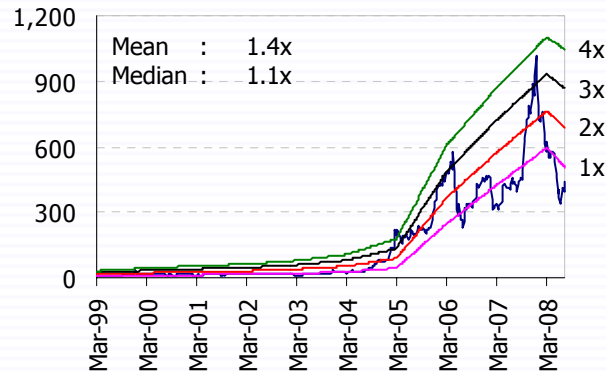
Current Backlog = 82bn
 Target EV/OB = 0.3x
 Target = 34

Average : Rs 44 (Core bus.) + Rs 54 (VoI) = Rs 98

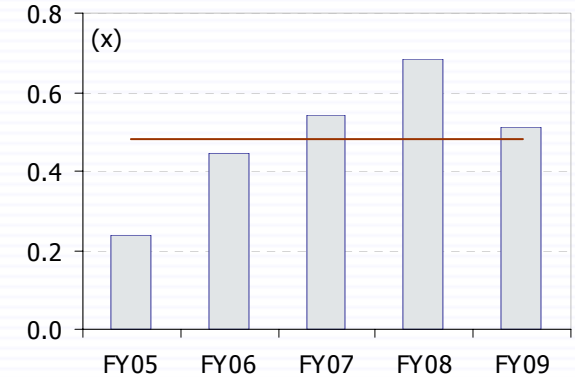
P/E Band



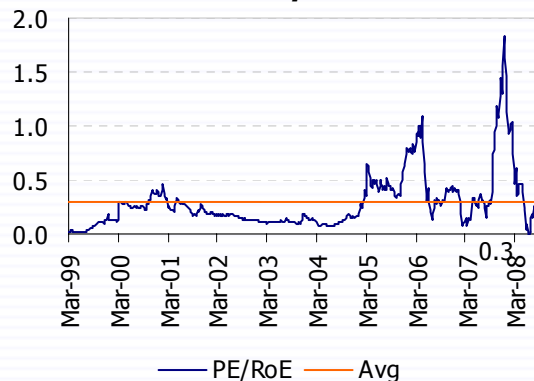
P/B Bands



EV/Backlog

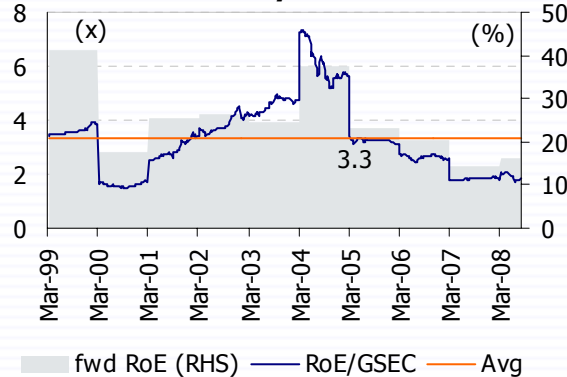


PE/RoE



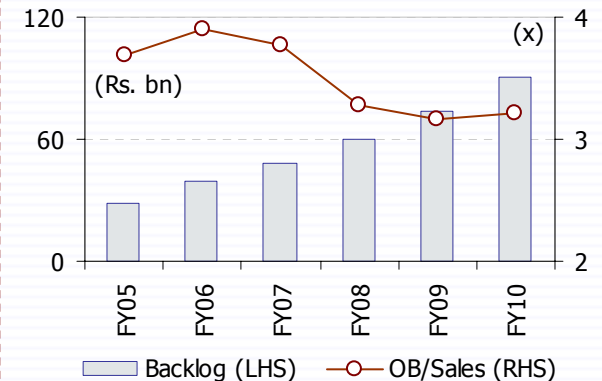
Sustainable RoE = 18%
 Target PE = 13x
 Target = 297

