Banking - Asset Quality

Leaning, but not falling

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Executive Summary

Slippage inevitable, though magnitude and velocity to be lower this time

Of the two Bs that drive bank share price, one (bond rates) is moving in the favourable direction, while there are concerns around the other (bad debts). Currently, the market, though wanting to play falling bond yields, is nervous on the risk from non-performing loans (NPL) due to reminiscence of mid-1990s and early 2000. In our view, net slippage in the current cycle will be significantly lower compared with both mid-1990s and early 2000 due to lower proportion of stressed sectors, lower leverage, better risk management and improved debt restructuring, though retail NPL are likely to continue. Our conclusion is derived from a combined study of (top-down) macro economic factors, sector level leverage & demand outlook, bank level exposure to various segments and change in risk management & recovery tools. Moreover, loss given default (LGD) will also be lower due to better recovery mechanism (SARFAESI, DRT) available now. For large banks (SBI, PNB, ICICI, HDFC Bank, Axis Bank) net slippage is likely to remain low in FY09E, while in FY10E, it is likely to increase to 1-1.5% (gross slippage of 2.5-3.0%).

Stressed book, as percentage of loans, is lower than previous cycle

As per our estimates, loans to stress sectors (as a percentage of total credit) were 27% in FY08 compared with 34% in FY99. Our analysis of corporate loans (~50% of total credit) based on sector-wise financial ratios and demand & margin outlook (corroborated by Altman Z Scores) suggest higher net slippage (of >2.5%) in textiles, auto ancillaries, transport operators, gems & jewelry, real estate, sugar, mid-size metals (non-integrated) and chemicals & fertilizers. Loans to infrastructure, engineering, food processing, petroleum, telecom and cement (together 18% of total credit) appear healthy and, therefore, should see normal delinquencies. Of retail credit, two wheelers, credit cards, commercial vehicles (CV), and personal loans are likely to witness accelerated slippage, partly due to nature of credit and partly due to the weakening environment. Small scale industries (SSI, 7% of total credit) are likely to be under stress, considering their sensitivity to overall economic growth and high export dependent revenues. Owing to the recent cleaning (through loan waiver) in agriculture loans (12% of total credit), NPL are expected to remain low (<1.0%) in the agri loan book.

PD and LGD to be lower in current cycle

We expect the probability of default (PD) in the current cycle to be lower (than in previous cycles) due to: lower proportion of stressed loans; fear of default among promoters (due to SARFAESI); improved restructuring mechanisms; sharp decline in interest rates; and recent relaxation in prudential guidelines. Against 15.6% cumulative gross slippage during FY99-01 (using SBI data as proxy), we expect gross slippage to be at 8.5% during FY10-12E. Loss given default (LGD) is expected to decline to ~45% levels in this cycle from >70% previously; therefore, net credit loss (NCL) is likely to remain low at ~4% for FY10-12E (average 1.3%).

Outlook: SBI, PNB, HDFC Bank, Federal Bank offer play on both Bs

We expect incremental pressure of loan loss provisions (LLP) to be lower for HDFC Bank and Axis Bank, as their FY09 LLP is estimated to be higher than default risk. PSU banks are making lower LLP (at 60-80bps of loans) compared with the stress implied (~1.4%) by their loan books in FY10E. However, we expect bond gains to offset the increase in FY10 LLP for select PSU banks. One off incidents of NPA can lead to price correction, should be used for buying in our view. EPS for large banks is expected to grow at 15% CAGR over FY08-10E. At current valuations, we like State Bank of India (SBI), HDFC Bank, Axis Bank, and Punjab National Bank (PNB). Among mid-size banks, we like Federal Bank for its high duration bond book, high capitalization, and attractive valuation.

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AT A GLANCE

	M cap (INR bn)	M cap (USD mn)	Price (INR)	P/ABV FY09E (x)	P/ABV FY10E (x)	EPS FY09E (INR)	ROE FY09E (%)	P/E FY09E (x)	P/E FY10E (x)	PE / G FY08-10 (x)	EPS CAGR FY08-10 (%)	Yield FY08 (%)	Rating
State Owned Banks													
Allahabad Bank	23	500	50	0.5	0.4	14	12	4	3	(0.8)	(4)	3.96	ACCUMULATE
Indian Overseas Bank	36	805	67	0.7	0.7	21	22	3	3	0.6	5	4.50	ACCUMULATE
Oriental Bank	38	833	150	0.6	0.5	41	15	4	4	1.0	4	3.34	ACCUMULATE
Pun. Natl. Bank	140	3,104	444	1.1	1.0	79	21	6	5	0.4	15	3.15	ACCUMULATE
SBI (stand alone)	728	16,154	1,147	1.4	1.3	142	17	8	7	0.4	21	2.53	BUY
SBI (Cons)	556	13,901	987	1.0	0.9	142	17	7	6	0.3	21	2.94	BUY
Syndicate Bank	32	709	61	0.8	0.7	14	18	4	4	(2.9)	(2)	3.27	ACCUMULATE
Union Bank (I)	75	1,667	149	1.2	1.0	26	22	6	5	0.8	7	2.35	BUY
Private Sector Banks													
Axis Bank	156	3,456	434	1.6	1.3	48	18	9	7	0.2	41	1.38	BUY
Federal Bank	24	541	143	0.6	0.5	31	13	5	4	0.2	30	3.15	BUY
HDFC Bank	393	8,720	925	2.8	2.4	52	17	18	14	0.8	21	1.07	BUY
ICICI Bank	455	10,087	409	1.0	0.9	35	8	12	10	4.0	3	2.59	BUY
ICICI Bank#	268	5,945	241	0.7	0.7	30	8	8	7	0.6	12	NA	BUY
ING Vysya Bank	15	342	150	1.0	0.9	21	14	7	6	0.2	32	1.33	BUY
Kotak Mahindra Bank#	105	2,339	305	1.6	1.5	21	7	15	13	(1.3)	(11)	0.22	REDUCE
Karnataka Bank	9	191	71	0.6	0.5	18	14	4	3	2.1	2	5.64	ACCUMULATE
South Indian Bank	6	141	56	0.5	0.5	15	14	4	3	0.6	7	5.35	BUY
Yes Bank	21	469	71	1.4	1.2	8	17	9	6	0.3	27	-	BUY
Speciality Finance													
HDFC Ltd	437	9,681	1,535	3.0	2.5	90	19	17	13	1.1	15	1.75	BUY
HDFC Ltd#	274	6,086	965	2.4	2.7	90	19	11	8	0.7	15	2.79	BUY
LIC HF	21	459	244	1.0	0.8	56	24	4	4	0.3	13	4.10	BUY
IDFC	74	1,643	57	1.2	1.0	7	15	8	8	0.8	11	1.75	ACCUMULATE
Power Finance Corporation	152	3,360	132	1.3	1.3	13	16	10	9	0.6	18	2.65	ACCUMULATE
Reliance Capital	101	2,247	413	1.4	1.2	36	13	12	10	(6.2)	(2)	-	ACCUMULATE
SREI	5	106	41	0.4	0.4	8	10	5	3	1.4	4	3.65	BUY
Shriram City Union Finance	16	351	345	2.2	1.7	24	20	14	10	0.5	28	1.16	REDUCE

Note: # adjusted for subsidiaries

Asset Quality: Leaning, But Not Falling

The scope of this report is to assess the asset quality issues in the current downturn compared with the previous cycles and possible loan loss for banks. In the process of our study, we have calculated probability of default (PD) for various sectors in corporate book, segments of retail credit, agriculture and SSI separately (refer table "Probability of default", on page 8). To estimate PD for corporate book, we have used financial ratios of 2,400 companies in 20 sectors (60% of corporate credit) and their margin outlook. We have also considered stress as implied by Altman Z scores for companies in various sectors. Retail default estimates are based on analysis of securitised pools, company guidance, historical default rates, and income outlook. Future slippages are estimated based on the bank-wise exposure to various sectors/segments, adjusting for the difference in risk management practices.

Ingredients of deteriorating asset quality present

Key macro factors like slackening domestic economy, global slowdown, weak commodities and real estate demand, scarcity of equity capital, and sagging personal incomes with strong credit growth in the past four years are all suggesting higher NPLs, going forward. Since FY98, there has been a steady change in: (1) banks' loan book composition, with higher retail (mortgage) and infrastructure loans; and (2) the nature of credit, moving from working capital finance to longer maturity loans.

From a macro perspective, economists have revised down their GDP growth estimates for the Indian economy to ~6% levels for FY10 due to weakening signals from industrial activity. We expect NPL to pick up due to: (a) weak demand scenario at home and internationally; (b) steady increase in leverage of certain corporates (though low compared with previous cycles) and consumers compared with the past four years; (c) weak commodity and other asset prices; (d) weak capital markets that incrementally shifts the risk to debt holders from equity; and (e) slackening income levels due to weak employment scenario.

Magnitude and velocity of slippage to be lower this time

Analysis of the past decade indicates two prime contributors to high gross NPA: (1) overhang component in the form of old and stickier assets sitting in doubtful assets for a long time (due to longer recovery cycles); and (2) change in business cycles. Whether it was the mid 1990s post liberalisation crisis, which exposed operational inefficiencies, or the late 1990s crisis due to a slowdown instigated by the Asian crisis, Indian banks continued to accumulate NPAs from each downturn, resulting in gross NPA ratio of >10% (discussed in detail under section "Asset Quality Cycles In The Past " on page 20).

We would use the cliché 'it's different this time' to best describe our view on the current asset quality. In our view, net slippage in the current cycle will be significantly lower compared with both mid-1990s and early 2000 due to decline in proportion of stressed sectors, lower leverage, better risk management, and improved debt restructuring, though retail NPL are likely to continue. Our conclusion is derived from a combined study of (top-down) macro economic factors, sector level leverage and demand outlook, bank level exposure to various segments and change in risk management and recovery tools. Moreover, LGD will also be lower due to better recovery mechanism (SARFAESI, DRT) available now.

A number of structural improvements (refer page 22 to 24), combined with an extended strong economic cycle over the past few years, would slow down the pace of delinquency, in our view. Compared with previous business cycles, corporate dependence on external funds has reduced considerably to 44% in 2002-06 from 69% in the mid-1990s. Strong corporate balance sheets, regulatory relaxations, and deep interest rate cuts are likely to delay NPAs. Improved internal/external risk mechanisms and better legal recovery channels favour banks in the current cycle.

Chart 1: Sticky assets causing slower run off

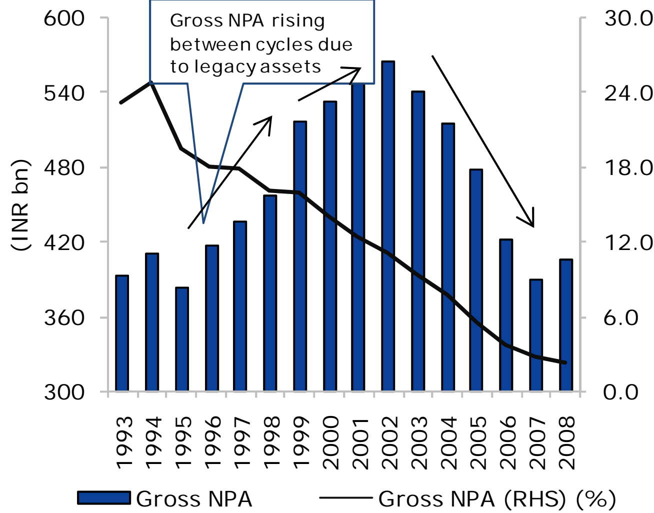
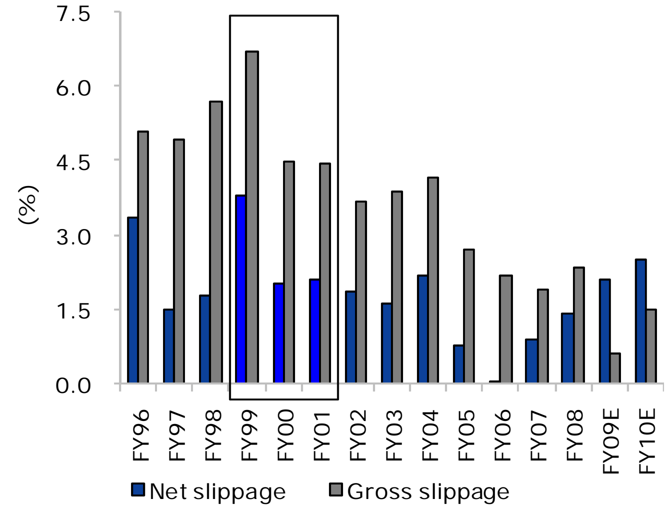
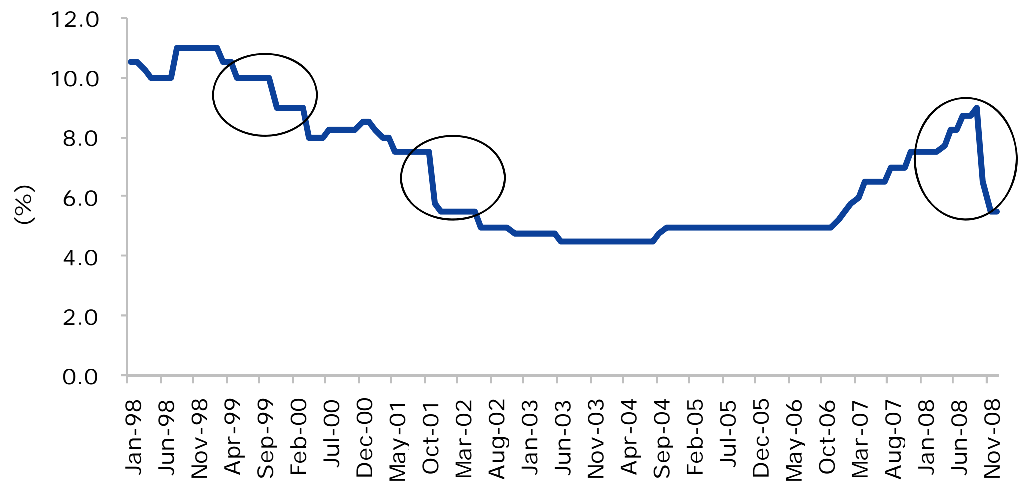


Chart 2: SBI net slippage across business cycles



Source: RBI, SBI, Edelweiss research

Chart 3: Monetary actions have been swifter and sharper this time around

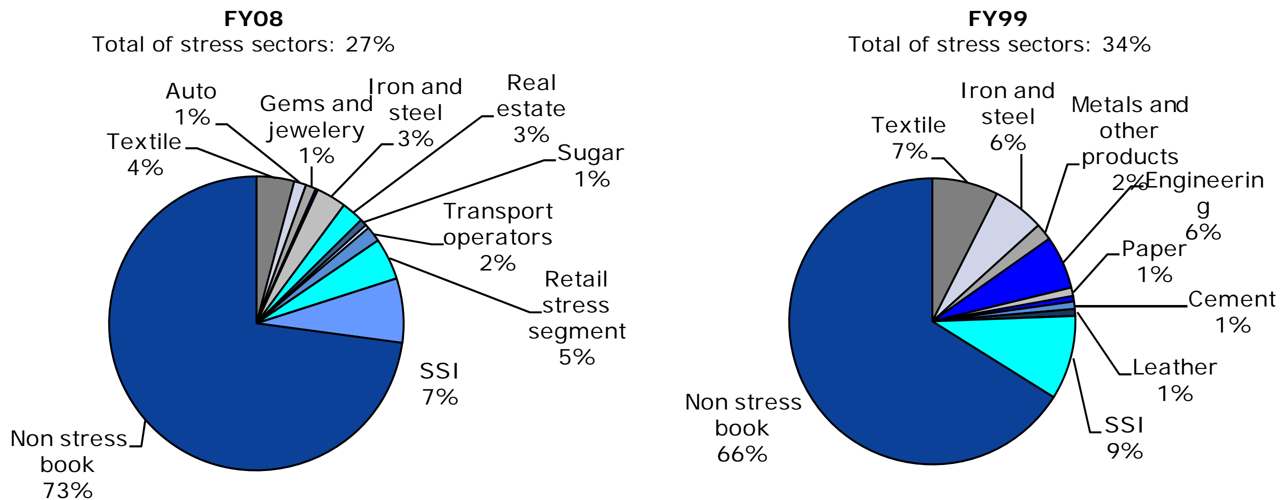


Source: RBI

Stressed book, as percentage of loans, is lower than previous cycle

As per our estimates, overall weak loans (as a percentage of total credit) were 27% in FY08 compared with 34% in FY99.

Chart 4: Composition of the book is much more diversified compared with previous cycles



Source: RBI, Edelweiss research

Corporate loan book (40% of credit): Outlook weak, balance sheets strong

Our analysis of ~2,400 companies (across 20 sectors) indicates that the Indian corporate sector had the strongest financials in FY07-08, in the past 14 years. At an aggregate level, interest coverage ratio (ICoR), which hit rock bottom in FY99 at 0.9x, improved to an estimated ~6.0x in FY08. The debt equity ratio (D/E), which had peaked in FY94, at 1.4x and 1.2x in FY97-00, has dropped sharply to 0.74x. Improving business performance has increased debt service coverage ratio (DSCR) to 1.7x in FY08 compared with 0.9x in FY01 and 1.4x during FY95-98.

We see these broad stress areas for corporate books, where risks of NPA could arise: (1) **sector specific**: (a) export dependent - textiles, auto ancillaries, gems and jewelry, (b) demand led (commodities) – metals, and real estate; and (2) **company specific** due to higher leverage and lower coverage.

Our analysis of corporate loans (50% of total credit) based on sector-wise financial ratios and demand and margin outlook (corroborated by Altman Z Scores) suggest higher net slippage (of >3%) in textiles, auto ancillaries, transport operators, gems & jewelry, real estate, sugar, mid-size metals (non-integrated) and chemicals & fertilizers. Loans to infrastructure, engineering, food processing, petroleum, telecom, and cement (together 18% of total credit) appear healthy and, therefore, should see normal delinquencies.

Additionally, our analysis using Altman Z Score indicates stress in textiles, fertilizers, sugar, while metals, cement and auto appear to be in good health (refer pages 54 to 57).

Retail NPA to continue to grow, but falling interest rates a big cushion

Retail credit will continue to see higher slippages as we move into FY10, due to weak employment (income) scenario, declining prices of underlying assets coupled with banks' limited ability on recovery. Mortgage, which would still be the safest of retail assets, could see defaults arising mainly from job (income) losses and loans where a project is under completion (mostly given during FY07-08). In our view, banks which built most of their mortgage books in the past two years should see greater slippages. The biggest mitigating factor that can reduce the intensity of slippages will be falling interest rates providing relief on mortgage. Our estimate shows that ~100bps decline in interest rates can help increase cash flows by ~6-8% of personal income.

We expect car loan slippages to be slightly higher at ~2.5%, due to weak income outlook, despite partly benefitting from reduced cash flow strain due to declining interest rates (mortgage installments).

Two wheelers, credit cards, and personal loans are likely to witness accelerated slippage in the range of 8-10%, partly due to nature of credit and partly due to the weakening income outlook. Defaults in CV loans are likely to be >5% in FY10E, given reduced economic activities and sluggish used-CV market. Higher cost of recovery in retail loans is leading to higher LGD in this segment of credit.

We analysed over 150 securitised retail loan pools rated by ICRA, Fitch, and Crisil, and further interacted with rating agencies and industry participants to understand the quality of the retail loan book in India and outlook on the same (insights from which are discussed on page 60). Unlike the corporate loan book, where delinquency tends to be lumpy, retail delinquency behaves like an 'inverted U'. Deterioration picks up in the first few quarters before peaking and steadily taper down in the final stages when recoveries kick in. Peaking of delinquency depends on the nature of the underlying asset, tenor of the loan, underwriting standards, and prevailing interest rates.

Priority sector lending: Agri book stable (12% of credit), SSI book vulnerable (7% of credit)

SSI (7% of total credit) are likely to be under stress, given their sensitivity to overall economic growth and high export dependent revenues. We expect 4% slippage due to the recent cleaning (through loan waiver) in agriculture loans (12% of total credit); further, slippage is expected to remain low (<1.0% in FY10E) in the agri loan book.

In **priority sector lending (PSL)**, due to the intervening period between announcement and implementation of the loan waiver scheme, gross NPA in the agricultural portfolio had increased sharply for a few banks in March 2008 (however, it has reduced since then). Delinquency in securitisation pools for some portfolios, which are classified as priority PSLs like commercial vehicle and commercial equipment, are showing strains of higher delinquency in the 3-5% range.

Current cycle to have its own challenges

The biggest difference between the current downturn and the earlier ones is the emerging role of banks as term lenders, which was earlier the forte of development financial institutions (DFI). The proportion of long-term financing has increased to 61% of total loans outstanding (from 50% in FY04), while the proportion of shorter-term financing has declined to 39% from 50% in 2004. Real estate exposure has increased ~2.5-3% of total credit compared with negligible exposure in previous cycles. Additionally, global liquidity and global interest rates have much higher ramifications today than before.

Probability of default and loss given default to be lower in current cycle

We expect probability of default (PD) to be lower (compared with previous cycles) due to: lower proportion of stressed loans; fear of default among promoters (due to SARFAESI); improved restructuring mechanisms; sharp decline in interest rates, and recent relaxation in prudential guidelines. Against 15.6% cumulative gross slippage during FY99-01 (using SBI data as proxy), we expect cumulative slippage to be at ~8.5% for FY10-12E. Loss given default (LGD) is expected to decline to ~45% levels in the cycle from >70% experienced for loans given in FY99-01; therefore, NCL is likely to remain low at ~4.0% for FY10-12E (average 1.3%).

In our view, investors should not generalise credit risk for the sector and, therefore, differentiate between banks with different kind of exposures and risk/recovery mechanisms. We believe the slippage could be lower than PD (depicted in table 1) for banks that have superior risk management practices (that can identify stress sectors early and work to reduce their exposure before they even translate into NPAs). Difference in credit appraisal process and risk monitoring would be key differentiators while estimating probable defaults for banks. Axis Bank, for example, reduced its exposure to financial companies from 15% in Q1FY08 to 7% Q2FY09 in around five quarters, while its real estate exposure was reduced from ~9% to 6% in four quarters. Documentation and collection system would determine the difference in LGD for different banks.

Table 1: Probability of default (PD)

(%)	IOB	SBI	PNB	ICICI **	HDFC Bank @	Axis	Gross default risk
Textile	4.4	5.9	4.6	1.7	1.0	4.5	5.8
Auto	1.9	1.2	0.3	1.7	7.0	1.3	1.7
Gems and jewellery	1.1	1.8	0.5	1.4	1.0	2.3	3.8
Leather	0.6	0.3	0.4	-	-	0.1	2.9
Metals	4.4	5.7	6.5	5.2	2.1	5.7	1.9
Real estate	6.0	2.0	5.0	7.0	7.9	6.2	
- Developers loans	NA	NA	NA	1.5	0.8	1.5	4.6
- other real estate	NA	NA	NA	5.5	7.1	4.7	1.8
Sugar	0.7	1.0	2.0	-	0.5	0.8	2.9
Chemicals & fertilizer	-	0.5	0.5	3.0	0.5	2.6	2.1
Other stress sectors	2.5	2.5	2.5	1.0	1.5	1.0	2.3
Retail loans - (high PD)	5.0	8.0	6.0	19.5	23.8	3.5	$
% of loan book high PD)	**26.6**	**28.9**	**28.3**	**40.6**	**45.3**	**27.8**	
Infrastructure	6.5	6.3	5.5	11.9	2.0	6.2	1.2
Agriculture	10.0	10.0	17.0	9.4	12.6	8.3	1.2
Others	46.9	43.8	39.1	8.6	32.1	38.2	1.7
Mortgage	10.0	11.0	10.0	29.5	-	13.3	$
% of loan book (low PD)	**73.4**	**71.1**	**71.7**	**59.4**	**54.7**	**72.2**	
Gross default risk (FY10E)	**2.5**	**2.4**	**2.3**	**2.6**	**3.2**	**1.8**	
Net slippage for FY10E (A)	**1.6**	**1.5**	**1.4**	**1.7**	**2.3**	**1.3**	
- Non- retail (as per PD)	1.4	1.1	1.2	0.6	0.6	0.9	
- Retail as % of total loans	0.2	0.5	0.2	1.1	1.7	0.4	
LLP as % of BOP loans (FY09E) (B)	0.7	0.8	0.9	1.5	2.5	1.4	
Incremental LLP pressure (A-B)	**0.96**	**0.72**	**0.57**	**0.21**	**(0.21)**	**(0.02)**	

Source: Company, Edelweiss research

*Note: ** ICICI Bank's exposure to fertilizers is reported under chemicals*

'@ HDFC Bank has not given segment wise break-up for exposures under 2%. We have assumed 0.5-1% exposure across segments

$ respective portfolio default risks

Axis Bank - latest data wherever available

Table 2: NPA forecast for banks

State Bank of India

	FY08E			FY09E			FY10E		
	Loan book (INR bn)	Gross NPA (INR bn)	Gross NPA (%)	Loan book (INR bn)	Gross NPA (INR bn)	Gross NPA (%)	Loan book (INR bn)	Gross NPA (INR bn)	Gross NPA (%)
Retail	851	26	3.1	1,070	35	3.3	1,250	55	4.4
Corporate and others	2,880	73	2.5	3,594	93	2.6	4,186	148	3.5
Agriculture	436	29	6.7	545	26	4.7	635	32	5.0
Total	4,168	128	3.1	5,209	154	3.0	6,071	234	3.9
Est write off during year					(8)	(0.1)		(12)	(0.2)
Gross NPA (likely reported)				5,209	146	2.8	6,071	222	3.7
Net NPA		74.2	1.8		70.4	1.4		118.4	1.9
Provision coverage			42.2			52.2			47.7
LLP as % of BOP loans			0.8			0.8			0.9

ICICI Bank

	FY08E			FY09E			FY10E		
	Loan book (INR bn)	Gross NPA (INR bn)	Gross NPA (%)	Loan book (INR bn)	Gross NPA (INR bn)	Gross NPA (%)	Loan book (INR bn)	Gross NPA (INR bn)	Gross NPA (%)
Retail	1,317	55	4.2	1,183	92	7.7	1,317	117	8.9
Corporate and others	770	11	1.4	817	18	2.2	865	30	3.5
Agriculture	170	10	5.8	217	12	5.3	238	13	5.3
Total	2,256	76	3.4	2,216	121	5.5	2,420	160	6.6
Est write off during year					(12)	(0.5)		(24)	(1.0)
Gross NPA (likely reported)				2,216	109	4.9	2,420	136	5.6
Net NPA		34.9	1.5		44.4	2.0		43.1	1.8
Provision coverage			52.0			59.4			68.3
LLP / BOP loans			1.4			1.5			1.7

HDFC Bank

	FY08E			FY09E			FY10E		
	Loan book (INR bn)	Gross NPA (INR bn)	Gross NPA (%)	Loan book (INR bn)	Gross NPA (INR bn)	Gross NPA (%)	Loan book (INR bn)	Gross NPA (INR bn)	Gross NPA (%)
Retail	393	7	1.9	579	21	3.7	731	40	5.5
Corporate and others	161	3	1.6	326	3	1.0	445	8	1.7
Agriculture	80	0	0.5	131	1	0.6	170	1	0.5
Total	634	10	1.6	1,036	25	2.4	1,347	49	3.6
Est write off during year					(4)	(0.3)		(15)	(1.1)
Gross NPA (likely reported)				1,036	22	2.1	1,347	34	2.5
Net NPA		3.0	0.5		7.6	0.7		10.0	0.7
Provision coverage			67.1			64.8			70.8
LLP as % of BOP loans			2.6			2.6			2.5

Axis Bank

	FY08E			FY09E			FY10E		
	Loan book (INR bn)	Gross NPA (INR bn)	Gross NPA (%)	Loan book (INR bn)	Gross NPA (INR bn)	Gross NPA (%)	Loan book (INR bn)	Gross NPA (INR bn)	Gross NPA (%)
Retail	136	3	1.9	160	4	2.8	194	7	3.5
Corporate and others	411	1	0.3	573	5	0.9	723	13	1.8
Agriculture	50	1	2.2	67	1	1.9	82	2	1.9
Total	597	5	0.8	799	11	1.4	999	22	2.2
Est write off during year					(2)	(0.2)		(5)	(0.5)
Gross NPA (likely reported)				799	9	1.1	999	16	1.6
Net NPA		2.5	0.4		3.8	0.5		7.0	0.7
Provision coverage			49.8			57.8			56.9
LLP as % of BOP loans			1.3			1.4			1.4

Source: Edelweiss research

Overall Sector View

Asset quality deterioration to be manageable

As discussed in the first section, we do not expect net slippage to rise significantly in FY09. In FY10E, it is likely to be 1-1.5% (gross slippage 2.5-3%) for large banks, though deterioration is expected to be higher for mid-size PSU banks. Average LLP for our coverage banks in FY08 was ~90bps (70bps for PSU banks and 140bps for private banks). In the near term, retail slippage would continue causing high LLP for ICICI Bank and HDFC Bank. Considering lower existing LLP, incremental pressure of provisioning would be higher for PSU banks in FY10, which they can withstand due to MTM gains on bond book.

Bond gains at 6% of bond yield to cushion 2-3% of loans

Banks have nearly 20% of the balance sheet in SLR that has appreciated 20-25% (at 6% yield on benchmark bond). Indian banks are sitting on significant treasury profits in both held to maturity (HTM) and available for sale (AFS) portfolios. These notional profits, as per our estimates, could be to the tune of 2-3% of loan book, which will be a significant earnings cushion, going forward. Banks' investments in non-SLR bonds would also have MTM gains, considering the contraction in corporate spreads in December. PSU banks (like SBI) have high duration investment book and, therefore, would be greater beneficiary of falling yields.

Earnings growth to remain strong for banks in FY10

We are revising our FY09 and FY10 earnings estimates to build in write backs of MTM losses, increased pension liabilities of PSU banks (due to falling bond yields) and lowered credit growth forecast. We expect our set of banks to post earnings CAGR of 16% over FY08-10E. With other avenues of debt drying up such as external borrowings and mutual funds, banks have emerged as preferred lenders, which augurs well for volume growth as well as margins in FY09. Credit growth is expected to decelerate to 17% in FY10E from 24% in FY09, mainly due to sluggish retail and fresh investment demand, though expansion in working capital cycle would offset flattening of revenues. Funds requirement for projects under implementation and refinancing of external borrowings would support domestic credit growth in FY10E. Margins, which otherwise would have expanded due to CRR/SLR cuts, would remain largely flat for the sector and decline 5bps for PSU banks (SBI), while private banks would see expansion (5-30bps) in margins.

Outlook: Select large caps offer best play on both Bs

Of the two B's, which drive bank share price, one (bond rates) is moving in the favourable direction, while there are concerns around the other (bad debts). Currently, the market appears cautiously optimistic on banks, wanting to play falling bond yields; it is, however, nervous on NPL risks. Owing to sharp decline in interest rates and various relaxation measures initiated by RBI in terms of restructuring, we expect NPAs to be deferred by at least two-three quarters. We believe slippages will be lower in FY09 for select banks than what is being factored by markets and, therefore, probability of consensus being surprised positively is high. However, short-term price movements get impacted by one-off incidents of defaults, which causes general fear of NPL. In our view, such corrections should be used to accumulate select banks. At current valuations, we like HDFC Bank, SBI, and PNB. We also like Axis Bank, but due to its strong out-performance recently advise buying on pull backs. Among mid-size banks, we like Federal Bank due to its high duration investment book, high CAR and attractive valuations.

Table 3: Credit breakup (modified) across three cycles

(INR bn)	FY99	FY02	FY08
Gross bank credit (INR bn)	3,420	5,367	22,474
1. Public food procurement credit (INR bn)	168	540	444
2. Non-food gross bank credit (INR bn)	3,252	4,827	22,030
Industry*			
Infrastructure	1.8	3.1	9.2
Iron and steel	7.4	5.5	4.8
Textiles	7.2	5.4	4.1
NBFC	1.9	2.0	3.4
Chemicals	6.1	5.4	2.9
Real estate loans	0.5	0.5	2.4
Engineering	6.6	5.0	2.4
Food processing	1.5	1.5	2.3
Petroleum	1.7	2.3	1.9
Export credit	11.0	8.9	NA
Others	13.8	20.3	29.7
Total	**59.5**	**59.9**	**63.1**
Personal loans			
a) Housing	3.5	4.6	12.2
b) Consumer durables	1.0	1.5	0.4
d) Loans to Individuals against Shares and debentures/bonds	0.5	0.3	0.2
f) Other non-priority sector personal loans	3.8	4.8	0.0
g) Advances against fixed deposits	4.6	4.4	2.0
h) Credit card outstandings	0.0	0.0	0.9
i) Education	0.0	0.0	0.9
j) Other personal loans	0.0	0.0	0.7
Total	**13.4**	**15.6**	**17.4**
Priority sector			
Agriculture	12.2	12.6	12.4
SSI	14.9	11.8	7.1
Total	**27.1**	**24.4**	**19.5**

Source: RBI, Edelweiss research

*Note: * Industry includes data from services and trade as defined by RBI*

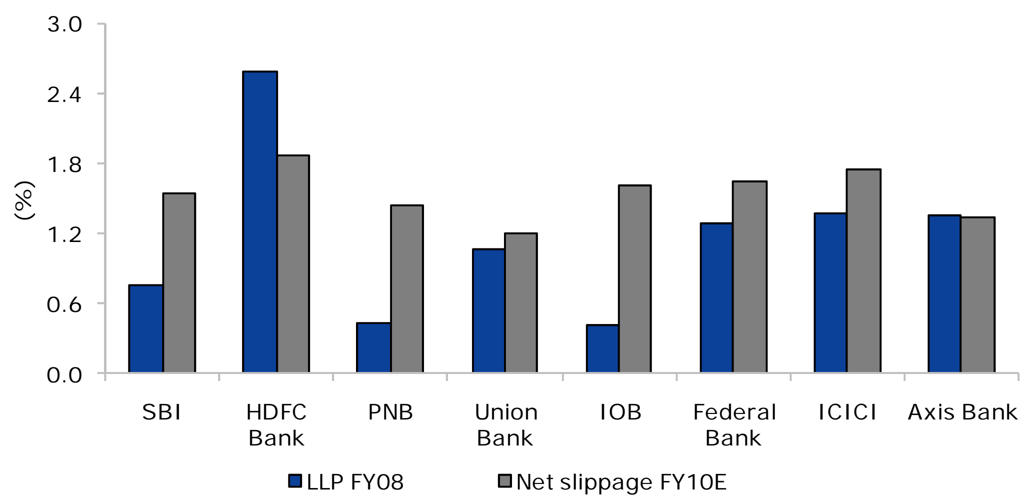
Table 4: Bank-wise credit break-up (as of Q2FY09)

(INR bn)

	Axis Bank	SBI	HDFC Bank	ICICI Bank
Large corporate	338	567	517	266
SME and mid corporate	131	2,143		
Agriculture	51	489		133
International		754		577
Retail	168	997	505	1,221
Housing	89	506		623
Personal	37	355	82	118
Education		56		
Cards	7		39	85
Non schematic	8			
Vehicle loans	22			366
Auto loans	15	80	135	158
Commercial loans	7		90	176
Two Wheelers	-		22	32
Loans against securities			10	
Business banking			128	
others				
Total	**689**	**4,934**	**1,022**	**2,220**

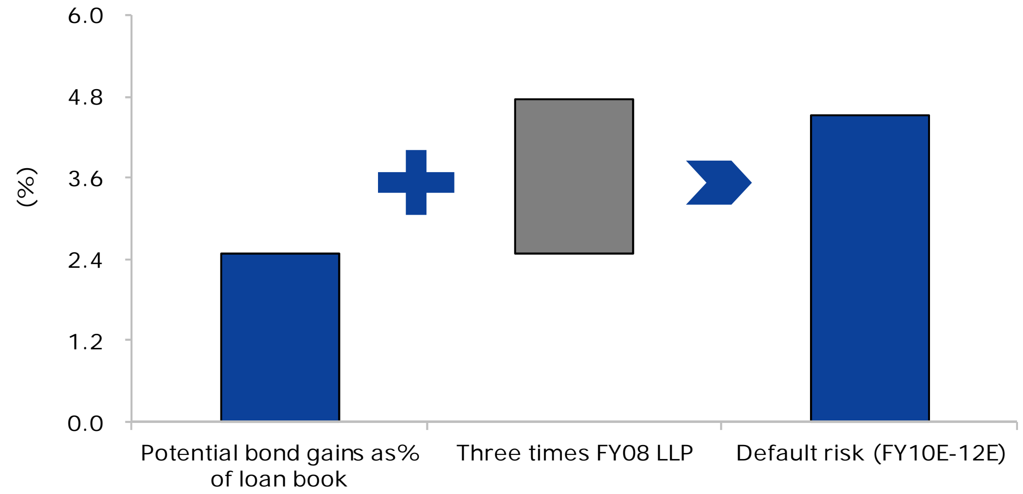
Source: Company

Chart 5: Bank-wise LLP (FY08) and net slippage in FY10E



Source: Company, Edelweiss research

Chart 6: Default risk not to impact RoAs illustrated with SBI as benchmark



Source: Company, Edelweiss research

*Note: * Calculated at 6% G-Sec yield*

Ingredients of Deteriorating Asset Quality Present

The ingredients for declining asset quality are in place. India has had one of the longest uninterrupted economic growth which has resulted in credit expansion at a fast pace. FY09 is seeing the sheer impact of the seizure in world credit caused largely due to the subprime crisis, while the subsequent recession in most developed economies should be sufficient indicator that India's banking system cannot be insulated from deteriorating asset quality.

From a macro perspective, economists have revised down their GDP growth estimates for the Indian economy to more conservative levels of ~6% for FY10 due to weakening signals from industrial activity. We expect NPL to pick up due to: (a) weak demand scenario at home and internationally; (b) steady increase in leverage of certain corporates (though low compared with previous cycles) and consumers compared with the past four years; (c) weak commodity and other asset prices; (d) weak capital markets (scarcity of equity capital) that incrementally shifts the risk to debt holders from equity; (e) slackening income levels due to weak employment scenario; and (f) strong credit growth in the past four years.

Since FY98, there has been a steady change in: (1) banks' loan book composition, with higher retail (mortgage) and infrastructure loans; and (2) the nature of credit, moving from working capital finance to longer maturity loans.

Prolonged credit growth with falling NPA changed course in FY08

Credit growth has increased at a furious pace of over ~22% CAGR over FY02-Q3FY09. Also, this period witnessed absolute decline in gross NPA, relieving most banks of all their stickier NPA and equipping them to tackle the next downturn. Gross NPAs fell from over 10-11% in FY02, 16% in FY99, and ~25% levels in FY94 to 2.2% in FY08.

Chart 7: Increase in gross NPA w.r.t credit growth

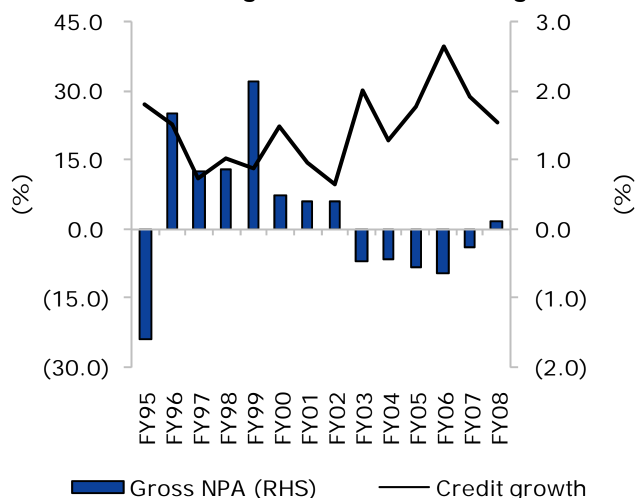
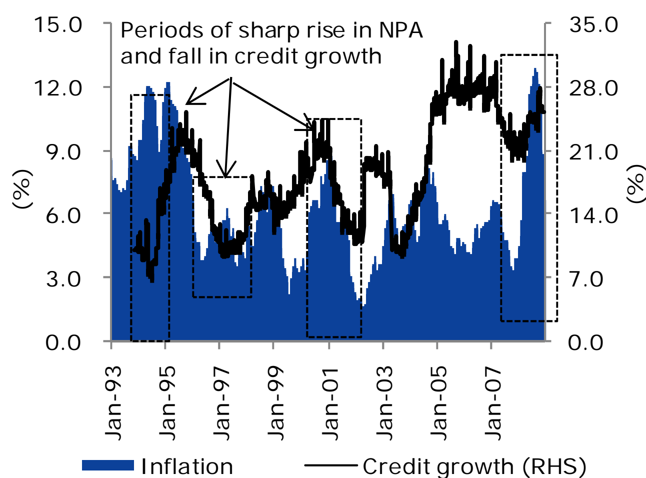


Chart 8: Impact of inflation, credit growth, and NPA



Source: Bloomberg

As typical in a cyclical slowdown, we could see excesses built in the system coming under stress leading to higher defaults

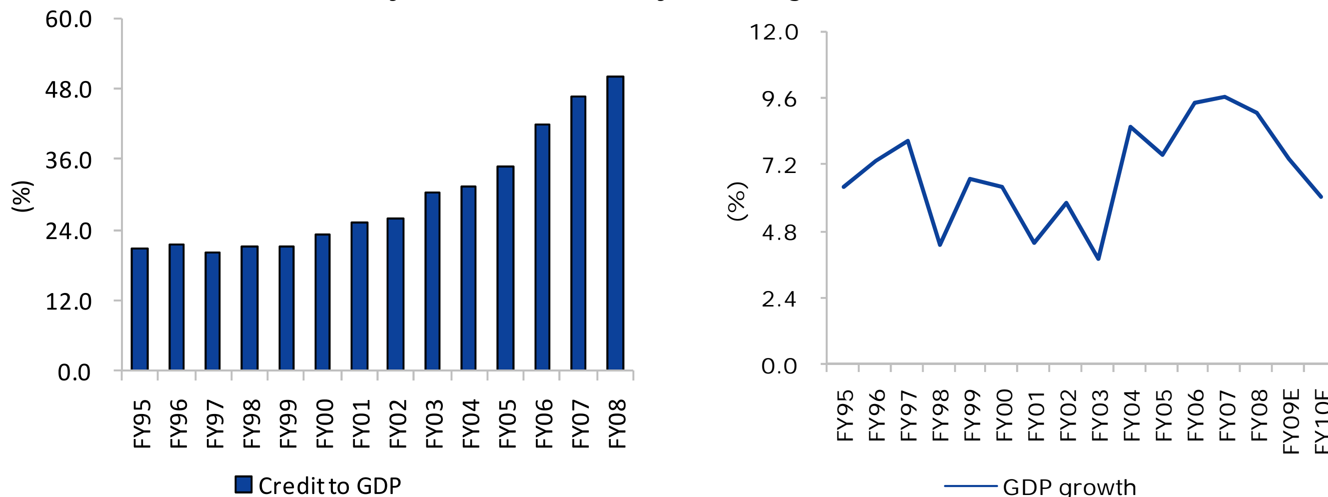
Economic growth slowing down; systemic leverage is increasing

After a strong up cycle (which has averaged 7-8% in the past five years) fuelled by global upturn and exports growth (particularly software and cheap capital availability) India's GDP growth is set to moderate to 7.4% in FY09E and 6% in FY10E due to the global slowdown. As typical in a cyclical slowdown, we could see excesses built in the system coming under stress leading to higher defaults.

Since FY98, there was been a steady change in the loan book composition with higher retail (mortgage) and infrastructure loans

In India, commercial banks still remain the most important suppliers of credit. Banking credit has grown at 22% CAGR over the past five years with credit to GDP increasing to 50% in FY08 from 31% in FY04. The rapid pace of credit growth for over five years has resulted in increased asset quality risks. With other avenues drying up, the reliance on domestic bank credit has increased. Since FY98, there was been a steady change in the loan book composition with higher retail (mortgage) and infrastructure loans and in the nature of credit moving from working capital finance to longer maturity loans. Household leverage has steadily increased due to higher acceptance of debt (derived from household flows) and favorable income outlook.

Chart 9: Bank credit to GDP over years has been steadily increasing



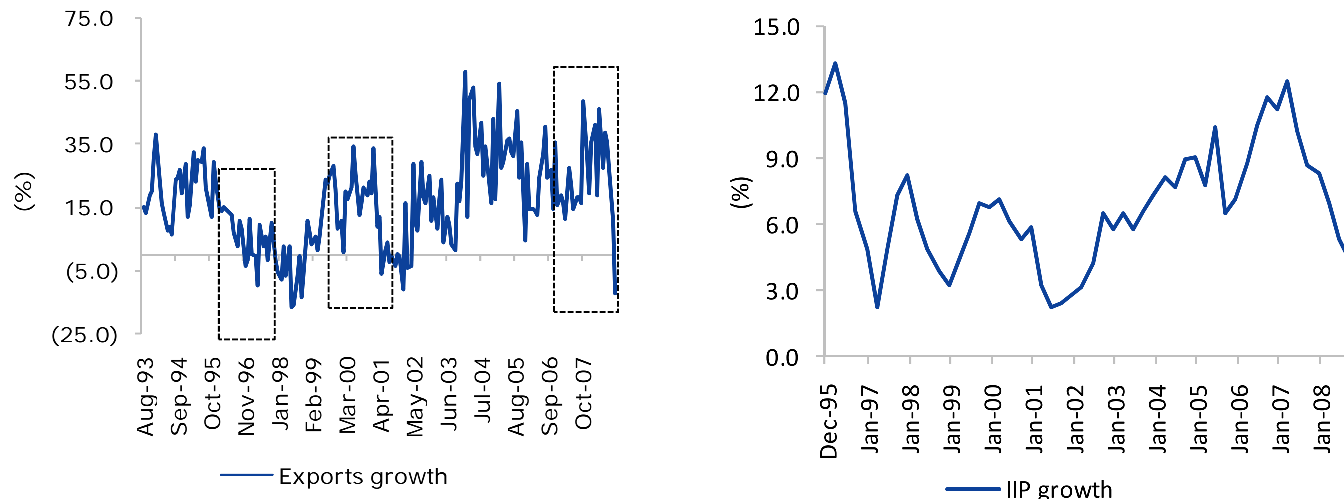
Source: RBI, Edelweiss research

With major economies around the world grappling with stiff recession, demand for Indian exports is likely to slowdown

Export growth declining while manufacturing numbers are getting weaker

Typically, decline in exports has been followed by steep increase in NPAs with export linked industries forming nearly ~17% of industrial credit. With major economies around the world grappling with stiff recession, demand for Indian exports, which primarily consists textiles, gems & jewellery, and auto ancillaries, is likely slowdown. Despite being a fairly closed economy, internal consumption is also dipping sharply. Lead indicators of slow economic growth are coming from IIP numbers falling from double digits in FY08 to below 5% in Q2FY09.

Chart 10: Slowdown in exports and weakness in IIP growth have been followed by higher slippages in India



Source: Business Beacon

Risks on projects remaining unfinished due to lack of equity capital are rising due to weakness in capital markets

Weak equity market could leave projects in the lurch

In the midst of the capex cycle, weak equity markets could affect execution of projects. Infrastructure, which has been one of the primary sources of credit growth in the past few years, can significantly impact asset quality, if projects are deferred due to weak capital markets.

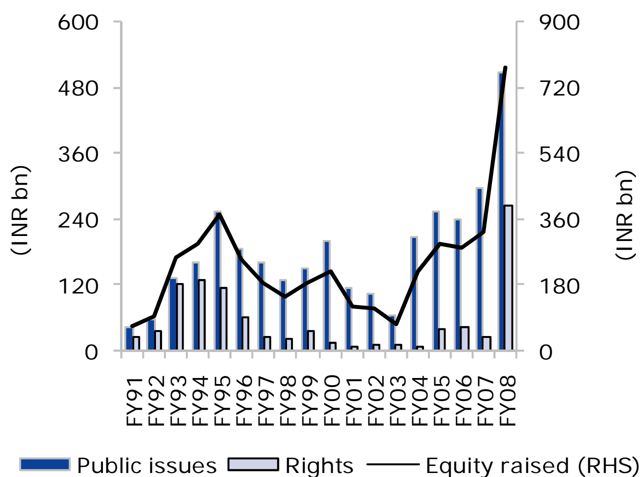
One of the primary reasons for sharp rise in gross NPA in the 1990s was the absence of a strong primary equity market as credit was extended to fresh projects under the assumption of promoters raising primary equity from public markets at a subsequent date. However, our discussions with various banks indicate the risk of non-contribution of promoter equity arises mostly in fresh projects, rather than those under execution, as financial closure has been carefully assessed on the ability of promoters to bring their incremental share of equity against specific milestones.

Sagging employment (personal income) outlook portends greater retail stress

On the retail outlook, interest rates have had a sharper bearing on credit growth as well as asset quality. Interest rates increased ~350bps in the past three years leading to sharp rise in EMI payments across all product verticals.

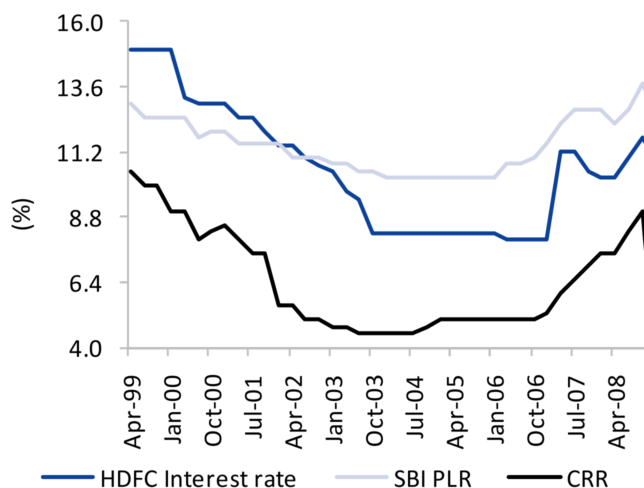
While the absence of an information bureau leads to lack of clear information on unemployment, news reports and anecdotal evidences suggest that with a slowdown worldwide job losses look likely, which will stress repayment capacities of households. Particularly IT /ITES/financial services industries, which are key employers in metros and were major drivers of retail credit. Labor-heavy industries like textiles and gems & jewellery have also laid off people recently and we expect this to be an industry wide phenomenon which could lead to higher retail delinquencies. The silver lining to retail credit would be falling interest rates, which can partly cushion stretched household incomes, easing repayment woes.

Chart 11: Primary market activity has reduced



Source: Business Beacon

Chart 12: Rise in rates has affected retail book



Source: Company, Bloomberg

It's Different This Time

Magnitude and velocity of slippage to be lower this time

Analysis of the past decade indicates two prime contributors to high gross NPA: (1) overhang component in the form of old and stickier assets sitting in doubtful assets for a long time (due to longer recovery cycles); and (2) change in business cycles. Whether it was the mid 1990s post liberalisation crisis, which exposed operational inefficiencies, or the late 1990s crisis due to a slowdown instigated by Asian crisis, Indian banks continued to accumulate NPAs from each downturn, resulting in gross NPA ratio of >10%.

We would use the cliché 'it's different this time' to best describe our view on the current asset quality. In our view, **net slippage in the current cycle will be significantly lower compared with both mid-1990s and early 2000** due to decline in proportion of stressed sectors, lower leverage, better risk management, and improved debt restructuring, though retail NPL are likely to continue. Strong corporate balance sheets, regulatory relaxations and deep interest rate cuts, combined with an extended strong economic cycle over the past few years, will slow down the pace of delinquency, in our view. Compared with previous business cycles, corporate dependence on external funds has reduced considerably to 44% in 2002-06 from 69% in the mid-1990s. Moreover, LGD will also be lower due to better internal/external risk mechanisms and better legal recovery channels (SARFAESI, DRT, CDR) available for banks now.

Though the severity seen earlier is unlikely to be repeated in the current cycle, **a few sectors in the corporate and SME (textiles, real estate, auto components and metals) and the priority sector of SSI can re-emerge as a sore point going forward.** In other sectors, we expect movement in gross NPA to emerge as a function of business cycles and banks to proactively take steps ensuring no sharp slippages occur through using various options.

Our conclusion is derived from a combined study of (top-down) macro economic factors, sector level leverage and demand outlook, bank level exposure to various segments and change in risk management and recovery tools.

Chart 13: Sticky assets causing slower run off

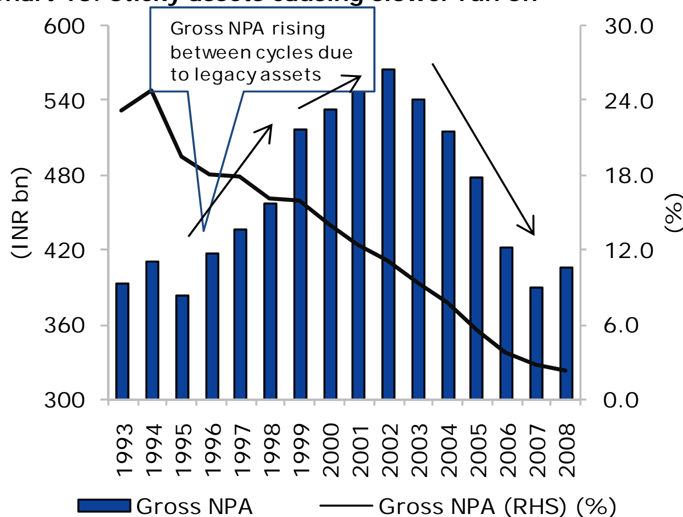
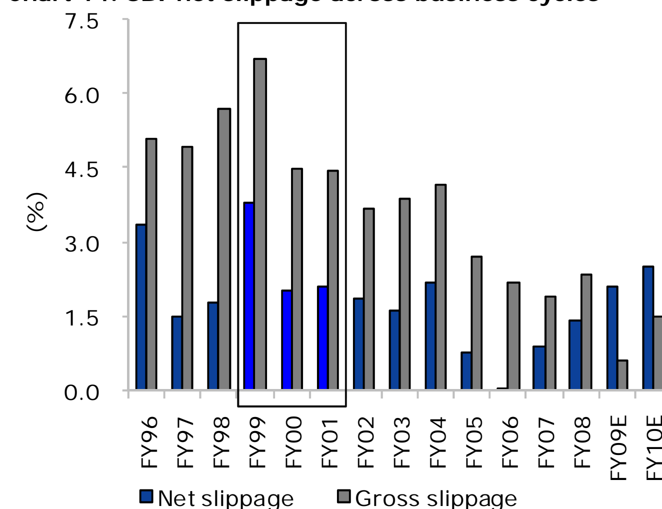


Chart 14: SBI net slippage across business cycles



Source: RBI, SBI, Edelweiss research

Non performing loans (NPL) burden exhibits a fair degree of negative correlation with credit growth and positive correlation with leverage. With a weak outlook on economic environment (leading to lower credit growth) we should expect NPL burden to rise steadily. The debt/equity at the corporate level is at historic lows of 0.6-0.7x, which we expect to increase from current levels, putting further pressure on asset quality.

Chart 15: SBI's NPL burden has negative correlation with credit growth

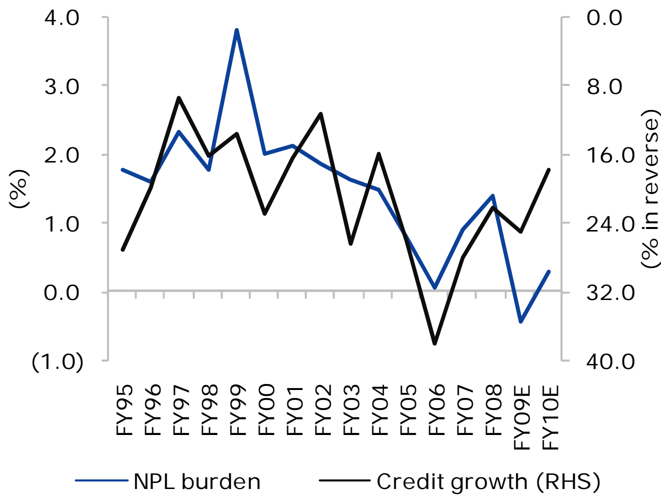
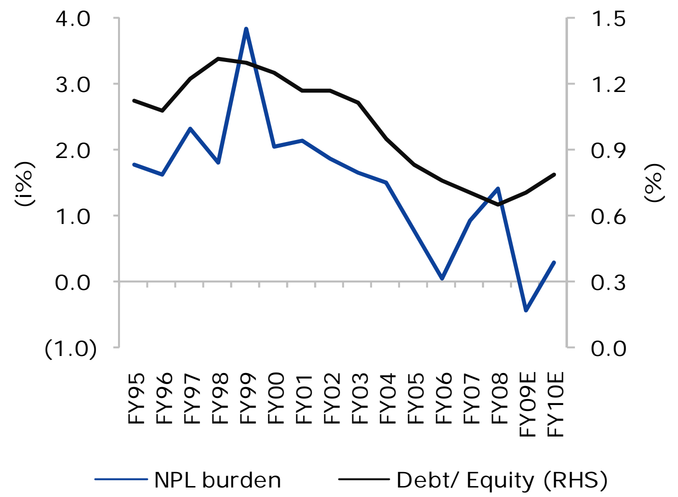


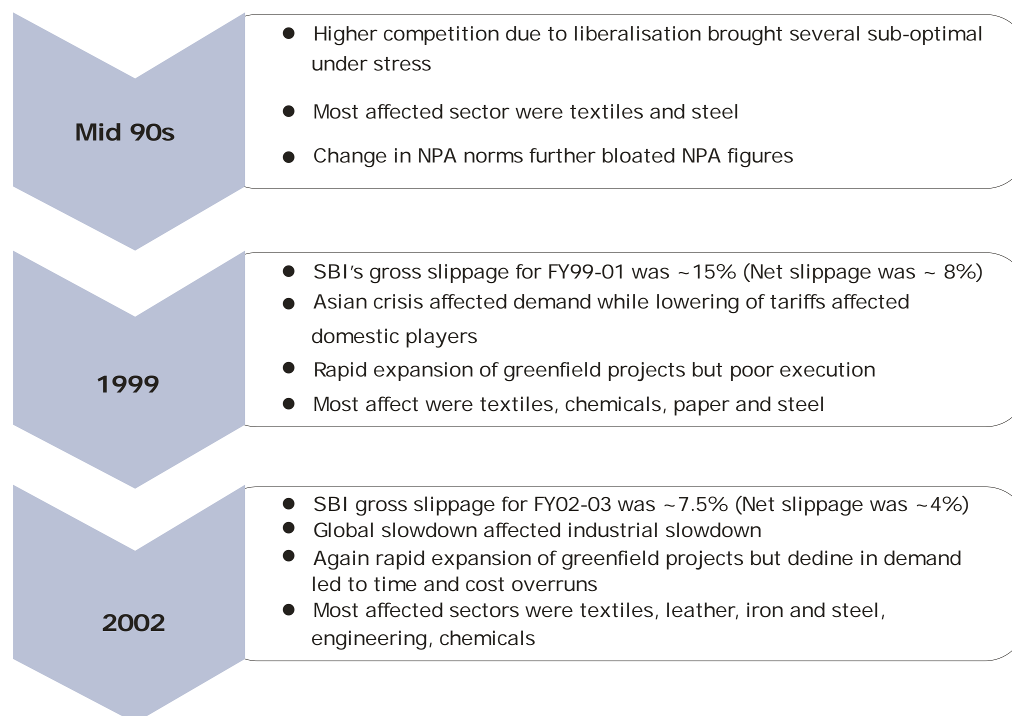
Chart 16: SBI's NPL burden has positive correlation with leverage



Source: Company, RBI, Capitaline, Edelweiss research

Asset quality cycles in the past

Fig. 1: Three instances of sharp asset quality deterioration in the past



Source: Edelweiss research

The period of mid 1990s: Liberalisation brought competitive pressures

With liberalisation firmly in place, the economy witnessed high degree of competition. Though the overall macro environment appeared to be robust with strong GDP and IIP numbers, few weak sectors wilted under competition from cheap goods and their sub-optimal capacities (especially steel and textiles).

NPA rose due to weak sectors and tightening of NPA recognition norms

The banking sector, specifically PSU banks, continued to be plagued with higher gross NPAs. Gross NPA increased by 9% Y-o-Y (1.5% of advances, one year lag) to INR 41 bn with both the priority and non priority sector segments showing almost similar increase. Additionally, tightening of NPA recognition norms from 360 days to 270 days by FY94 and 180 days by FY95 and higher exposure to weak sectors like textiles and iron and steel (at ~25% of corporate credit) coming under stress due to opening up of the market led to higher slippages. Weak SSI performance further aggravated NPA.

Gross NPA at 18% of advances; poor recovery mechanism

- Gross NPA increased to 18% of gross advances with over 12% in doubtful assets (assets where no payment was received for over 30 months).
- Public sector banks had to be recapitalised with the government infusing over INR 200 bn over the next few years.
- Options available with banks for recovery of assets were fairly low with recovery under Board for Industrial & Financial Reconstruction (BIFR) and Debt Recovery Tribunal (DRT) being not only slow but also painful.

1999 crisis: Asian crisis; rapid expansion of green field projects

Macro environment turned unfavorable with Asian crisis and lowering of tariffs

With the Asian crisis slowly impacting every country in Asia, India despite being insulated, saw its industrial economy steadily declining to the low single digits. Also, as India was slowly moving towards WTO regulations, it steadily lowered its import tariffs and encouraged local competition.

Rapid expansion of green-field projects but poor execution

Most corporate houses went on a huge capex programme across all sectors. Financial closures for projects were done with assumptions of equity capital raising programmes. However, with equity markets losing flavor during the Asian crisis, most companies could not fund their equity contribution resulting in delay in project execution. This resulted in projects funded through higher debt, leveraging the company's balance sheets even further. Also loans had to be restructured due to low repayment capabilities while a few projects saw equity infusion by lenders to replace promoter's contribution. Also, there were projects with tardy progress resulting in time overruns. Time and cost overruns resulted in higher NPAs.

Gross slippages of SBI at ~15% in FY99-01; commodity sector heavily affected

- Gross slippage (of SBI) went up sharply to 6.7% in FY99, 4.5% in FY00 and ~4% in FY01, while cumulative slippage during FY99-01 was ~15% while net slippages went by 7.9% in FY99-01.
- Key sectors impacted were iron and steel, textiles, chemicals, and paper. Priority sector NPAs for few banks reached ~20% while non priority sector NPAs were at 14%.
- Legal mechanisms continued to be weak with the option of DRT and some degree of restructuring being the sole source of recovery/improving the asset quality. With DRT available in very few cities, recovery was extremely slow and painful.
- In this period, PSU banks were capitalised but were saddled with legacy NPA.

2002: Global slowdown affected industrial output

Overall GDP growth in 2002 was healthy at ~5%, with agriculture and the services sector being the growth drivers. However, industrial sector grew by merely ~3% (compared to ~6% in FY01) as global slowdown adversely affected industrial output. Iron and steel passed through its worst and final year of its downturn which started in FY96-98 while sectors like textiles improved marginally.

Gross NPAs low for public sector banks

Gross NPA increased by 11% Y-o-Y (1.3% of advances, one year lag) for scheduled commercial banks but only 3% for (net of w/off) public sector banks. Key sectors like textiles, leather, iron and steel, engineering and chemicals were the most affected. Capex continued to be fairly slow but existing projects were running under huge cost and time overruns.

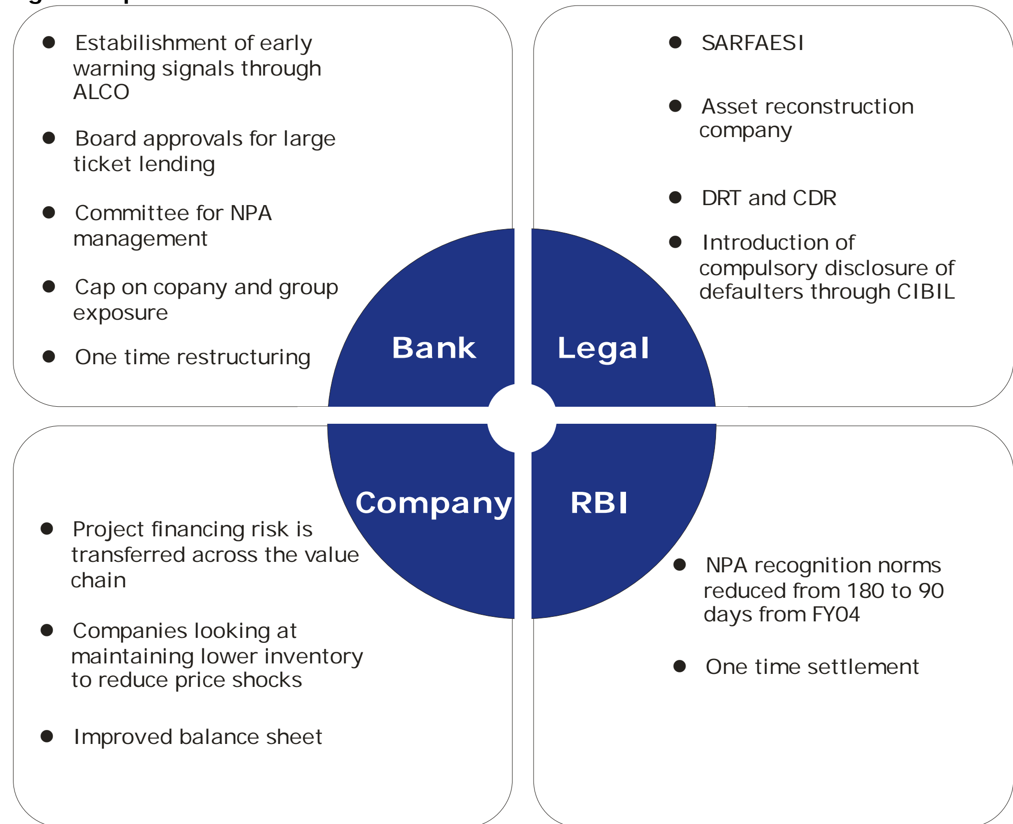
Gross NPA continued to be high at ~10% of advances with 3.1% net slippages of credit outstanding; priority sector NPA was as high as 16% while non priority sector NPA was at 9%. Legal recovery mechanisms continued to be weak, but DRT improved with opening of more centers; however, it continued to be slow.