RoE/GSec



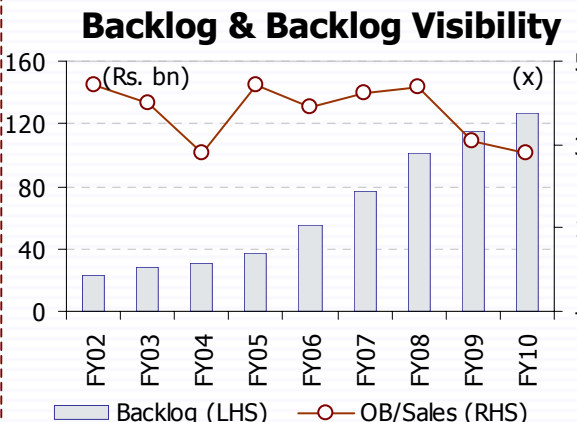
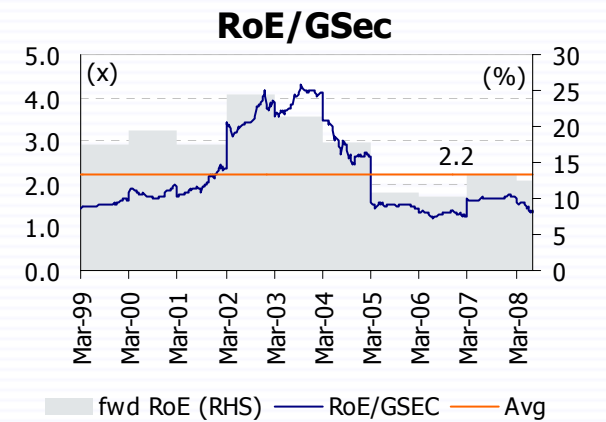
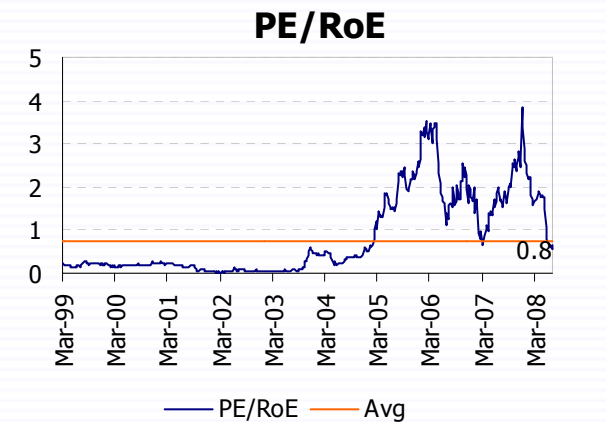
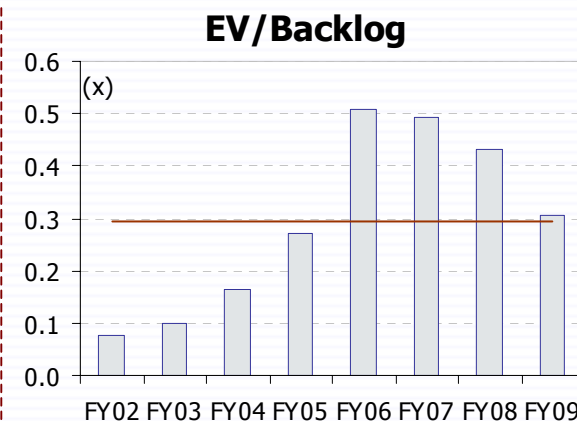
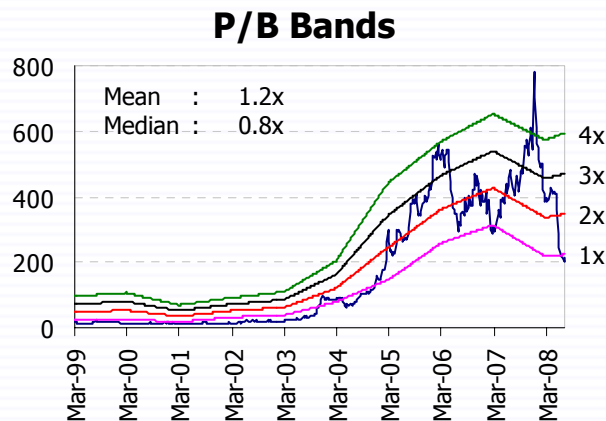
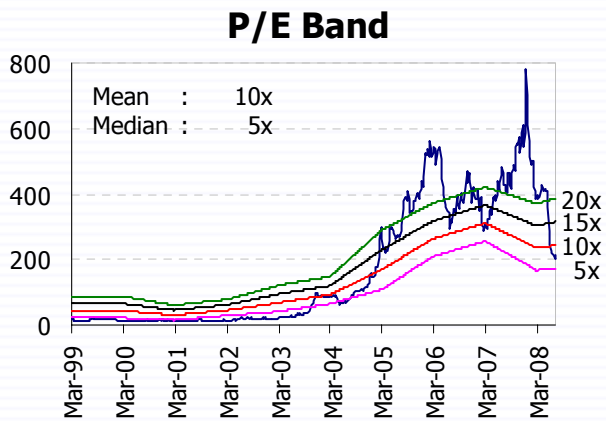
LT growth = 7%
 Cost of Equity = 13.9%
 Target P/B = 1.6x
 Target = 269