However, there were major developments after 2002 to fasten recovery process: (1) new NPA recovery mechanisms were introduced through CDR/SARFAESI to bypass DRT and BIFR; (2) introduction of CIBIL to track defaulters (especially willful defaulters); and (3) one time settlement (OTS) was introduced for chronic NPAs for public sector banks. Further recognition of doubtful NPA was advanced from 24 to 18 months.

Lessons from past led to regulatory and structural improvements

Three crises in a span of less than 10 years led to various regulatory and internal changes which have strengthened the system and these can help reduce sharp deterioration in NPA.

Fig. 2: Improvements which could make a difference this time



Source: RBI, Edelweiss research

Structural improvements since past cycles

Bank specific measures

In the past decade, banks have seen significant improvements which attempt to identify early signals of deterioration in asset quality.

1. **Setting up ALCO and research committees**

   a. Banks and financial institutions have set up research committees to identify early warning signals and assess subsequent impact on their portfolios.

   b. Internal guidelines have been issued for board approval for large disbursements and continuous monitoring on performance of NPA portfolio. Financial closure for projects is carefully scrutinized with equity contribution monitored with every disbursement. Covenants established before disbursements ensures effective monitoring.

   c. Ceiling of company exposure (ex-infrastructure) to capital funds was brought down from 25% in FY00 to 20% in FY01 and to 15% by FY02. Group exposure (ex-infrastructure) has been brought down from 50% of capital funds to 40% by FY02.

2. Improved IT infrastructure has helped monitor delinquencies and recoveries.

3. Banks were heavily discouraged from ever-greening their assets (process of providing finance to service existing debt) to prevent NPA.

4. Bank specific restructuring: The RBI has issued various guidelines for bank specific restructuring of an asset and subsequent reclassification of the asset.

Company level measures

With most banks and financial institutions paying a heavy price in the 1990s for their project finance exposure, past few years have seen drastic changes. **Risks in project finance is de-risked across the value chain** to ensure that cost and time overruns are identified to specific parties and risk is relatively lower for stakeholders.

Working capital cycles steadily declined while sustained growth in profits has led to lower reliance on external debt.

Legal recourse

With slow progress in recovery, banks were allowed more flexibility with other options:

In the past couple of years, recoveries through SARFAESI have been steadily increasing—61% in FY08 compared to FY05 levels of 18%

- **Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest, 2002 (SARFAESI):** The most significant difference between the current and all the previous down cycles is SARFAESI. The act authorises banks, financial institutions, and housing finance companies to take possession of the security without any court intervention by giving 60 days notice. The act aims to provide more powers to banks and bypass the legal channel. However, only post FY07 bankers have gained a fair degree of success in implementing the act. In the past couple of years, recoveries through SARFAESI have been steadily increasing—61% in FY08 compared to FY05 levels of 18%.
- **Corporate debt restructuring (CDR) :** CDR was introduced in FY02 with the objective of ensuring timely and transparent mechanism for restructuring of corporate debts lent under consortium of viable corporate entities affected by internal or external factors, outside the purview of BIFR, DRT, and other legal proceedings. Despite draft guidelines issued in FY03, it was only in FY06 that final guidelines were approved. This covers mainly exposures of over INR 100 mn across banks with at least 60% of creditors and 75% by value approving for a restructure. It allows banks to restructure debt within a period of 90 days (can be extended to 180 days with sufficient reasons).
- **Asset reconstruction firms (ARC) which can buy distressed assets:** Established in FY02, this allowed establishment of ARCs to help banks and financial institutions sell their non-performing assets. Guidelines have been subsequently enhanced to facilitate faster transfer of assets. There are ~11 players in the asset reconstruction space with ARCIL (Asset Reconstruction Company of India) being the largest player with over ~75-90% market share. However, the value recovered from sale of assets is fairly low, which makes sale to ARC unattractive and the last option.
- **Credit Information Bureau (India) (CIBIL):** Established in FY02, the institution has been an effective agency only in the past three years. It has slowly started becoming an effective source to understand defaulters and default patterns across banks; it has a scoring mechanism to identify defaulters.
- **Debt recovery tribunals:** Introduced in 1992 through the Recovery of Debts Due to Banks and Financial Institutions Act, 1993, this is a time consuming process and incurs high legal costs for recoveries. In terms of success ratio, FY06 was one of the better years for DRT with a success ratio of ~77% compared to a low of 19% in FY05.

Table 5: Improvement in recovery ratio in SARFAESI and DRT but low in lok adalats (INR mn)

	Lok Adalat				DRT				SARFAESI			
	No of cases	Amount involved	Amount recovered	% recovery	No of cases	Amount involved	Amount recovered	% recovery	No of cases*	Amount involved	Amount recovered	% recovery
2008	186,535	21,420	1,760	8.2	3,728	58,190	30,200	**51.9**	83,942	72,630	44,290	**61.0**
2007	160,368	7,580	1,060	14.0	4,028	91,560	34,630	37.8	60,178	90,580	37,490	41.4
2006	181,547	11,010	2,230	20.3	3,524	61,230	47,100	76.9	38,969	98,310	34,230	34.8
2005	185,395	8,010	1,130	14.1	4,744	143,170	26,880	18.8	39,288	132,240	23,910	18.1

Source: RBI

*Note: * Number of notices issued*

Regulatory measures

Guidelines for early recognition of NPA: One of the most significant guideline which emerged from the Narasimhan Committee was the early recognition of NPA.

a. Recognition norms for doubtful assets was tightened from 24 months since 'past due' (includes 30 days of grace period since due) to 18 months post overdue by March 31, 2001, and further lowered to 12 months by March 31, 2005.

b. NPA recognition norms were also tightened from two quarters past due to one quarter overdue by March 31, 2004.

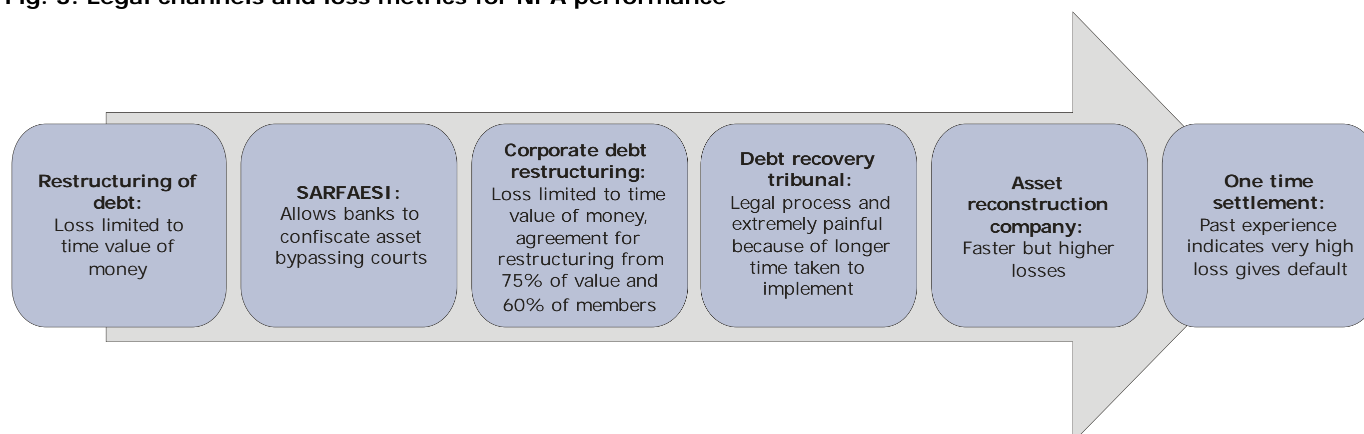
One time settlement: From FY01, various measures have been initiated by the government aimed at removing legacy NPA from PSU banks' portfolios. In FY00-01, public sector banks were asked to relook their corporate/SME NPA (up to March 1998) where lending was up to INR 50 mn (subsequently revised upwards to INR 100 mn) and NPA (up to March 1998) from lending to small and marginal farmers up to INR 25,000 (subsequently revised upwards to INR 50,000) and work out a one-time settlement scheme. While the move was successful in bringing down NPA levels, progress was extremely slow with frequent change of definitions and extension of deadlines. In comparison, the recently issued one-time settlement in FY08 for agriculture debt was implemented much faster.

Table 6: Measures adopted by RBI to lower gross NPAs

Year	Nature	Focus audience	Time to implement
2000-04	Public sector banks / FI	One time settlement for SME/mid corporate accounts upto INR 100 mn	More than 3-4 years
2001-03	Public sector banks	Small and marginal farmers with exposure less than INR 0.5 mn	More than 3-4 years
2008-09	All banks	Agricultural loan waiver and debt relief	Less than 6 months

Source: RBI

Fig. 3: Legal channels and loss metrics for NPA performance



Source: Edelweiss research

What will be different in FY09-10?

The good part

- **Diversified portfolio with higher contribution of retail portfolio, infrastructure**

  In the past few years, the banking sector's asset composition has changed significantly in favor of retail and infrastructure. While low risk housing dominates more than 50% of the retail portfolio, infrastructure dominates ~25% of corporate credit.

- **Early recognition of NPA due to better guidelines**

  NPA recognition has become far more stringent at every level of NPA (whether sub-standard, doubtful or loss asset). With the introduction of 90-days delinquency, banks can identify early signals of stress in the portfolio. Also, banks have to provide up to 100% on doubtful assets beyond three years (compared to the earlier guideline of of providing only 50%), forcing them to act on these loans. We believe these measures have provided some resilience to balance sheets to absorb shocks.

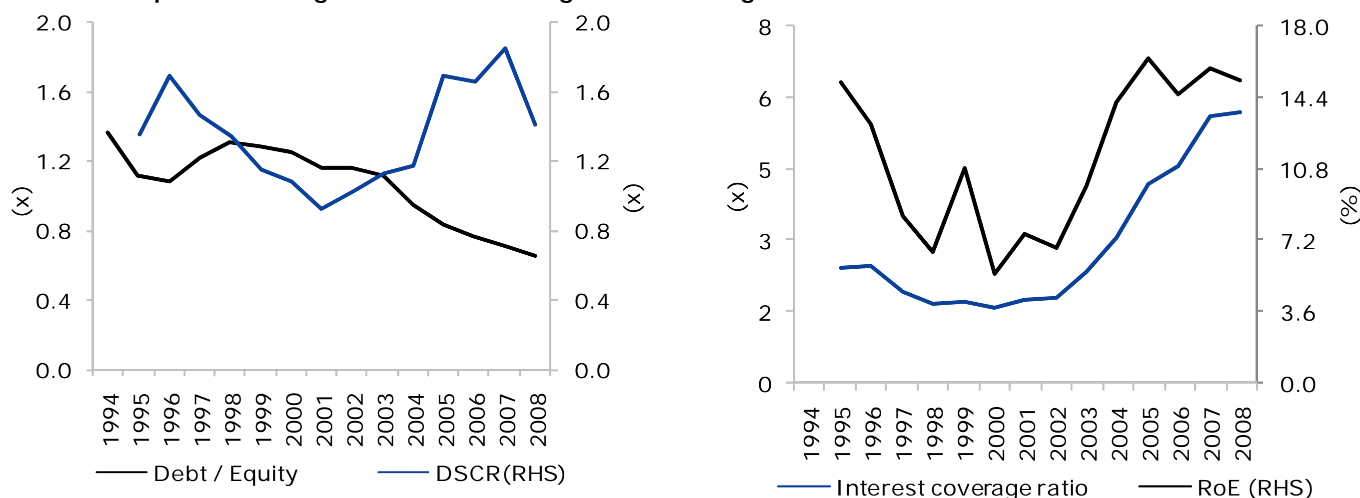
- **Better monitoring mechanism with far more effective legal options**

  With CBS being fully implemented across branches, de-risking of credit origination and approval process, company and group level ceilings, establishment of research departments for detecting early warning signals, and better risk metrics, banks have a fairly well developed processes to prevent sharp slippages in the asset portfolio. Also, legal channels through SARFAESI and CDR offer faster recovery. With asset reconstruction having reasonably developed, banks have an option of transferring the asset and enjoying partial gains through securitised receipts.

- **Corporate leverage is low and coverage ratios are high**

  Our coverage of over 2,400 companies across 20 sectors spanning over 14 years indicates that corporate balance sheets are healthy. Despite steady rise in industry credit/GDP, overall financials of companies, barring a few, are still well above dangerous levels of FY98-02. Strong corporate profitability along with favourable capital markets which helped equity issuances ensured a decline in debt/equity to 0.7x in FY07 from 1.4x in FY94 and improved their DSCR levels to ~1.9x in FY07 from ~1x in FY01. The interest coverage ratio (ICR) is healthy at ~ 6.0x in FY08 after hitting a low of 0.9x in FY99.

Chart 17: Corporate leverage is low and coverage ratios are high



Source: Capitaline, Edelweiss research

The not so good part

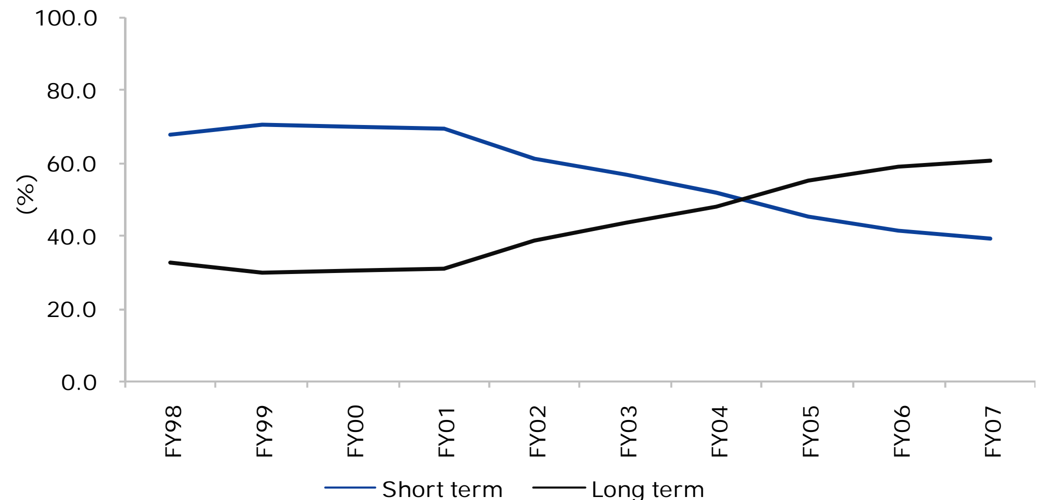
- **Law protects banks, but only when backed with stringent documentation**

  While banks are better equipped to handle NPAs through legal channels, they are expected to diligently complete the documentation process. Failure to do so will only result in slower recovery process and higher NPAs. The process flaw and system ineffectiveness is higher in case of PSU banks.

- **Expertise in long term project financing will be tested for the first time**

  Commercial banks, which have been traditionally active in working capital financing and not so active in project-based loans, have lent to long-term projects in the past three-four years. Long-term lending (to housing and infrastructure) has been rising steadily and is more than 60% of banks' portfolios currently compared to 33% in the late 1990s. With banks becoming sole players in the project finance space with the gradual decline in the importance of development financial institutions (DFI), it will be testing times for them. Also, banks have largely lent under a consortium where the documentation process should be complete to initiate any CDR process, if required.

Chart 18: Long term loans of banks have increased over years (housing and infrastructure)



Source: RBI, Edelweiss research

- **Relaxation of underlying classification can lead to procrastination of NPA**

  One of the biggest risks emerging in the next few quarters would be deferring the early recognition of the underlying stressed asset as RBI relaxes asset classification norms (RBI's recent approval of relaxing the classification of delayed infrastructure project execution as a standard asset would be an example). As stringent asset classification norms help banks, especially during a weak environment by forcefully making higher provisions, relaxation of this basic tenet defeats the underlying purpose.

Corporate Asset Quality

Low corporate leverage to minimize impact

Corporate credit, which had contributed 50% to total credit in the 1990s, has fallen to 40%, but is rising steadily with buoyant credit growth in infrastructure (over 45% CAGR in FY98-08) and unavailability of external credit. Infrastructure credit contributed 23% to corporate credit in FY08 compared to 3% in FY99 and 0% in FY94. Adjusting for RBI reported banking credit for NBFC and real estate; credit to overall industry is at 50% as of FY08 compared to 60% in FY02 and FY99.

Credit growth in other sectors has been at a much lower pace due to strong cash conversion cycles leading to lower working capital requirement, while strong cash flows have helped partly fund their existing capex programmes. Our analysis of companies across 20 sectors and business cycles indicate that Indian corporate sector has the strongest performance in FY07-08 in the past 14 years with low leverage and comfortable coverage ratios. However, in the past few months, corporate growth is showing signs of slowdown with sharp decline in IIP numbers, while the ongoing credit freeze is sharply weakening financials of companies. However, signs of distress are emerging which will weaken operating performance with weak demand outlook (especially for export oriented sectors), increase in downgrades by rating agencies, unavailability of primary equity.

Outlook: NPA story to emerge slowly; private banks better equipped

We see these broad stress areas for corporate books, where risks of NPA could arise: (1) **sector specific**: (a) export dependent - textiles, auto ancillaries, gems and jewelry, (b) demand led (commodities) – metals, and real estate; and (2) **company specific** due to higher leverage and lower coverage.

Our analysis of corporate loans (50% of total credit) based on sector-wise financial ratios and demand and margin outlook (corroborated by Altman Z Scores) suggest higher net slippage (of >3%) in textiles, auto ancillaries, transport operators, gems & jewelry, real estate, sugar, mid-size metals (non-integrated) and chemicals & fertilizers. Loans to infrastructure, engineering, food processing, petroleum, telecom, and cement (together 18% of total credit) appear healthy and, therefore, should see normal delinquencies.

Corporate NPAs will, however, not emerge immediately, because unlike retail where managing individual disbursement is difficult, banks can work with companies closely restructuring assets.

The impact will be lower on banks with superior risk management practices that can identify stress sectors early and work to reduce their exposure. Also, banks with strong documentation processes can reduce delay in recovering the asset. We believe private banks with low and selective corporate exposure to be better managed than public sector banks.

Indian corporate's reliance on banking credit on the rise

Commercial bank credit to industry has grown by 29% CAGR over FY04-08 on account of industry's increased reliance on banks as a source of funds. Consequently, corporate credit share in overall bank credit increased sharply to ~40% after declining to a low of 32% in FY02-04 from ~50% in the 1990s.

Growth over the past four-five years has been primarily driven by demand for infrastructure projects (53% CAGR growth over FY04-08), followed by food processing, automobiles, metals, construction, and petroleum segments. Infrastructure credit, whose contribution to corporate credit was nil in 1994 and 3% in 1999, has risen sharply to 23% in FY08. Sectors that witnessed a decline in overall credit proportion compared to earlier years include engineering, chemicals, textiles, and cement, while growth was seen in petroleum, construction, gems & jewellery, and food processing.

Corporate reliance on banking credit increased to 21% in FY01-06 compared to 13% in FY85-91

Indian banks play a significant role in meeting financing needs of the industry, which is reflected in the relatively higher share of industry credit to total bank credit at 38% in India compared to 20% in the US and 4% in the UK.

Table 7: Comparison of industry credit across countries (%)

	1991	1995	2000	2001	2002	2003	2004	2005	2006	2007
Australia	-	20	19	18	17	16	15	15	15	13
Brazil	21	24	26	29	30	28	25	23	23	22
Germany	-	34	16	14	12	10	9	8	7	7
India	**48**	**46**	**47**	**44**	**41**	**41**	**38**	**39**	**37**	**38**
Indonesia	37	39	45	43	37	32	31	30	29	27
Malaysia	-	31	30	29	27	26	23	20	17	-
New Zealand	7	7	6	6	5	4	4	4	4	4
Thailand	30	30	32	30	30	31	33	32	32	31
United Kingdom	13	10	7	7	6	5	4	4	4	4
United States	27	25	28	25	22	20	19	19	19	21

Source: RBI

Table 8: Pattern and sources of funds of Indian corporates (ex finance)

(%)	1985-86 to 1990-91	1992-93 to 1996-97	1997-98 to 2000-01	2001-02 to 2005-06
Internal sources	34.1	31.3	43.1	56.1
External sources (a+b+c)	65.9	68.7	56.9	43.9
a) Equity capital	7.1	20.6	12.9	10.9
b) Borrowings (i+ii+iii+iv)	36.2	33.3	28.6	13.8
i) Debentures	10.3	5.2	6.1	(2.9)
ii) Banks	12.7	10.7	9.4	21.5
iii) FI	8.4	8.3	9.8	(5.1)
iv) Others	4.8	9.1	3.3	0.3
c) Trade dues and current liabilities	22.6	14.8	15.4	19.2

Source: RBI

One of the emerging risks in corporate credit will be the continued credit concentration among the top 10 sectors. Of the total 26 sectors reported by RBI, the top 10 sectors which contributed to ~60% of corporate credit till 1999 have gone up to ~75% in 2008, mainly due to infrastructure lending.

Table 9: Key break-up of corporate credit

Sector	1994 (%)	1999 (%)	2008 (%)	1999-2008 CAGR (%)	Change
Infrastructure	**0.0**	**3.3**	**23.2**	**48.0**	↑
Textiles	12.6	13.0	10.5	16.4	↓
Iron and steel	**5.6**	**10.2**	**9.3**	**16.5**	↓
Chemicals	**12.5**	**11.1**	**7.4**	**13.9**	↓
Engineering	21.3	12.0	6.0	10.4	↓
Food processing	2.0	2.7	5.8	30.0	↑
Petroleum	0.3	3.1	4.8	25.2	↑
Gems and jewellery	2.5	2.3	2.9	22.2	↑
Construction	2.1	1.4	3.2	30.5	↑
Cement	1.5	1.5	1.6	20.0	↓
Contribution to corporate credit	**60.3**	**60.7**	**74.6**	**19.2**	

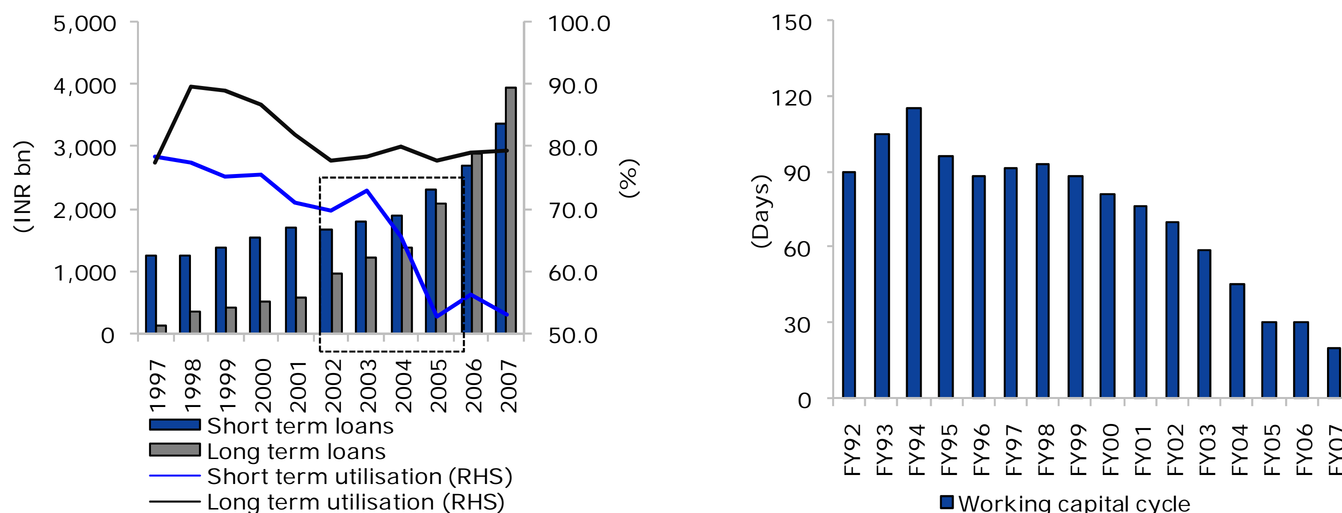
Source: RBI, Edelweiss research

Nature of industrial credit has also changed to limited working capital

Since FY02, the nature of credit has changed steadily. There are three primary reasons for this change: (1) with sharp pick up in revenue growth, companies were flush with internal funds and required limited working capital. Improved working capital management has resulted in net working capital days reducing from over 100 days in the 1990s to ~20 by FY07; (2) credit off-take in the infrastructure sector tends to be for longer duration; and (3) working capital, despite being short term, actually worked as long term funding for companies. Hence, banks could have converted some of the working capital lending in to long term funding.

Sectors like cement, metals, and auto have witnessed the sharpest decline in utilisation of their working capitals.

Chart 19: Rise in term lending, reducing working capital cycle and strong profits required less working capital



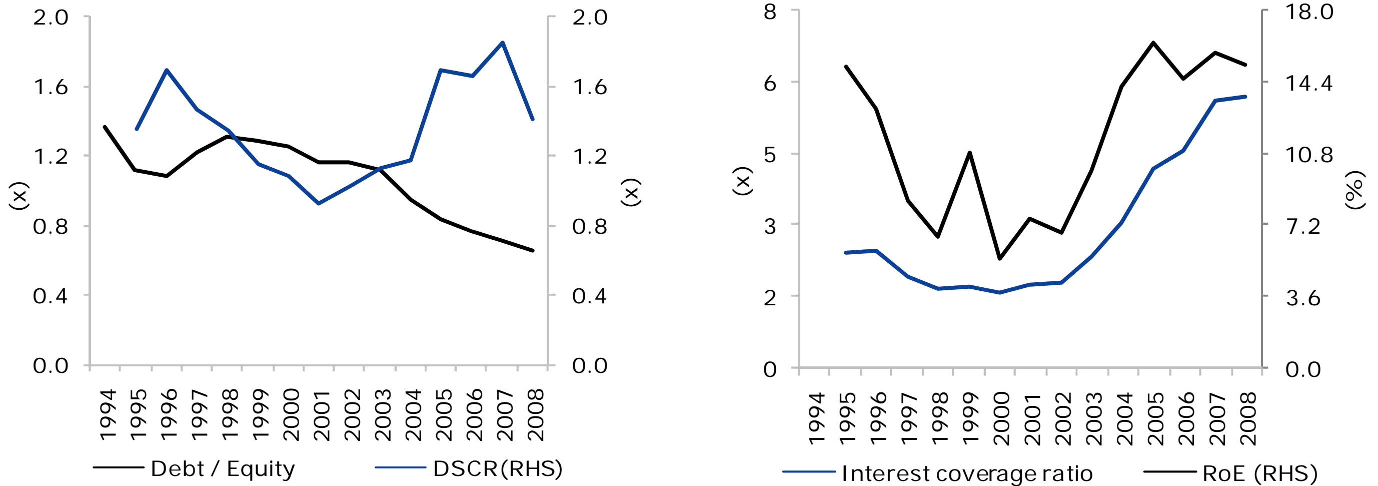
Source: RBI, Business Beacon, Edelweiss research

Leverage still low and coverage ratios high

Our coverage of over 2,400 companies across 20 sectors spanning over 14 years indicates that corporate balance sheets are healthy. Despite steady rise in industry credit/GDP, overall financials of companies, barring a few, are still well above dangerous levels of FY98-02. Strong corporate profitability along with favourable capital markets in the past three years helped

equity issuances and ensured steady decline in debt/equity to 0.6x in FY08 from 1.4x in 1994 and improve their debt service coverage levels to ~1.4x in FY08 from ~1.0x in FY01. The interest coverage ratio (ICR) is healthy at ~ 6.0x in FY08 after hitting a low of 0.9x in FY99.

Chart 20: Improving India Inc.



Source: Capitaline, Edelweiss research

Segments that are heavy on debt consumption, which is indicated through rising corporate debt/GDP, will contribute to GDP from FY10-11 onwards. Sectors like power, roads, ports, and telecommunications are still in the investment mode and revenue contribution is still a few years away.

Potential red flags are being raised

Rated companies being downgraded despite not defaulting in past three years

Having had the worst history during FY98-01 with over 94 companies defaulting, Indian corporate debt has had no defaults in the past three years. Of the total 120 debt defaults in Crisil Default Study 2007, ~17% were from non banking financial companies, followed by iron and steel (~13%), textiles (~9%), chemicals and consumer durables (~8%), and construction (~7%). Significantly, in 1998, which was the worst year with over 44 defaults, 30% of defaults representing 13 companies, were in the NBFC category. Since then, stringent regulatory requirements for NBFCs have helped lower default rates, improved business cycle for commodities has helped iron and steel, while benefits from the government in the form of TUFS (Technology Upgradation Fund Scheme) and improved business environment have helped textiles.

Table 10: CRISIL's study on default loans

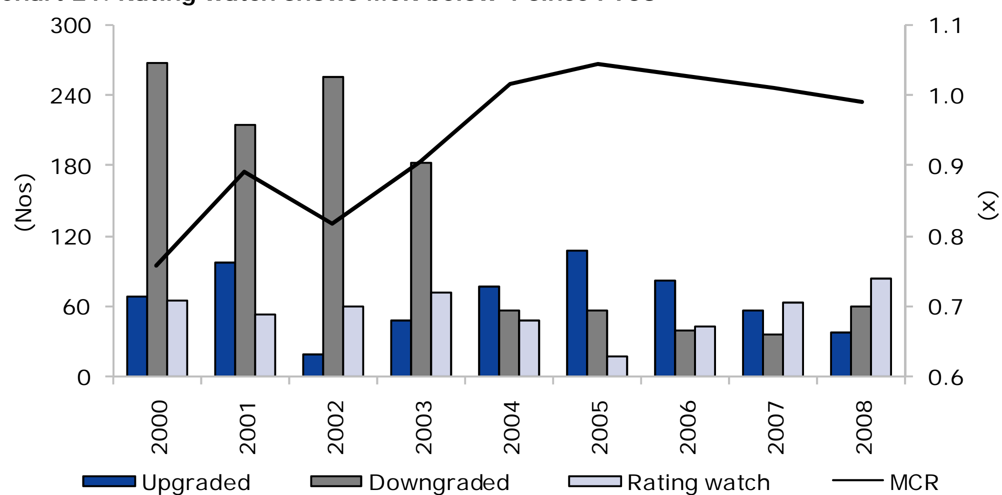
	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
NBFC		4		13	3								
Iron and steel		2	1	6	2	2	2						
Textiles			3	1	3	1	2		1				
Consumer durables	2	1	1	5				1					
Chemicals			1	1	1	3	2	1					
Construction		1		3	2	1	1						
Automotive		1	1	2	1		1			1			
Engineering				2	3	1	1						
Pharma		1		1	3		1						
Paper			1	1	1			1					
Diversified				3								*No default*	
Packaging				2	1								
Power						1	2						
Sugar					3								
Hardware (comp)				2									
Misc				1		1							
Telcom				1	1								
Courier			1										
Hotels					1								
Oil and refining					1								
Printing					1								
Shipping						1							

Source: CRISIL Default study, 2007

Modified credit ratio slips below 1; strong correlation with IIP and interest rates

Modified credit ratio (MCR ratio of upgrades to downgrades) for FY08 slipped below 1, reflecting a challenging operating environment. Though a majority of rated companies still carry investment grade ratings, we believe the stress will be more amongst smaller players. Manufacturing and infrastructure have deteriorated sharply, while deterioration in finance companies has been marginal.

Chart 21: Rating watch shows MCR below 1 since FY03



Source: Business Beacon, Edelweiss research

Note: MCR: (Number of upgrades + Reaffirmed)/(Number of downgrades + Reaffirmed). Greater than 1 is better

IIP and real interest rates have historically demonstrated strong correlation with CRISIL's MCR. The IIP has dipped sharply in the past few quarters and real interest rates have increased leading to a dip in MCR. We believe emerging trends of risk downgrades will continue as economic conditions worsen and real interest rates rise.

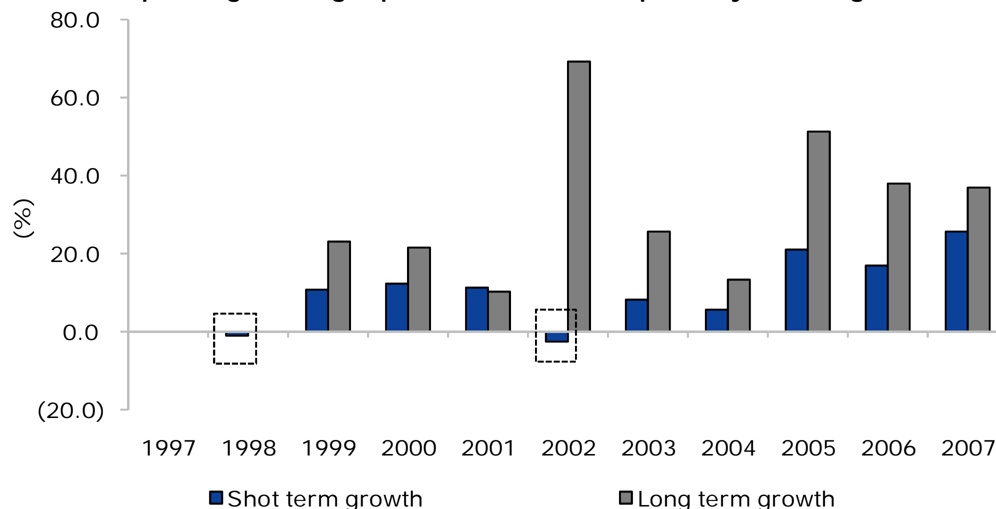
Outlook: Corporate NPA not to emerge immediately

There are a few reasons why NPA may not rise immediately. In the near term, companies have a fairly strong cushion, having emerged from one of the best business cycles. Hence, their balance sheets are strong. Further, there are a few key reasons:

1) Limits unutilised resulting in "ever greening" for certain period

We believe gross NPA cannot arise sharply in the banking system given the low utilisation of credit limits. As of FY07, the short term utilisation rate was ~53%. Of the reported 17 sectors only two sectors (electricity, gas and water, and construction) had utilised their short term limits above 70%. In the long term lending space, utilisation was better at ~80% and utilisation of all sectors was well above 70%. In the previous cycles (Asian and technology crisis), banks squeezed credit to prevent further erosion. However, utilisation rates were much higher between 75% and 80% then compared to ~53% currently.

Chart 22: Squeezing working capital limit could have probably led to higher defaults



Source: RBI

2) **Most companies have multiple banking relationships** which effectively gives them the flexibility of managing their default to a specific bank.

3) **RBI open to relaxing prudential norms:** The RBI has allowed maintaining existing classification after restructuring an asset twice. Further, it allowed commercial real estate loans to be restructured once and maintain the existing classification of the asset. This can be relaxed to other assets like capital market exposure and personal loans, if required. Further, the RBI can help banks in delaying recognition of only specific asset as NPA. Infrastructure projects can be one of the biggest beneficiaries as they are lumpy in nature and the higher provisioning requirements can substantially impact profitability. Also, the central bank can relax identifying all exposures of the client to be classified as NPA (similar to what has happened in forex derivative NPA).

Private sector banks better equipped

In a deteriorating environment, no banks can be in isolation on asset quality. At best, one can probably perform better. We believe there are a few factors which favor private banks over public sector banks.

Establishment of early warning signals that detect possible NPA

Discussions with banks indicate that private banks have risk teams that monitor factors like commodity prices, cross currency fluctuations, economic data, etc., to understand the implication of and customer behavior to these changes. This helps in early detection of sectors under stress. While most banks in the previous cycle responded only after NPA occurrence, such proactiveness can help reduce costs of NPAs for private banks.

Better documentation leading to faster recovery

One of the key factors helping faster recovery, especially through legal channels, is a sound operating model with a strong documentation process. Any slippage will lead to longer delay when recovery is done via legal channels. Our discussions with a few banks indicate that processes are better handled in private banks.

Stress seen in few sectors

There are two broad areas where NPA can emerge. Company specific arising from higher leverage and sector specific. We have identified a few key sectors where the risk of default is higher.

1) Export oriented: Textiles, gems & jewellery, and auto ancillaries

This segment contributes ~7% of total credit. Margins in these industries are declining due to weak demand and higher input costs.

2) Government intervention: Sugar and fertilizers

Sugar, which represents 1% of total credit, is impacted mainly due to higher raw material costs which are fixed by respective states. The sector is just recovering from a downturn which can cushion margins through higher selling prices, but higher government intervention can impact profitability.

Fertilizers, which represent 0.5% of the total credit, will be impacted with temporary mismatches due to delay in release of government bonds. Average margins at less than 1% and reliance on subsidy from government makes (bonds, which are sold at a discount and cash) it a weak sector from credit point of view. Most banks have a fairly low exposure to this segment.

3) Commodities: Iron & steel

Iron and steel represents 3.3% of total credit. Our discussions with various players and analysts indicate a few positives and negatives on the sector. On the negative side, smaller, non-integrated and newer players will be highly impacted given their product portfolio and operating structure. Most of the large players have not implemented any major expansion (Greenfield) projects and are looking to downsize, if possible. Also, companies have been proactive in cutting production to prevent inventory build-up at a much earlier stage.

4) **Real estate:**

Most banks have limited exposure to the commercial real estate segment at ~6% of their entire loan book, while few borrowers use their commercial real estate for working capital requirements. However, we expect defaults to arise mainly due to liquidity mismatches and less due to erosion of the underlying collateral.

Table 11: Stress sector exposure and gross NPA estimate for leading banks

State Bank of India

Stress exposures - as % of total industry exposure

	FY08E		FY09E		FY10E	
	Exposure (funded) (%)	Gross NPA (%)	Exposure (funded) (%)	Incremental slippage (%)	Exposure (funded) (%)	Incremental slippage (%)
Textiles	8.3	1.6	8.3	0.8	8.3	2.5
Iron/steel & products	7.9	1.8	7.9	0.5	7.9	1.0
Gems and jewellery	2.5	0.7	2.5	2.0	2.5	2.0
Automobiles	1.7	1.0	1.7	0.2	1.7	0.8
Fertilizers	0.6	3.8	0.6	0.7	0.6	0.8
Real estate (commercial)	2.7	1.0	2.7	0.7	2.7	2.0
Loan book (INR bn)	**2,880**	**2.5**	**3,594**	**2.6**	**4,186**	**3.5**

ICICI Bank

Stress exposures - as % of total industry exposure

	FY08E		FY09E		FY10E	
	Exposure (funded) (%)	Gross NPA (%)	Exposure (funded) (%)	Incremental slippage (%)	Exposure (funded) (%)	Incremental slippage (%)
Iron/steel & products	6.7	0.9	6.8	0.4	6.8	0.8
Chemicals and fertilizers	3.8	3.1	3.4	0.7	3.4	0.8
Textiles	2.2	3.0	2.3	0.9	2.2	2.0
Automobiles	2.2	2.2	2.2	0.2	2.2	0.2
Gems and jewellery	1.8	0.5	1.9	1.6	1.8	1.6
Real estate (commercial)	8.9	0.1	8.4	0.4	7.9	1.6
Loan book (INR bn)	**770**	**1.4**	**817**	**2.2**	**865**	**3.5**

Axis Bank

Stress exposures - as % of total industry exposure

	FY08E		FY09E		FY10E	
	Exposure (funded) (%)	Gross NPA (%)	Exposure (funded) (%)	Incremental slippage (%)	Exposure (funded) (%)	Incremental slippage (%)
Textiles	5.1	0.5	4.9	0.3	5.0	2.1
Iron/steel & products	2.5	0.7	2.6	0.2	2.5	0.9
Chemicals, dyes and paints	2.4	0.7	2.3	0.1	2.4	0.9
Automobiles	2.2	0.5	2.3	0.1	2.3	0.6
Gems and jewellery	1.5	2.7	1.6	1.6	1.4	3.4
Real estate (commercial)	10.8	0.6	11.8	0.2	10.4	1.7
Loan book (INR bn)	**411**	**0.3**	**573**	**0.9**	**723**	**1.8**

HDFC Bank

Stress exposures - as % of total industry exposure

	FY08E		FY09E		FY10E	
	Exposure (funded) (%)	Gross NPA (%)	Exposure (funded) (%)	Incremental slippage (%)	Exposure (funded) (%)	Incremental slippage (%)
Metals and metal products	5.2	0.6	5.2	0.9	5.0	0.9
Automobiles and auto ancillaries	4.0	0.3	4.0	0.3	3.6	0.7
Real estate (commercial)	7.9	0.3	7.9	0.4	7.1	1.8
Loan book (INR bn)	**161.0**	**1.6**	**326.2**	**1.0**	**444.9**	**1.7**

Source: Edelweiss research

Sector snapshot

S No	Sector	Credit (INR bn)	Total credit (%)	Financial FY08 Debt / Equity (x)	Interest coverage (x)	Comments
				Negative		
	Export dependent					
1	Textile	913	4.1	1.1	1.3	Weak margins and demand outlook
2	Auto	292	1.3	0.7	5.1	Falling margins and demand outlook
3	Gems and jewellery	250	1.1	1.9	2.2	Margins, rising leverage and demand outlook
4	Leather	58	0.3	0.6	2.0	Export dependent. Weak margins. Marginal impact considering the overall sector contribution
	Total	**1,512**	**6.9**			
	Commodities					
1	Iron and steel	723	3.3	0.9	2.4	Weak demand outlook and impact of operating leverage
1	Real estate	539	2.4	1.1	6.5	Liquidity and weak demand outlook
	Government dependent					
1	Sugar	167	0.8	1.6	0.7	Raw material pricing is government dependent and can impact margins
2	Fertilizer	93	0.4	0.8	2.9	Government oriented sector and can impact mainly from working capital mismatches
	Total	**260**	**1.2**			
	Total of stress sectors	**3,033**	**13.8**			
				Neutral		
1	Infrastructure	2,023	9.2	0.5	3.1	Demand outlook strong. Implementation risk can lead to sharp rise in default
2	Engineering	524	2.4	0.3	6.3	Leverage is low
3	Food processing	502	2.3	0.5	2.6	Interest coverage is falling
4	Petroleum	417	1.9	0.6	6.0	Working capital pressure is easing
5	Telecom	371	1.7	0.3	3.7	Strong margins. Stable outlook
6	Construction	283	1.3	0.4	4.7	Working capital intensive. Smaller players can be impacted
7	Pharmaceuticals	233	1.1	0.5	3.6	Margins and leverage ratios comfortable
8	Cement	142	0.6	1.0	5.4	Stable financials. Rising interest with expansion
9	Paper	136	0.6	1.3	1.9	Margins are still comfortable
10	Rubber	104	0.5	0.4	8.7	Steadily decline in financials but margins are still comfortable
11	Others	949	4.3			
	Total	**5,686**	**25.8**			
	Industry credit	**8,719**	**39.6**			

Source: Capitaline, RBI, Edelweiss research

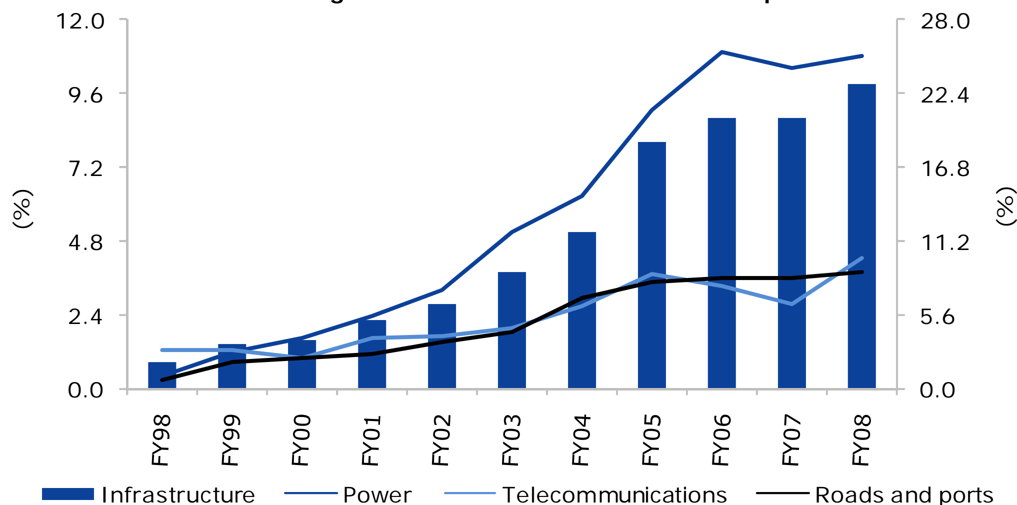
Demand outlook in infrastructure, which witnessed the sharpest growth in credit off-take in the past five years, remains robust

Sectoral analysis

I. Infrastructure credit: Growth story continues; NPA to take time

Infrastructure credit (Annexure 1) is fast emerging as a mainstay source of corporate credit for the banking sector. This segment contributes 23% of total credit currently compared to 3% in FY03 and 0% in FY97. There are three primary source of lending in infrastructure credit—power, telecommunications, and roads/ports. Our interactions with respective analysts and external reports indicate that there is no significant slowdown in execution, while long term demand continues to be intact. According to a Planning Commission report, investments in infrastructure projects are expected to grow by 22% CAGR in FY08-12 to INR 5.8 tn.

Chart 23: Contribution of segments of infrastructure to total corporate credit



Source: RBI, Edelweiss research

Table 12: Banks with exposure to infrastructure

	Fund based (INR bn)	Non fund based (INR bn)	Exposure (INR bn)	Fund based (%)	Total (%)
ICICI Bank	234	243	478	6.7	10.2
State Bank of India	383	114	497	6.3	6.3
Punjab National Bank	67	39	107	5.5	7.0
Indian Overseas Bank	39	-	39	6.5	6.5
Axis Bank	42	26	68	4.5	6.0

Source: Company, Edelweiss research

Infrastructure: Headwinds despite a rosy picture: Despite credit growth estimates (from Planning Commission) indicating a comfortable growth of over ~21% CAGR for FY08-12, the growth is fraught with a few headwinds. Our interaction with various players indicates two primary problems:

- **Equity infusion in projects:** Equity infusion in the form of fresh equity issuance is a critical component in most infrastructure projects. A weak equity market can significantly slow down capital raising programmes for most of these projects which in turn can risk a project for a lender as they would have to infuse higher debt risking their lending programme or postpone the project.
- **Delay in equipment delivery:** Most projects are expected to be commissioned in FY10-11. With few players in equipment manufacturing (BHEL, Dongfang Electric, Shangai Electric, Harbin, etc.,) any serious delay in delivery can affect the sector as a whole in project delays.
- **Hydel can be a weak link due to slower execution**

Power: Largest borrower; in reasonably good shape

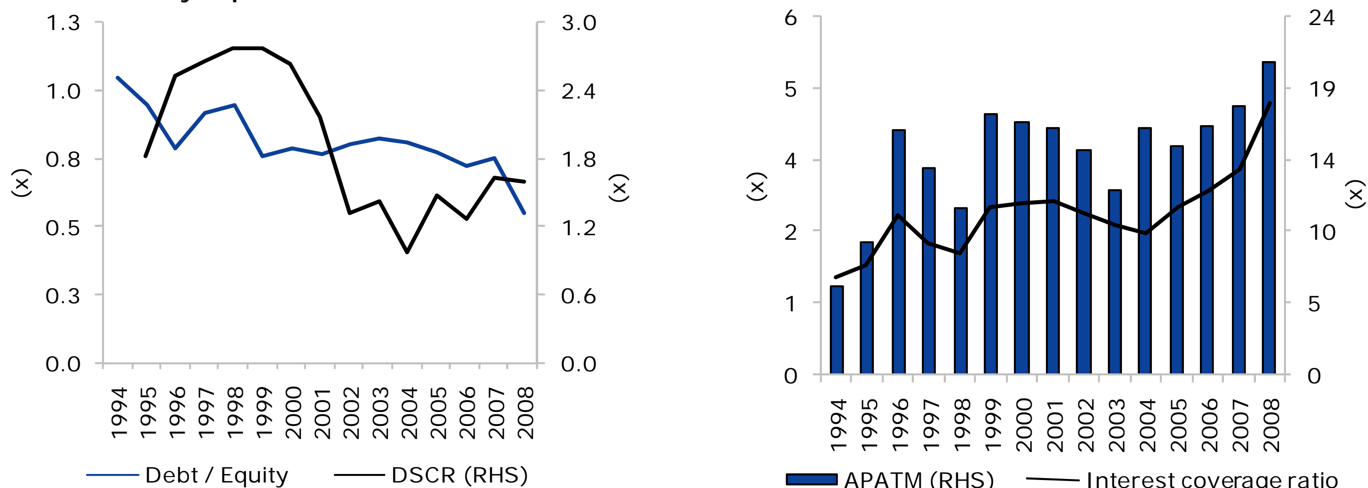
Our analysis of various projects that are off the ground (refer Annexure table 4 and table 5) indicates that atleast INR 883 bn worth of investments are yet to be disbursed, which represents almost 85% (adjusted for equity infusion at 30% of project cost) of the outstanding credit currently. The power sector, given the relatively higher gestation period of projects, is still in the investment phase and we expect the debt/equity to rise in the coming years and the debt service coverage ratio to fall as most projects will be commissioned in another three-five years. On almost all financial parameters, the sector is not showing any serious signs of strain. On hydel projects there are some signs of delay mainly due to poor working conditions.

Table 13: Industry break-up

Loan book (INR bn)	939
% of total credit	4.3
Number of companies covered (Nos)	80
Average PAT margin for FY98-08	16.0
RBI reported credit growth CAGR FY98-08 (%)	63.3

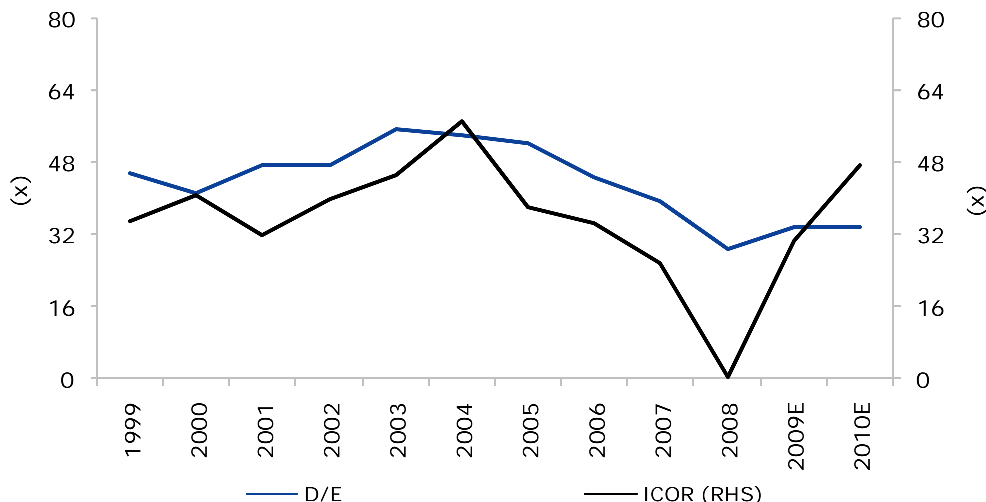
Source: RBI, Edelweiss research

Chart 24: Steady improvement in financials



Source: RBI, Capitaline, Edelweiss research

Chart 25: % of debt with D/E above 1 and ICOR below 2



Source: Capitaline, Edelweiss research

Asset quality to remain healthy; gross NPA, if any, to start from FY11

We have analysed over 88 projects (thermal and hydro) which are expected to generate over 48,000 MW in the next five years to understand the current state of completion and any significant delays in their execution. Given the bulkiness of such investments, coupled with a fairly long gestation period (including RBI defined permissible period), we believe we are a few years away from any meaningful NPA creation building into the banking system. In thermal power projects only three projects of the 47 can potentially default, while hydel power projects have a relatively higher probability of default primarily because of delay in execution due to weather conditions. However, RBI has already allowed two of these projects to be classified as standard assets.

Our power analyst, Shankar, believes that power utility companies have been able to achieve financial closure, though are highly leverage assets. Considering the regulated framework of the respective businesses and various payment security mechanisms available to lenders, we believe financial institutions are comfortable lending to this sector.

Table 14: Projects delayed in thermal power beyond the stipulated moratorium

S No	Delayed projects	Last status update	Original commissioning date	Revised commissioning date	Number of days delay	RBI specified date	Amount (INR bn)
1	Kutch Lignite	May-08	Oct-06	Oct-08	682	Sep-08	5
2	Konaseema CCPP*	Jan-08					18
	GT 1		Nov-05	Nov-08	1016	Nov-07	
	GT 2		Feb-06	Nov-08	924	Feb-08	
	ST		Mar-06	Dec-08	896	Feb-08	
3	Gautami CCPP*	Jan-08					18
	GT 1		Feb-06	Dec-08	924	Feb-08	
	GT 2		Feb-06	Dec-08	924	Feb-08	
	ST		Jul-06	Dec-08	774	Jun-08	
	Total						**41**
	Outstanding in thermal power						**1,388**
	% of total projects outstanding in thermal						***3.0***

Source: CEA

*Note: * RBI has relaxed NPA recognition for four power projects on Nov 14, 08 which includes Gautami and Konaseema project*

Table 15: Projects delayed in hydel power

S.No	Name of the project	State	Company	Capacity (MW)	Commissioning Date		Cost (INR mn)	
					Original	Delay	Original	Revised
1	Maheshwar	Uttaranchal	SMHPCL	400	Dec-02	Dec-12	16	24
2	Baglihar	J&K	JKSPDC	450	Dec-05	Dec-09	35	52
3	Koteshwar	Uttaranchal	THDC	400	Dec-06	Dec-11	13	13
4	Shrinagar	Uttaranchal	GVK Industries	330	Dec-06	Dec-12	17	21
5	Priyadarshini Jurala	AP	APGENCO	234	Dec-06	Dec-08	5	5
	Total						**86**	**116**
	Total outstanding hydro projects							**704**
	% of outstanding projects							**16.4**

Source: CEA

II. Textiles: Cotton, jute, and others

Table 16: Key characteristics for FY08

Loan book (INR bn)	913
% of total credit	4.1
Number of companies covered (Nos)	500
Average PAT margin for FY98-08	6.3
RBI reported credit growth CAGR FY98-08 (%)	17.7

Source: RBI, Capitaline, Edelweiss research

Economy dependent; debt showing stable numbers

The period of 2001-04 witnessed one of sharpest downturn in the textile industry with erosion in net worth at the consolidated level. Post introduction of TUFS (Technology Upgradation fund scheme) and an improved macro environment resulting in better margins and revenues, there has been improvement in key ratios with companies repaying their high cost borrowings resulting in improved DSCR and coverage ratios.

Outlook: Weak

Our discussions with textile analysts indicate that the sector's margins are under pressure despite steady growth in revenues, primarily due to high cost of raw material, mainly cotton. Moreover, we believe revenues of textile companies will increase on account of commissioning of new capacities, however, profits will be severely impacted on account of cost push problems. It remains to be one of the weakest segments in corporate credit. As it remains dependent on economic growth, sharp decline in profitability will affect the ability to service loans. Interest coverage ratio is currently at ~2.0x, while debt equity at 1.1x is close to unhealthy levels, given the earnings prospects.

Table 17: Top industry exposure amongst select banks

	Fund based (INR bn)	Non fund based (INR bn)	Exposure (INR bn)	Fund based (%)	Total (%)
State Bank of India	363	60	424	5.9	5.4
Punjab National Bank	56	6	62	4.6	4.1
Indian Overseas Bank	27	-	27	4.4	4.4
ICICI Bank	34	5	39	1.0	0.8
Axis Bank	28	2	30	3.0	2.7

Source: Company, Edelweiss research

Note: HDFC Bank's exposure, if any, is below 2% on funded exposure

IOB reports total exposure

Chart 26: Share of textiles is steadily increasing in credit

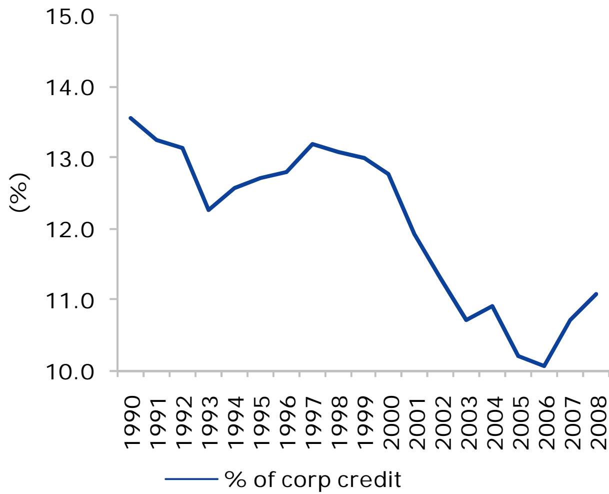


Chart 27: Companies with D/E >1 and ICOR <2

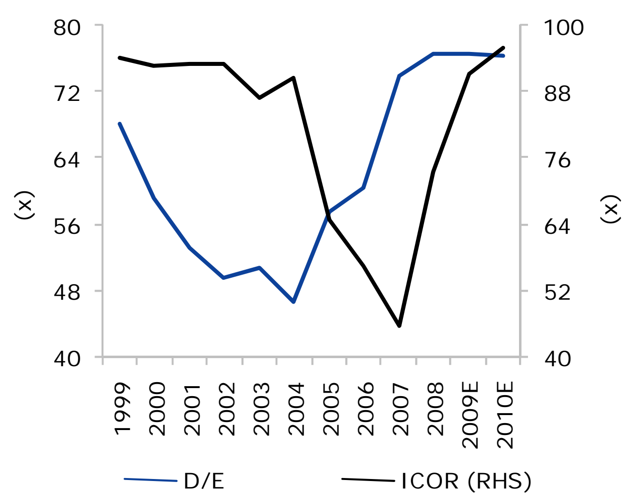


Chart 28: Consolidated industry level

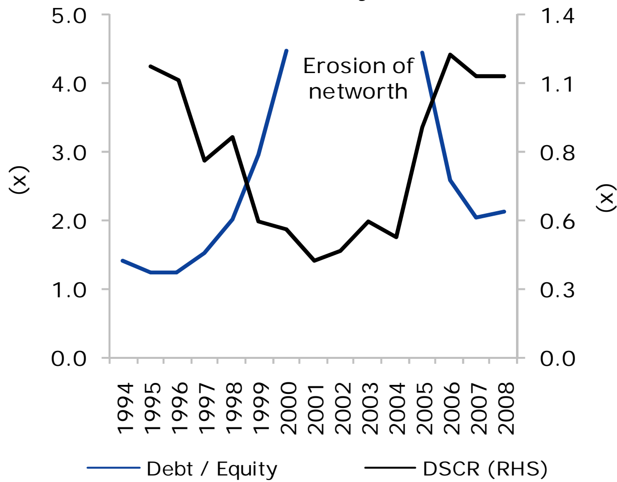
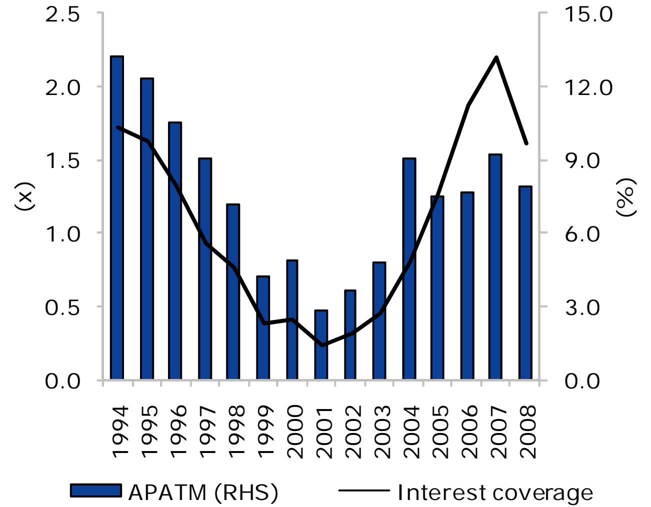
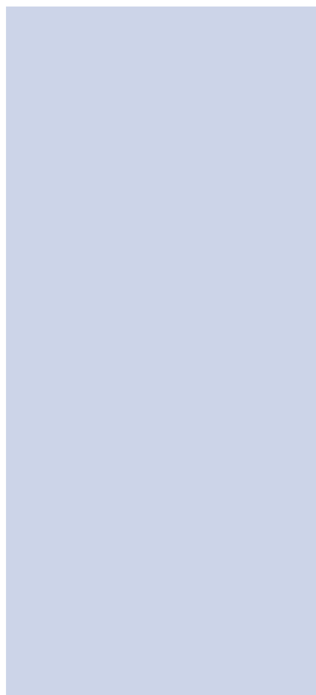


Chart 29: Weakness emerging in the sector



Source: RBI, Capitaline, Edelweiss research



III. Gems & jewellery

Table 18: Key characteristics for FY08

Loan book (INR bn)	250
% of total credit	1.1
Number of companies covered (Nos)	50
Average PAT margin for FY97-08	3.0
RBI reported credit growth CAGR FY97-08 (%)	20.9

Source: RBI, Capitaline, Edelweiss research

Non fund based exposure selectively backed by collateral

The exposure for banks varies between fund and non fund based. Axis Bank has a higher non fund based exposure which is largely backed by collateral (fixed deposits which represents ~73% of their non fund based exposure). Most other banks have a large fund based exposure.

Outlook: Rising debt equity a concern

One of the key concerns is the revenue visibility given its higher dependence on exports. As of FY08, the industry's margins were expanding, which gives some comfort on the rising debt/equity levels in the sector. However, PAT margins have dropped to as low as 1% (FY06) and have been at 1-2% thrice since 2004. We are currently uncomfortable on the dropping debt service coverage ratio, which is currently well below 1 for the sector despite interest coverage ratio being well above 2.3x.