Backlog & Backlog Visibility



Current Backlog = 31bn
 Target EV/OB = 0.4x
 Target = 296

Average : Rs 288 (Core bus.) + Rs 135 (VoI) = Rs 423



Sustainable RoE = 15%
 Target PE = 9x
 Target = 122

LT growth = 7%
 Cost of Equity = 13.9%
 Target P/B = 1.2x
 Target = 137

Current Backlog = 102bn
 Target EV/OB = 0.2x
 Target = 152

Average : Rs 137 (Core bus.) + Rs 86 (VoI) = Rs 223

Note: P/E and P/B bands have been adjusted for the Value of Investments



Appendix

Rising rates impacting project IRR's

➤ Adoption of PPP models but IRR's impacted

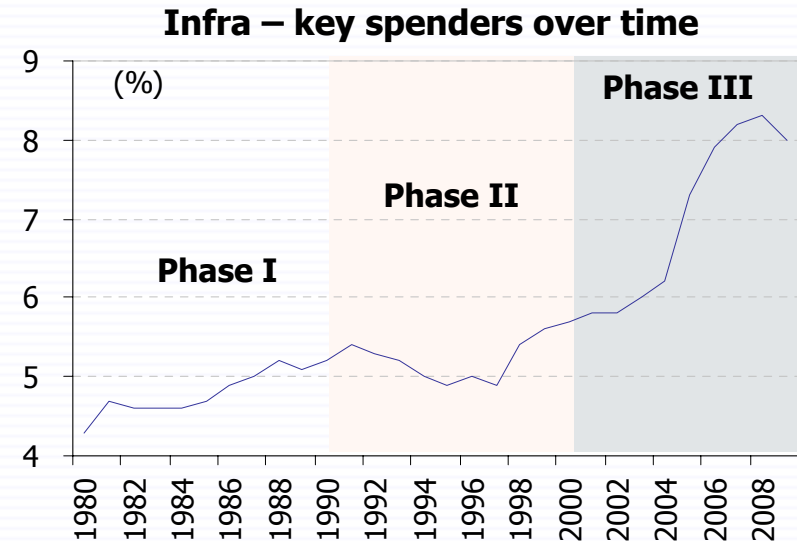
- Infra spend , largely govt financed until now
- Public private partnership model adopted recently
- However, equity IRR's have been hit due to rising rates => inadequate incentive for private players

➤ Funding pressure on balance sheet

- Tight monetary situation coupled with pressure to fund existing BOT and real estate projects=> pressure on balance sheets
- Option of raising finances through capital markets not available currently!

➤ Expect a year or two of consolidation

- High Interest costs coupled with escalating raw material prices to impact profitability
- Players with stronger execution capabilities and relatively stronger balance sheets are better off



Source: ENAM Research, Prowess

- **Phase I:** Govt as not viable for pvt enterprise
- **Phase II:** Privatization picks up; Govt still large, spending has demand pull
- **Phase III:** IRR attractive enough for pvt sector, larger participation to ease govt funding pressure and faster execution

How players stack up... I

Extent of pass through in backlog

(% of Total Backlog)	IVRCL	NJCC	GIL*	PEL	HCC	Punj
Star rated (full pass thru)	65	25	15-20	50-60	5-10	-
Index/WPI linked	25	45	65-70	10-15	85	60-70
Material provided by clients	3	0	-	-	-	-
Fixed Price contracts	7	30	10	20-25	5-10	30-40

Source: Company, ENAM Research, * incl ATSL

FY09 Intake capacity and achievement

	IVRCL	NCC	Gammon	PEL	HCC	Punj
Net Worth	16	16	10	9	10	27
Net intake capacity status	119	81	60	52	66	184
FY09 Intake Assumed	99	67	52	36	55	158
Q1FY09 % achieved	29	27	21	15	16	17

Source: Company, ENAM Research, Note: Intake capacity = Net worth x Applicable multiplier factor (8-12) + FY09E revenues – current backlog

How players stack up...2

Working capital breakup

	Punj Lloyd	Gammon	Patel Engg	IVRCL	HCC	NCC
Inventory	97	113	160	19	254	59
Receivables	98	83	91	66	1	94
Loans and Advances	31	80	92	78	35	161
Other Current Assets	4	1	0	107	0	1
Current Assets	230	278	344	270	290	314
Current Liabilities	184	195	212	104	150	162
Net Current Assets - FY08	76	106	180	179	169	176
Without L&A to subsidiaries	76	86	155	135	153	151

Total investments in BOT and real estate subsidiaries

FY08 Rs mn	Inv in Subs/JV	Loans & Adv	Total	Est equity investment reqd *		Bal to be funded
				for BOT projects	for Realty	
NCC	5,648	2,298	7,946	6,502	2,250	806
IVRCL	3,409	4,379	7,788	2,573	4,000	(200)
HCC	2,520	1,322	3,842	590	2,500	(752)
Gammon	1,208	1,275	2,483	4,605		2,123
PEC #	1,101	1,287	2,388	4,440		2,052

Note: * Only near term equity requirements for real estate are considered above

Estimated requirement in the near term incl that for proposed thermal power plant (Rs 3bn) where land acquisition is in progress (not included in valuations) ; no immediate requirement for real estate since land is already paid for.

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Disclosure of interest statement (As of September 5, 2008)

	Punj Lloyd	IVRCL	Nagarjuna	Gammon	HCC	Patel Engg.
1. Analyst ownership of the stock	Yes	No	No	No	No	Yes
2. Firm ownership of the stock	No	No	No	No	No	No
3. Directors ownership of the stock	No	No	No	No	Yes	Yes
4. Investment Banking mandate	No	No	No	No	No	No
5. Broking relationship	No	No	No	No	No	No

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