Table 19: Axis Bank has top non fund exposure while SBI has most overall exposure

	Fund based (INR bn)	Non fund based (INR bn)	Exposure (INR bn)	Fund based (%)	Total (%)
Axis Bank	8	80	88	0.9	7.8
State Bank of India	112	6	118	1.8	1.5
Indian Overseas Bank	6	-	6	1.1	1.1
ICICI Bank	28	4	32	0.8	0.7
Punjab National Bank	6	0	6	0.5	0.4

Source: Company, Edelweiss research

Note: HDFC Bank's exposure, if any, is below 2% on funded exposure

IOB reports total exposure

Chart 30: Steady increase in share of credit

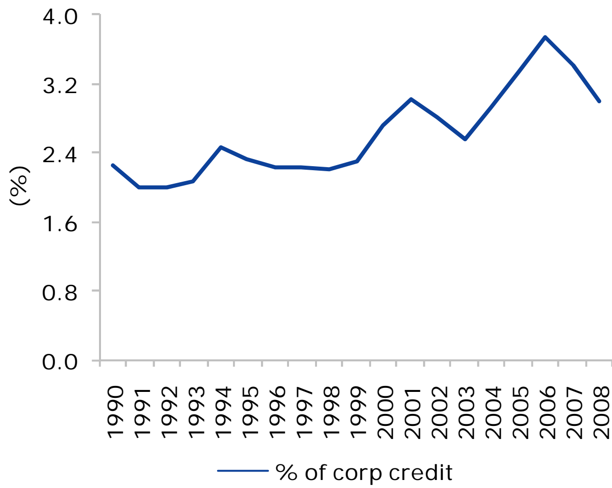


Chart 31: Companies with D/E >1 and ICOR <2

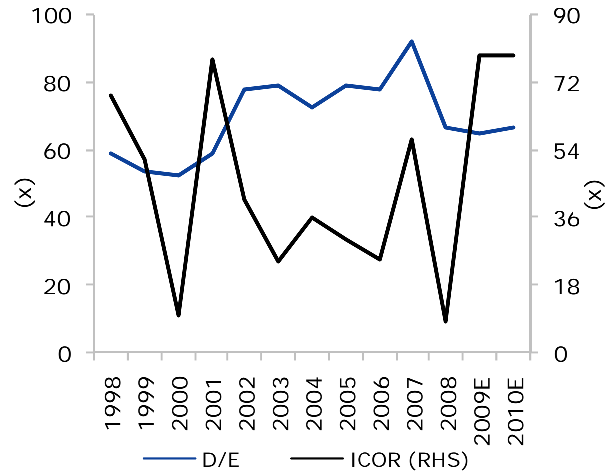


Chart 32: Consolidated industry level

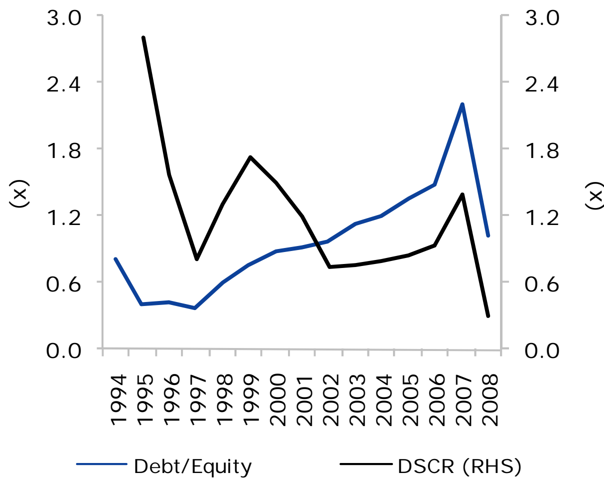
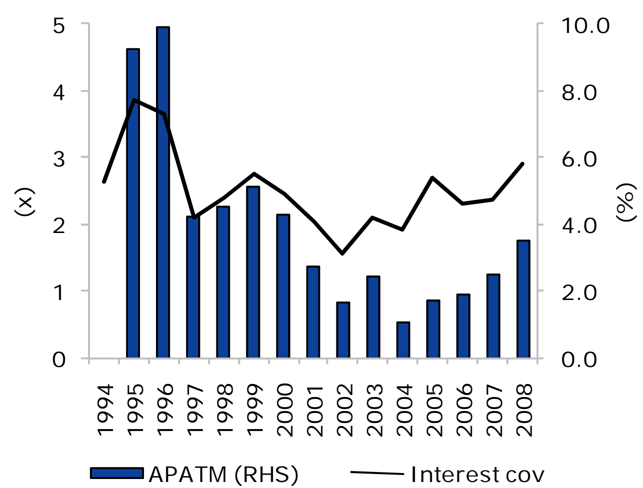
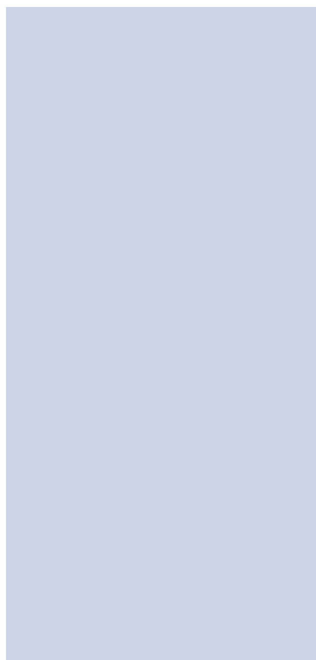


Chart 33: Margins are weak but coverage has improved



Source: RBI, Capitaline, Edelweiss research



IV. Auto and auto ancillaries

Table 20: Key characteristics

Loan book (INR bn)	292
% of total credit	1.3
Number of companies covered (Nos)	175
Average PAT margin for FY97-08	4.7
RBI reported credit growth CAGR FY97-08 (%)	22.4

Source: RBI, Capitaline, Edelweiss research

Table 21: Top exposure amongst banks

	Fund based (INR bn)	Non fund based (INR bn)	Exposure (INR bn)	Fund based (%)	Total (%)
HDFC Bank	52	NA	52	7.0	
Axis Bank	12	2	14	1.3	1.2
Indian Overseas Bank	12	-	12	1.9	1.9
State Bank of India	74	2	75	1.2	1.0
ICICI Bank	33	12	45	1.0	1.0
Punjab National Bank	4	2	6	0.3	0.4

Source: RBI, Capitaline, Edelweiss research

Note: IOB reports total exposure

Chart 34: Marginal increase in share of credit

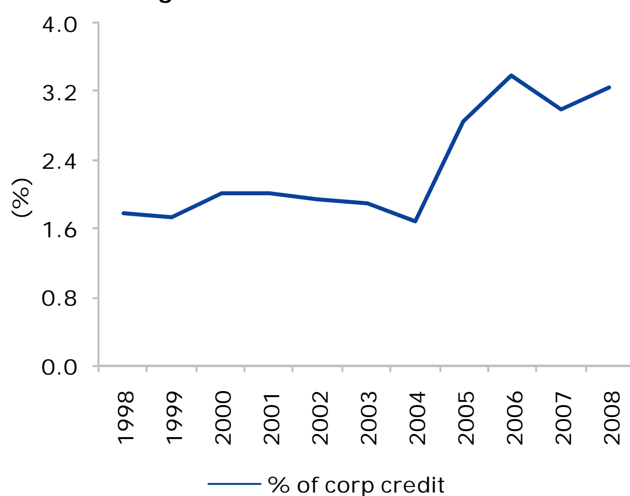


Chart 35: Companies with D/E >1 and ICOR <2

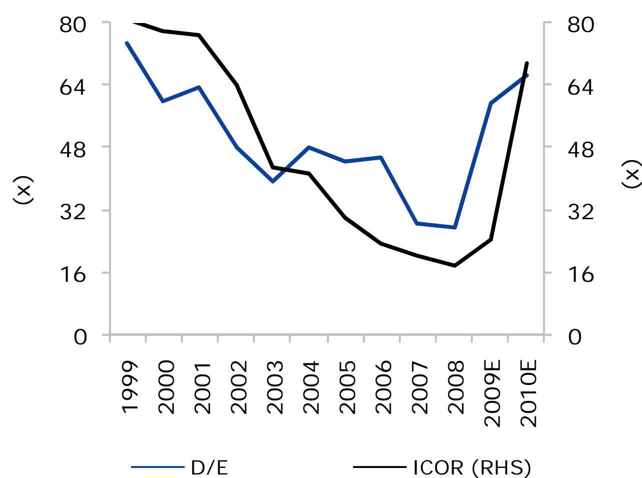


Chart 36: Consolidated industry level

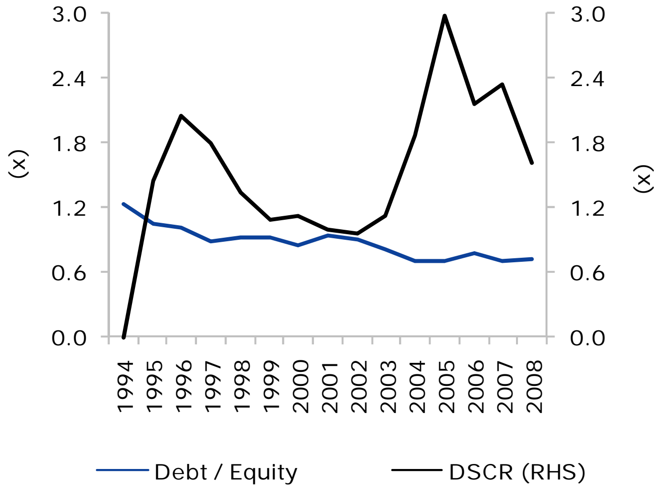
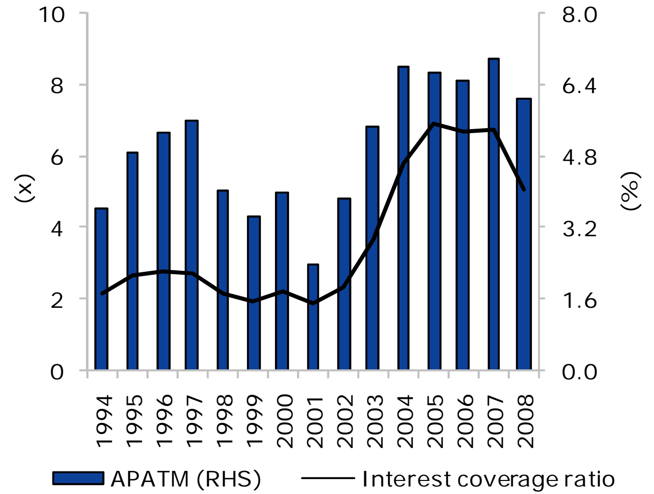
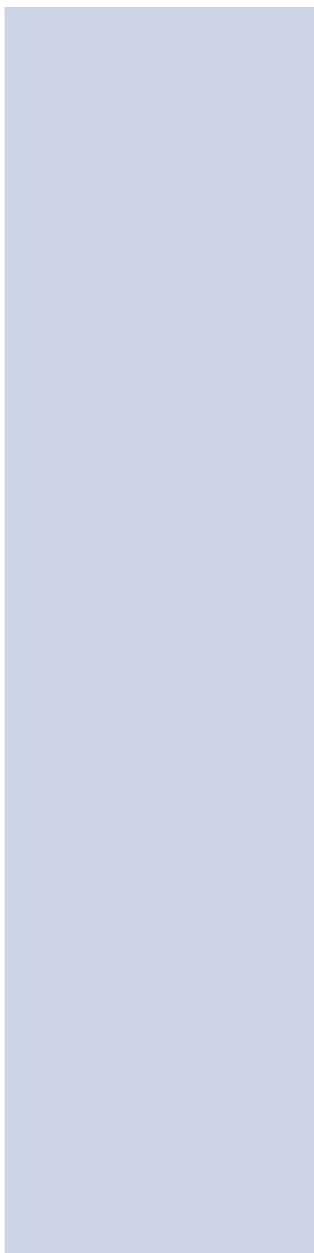


Chart 37: Margins and coverage ratio are falling



Source: RBI, Capitaline, Edelweiss research



V. Steel

Our metals and mining analyst, Prasad Baji believes that in the ferrous space, demand is expected to remain weak in the coming quarters. However, given the significant production discipline exercised so far, we expect prices to decline only slightly from the current levels (by about USD 50-60/tonne). On raw material side, we expect iron and coking coal contract prices for CY09 to be negotiated at 35% and 40% lesser respectively but, these will be insufficient to compensate for the Y-o-Y steel price decline. Except Tata Steel's ongoing 2.9mtpa brownfield expansion project at Jamshedpur, all the other capex projects are delayed atleast by 12 months or more. We expect base metal prices especially aluminum and zinc to rebound slightly from current levels due to ongoing production cuts and with prices close to average cost of production. Going forward, falling input costs are likely to provide some respite to producers.

Table 22: Key characteristics

Loan book (INR bn)	808
% of total credit	3.7
Number of companies covered (Nos)	240
Average PAT margin for FY97-08	1.8
RBI reported credit growth CAGR FY97-08 (%)	19.2

Source: RBI, Capitaline, Edelweiss research

Table 23: Banks with exposure to metals

	Fund based (INR bn)	Non fund based (INR bn)	Exposure (INR bn)	Fund based (%)	Total (%)
Axis Bank	14	7	21	1.5	1.9
Indian Overseas Bank	27		27	4.4	4.4
State Bank of India	348	107	455	5.7	5.8
ICICI Bank	103	60	163	3.0	3.5
Punjab National Bank	79	57	135	6.5	8.9

Source: RBI, Capitaline, Edelweiss research

Note: HDFC Bank's exposure is ~2% on funded exposure. IOB reports total exposure

Chart 38: Share of credit fairly stable since FY99

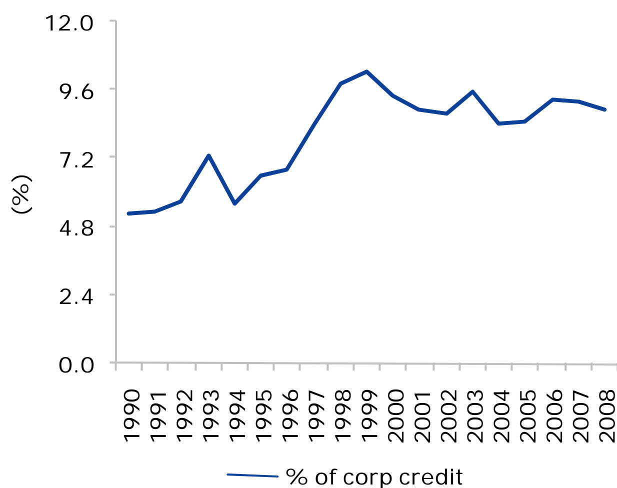


Chart 39: Companies with D/E >1 and ICOR <2

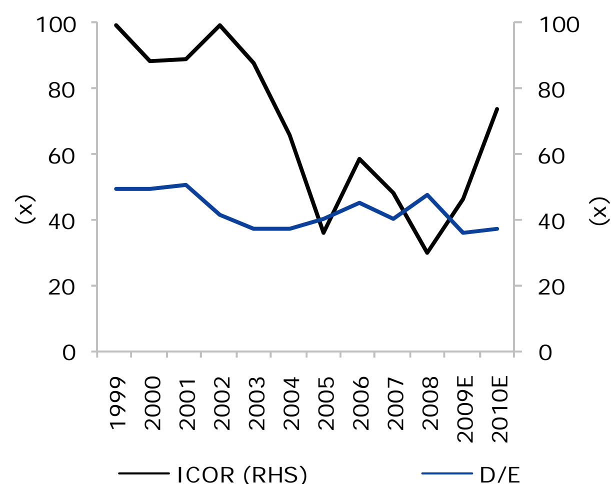


Chart 40: Consolidated industry level

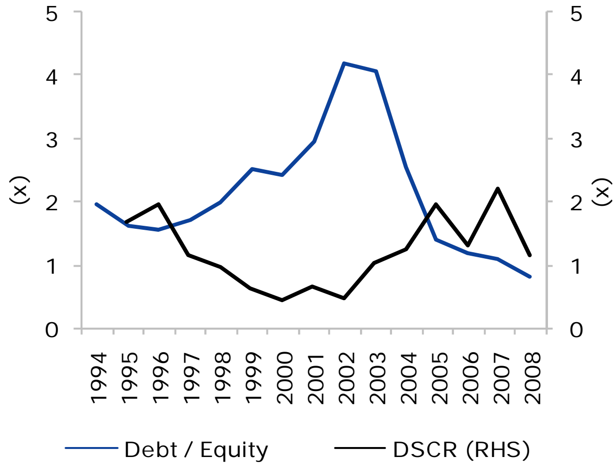
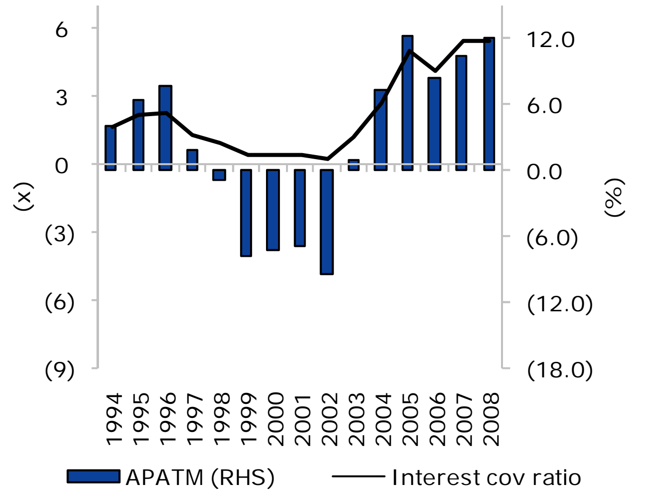
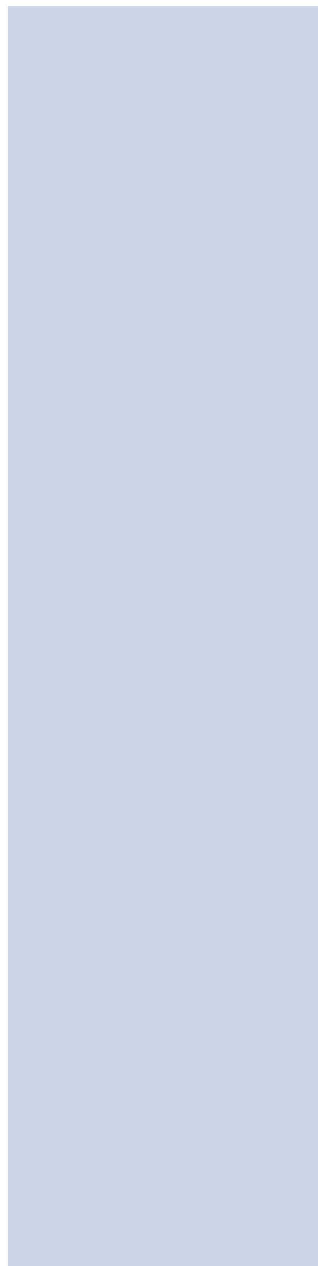


Chart 41: Margins to fall sharply with falling prices



Source: RBI, Capitaline, Edelweiss research



VI. Cement

Our cement analyst Revathi Myneni believes that the outlook for the cement sector remains cautious with new capacity additions likely to pressurize realisations of companies. While key costs—power, fuel, and freight—are expected to soften, net profit is likely to decline by ~5-40% Y-o-Y in FY10E due to price corrections. Current EBITDA margins of ~25-35% in FY09 are likely to correct by up to ~450bps for our coverage universe.

However, aided by impressive 71% realisation increase during FY06-09E (cycle upturn), companies have stronger balance sheets (average D/E of 0.3 for our coverage universe) and higher profitability than the previous down cycle. Average D/E for our coverage is likely to be 0.3x in FY10E vis-à-vis 1.3x in FY03 (previous downturn) and EBITDA margin is expected to be 26% in FY10E compared to 18% in FY03.

Accordingly, we believe default risk is low for our coverage universe. However, we believe the same exists for smaller players who had financed major part of the capex through borrowings (gestation period of a project is ~3 years).

Table 24: Key characteristics

Loan book (INR bn)	142
% of total credit	0.6
Number of companies covered (Nos)	35
Average PAT margin for FY97-08	12.5
RBI reported credit growth CAGR FY97-08 (%)	20.0

Source: RBI, Capitaline, Edelweiss research

Table 25: Top exposure amongst banks

	Fund based (INR bn)	Non fund based (INR bn)	Exposure (INR bn)	Fund based (%)	Total (%)
Axis Bank	9	2	11	0.9	1.0
Punjab National Bank	13	1	14	1.0	0.9
Indian Overseas Bank	4	-	4	0.7	0.7
State Bank of India	33	7	40	0.5	0.5
ICICI Bank	10	3	12	0.3	0.3

Source: Company, Edelweiss research

HDFC Bank's exposure is below 2% on funded exposure

IOB reports total exposure

Chart 42: Declining contribution of cement

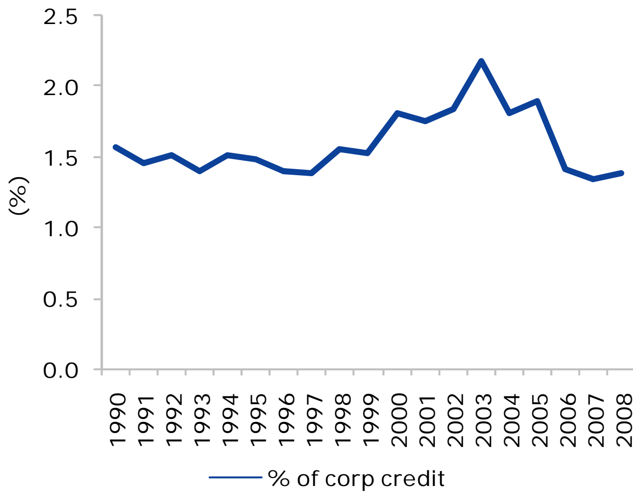


Chart 43: Companies with D/E >1 and ICOR <2

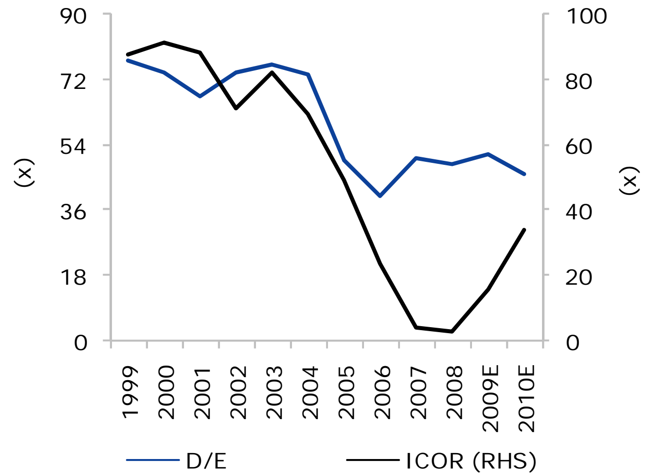


Chart 44: Consolidated industry level

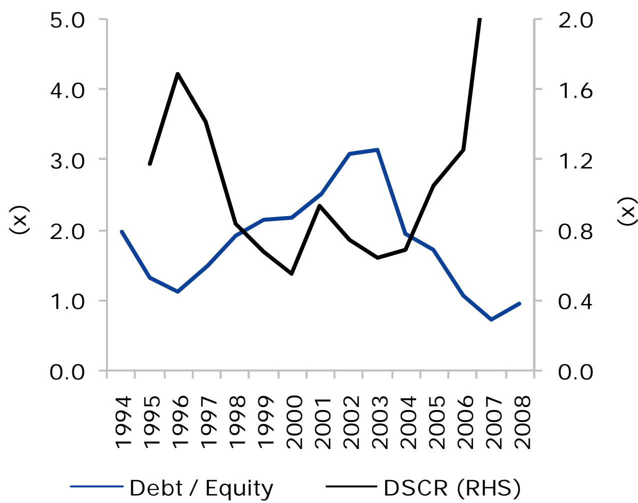
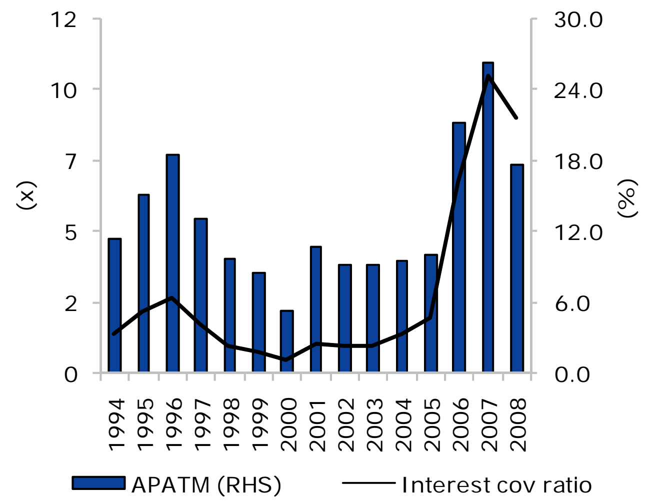
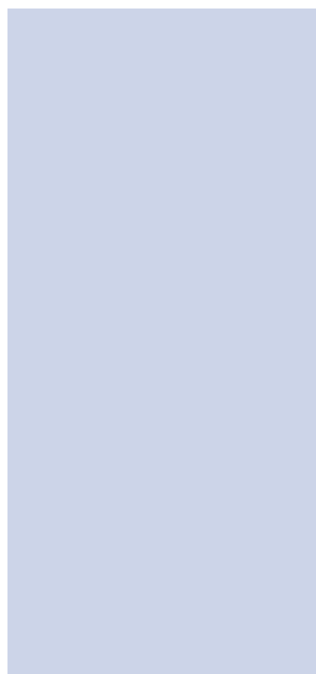


Chart 45: Comfortable margins and coverage ratio



Source: RBI, Capitaline, Edelweiss research



VII. Fertilizer

Table 26: Key characteristics

Loan book (INR bn)	93
% of total credit	0.4
Number of companies covered (Nos)	45
Average PAT margin for FY97-08	(0.6)
RBI reported credit growth CAGR FY97-08 (%)	13.2

Source: RBI, Capitaline, Edelweiss research

Chart 46: Decline in share of credit from FY05

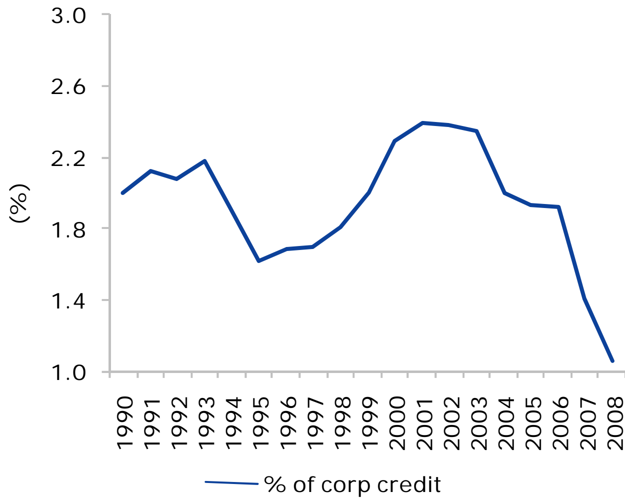


Chart 47: Companies with D/E > 1 and ICOR < 2

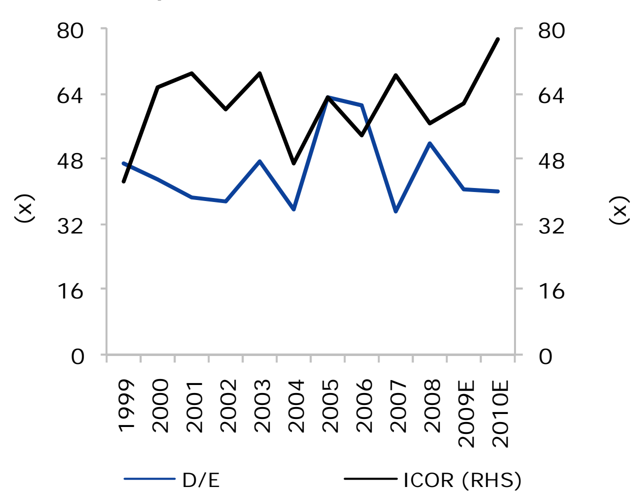


Chart 48: Consolidated industry level

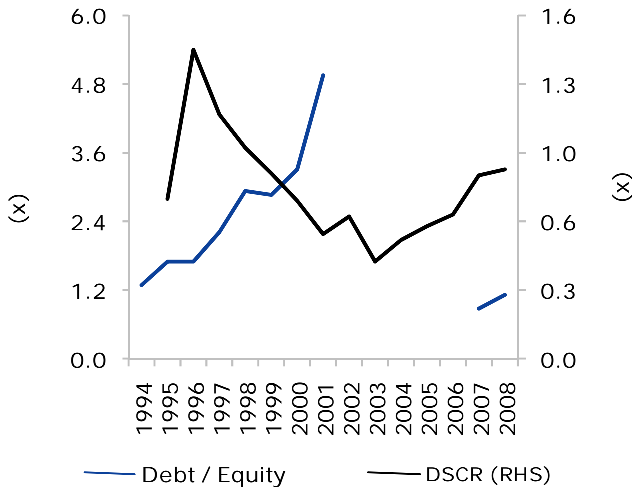
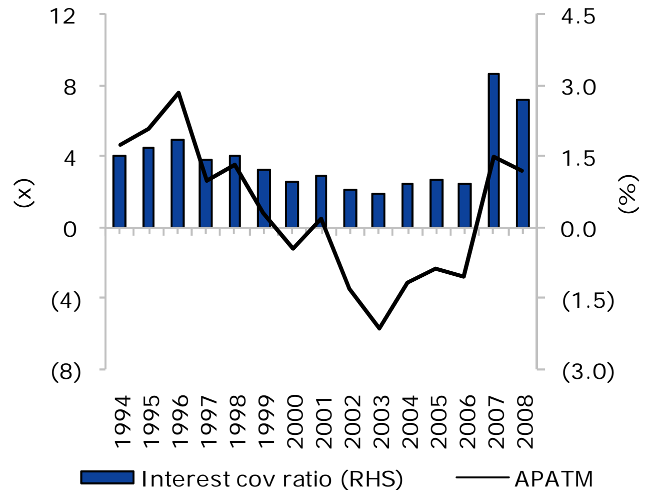


Chart 49: Margins are fairly weak



Source: Capitaline, Edelweiss research

VIII. Sugar

Table 27: Key characteristics

Loan book (INR bn)	167
% of total credit	0.8
Number of companies covered (Nos)	60
Average PAT margin for FY97-08	1.5
RBI reported credit growth CAGR FY97-08 (%)	18.7

Note: HDFC Bank's exposure, if any, is below 2% on funded exposure

Table 28: Break-up of exposure of large banks

	Fund based (INR bn)	Non fund based (INR bn)	Exposure (INR bn)	Fund based (%)	Total (%)
Punjab National Bank	24	3	27	2.0	1.8
State Bank of India	63	3	66	1.0	0.8
Indian Overseas Bank	5	-	5	0.7	0.7
Axis Bank	7	0	7	0.8	0.6
ICICI Bank	-		-	-	-

Source: Company, Edelweiss research

Chart 50: Decline in consumption from FY05

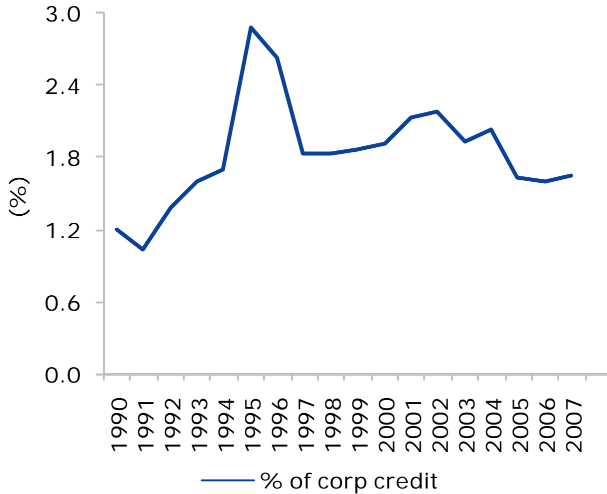


Chart 51: Companies with D/E > 1 and ICOR < 2

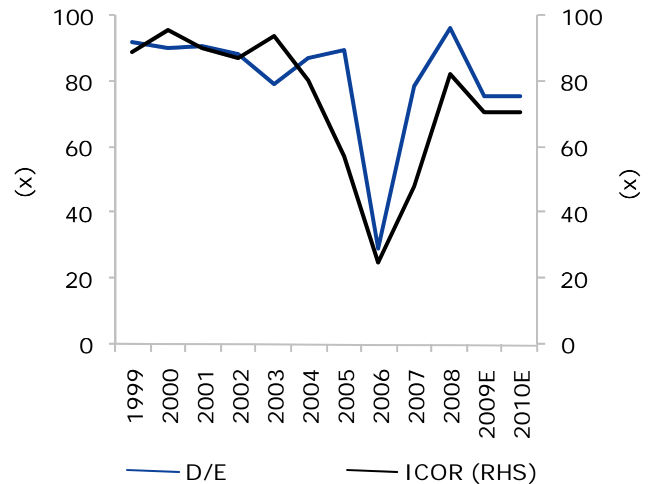


Chart 52: Consolidated industry level

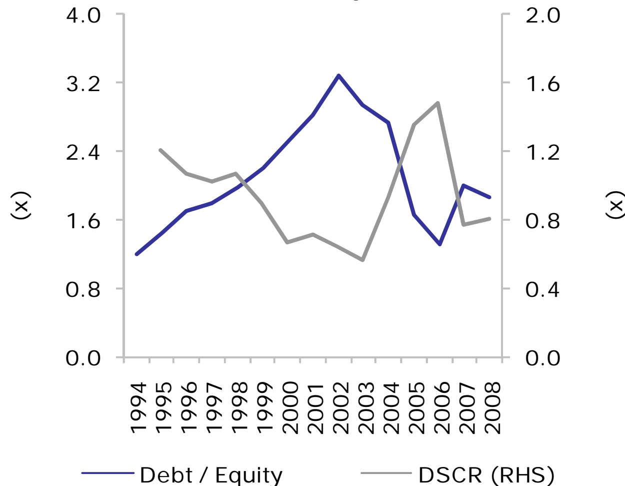
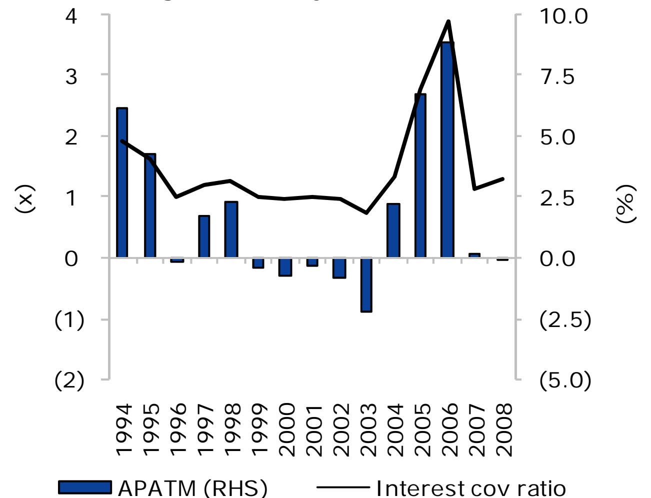


Chart 53: Margins are fairly weak



Source: Capitaline, Edelweiss research

IX: Commercial real estate

In an environment characterized with economic uncertainty and manpower rationalization, demand for commercial real estate has slackened. Weaker household income outlook has also led to slack in demand for retail space. With a collapse in volumes, developers have been left heavily leveraged.

Commercial real estate has grown by ~58% CAGR from FY05-08 to INR 1.1 tn with public and private sector banks having similar market share and currently forms 6% of overall loan book. Most banks have ~3-5% of their loan book towards commercial real estate. Axis Bank and HDFC Bank have one of the highest commercial real estate exposure at ~7-10% but lending to developers is fairly low.

Table 29: Commercial real estate outstanding and exposure across players

Loan book (INR bn)	539
% of total credit	2.4
Number of companies covered (Nos)	130
Average PAT margin for FY97-08	11.5
RBI reported credit growth CAGR FY97-08 (%)	38.1

	FY05	FY06	FY07	FY08
Market size (INR bn)	288	490	833	1,135
Growth (%)		*70*	*70*	*36*
Proportion to real estate (%)	*21*	*22*	*27*	*29*
Market share (%)				
Public sector	*33*	*42*	*44*	*51*
Private sector	*67*	*58*	*56*	*49*

Source: Company, Edelweiss research

Note: Definition of real estate exposure is the primary reason for the difference RBI reported numbers and that which is presented in the annual report. Covers 34 banks and 2 NBFC.

Outlook weak despite RBI's effort

RBI has been fairly vigilant in lending to commercial real estate. In May 2006 when lending to real estate was growing at a rapid pace, RBI increased the general provisioning requirement from 0.4% to 1.0 percent and risk weights from 125% to 150%. It then subsequently increased the general provisioning requirement to 2% and reduced this to 0.4% by November, 08. It also asked banks to refrain from financing purchase of land banks thus decreasing the LTV.

Banks adopted a cautious stance while lending to this segment given the higher provisioning and capital adequacy requirements. Banks have rental receipts, confirmed lease agreements of specific projects, and lending to specific projects to reduce the risk of delinquency. However, banks have lent to corporates for their working capital requirements which is backed by commercial real estate where the risk will mirror the underlying industry fundamentals.

Most banks have limited exposure to the commercial real estate segment at about 6% of their entire loan book and few borrowers use their commercial real estate for working capital requirements. However, we expect defaults in instances as noted below:

- Projects where existing lease agreements (during the construction phase) are revised down leading to sharp erosion in debt serviceability.
- Upcoming projects with companies putting their expansion on hold while previously agreed rentals are revised down sharply. Corporates funding their capital requirements witnessing a sharp downturn in their industry.

Table 30: Break-up of commercial real estate exposure

	ICICI	SBI	Bank of India	PNB	Axis	Bank of Baroda	Union	Federal	Allahabad	IOB
Direct exposure (INR bn)	137	120	52	60	59	40	24	6	22	37
% of advances	6	3	5	5	10	4	3	3	4	6
Relative market share	12.1	10.5	4.6	5.3	5.2	3.6	2.1	0.6	1.9	3.2

Source: Company, Edelweiss research

Chart 54: Companies with D/E above 1 and ICOR below 2

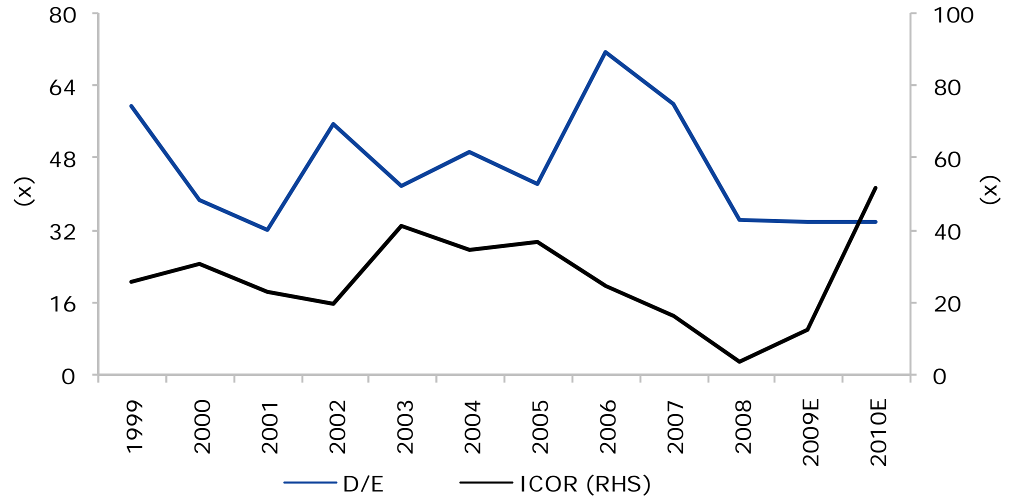


Chart 55: Consolidated industry level

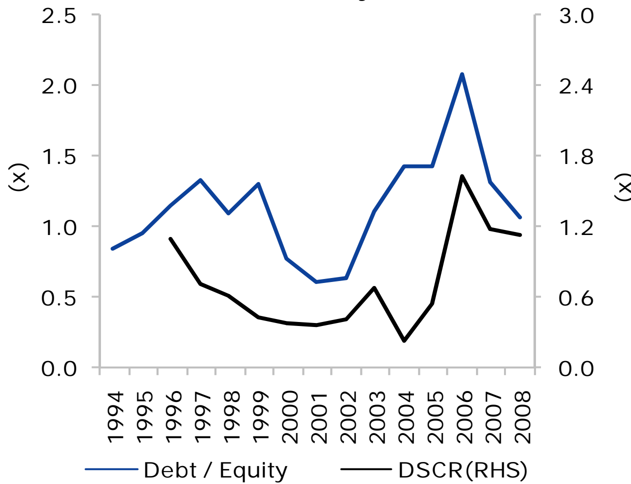
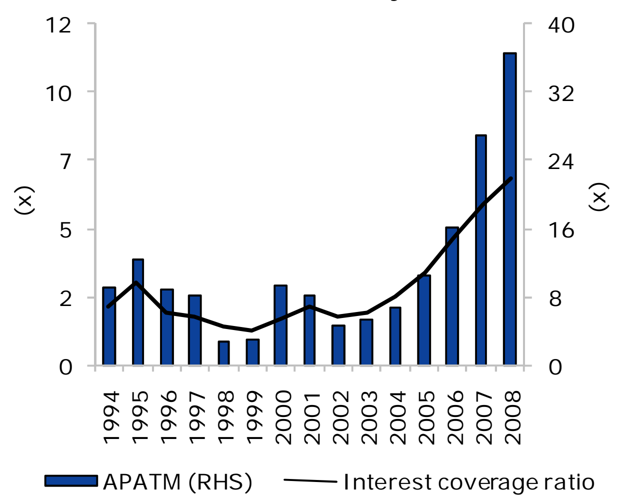


Chart 56: Demand outlook is fairly weak

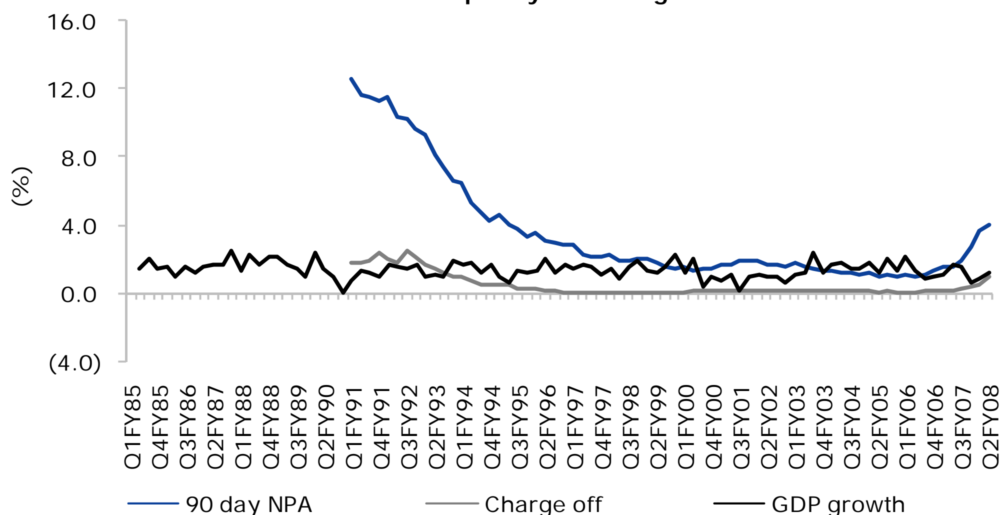


Source: Capitaline, Edelweiss research

International experience

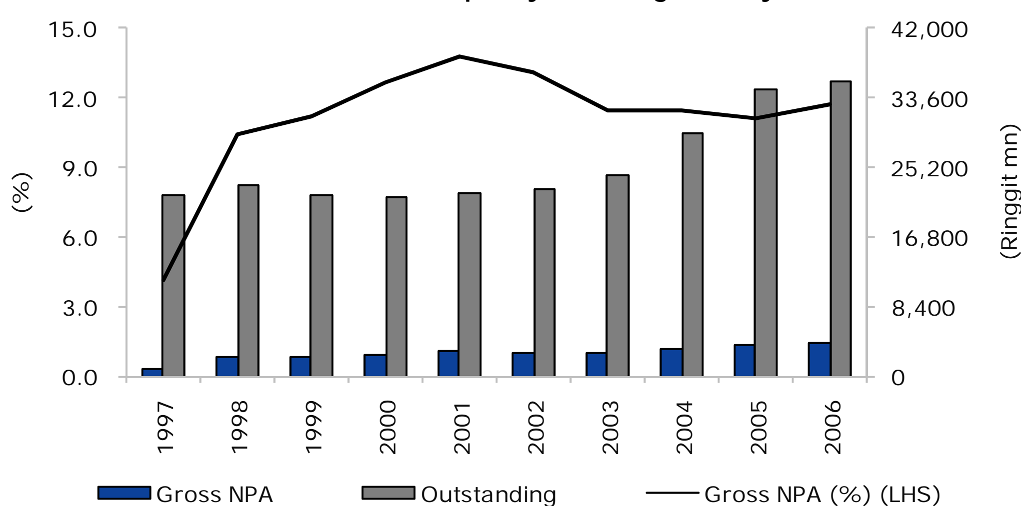
In US, the experience has been better with actual delinquency being lower than residential mortgages. In the commercial lending portfolio, the peak delinquency in FY00-02 has been ~1.9% with average charge off of 10bps/quarter, while the delinquency in the current crisis is higher at 4%. Malaysia, however, is straddled with legacy NPA caused in the Asian crisis of the late 90s.

Chart 57: Commercial real estate delinquency and charge : United States



Source: Federal Reserve, Bloomberg

Chart 58: Commercial real estate delinquency and charge : Malaysia



Source: Central Bank of Malaysia, Edelweiss research

Altman Z Score analysis for various sectors

One of the most commonly used statistical ratio models for predicting stress in business is Altman's Z Score. It was developed for bankruptcy prediction by Edward Altman in 1968. The study uses different financial ratios, assigns different weights to predict financial health of companies. We carried out Z score analysis on various "suspect" industries. While Z score is a widely used tool amongst auditing firms, its interpretation should be taken, as best, only as an indicator.

The original Altman Z Score formula is given:

$Z = 1.2\ T1 + 1.4\ T2 + 3.3\ T3 + 0.6\ T4 + 0.999\ T5$

Where:

T1 = (Current Assets – Current Liabilities)/Total assets

This ratio factors in the liquid assets of the company in relation to the firm size. This component varies from sector to sector as conversion cycles of different businesses are different.

T2 = (Retained Earnings)/Total Assets

The ratio reflects the age and the cumulative profitability of a firm. It also factors the historical earning power.

T3 = (Earnings before Interest and Tax)/Total Assets

The operating efficiency of an organization is of utmost importance to its long term viability. This ratio factors in the profitability without considering leverage.

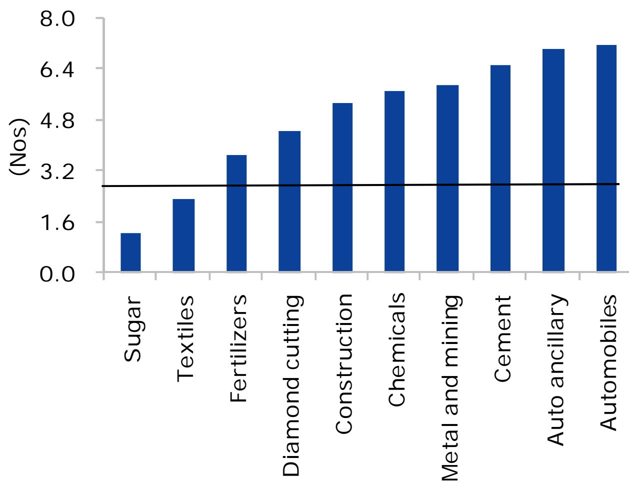
T4= (Market Value of Equity)/Book Value of Total Liability

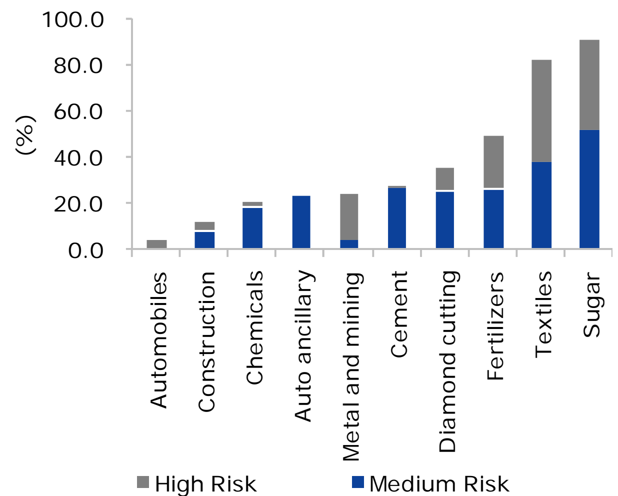
Using this ratio adds the market dimension into the score, as secondary markets usually foreshadow upcoming problems.

T5= (Sales)/Total Assets

This component varies significantly for different sectors and does not have validity for the financial sector.

Chart 59: Score of <3 witnessed in two sectors but metals have higher proportion of high risk debt





Source: Capitaline, Edelweiss research

Sugar and textiles segments, which collectively account for ~5% of bank credit, are clearly suspect, while fertilizers and diamond cutting industries are near the stress zone. Interestingly, metals and cement paint a healthy picture. Risk debt to total debt as per Z score analysis has given a fair indication to the level of NPAs in the system historically. The difference in the two numbers could partially be explained by the write-offs undertaken.

Chart 60: Proportion of risky debt

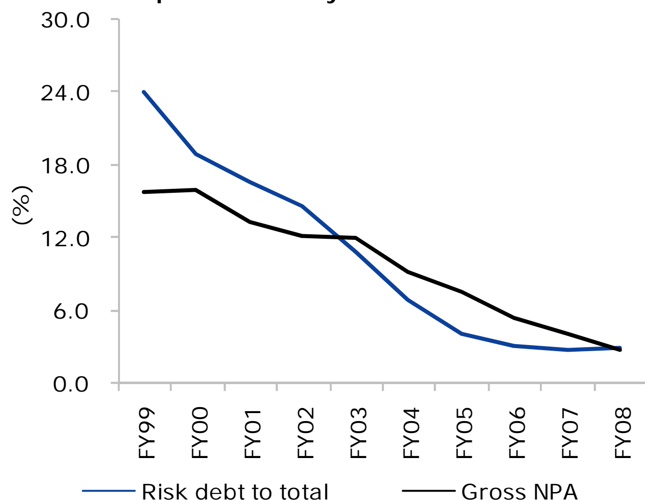
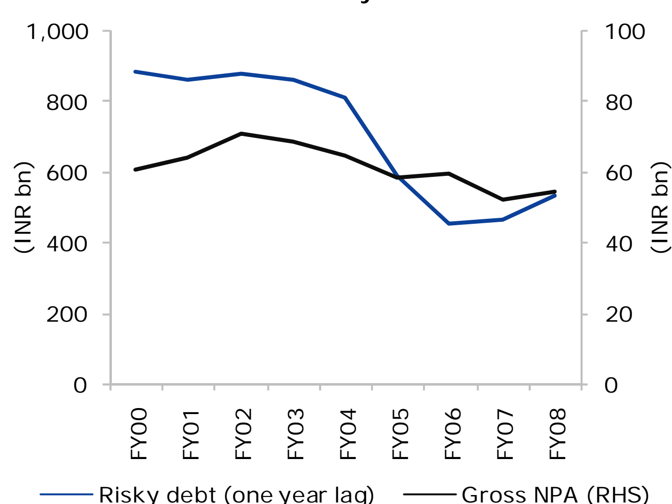


Chart 61: Performance of risky debt to NPA



Source: Capitaline, Edelweiss research

Metals and mining

Metals and mining, which led the increase in NPA in 2002, looks much better placed this time around with a median Z score of ~5 and risky debt contribution close to 22%.

Sugar

The sugar sector has the highest proportion of its debt in risky category of which 39% is in high risk and 51% in medium risk category. Z score has also moved below the threshold of 1.8 which puts the sector under the scanner.

Fertilizer

The fertilizer sector has the risk of temporary mismatch in working capital which can lead to delay in payments. Though the median Z score is well above historical, high proportion of risky debt to overall sector debt makes us cautious on the sector.

Construction

The construction sector looks better placed this time around with significantly high Z scores (>5) and proportion of risky debt to overall at ~10%. We believe the sector is well placed and risk of defaults is low.

Textiles

Textiles has been historically one of the weakest segments due to intense competition, export dependence, currency fluctuations, and lack of scale, which continues to remain under stress. Z score is close to 2, while risky debt proportion in ~83%.

Chemicals

Chemical sector looks comfortable and in a better position than the last time with high median Z score and proportion of risky debt at ~20%.

Gems & jewellery

Diamond cutting, which like textiles is export dependent and fragmented, could also come under stress. Median Z score is comfortable at ~3.5 though proportion of risky debt is high at 35%. The cement sector looks comfortable with Z score of ~3.5 with proportion of risky debt at 27%.

Automobiles

Automobiles looks well placed and we do not see any default risk arising from the sector. Auto components, however, could come under stress due to the state of global auto majors, weak domestic demand, and currency fluctuations. 25% of the sector debt can be classified as risky.

Chart 62: Metals and mining is reasonably insulated

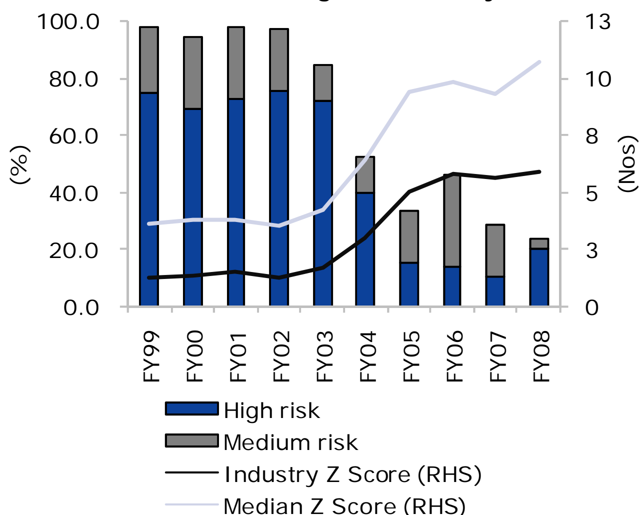


Chart 63: Signs of stress in sugar

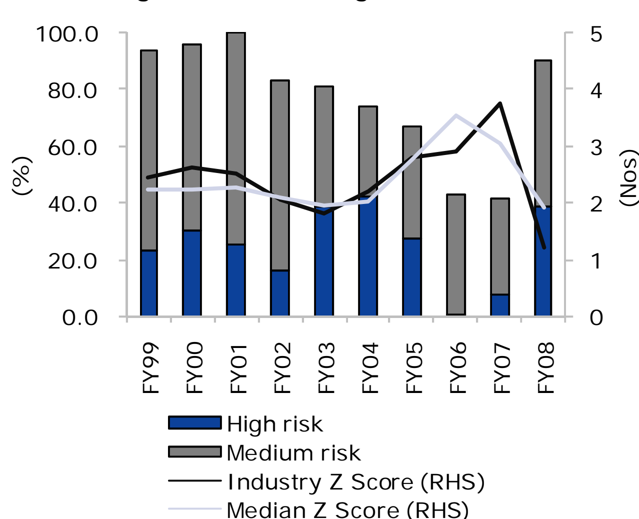


Chart 64: Stress in fertilizer

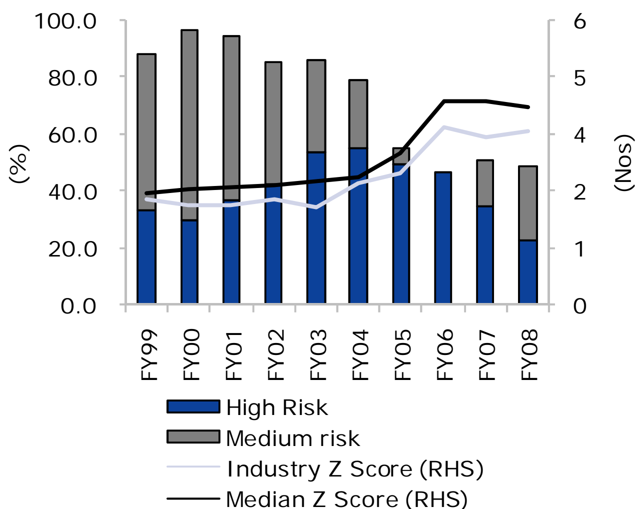


Chart 65: Construction is witnessing little stress

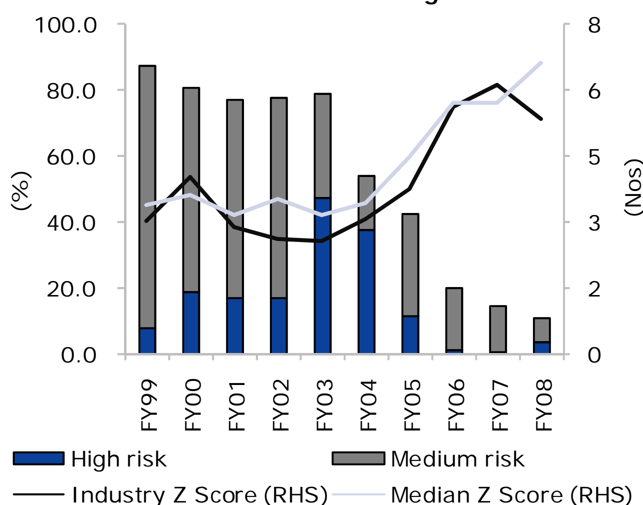


Chart 66: Stress in textiles

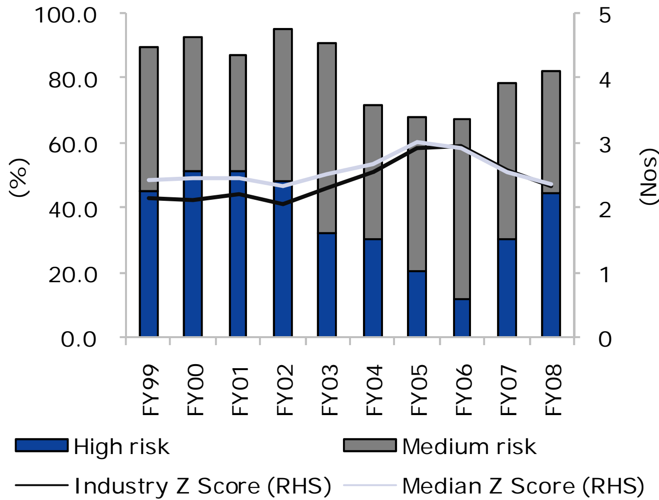


Chart 67: Chemicals is comfortable with little stress

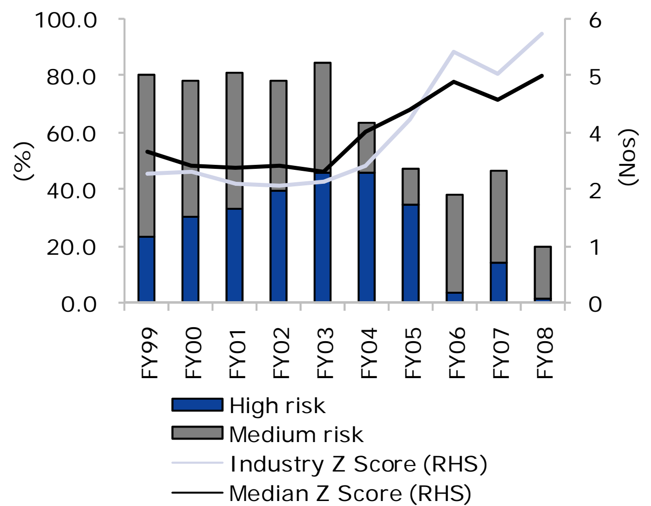


Chart 68: Increasing stress in gems & jewellery

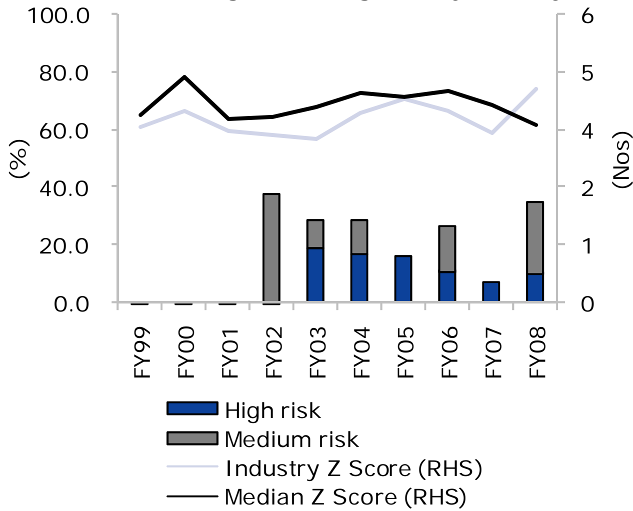


Chart 69: Cement is comfortable with little stress

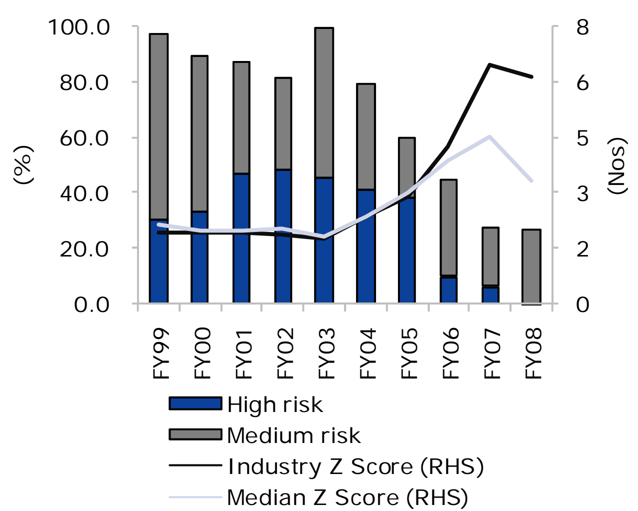


Chart 70: Automobiles is extremely comfortable

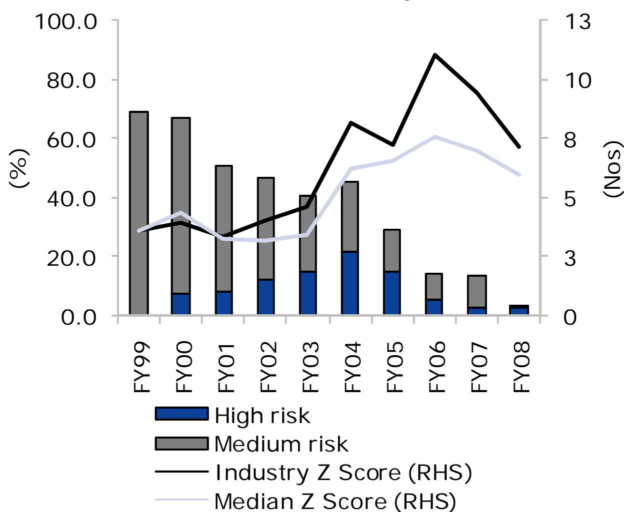
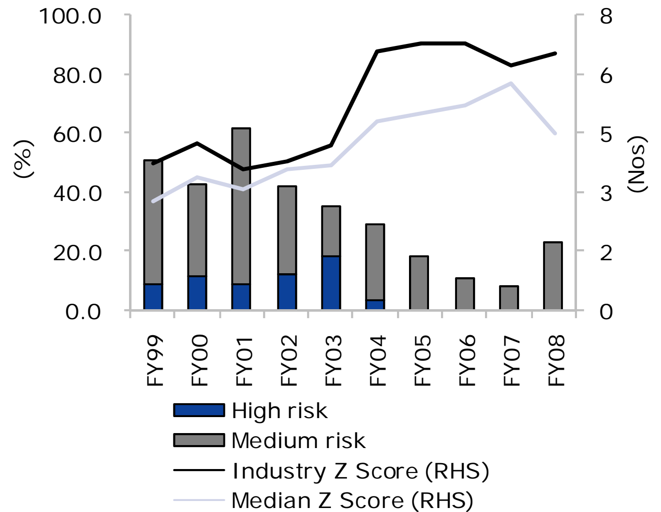


Chart 71: Decline in demand in auto ancillaries



Source: Capitaline, Edelweiss research

Retail Asset Quality: First Bite

High growth phase over FY04-07; no historical experience of retail NPLs

Retail credit, which was in a high growth phase over FY02-07 (now forming 24% of overall credit), is already contributing to banks' NPL. Lack of credit offtake in the corporate sector (credit deposit (CD) ratio between FY04 and FY05 at ~55-60%) and low interest rate environment encouraged most banks to focus on the retail segment (mortgages in particular).

Why higher slippage would continue?

Banks had ***eased their lending standards by increasing LTV (loan to value), IIR (installment to income) and tenor*** to remain competitive and meet increased retail credit demand (boosted by tax incentives, growing consumer wealth and other structural drivers), which is now leading to higher delinquencies. Moreover, many banks ***went up the risk curve and ventured into riskier unseasoned and non-collateralised loan portfolio*** (personal loans, credit cards and two wheelers) as competition was rising in asset backed products and visibility was improving on strong growth in personal income. Further, ***outsourcing of loan origination activities to DSAs (Direct Sales Agent)*** to hitherto unknown customers aggravated delinquency for all participants.

Retail slippages will continue to see higher defaults as we move into FY10 and due to weak employment (income) scenario, declining prices of underlying assets and banks' limited ability on recovery.

Mortgage, which would still be the safest of retail assets, could see defaults arising mainly from job (income) losses and loans where project is under completion (mostly during FY07-08). In our view, banks which built most of their mortgage book in the past two years should see greater slippages. The biggest mitigating factor that can reduce the intensity of slippages would be falling interest rates providing relief on mortgage. Our estimate shows that ~100bps decline in interest rates can help increase cash flows by ~6-8% of personal income. We expect net slippage in mortgages to be 0.4 -1.0% for FY10.

Slippages in **CV loans** are likely to be ~4% in FY10E, given reduced economic activity. We expect **car loans** defaults to be at ~3%. **Two wheelers, credit cards and personal loans** are likely to witness accelerated slippage in the range of 8-12%, partly due to nature and partly due to the weakening income outlook. Higher cost of recovery in retail loans is leading to higher LGD in this segment of credit. We believe banks which have grown their retail book in the past two years are likely to witness higher credit costs (*ceteris paribas*).

We have anlaysed over 150 securitised retail loans pools rated by ICRA, Fitch, and CRISIL and have interacted with rating agencies and industry participants to understand the quality of retail loan book in India and outlook on the same. Moreover, we have looked at the bank level exposure to various segments and change in risk management and recovery tools.

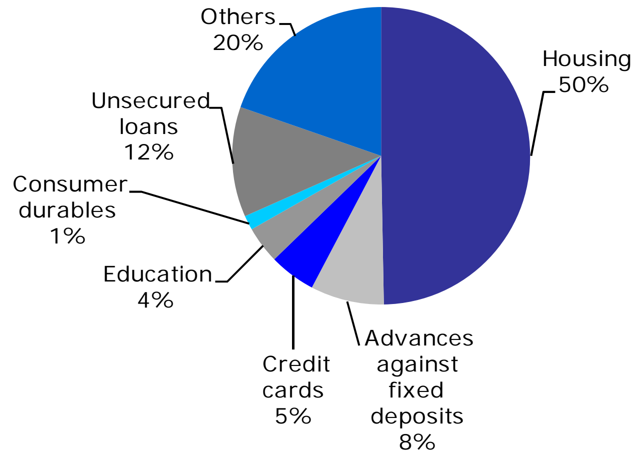
In the sections below we have discussed the following in detail:

- Insights from analysis of securitised pools (refer pages 60)
- Bank level exposure to retail segments and retail NPA estimates of major banks (refer pages 61-62)
- Individual asset class, namely, mortgage, auto, and personal loans, highlighting drivers of default, mitigants and asset quality outlook in the respective segments .

At a glance : Retail credit growth and risk spectrum

Retail credit was in a high growth phase over FY02-07 (now forming 24% of the overall credit) and India has no prior experience of retail NPL. Retail credit is still dominated by relatively safer asset class, namely, mortgages which constitute 51%; Vehicle loans constitute 33% and other segments like personal loans, credit cards, education loans, etc., form the rest.

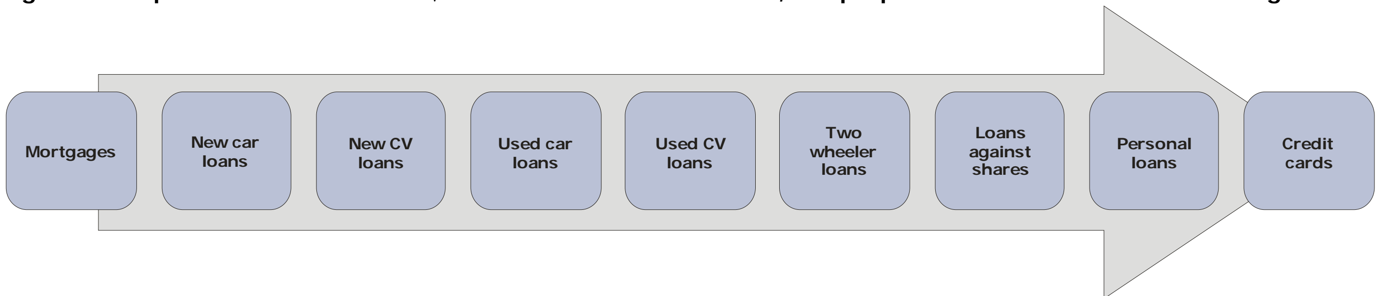
Chart 72: Retail loans dominated by housing and vehicle loans



Source: CRISIL

However, the proportion of unseasoned and non-collateralised loan portfolio (personal loans, credit cards and two wheelers), where natural delinquency is relatively higher (compared to secured lending), has increased to 17% of outstanding retail loans in FY08 (up from 6% in 2004).

Fig. 4: Risk spectrum of retail credit; safer asset class dominates, but proportion of unsecured credit rising



Source: CRISIL

Insights from analysis of securitised retail loan pools

We have anlaysed over 150 securitised retail loans pools rated by ICRA, Fitch, and CRISIL and have interacted with rating agencies and industry participants to understand the quality of retail loan book in India and outlook on the same. Our basic hypothesis for analysing the retail portfolio was to:

- Understand the behaviour of slippages across loan tenor of various retail asset classes
- Analyse the impact of interest rates on asset quality
- Assess underwriting quality of various banks/financial institutions.

As information on delinquency in retail credit is unavailable in the public domain, we studied the movement of NPA on securtised assets, as they are a good proxy of the actual loan outstanding. We have a fair representation of most asset classes from mortgage, CV, CE, cars, two wheelers, and personal loans across two three years. Significantly, most of the securitisation pools provide us with information to make a useful analysis of the performance of the underlying asset in the respective bank's portfolio.

Table 31: ICRA ABS pools analysed

	Jun-04	Mar-05	Dec-05	Sep-07
Number of pools	32	45	56	111
Total amount (INR mn)	62,939	119,582	161,639	342,947
Number of pools				
Citibank NA/ Citicorp Finance	3	4	5	3
Cholamandalam Finance	7	8	6	1
GE Capital	2	3	4	7
HDFC Bank	2	3	4	5
ICICI Bank	9	19	26	58
Sundaram Finance	1	1	1	9
SREI Infrastructure Finance			1	3
Tata Motors Financial Services	6	8	9	25

Source: CRISIL, ICRA, Fitch, Edelweiss research

Our analysis revealed that, unlike corporate loan book where, delinquency tends to be lumpy in nature, retail loan slippages behave like an 'inverted U' - deterioration picks up in the first few quarters before peaking and steadily tapers down in the final stages when recoveries kick in. Peaking of slippages depends on the nature of the underlying asset, tenor of the loan, underwriting standards, and prevailing interest rates.

Our observations from comparison of securitised pool across asset classes over FY04-07 are:

1. Slippages tend to rise naturally in rising interest rate environment.
2. LTV and product tenor increases over the time period for certain products, suggesting liberal underwriting standards (in the form of higher LTV and longer tenor).
3. Slippages are higher for non-collateralised loan portfolio such as personal loans and credit card receivables (particularly on unseasoned book) compared with secured credit. Eventual loss in collateralised assets also tends to be relatively lower as the equity contribution towards the asset steadily increases, raising the cost of default for the borrower. Credit loss for non-collateralised products could be much higher at about 6-8%.
4. Our analysis of securitised pools suggests that slippages in car loans should peak between 12 and 15 months post origination, while that of two wheelers loans is at ~12 months and personal loans at 18 months. An ICRA study in December 2007 concluded that delinquencies in the CV pool peaked between 18 and 21 months post origination.
5. Peak slippages have increased sharply over FY05-08 with delinquency in the 2.5-4.0% range for housing, 12% for CV, 5% for cars and 8% for two wheelers.

Bank level exposure to retail credit

Table 32: Retail credit breakup of leading players as of Q2FY09

(INR bn)	ICICI	SBI	HDFC Bank	Axis	Kotak Mahindra
Residential mortgage	623	506	-	89	30
Car loans	158	80	135	15	49
Personal Loans	118	355	82	37	31
CVs	176	NA	90	7	37
Two wheelers	32	-	22	-	-
Credit cards	85	-	39	7	-
Others / Business banking	28		216	13	
Total	1,221	941	584	167	147
(% of book)					
Residential mortgage	28	10	-	13	13
Car loans	7	2	13	2	21
Personal loans	5	7	8	5	13
CVs	8	NA	9	1	16
Credit cards	4	-	4	1	-
Others	3	-	23	2	-
Total	**55**	**19**	**57**	**24**	**64**
Loan book size	**2,220**	**4,934**	**1,022**	**689**	**232**

Source: Company, Edelweiss research

Profile of retail players

- **HDFC Bank**

  HDFC Bank has a track record of consistent growth in earnings and assets, and healthy asset quality (with gross NPAs below 2%) is one of the bank's key strengths. Retail advances (including business banking) constitute 57% of its loan book. The bank is one of the leading auto financiers. Vehicle advances constitute 24% of outstanding credit (with car loans being 13%, CV 9% and two wheelers 2%). The bank has grown its vehicle advances by 37% CAGR to INR 247 bn, in the past two years, with a bulk of the growth coming from the car portfolio. The bank is also a leading player in the unsecured portfolio (~12% of loan book) with a growth of over ~40% CAGR for FY06-08, post which the pace of growth has steadily declined. The bank follows an aggressive policy of creating higher loan loss provisions to maintain net NPA ratio at 0.5-0.7% of advances. With a largely retail oriented book, we expect higher retail NPA (before write-off) accretion, going forward, and gross NPA to rise further to 4-5% by FY09-10E.

- **ICICI Bank**

  ICICI Bank is India's second largest bank with retail credit exposure at ~55% of its loan book and is focused primarily on the housing segment. It remains one of the dominant players in every segment that it operates in. Residential housing dominates its retail portfolio with a share of 28% of the loan book (~50% of retail credit). Non-collateralised portfolio is ~9% of its portfolio and the balance 16% is in the vehicle portfolio. The bank has been growing its loan book aggressively over FY04-06, but the pace of growth slowed down to more conservative levels in FY07, and it stopped growing in H1FY08.

  ICICI Bank has higher NPAs compared with the industry, at ~4%. Of this, 70% comes from the retail book (non-collateralised portfolio forms ~57% of its net retail NPA). Going forward, we expect NPAs to continue mainly in the non-collateralised loan book. Given the sharp slowdown in the retail book (partly due to slowdown in disbursements in housing and other retail products), NPAs on a percentage basis are likely to be higher. Also, the bank does not follow aggressive write-off policy because of which its portfolio shows disproportionately higher NPAs. We expect retail NPA (before write-off) to be at ~7-9% by FY09-10E.

- **Axis Bank**

Axis Bank has relatively lower proportion of retail credit, compared with its private peers like ICICI Bank and HDFC Bank, at ~24% of its loan book. It has grown its retail portfolio at ~45% CAGR in the past two and a half years. Of its entire loan book, ~13% comes from residential housing with more focus on large ticket size (60% of mortgage loans has ticket size of more than INR 1.5 mn). It has been steadily declining its exposure to vehicle loans from 8% of loan book in FY06 to ~3% in FY08, and has withdrawn from the two wheeler market. Asset quality is stable with gross NPAs less than 1% in FY09. We expect retail NPA (before write-off) to increase gradually to 3-4% by FY09-10E.

- **State Bank of India**

Despite being the largest bank, SBI is still growing ahead of the industry with its loan assets growing at ~25% CAGR in the past three years. It has one of the most diversified portfolios with retail contributing about ~20% to its loan book. It is the third largest player in residential housing and commercial real estate segments. Its balance retail book is split between personal loans and auto loans. We expect retail NPA (before-write-off) to increase gradually to ~3-4% by FY09-10E.

Table 33: Retail NPA estimates of major banks

	FY08E			FY09E			FY10E		
	Loan Book (INR bn)	Gross NPA (INR bn)	Gross NPA (%)	Loan Book (INR bn)	Gross NPA (INR bn)	Gross NPA (%)	Loan Book (INR bn)	Gross NPA (INR bn)	Gross NPA (%)
ICICI Bank									
Cars	183	6	3.2	153	7	4.9	173	10	6.0
CV	194	8	4.2	167	16	9.7	205	23	11.0
Housing	667	15	2.2	615	19	3.1	591	26	4.4
Personal loans, 2W and credit cards	247	25	10.3	247	49	19.6	348	59	16.8
Other retail	26	1	3.0	0	0	0.0	0	0	0.0
Total	**1,317**	**55**	**4.2**	**1,183**	**92**	**7.7**	**1,317**	**117**	**8.9**
State Bank of India									
Auto	87	2	2.8	102	3	3.2	119	5	4.3
Housing	447	15	3.4	573	19	3.2	666	28	4.2
Personal loans	318	9	2.8	395	13	3.4	466	22	4.6
Other retail - business banking									
Total	**851**	**26**	**3.1**	**1,070**	**35**	**3.3**	**1,250**	**55**	**4.4**
Axis Bank									
Cars	9	0	2.0	19	1	3.0	24	1	3.5
CV	14	0	0.1	5	(0)	(0.0)	0	0	0.0
Housing	77	1	0.8	98	1	1.0	123	2	1.4
Personal loans and credit cards	27	2	6.2	29	3	9.9	34	4	11.8
Other retail - business banking	8	0	1.0	9	0	1.3	12	0	1.5
Total	**136**	**3**	**1.9**	**160**	**4**	**2.8**	**193**	**7**	**3.5**
HDFC Bank									
Cars	96	1	1.4	166	4	2.2	209	8	3.8
CV	59	1	1.5	103	3	3.4	119	8	6.4
Personal loans and credit cards	97	5	4.8	117	12	10.3	148	19	12.5
Other retail - business banking	140	1	0.5	192	2	1.1	256	6	2.4
Total	**393**	**7**	**1.9**	**579**	**21**	**3.7**	**731**	**40**	**5.5**

Source: Edelweiss research

Note: Assumptions have been based on historical experience of pools adjusted for banks underwriting.

ICICI Bank does not have an aggressive write-off policy like Axis Bank and HDFC Bank. NPAs not been confirmed by the management.

Digging deeper into individual asset class within retail credit

In the subsequent sections, we have discussed in detail individual asset class namely mortgage, auto and personal loans, the snapshot of which is highlighted below:

Table 34: Snapshot assessing risk of retail credit

Category	Drivers of safety	Drivers of default	Impact	Outlook
Mortgage	1. LTV cushion comfortable 2. Low borrower risk profile 3. SARFAESI is strong tool for recovering the asset quickly 4. Falling interest rates to cushion repayment capability	1. Unemployment and slower GDP growth 2. Housing prices can lead to negative equity	Impact of interest rates can offset slower income growth. LTV cushion is fairly comfortable at portfolio level	Structurally safer. We expect net slippages to be 0.4-1% by FY10
CV	1. Income earning asset for most borrowers 2. Falling fuel prices can provide cushion, albeit marginally	1. Slower industrial GDP growth (lower utilisation) 2. Higher LTV leading to longer break even 3. Weak new vehicle markets can affect the used vechicle market 4. One time expenditure, accidents leading to mismatch of cashflows	1. Will be a relatively weak portfolio due to macro environment 2. Borrowers will not enjoy falling interest rates as it is mostly fixed interest rates	With weak outlook on overall economy, we expect net slippages to increase to ~4-5% by FY10E
Cars	1. Dealer working capital financing is a low risk segment 2. Household cash flows are fairly comfortable	1. Rapid expansion in new geographical areas 2. Dealer/DSA model leading to lending to new customers with no prior customer experience	1. Dealer financing is a low risk exposure in the vehicle financing space. 2. Borrower profile provides cushion on lower slippages	Portfolio to be relatively safer than CV with net slippages in the range of 3.0% by FY10
Personal loans, two wheeler and credit cards	1. Banks have exited small ticket low duration loans where end use visibility is limited 2. Large ticket loans are for business purposes	1. High operating expenses to maintain low ticket portfolio and impact of unfair recovery practises 2. Unemployment and slower GDP growth may impact repayment	1. Most banks have an unseasoned portfolio leading to higher delinquency 2. Higher unemployment would impact repayment	Small ticket portfolio is running off from most banks portfolio while large ticket and credit cards will continue to witness higher slippages at ~8-12%

Source: Edelweiss research

I. Mortgage finance: Structurally safe

Residential mortgages losing pace of growth

Residential mortgages (which form ~50% of retail credit) are witnessing a soft landing after aggressive growth in the past few years. The banks' loan book grew at ~41% CAGR in the past nine years and 24% CAGR from FY05-08, before slowing down to 11% in FY08 (compared with overall credit growth of 22%). Sharp rise in interest rates since H2FY07, falling affordability with increase in property rises and weak real estate sentiments in anticipation of correction in property prices and decline in lending rates have been some of the primary causes for the deceleration in residential lending.

Chart 73: Penetration of mortgage finance

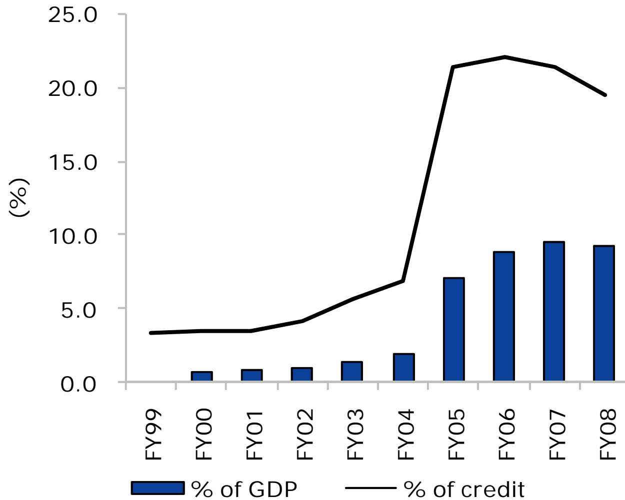
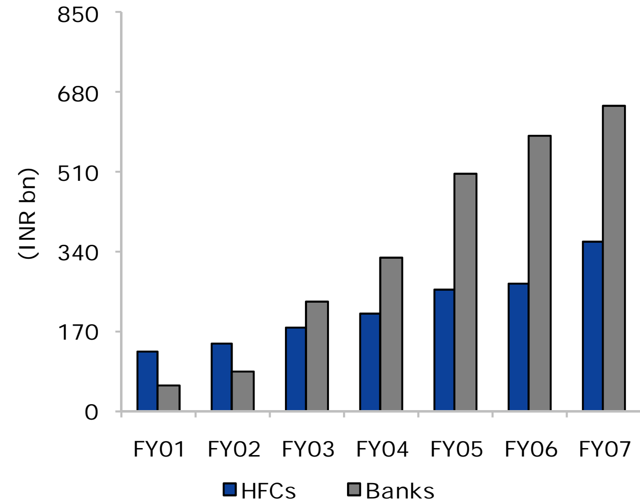


Chart 74: Growth in mortgage disbursements



Source: RBI, Edelweiss research

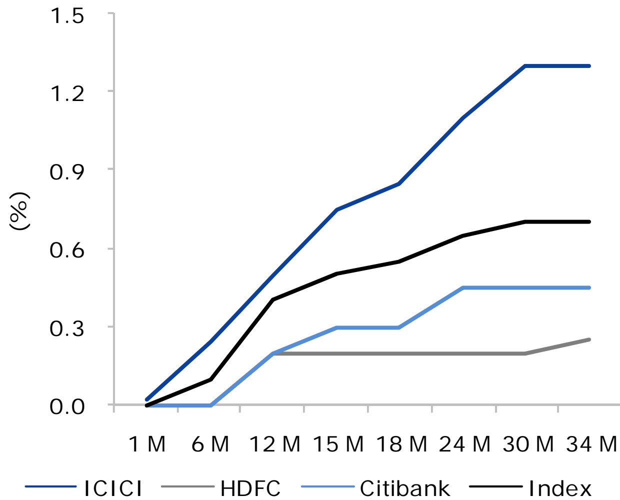
Securitisation pools suggest rise in delinquency

- CRISIL estimates that gross NPA on housing loans has increased 40bps from 1.8% in FY05 to 2.2% in FY07, and expects it to further increase to 2.7% by FY09. However, it expects loss given default (LGD) to be much lower at 0.5-1.5%.
- ICRA's February 2008 report, 'MBS pool rated by ICRA', indicates housing loan delinquency for 180+ dpd to be at a more conservative level of **within ~100bps**.
- Fitch analysis of Residential Mortgage Bond Securitities (RMBS) shows a trend of rising delinquency rates as witnessed in other retail segments.

Our observations

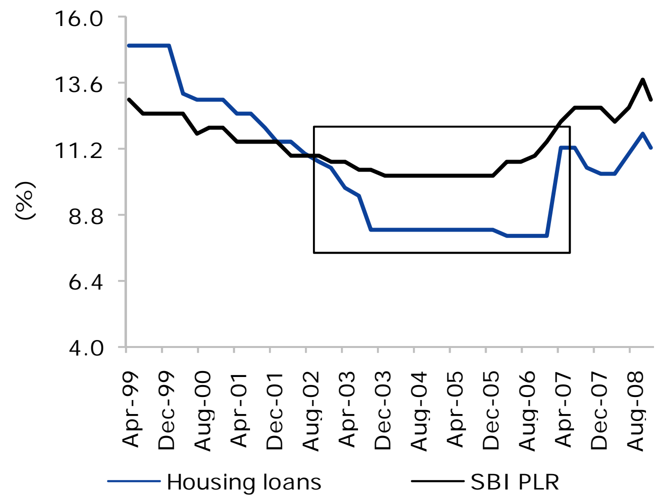
- As per our study, delinquency on housing loans generally peaks between 24 and 30 months post orgination and gradually falls post this period (in a stable property price environment).
- Delinquency level varies between banks - gross NPA in a few securitised loan portfolios is at >3.5% (on 90+ dpd), which is higher than industry average. PSU banks' delinquencies on mortgages is likely to be higher than the industry average >3% levels.
- High degree of competition, coupled with an urge to leverage on falling interest rates, steady rise in property prices, and strong growth in personal wealth saw banks easing their lending standards. LTV of 70-75%, at which mortgage loans were disbursed in FY02-05, steadily increased to above 80% by FY07-08. Further, banks have allowed longer duration loans, moving steadily from 15 years to over 20 years (select banks have 30 years loans too).

Chart 75: Delinquencies peak at ~24-30 months for 180+ dpd



Source: Fitch analysis, Indian RMBS Performance Bulletin, 2006

Chart 76: HDFC's lending rate and SBI's PLR



Source: HDFC Interest rates, Bloomberg

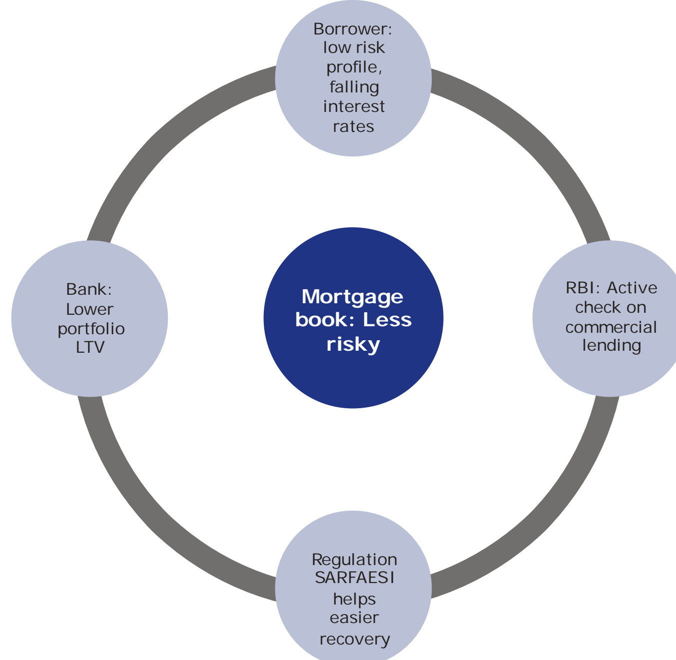
Note: Near approximation has been made on the performance, may not match with the real performance

Mitigants: High savings, lower portfolio LTV, and active central bank

We believe that mortgage book may not be severely impaired in case of a sharp downturn in the economy, supported by the following structural mitigants:

- Household savings continue to be on the higher side
- LTV is still comfortable at portfolio level (as indicated by CRISIL)
- Speed of recovery has improved through legal channels (SARFAESI)
- RBI has been an active watchdog ensuring that excessive credit does not create a real estate bubble as experienced in other economies in the past. Also, falling interest rates can ease borrowers' cash flows further.

Fig. 5: Structural risk mitigants easing NPL risk on mortgages



Source: Edelweiss research

- **Borrower level**

Household coverage ratios continue to be fairly high at ~3x

Household coverage ratios at the sector level are still comfortable at ~3x levels, despite a steady decline from 7.0x levels in FY01. As of FY08, gross financial savings and household debt have come off from the high of FY07. We believe debt serviceability, measured from liquid assets (removing long term products like insurance, provident and pension funds), is still favourable at 2.7x. While the table below gives only consolidated data (masking the leveraged cash flows of borrowers to savers with limited liability), it indicates that a large scale default (currently witnessed in developed countries and discussed in international experience) can be averted with 'savers' taking possession at attractive prices.

Table 35: Comfortable coverage ratio despite a declining trend (%)

	FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08
Currency	208	156	282	286	427	370	520	655	803
Deposits	857	1,018	1,207	1,319	1,457	1,614	2,806	4,227	4,066
Shares and debentures	246	88	45	59	40	88	337	500	774
Claims on government	290	390	519	561	874	1,064	872	392	(270)
Insurance funds	286	338	473	430	520	681	861	1,059	1,289
Provident and pension funds	539	479	466	480	515	562	626	656	602
Gross financial savings	**2,427**	**2,470**	**2,992**	**3,136**	**3,832**	**4,380**	**6,021**	**7,489**	**7,264**
Bank advances	266	233	394	493	535	1,073	1,705	2,677	1,997
Others	95	84	123	110	165	125	108	132	90
Financial liabilities	**361**	**318**	**517**	**603**	**700**	**1,198**	**1,813**	**2,809**	**2,087**
Net financial savings	2,066	2,152	2,475	2,533	3,133	3,183	4,208	4,680	5,177
Savings in physical assets	**872**	**811**	**769**	**948**	**1,207**	**2,064**	**2,683**	**3,222**	
Total savings	**3,299**	**3,281**	**3,761**	**4,083**	**5,040**	**6,444**	**8,704**	**10,711**	
Household savings/financial liabilities	9.15	10.32	7.27	6.77	7.20	5.38	4.80	3.81	
Net financial savings/financial liabilities	5.73	6.77	4.78	4.20	4.48	2.66	2.32	1.67	2.48
% of GDP									
Gross financial savings	*12.4*	*11.7*	*13.1*	*12.8*	*13.9*	*13.9*	*16.8*	*18.1*	*15.4*
Gross financial liabilities	*1.8*	*1.5*	*2.3*	*2.5*	*2.5*	*3.8*	*5.1*	*6.8*	*4.4*
Net financial savings	*10.6*	*10.2*	*10.9*	*10.3*	*11.4*	*10.1*	*11.8*	*11.3*	*11.0*
Physical assets	*4.5*	*3.9*	*3.4*	*3.9*	*4.4*	*6.6*	*7.5*	*7.8*	*-*
Total savings	***15.1***	***14.1***	***14.2***	***14.2***	***15.8***	***16.7***	***19.2***	***19.1***	***11.0***

Source: RBI, Edelweiss research

Income levels of borrowers comfortable: The average age of borrowers has declined over the past few years, which aids lenders in preventing default in two ways. One, banks can increase the tenor of the loan in case of sharp spike in rates without changing the EMI. Two, salaries have increased over the past three years which improves IIR.

Low risk borrower profile: CRISIL estimates that ~67% of housing loans are disbursed to salaried employees, who typically borrow to buy self occupied property. Significantly, houses in metros and other major cities are being bought by people with two or more earning members. Hence, defaults, if any, will be the last to occur when compared with other payment obligations. However, a subdued economy may not improve household income while increased risk of unemployment may create higher probability of default.

- **Bank specific**

  LTV comfortable at 52%, but recently originated book can face stress

  Most banks have built their mortgage books in the past three-four years, with a few banks building over 50% of their mortgage book in the past two years. CRISIL estimates that LTV is comfortable at ~50-52% and IIR at ~32%, indicating a lower risk of default and even further loss given default. FY05-08 saw sustained growth in property prices cushioning LTV, while a strong growth in personal incomes eased IIR, offsetting pressures from rising intererst rates.

  However, disbursements in past 12-18 months may witness higher net credit costs due to sharp correction in property prices. Given that the increase in property prices has been disproportionate across time and geographies, we have created a few simplistic assumptions (refer annexure table 15) to understand the loss impact on a bank's portfolio, adjusting for increase in income, interest rates, and underwriting standards. On the assumptions mentioned in the table below, asset prices will need to fall at least ~66% for FY05, ~50-55% for FY06, ~40% for FY07, and ~25% for FY08, to have higher LGDs.

- **Regulatory level**

  RBI has been active since FY04 to ensure that credit does not move excessively towards the mortgage finance creating an housing bubble.

  1. In May 2004, with rapid credit growth in mortgage lending, RBI increased risk weights from 50% to 75%. It later modified this to 50% for lending below INR 2 mn and further relaxed this in May 2008 to lending above INR 3 mn.
  2. In July 2005, the central bank raised risk weightage for lending to commercial real estate to 125% and further to 150% in May 2006. It relaxed this to 100% in November 2008.
  3. In May 2007, it increased standard asset provisions for mortgages beyond INR 2 mn and commercial real estate from 0.4% to 1%. In November 2008, this was relaxed to 0.4% of incremental loans.
  4. In January 2007, it doubled standard asset provisions further for commercial real estate to 2% of outstanding loans. In November 2008 this was relaxed to 0.4% of incremental loans.

  Strong regulatory measures available: The SARFAESI Act enables banks to foreclose and sell underlying property without court intervention, thus reducing the time for recovery.

- **Economic level**

  Falling interest rates to cushion payments

  Despite strong growth in salaries, we do not believe the average borrower has enjoyed a substanial benefit in terms of lower IIR mainly due to sharp rise in interest costs. Since April 2005, interest rates have increased 350bps, which has led to ~25% growth in EMIs, while instalment/income has declined only marginally by 10%. However, the impact was more visible in FY08, when IIR increased, while the lower asset value could have resulted in an increase in LTV.

  Most banks have offered customers an option to increase their loan tenor to ~25 years to ease burden on their income as the current interest rates hardly service the underlying principal.

Table 36: Impact analysis on mortgage borrower as of October 2008 (%)

	Increase in interest	EMI growth	Salary growth	IIR/Salary change	Current LTV change	House value growth	Principal o/s
April-04	3.50	23.7	82.2	(13.1)	(36.6)	87.1	90.1
April-05	3.50	24.8	65.6	(10.1)	(27.9)	54.2	92.8
April-06	3.75	28.2	38.0	(2.9)	(15.1)	20.6	95.4
April-07	0.50	3.0	15.0	(4.2)	1.3	(4.0)	97.7
April-08	1.50	10.3	-	3.9	8.2	(10.2)	99.3

Source: HDFC interest rates, external reports on property prices, Edelweiss research

Drivers of residential mortgage default

As mortgage payments top the priority of an average family, it would take a sharp economic decline to create debt serviceability issues.

Macro drivers

- Unemployment and slower GDP growth resulting in loss of income; repayment capacity could come under stress.
- Sharp spikes in interest rates could disturb household budgets. Our simplfied analysis shows EMI increasing ~25% for borrowers in FY05 on the back of 350bps increase in interest rates. However, despite the high uncertainity building in personal incomes as we move into FY10, falling interest rates can improve repayment capacity for a borrower since 100-150bps decline in rates can improve net household savings ~8-10% (which can offset expected decline in household income).
- Correction in housing prices will reduce 'houseowner's equity', thereby increasing the tendency to default. However, given the aversion of Indian households to credit and emotial attachment to property, we believe, this risk is low. We could see default tendency on assets bought from an investment perspective.

Micro drivers

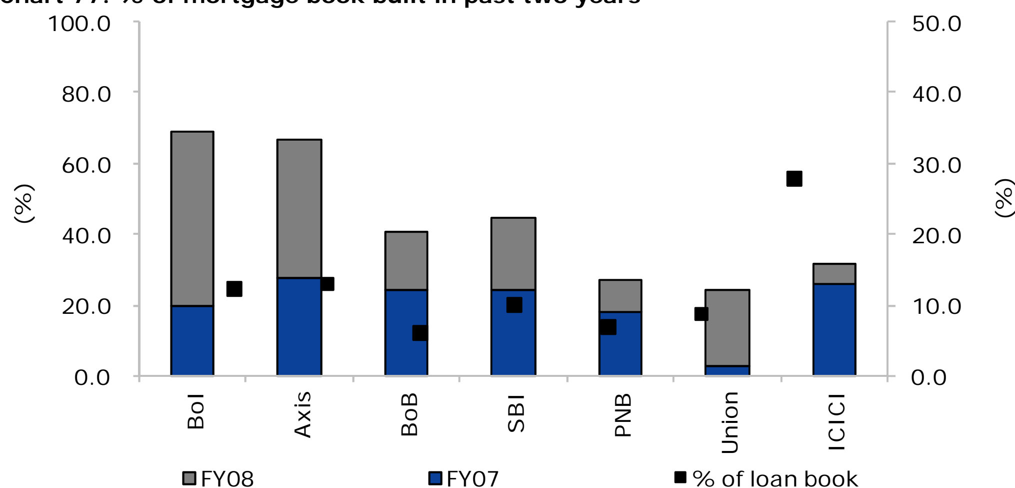
- Ineffective documentation due to lower disclosure of a customer's other liabilities.
- The project completion risks are also high on loans given for under-construction property, considering the ongoing delay in project completion.
- Origination of loans at the DSA level where the customer's history is unavailable.
- Lack of understanding of the borrower's ability to raise his primary equity for the property, leading to delay in the house being finally built and problems in repayment. We understand from a few players that customers resort to personal loans, relatives and friends to fund their portion of investment.
- Customers facing unplanned obligations, leading to mismatch in personal cash flows.

Outlook: Structurally safe; falling interest rates to help

Mortgages have historically been considered a safe haven for lenders due to their low default rate. We have already discussed in the section 'risk mitigants' a few structural mitigants that provide comfort on asset quality risk for mortgage finance and minimises the probablilty of defaults. However, we remain wary of asset quality risk emerging from mortgage book built in the past two years. This is because amidst high property prices and high interest rate background, borrowers would have witnessed sharp increase in their EMIs. While the anticipated correction in property prices would reduce their equity to the negative zone, decline in houselod income would adversely impact IIR. Morevoer, the project completion risks are also high on loans given for under-construction property, considering the ongoing delay in project completion. Again most of this cases would have got disbursed in last two years.

The biggest comfort in the current environemnt comes from declining interest rates, where every ~100bps can improve debt serviceability by ~6-8%. We forecast gross NPA to be in the 1.5-4% range for FY10E for banks under our coverage.

Chart 77: % of mortgage book built in past two years



Source: Company, Edelweiss research

Table 37: Mortgage book as of FY08

	ICICI	SBI	Bank of India	PNB	Axis	Bank of Baroda	Union	Federal	Allahabad	IOB
Direct exposure (INR bn)										
Residential mortgages	631	421	140	83	78	64	65	33	32	30
Commercial real estate	137	120	52	60	59	40	24	6	22	37
Total	**768**	**541**	**191**	**143**	**137**	**105**	**89**	**39**	**54**	**67**
% of total advances										
Residential	28	10	12	7	13	6	9	17	6	5
Commercial	6	3	5	5	10	4	3	3	4	6
Housing as a % of total advances	**34**	**13**	**17**	**12**	**23**	**10**	**12**	**21**	**11**	**11**
Relative market share (%)										
Residential mortgages	22.9	15.3	5.1	3.0	2.8	2.3	2.4	1.2	1.2	1.1
Commercial real estate	12.1	10.5	4.6	5.3	5.2	3.6	2.1	0.6	1.9	3.2
Total	19.8	13.9	4.9	3.7	3.5	2.7	2.3	1.0	1.4	1.7
Above INR 20 mn lending	50	21	67	27	64	9	34	22	7	17

Source: Company, Edelweiss research

Note: Covers 34 banks and 2 NBFCs (~80% of the housing credit), Union Bank, Axis, Federal, and IOB report lending up to INR 1.5 mn.

International experience in mortgages

1. **United States**

The US had two instances in the past decade of high delinquencies—in FY00-02 during the technology bubble and the current, which began last year. In the residential portfolio, the peak delinquency in FY00-02 was about 240bps with an average charge off of 45bps/quarter. Peak delinquency in the current crisis is at ~4%, while the charge off is at ~100bps/quarter. Following the rise in delinquency in FY01, banks improved their underwriting standards reducing the LTV ratio to more comfortable levels of ~75% (minimum LTV reached 72% in FY04). Also, in FY01, the Affordability Index (measured by income levels to be eligible for a mortgage) was higher, coupled with decline in property prices (reflected in Shillers Price Index), which aided increase demand for housing in secondary market and incurrance of relatively lower net credit losses given default.

The study of both the crisis reflected the following similar macro concerns, resulting in higher delinquency—

- Rise in mortgage rates (postive correlation of 55% with three quarter lag)
- Rising unemployement (correlation of 58%).

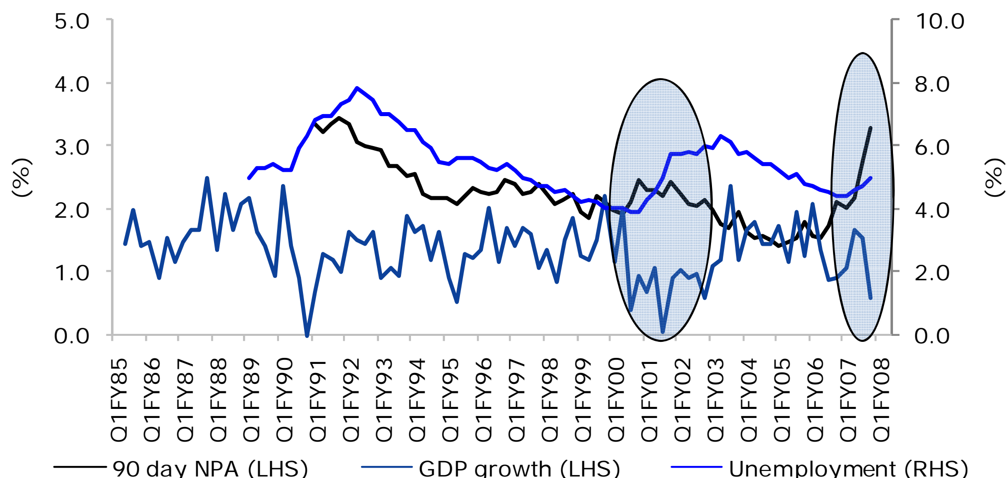
However, Affordability index (lag) and Shillers Price Index (lead) share a negative correlation of 56% and 82%, as it helped in creating a secondary housing market and lowering net credit losses.

Table 38: Correlation to various factors

Correlation series to delinquency	FY91-07
Unemployment	58
Mortgage interest rates (3 quarter lag)	55
Affordability Index (2 quarter lag)	(56)
Shillers Price Index (4 quarter lead)	(82)

Source: Bloomberg, Federal reserve, Edelweiss research

Chart 78: Residential real estate performance to macro factors



Source: Federal reserve, Bloomberg

Chart 79: LTV and 90 dpd delinquency in FY01 and FY07

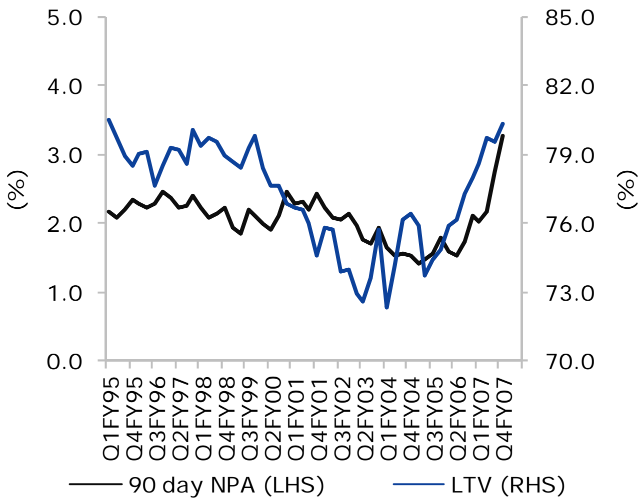
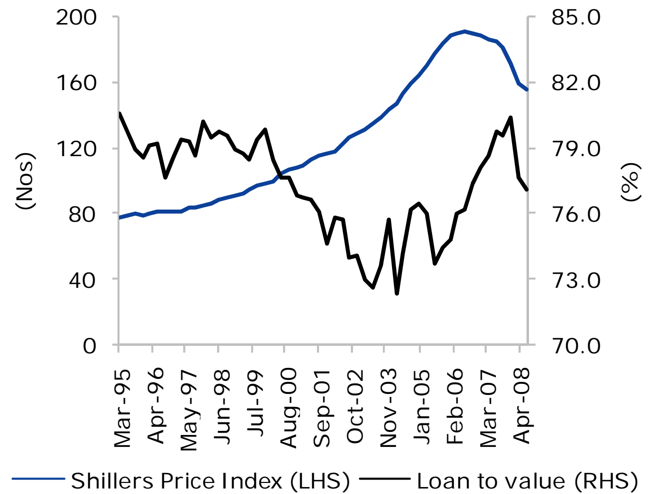


Chart 80: LTV and Shiller's Price Index



Source: Federal reserve, Bloomberg

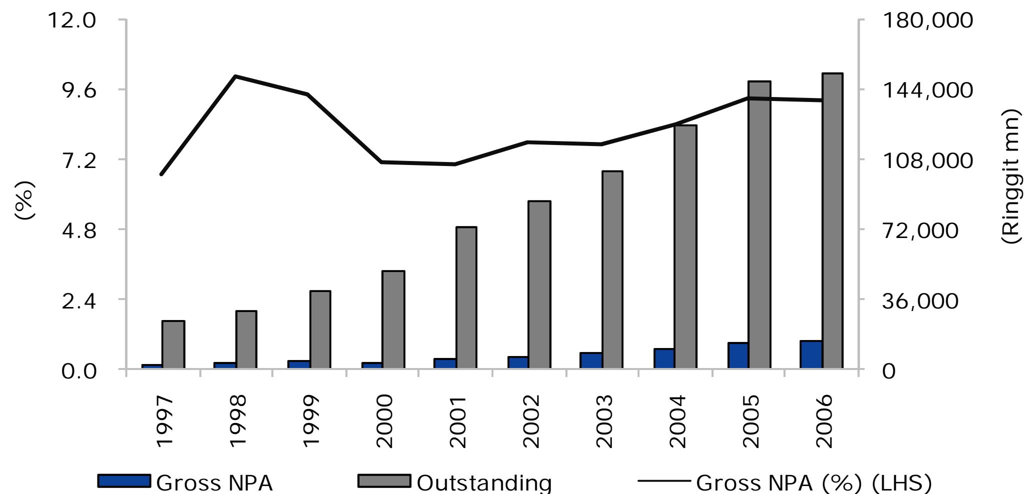
2. Malaysia

Malaysia's experience in mortgage delinquency is different from that of the US. Historically, Malaysia has had to deal with higher delinquencies and in FY07 too, its delinquency ratio was much higher at 9% (compared to the current high of ~4% for the US). The high delinqeuncy rates in Malaysia were primarily because of:

- Legacy assets of the Asian crisis still in the books of banks
- Very slow foreclosure process (~1-4 years) for possession of property
- Compulsory lending to low income group where recovery is expensive for the amount that is lent

However, we do see similarities between the two countries. After the Asian crisis, Malaysia went through a painful process of adjusting itself with rising unemployment in a weak macro environment.

Chart 81: Residential real estate delinquency



Source: Central Bank of Malaysia, Edelweiss research

II. Auto loans: Slippages to rise; old portfolio to show more pain

Private banks and NBFCs more aggressive in auto loans

CRISIL estimates auto loan (used and new) comprising cars, CVs, and two wheelers to contribute one-third of total retail loans. We believe private banks and NBFCs are much more aggressive than PSU banks in financing auto purchases. IndusInd Bank has ~50% of its loan book in auto advances, while Kotak Mahindra Bank is at ~35%, HDFC Bank at ~25%, and ICICI Bank at ~16%. Few NBFCs specialise in auto financing namely Sundaram Finance and Shriram Transport Finance; while DBS Cholamandalam, Mahindra Finance and Magma Srachi also carry significant chunk of loan book in auto advances.

Drivers of higher slippages

From our analysis of auto loan portfolio and interactions with most banks/financial institutions indicate, we believe slippages are high due to the following factors:

- Unlike housing, the risk in auto loans is that vehicles are depreciating assets and the value of the asset deteriorates as soon as it changes hands. Consequently, higher LTV and duration increase risk for lenders. Increased competition in the past few years resulted in easing of underwriting standards with LTV reaching more than 85-95% in commercial vehicles; while increased loan tenure results in higher risk for the lender.
- Rapid geographical expansion and origination structure through DSA/dealer leads to customer additions who do not necessarily have credit history with the banks.
- Some players introduced new collection mechanisms such as post dated checks, which have not been successful; while clamp down by RBI on strong arm recovery practices has aggravated the recovery process.

Outlook: Slippages to rise; old portfolio to show more pain

We expect slippages to rise across all auto portfolios such as cars (2.5-3%), commercial vehicles (CV) (4-5%), and two wheelers (~8%). We believe most banks will continue to make higher provisions for the next few quarters, but dip in demand for underlying assets in the last year has resulted in banks strengthening their underwriting standards.

In the sections below, we have discussed each segment of auto financing in detail

- **CV financing** - Banks that have built their CV portfolios in the past three years could have near negative spreads arising from fixed lending in a rising interest rate environment and building higher provisions for slippages from their relaxed underwriting standards.
- **Car financing** - portfolio would be relatively stable on margins and less slippage compared to CVs.
- **Two wheeler financing** - Most players are moving out of the two wheeler portfolio as slippages are the highest here and regard lending to this portfolio similar to unsecured lending.

Chart 82: LTV in securitisation pool

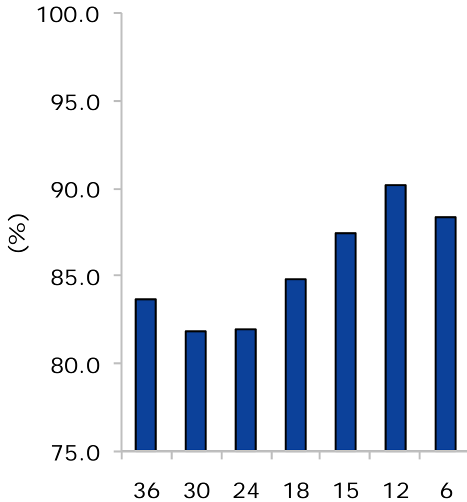


Chart 83: CV delinquency

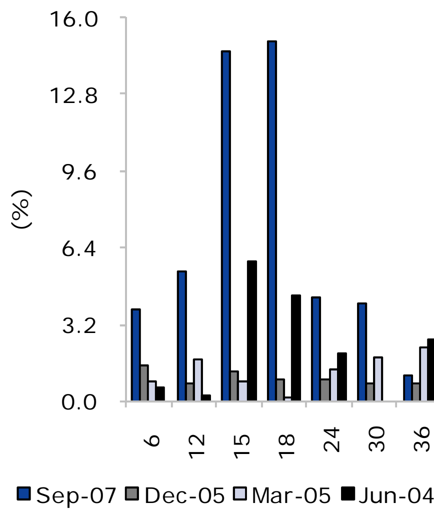
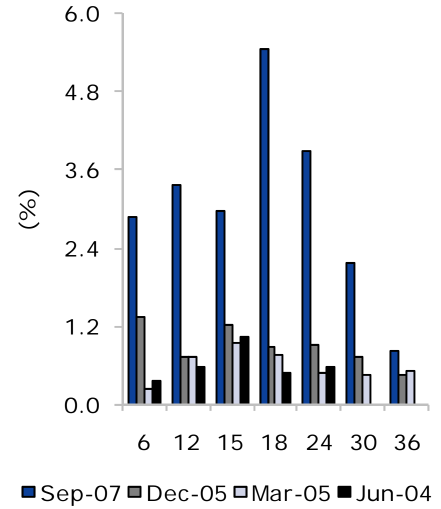


Chart 84: Car delinquency



Source: ICRA, CRISIL, Fitch ratings

Weak industrial outlook poses risk on CV portfolio

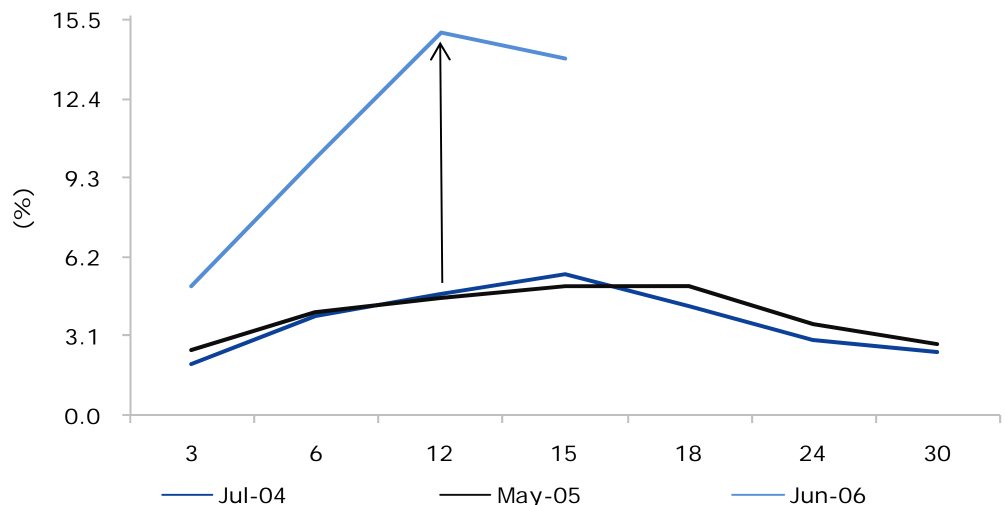
a) Commercial vehicles: Weak industrial outlook posing greater risk

The entry of new private sector banks since FY03 like ICICI Bank and HDFC Bank in the CV finance space resulted in other leading players losing their market share. However, in the past one and a half year, ICICI Bank has slowly withdrawn from the market, while HDFC Bank and Kotak Mahindra Bank are still active. Axis Bank is yet to enter into this market and has a minor exposure through securitisation receipts.

Securitisation pools suggest slippages peaking during 18-24 months

Slippages in CV financing tend to peak during 18-24 months post origination, followed by recovery and lower net slippages in the subsequent period. CV portfolio is witnessing the highest strain with incremental slippage in select pools reaching double digits one year post origination.

Chart 85: Slippages in CV portfolio peak in 18-24 months post origination



Source: Fitch Ratings, ICRA

Note: Near approximation has been made on performance

- **Reasons for such behavior**
  - Maintenance cost due to repairs and replacement of tyres picks up after 12 months for a used vehicle and ~20-24 months for a new vehicle.
  - Annual insurance cost which falls due during twelfth and twenty-fourth month and one-time costs (vehicle accidents) leads to delay in payments.

Drivers of default

Delinquencies in the CV portfolio have increased sharply from FY04 to FY07 driven primarily by relaxed underwriting standards and rising interest rates. The slowdown in recovery efforts, following the controversy over recovery methods of some players, has further aggravated the risk of delinquencies. Besides this, we have discussed portfolio specific risks below:

- Freight rates among fleet operators are primarily driven by prevailing fuel costs than the differential interest outgo and vehicle cost. Hence, the fleet operator who has purchased vehicle in relatively higher interest rate environment and at higher cost (in the past two years) witnesses adequate pressure for repayment (as EMI ranges between 10-20% of revenues depending on tenor of the loan).
- The relatively low IIP numbers in FY09 reflects weak industrial activity and gives an approximate indication of the adverse impact on vehicle traffic and subsequent stress on the vehicle owner.
- In a market where demand for underlying asset itself is declining (weak new vehicle sales), attractive discounts are being offered to induce buyers to shift their decision making from a used to a new vehicle. This weakens the used vehicle market and increases net credit costs. Further, vehicles involved in an accident and lost documents lead to lower resale value.
- Underwriting standards have been relaxed in the past with LTV as high as ~95% in a few cases, indicating that the breakeven for such disbursements has increased for the lender. In a simplified chart attached below, we see that the breakeven is well above one year for a steadily depreciating product with higher LTV (of ~95). Also, with banks offering longer duration products, breakeven period extends further. However, most players tend to balance out breakeven period by offering lower duration loans where the LTV is higher than 80-85%.
- Most of the old players have large feet on street where there is a regular interaction with borrowers to ensure repayment (compared with new players).

However, in case of CV financing, a primary mitigant is that the asset is the primary source of livelihood for the borrower.

Chart 86: Risk in first 15 months at 95% LTV

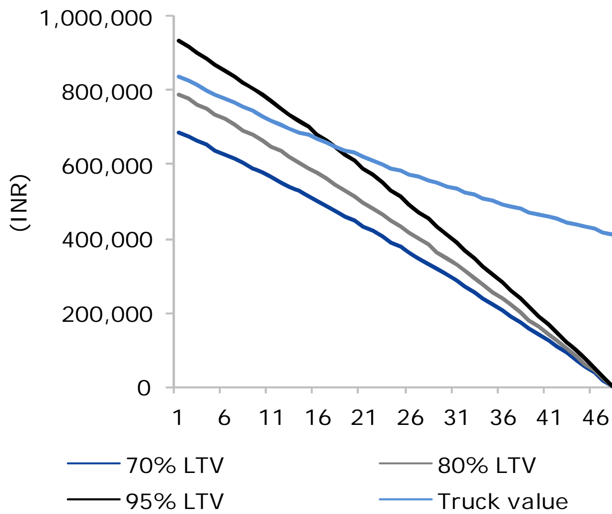
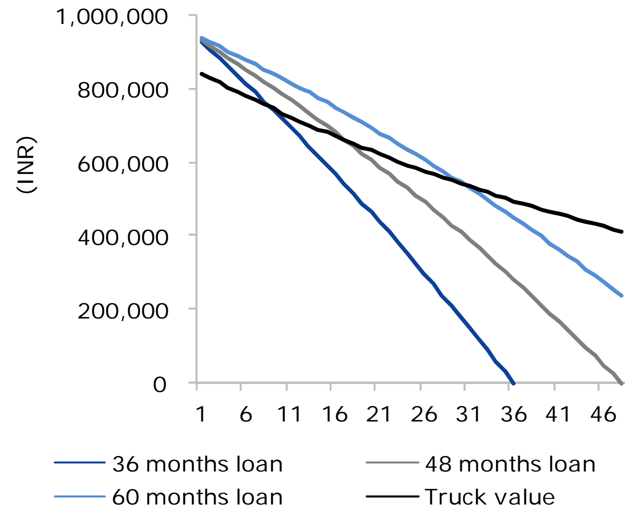


Chart 87: Higher duration increases break even period



Source: Edelweiss research

From a borrowers viewpoint: When does the stress occur

We have analysed the cost structure of a borrower of a CV to estimate the impact of the loan performance. We believe EMI and freight rates are two primary cost components impacting cash flows of a borrower.

Table 39: Cash flows for a CV driver; Q1FY08 conditions increase default risk (INR)

	Q1FY07	Q1FY08
Load carrying capacity (tonnes)	9	9
Overloading (%)	15.0	10.0
Effective load (tonnes)	10.4	9.9
Price	915,000	946,062
Chassis	765,000	796,062
Body	150,000	150,000
Tax	76,500	79,606
Loan (%)	85.0	85.0
Debt funding	777,750	804,153
Interest rate (%)	12.0	12.0
Loan tenure (years)	5	5
EMI	17,301	17,888
Distance travelled (per month)	9,200	8,640
Costs		
Fuel cost	76,627	83,913
Wages	13,000	13,000
Tyres	12,973	11,654
Maintenance and repair	763	788
Insurance	2,669	2,759
Taxes	2,500	2,500
Others and admin	1,250	1,250
EMI	17,301	17,888
Total (cash costs)	**127,082**	**133,752**
Revenues	138,550	132,097
Freight rate (INR/tkm)	1.46	1.54
Cash profit	**11,469**	**(1,655)**

Source: Edelweiss research

In the analysis below, we have looked at a few scenarios with changing working hours and days of operation. The sensitivity of cash coverage for a truck owner adjusting for all costs, changes in working hours/day and the number of days the vehicle is in operation, is detailed below:

Table 40: Sensitivity of number of days worked and hours employed on cash coverage for EMI

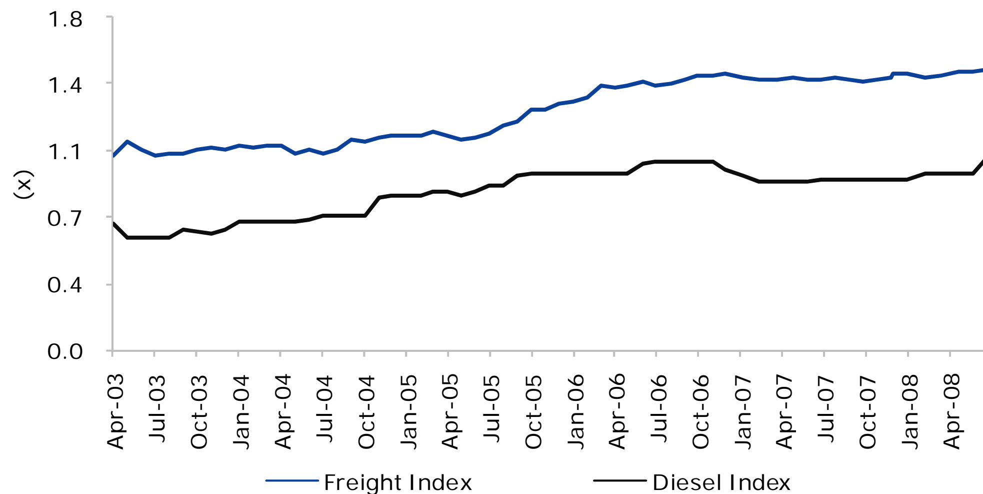
		No. of days				
	1	22	23	24	25	26
Hours	7	0.7	0.7	0.8	0.9	1.0
	8	0.9	1.0	1.1	1.2	1.3
	9	1.2	1.3	1.4	1.5	1.6
	10	1.4	1.5	1.6	1.8	1.9
	11	1.7	1.8	1.9	2.1	2.2

Source: Edelweiss research

Note: Cash coverage: (Total revenues-total expenses (ex- EMI))/EMI. A number less than 1 indicates probable default

The correlation between freight rates and fuel cost (depicted in terms of diesel index created by CRISIL) indicates ~87% positive correlation which reaffirms our assumption that freight rates are driven more by fuel cost than any other cost.

Chart 88: Movement of diesel index and freight index



Source: CRISIL, Edelweiss research

In our view, sharp rise in interest rates in FY09 (compared to FY07-08) and slowdown in industrial activity (indicated by the lower IIP numbers) will increase slippages in this portfolio for all banks (especially for banks that have lent last year). Further, a weak new vehicle market (leading to higher discounts) can depress prices for used vehicles, leading to higher net credit costs. As the portfolio is largely lent under fixed interest rate structure, disbursements of the past few years would be generating marginal-to-negative profits. However, in declining interest rate environment, margins are supposedly not expected be adversely impacted but increased provisions can result in lower RoE.

Outlook: NPAs manageable due to effective pricing

With easy liquidity in the past few years, most financial companies with lower funding costs were aggressive in building a CV portfolio, gaining market share, and enjoying higher yields. However, with a change in tide most players are now going slowly on disbursements, raising lending rates and improving collection mechanisms. Also, laxity of credit norms by players to aggressively build up the book in the past will lead to higher NPAs.

A rapidly slowing primary market for CVs in a slowing economy is leading to a possible oversupply of used vehicles, leading to lower vehicle prices and, hence, raising default rates, net credit costs, and higher provisions. We are estimating slippages of ~4-5% in CV financing for most banks.

Though the numbers will show a rising trend, reasons why we believe this portfolio will be manageable are: (1) dominant players in this segment are old hands at vehicle financing and are, therefore, adept at handling the portfolio through various business cycles; and (2) yields adequately compensate for delinquencies and operating cost, hence the product over a stable period is profitable for lenders.

b) Car financing:

Car portfolio is relatively secure considering the customer profile

Car financing portfolio of banks fall under three broad categories - auto dealer financing, end use new car and used car financing. Most banks like Kotak Mahindra Bank, ICICI Bank, and HDFC Bank are active in the first two segments, while ICICI Bank and a few foreign banks are present in the used vehicle market.

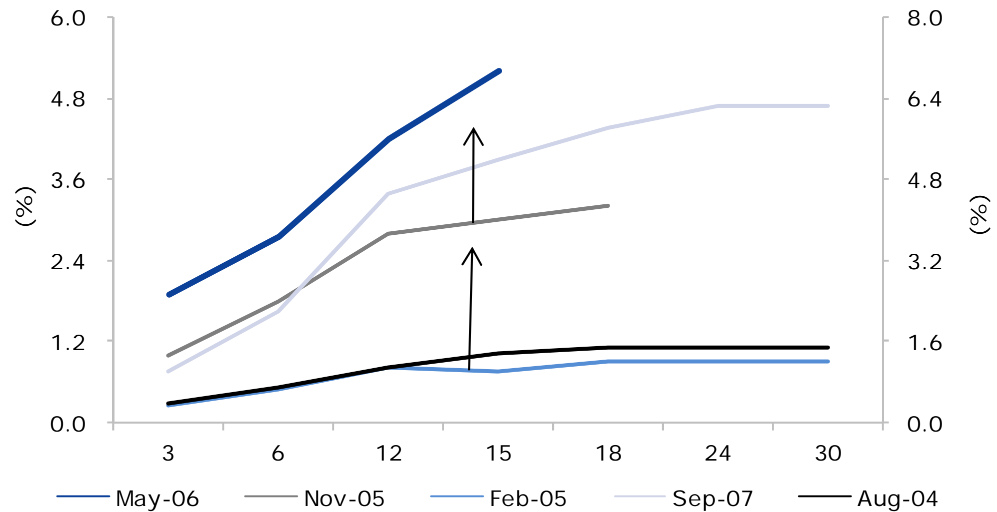
Auto dealer financing: Relatively safe and secured

Auto dealer financing exposure is in the range of ~20-40% for HDFC Bank, ICICI Bank, and Kotak Mahindra Bank. Most of these players lend money to finance dealers' working capital requirements, to maintain an inventory of cars at any given point in time. Further, banks secure this portfolio with additional collateral (besides a charge on inventory) to minimise the risk of loss. We believe this portfolio is most secured amongst the entire auto portfolio and probability of default is relatively low in this segment.

End use retail financing: Customer profile, documentation provide comfort

Unlike CV financing, where the risk of default is high, given the stress on loan serviceability in a high interest rate and weak environment scenario, borrowers for car purchase are relatively safe, given the customer profile with higher disposable incomes and more documentation available to assess the credit default propensity. In line with other portfolios, the car portfolio too is witnessing higher slippages on new loans disbursed. The securitisation pool shows delinquency in the ~4-5% range in a few pools, an increase of over 250bps in the past three years.

Chart 89: Car delinquency in specific portfolio



Source: ICRA, Fitch ratings, Edelweiss research

Outlook: Manageable delinquency

We are estimating delinquency of ~3% in car financing for most banks. Though numbers will show a rising trend, we believe this portfolio will be manageable as: (1) cash flows of retail households will continue to be comfortable; and (2) yields adequately compensate for delinquencies and operating cost.

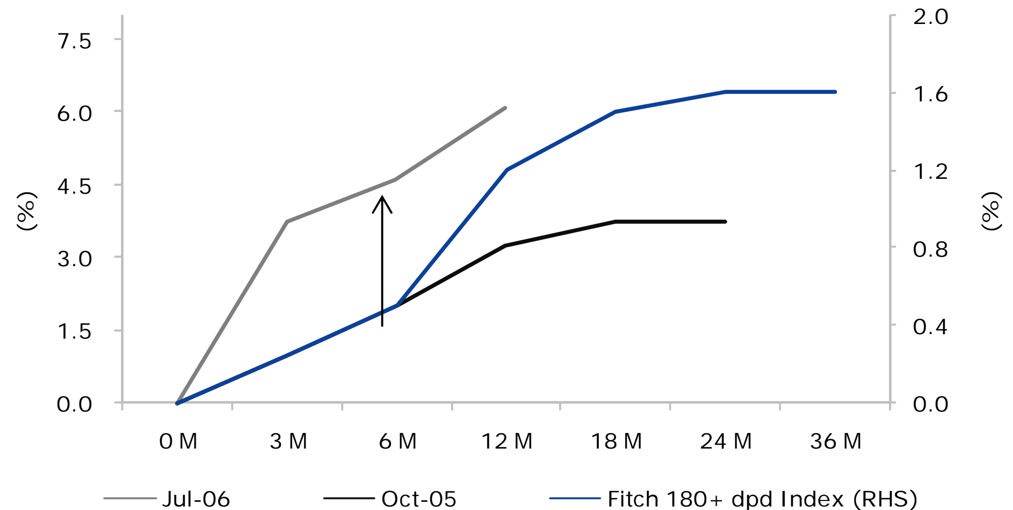
c) Two wheelers: Concern area, but overall exposure is low

Two wheeler loans form less than 2% of the total loan book of even the most prominent retail players like ICICI Bank and HDFC Bank. Disbursements in this portfolio are also gradually declining with banks focusing more on originating loans from their own branches than following the earlier DSA model. Channel checks suggest that players like GE and Citi Finance have also withdrawn from the market, while HDFC Bank has lowered its LTV and made credit norms more stringent. Also, auto players prefer financing arrangement for their 2-wheeler products through their own NBFC subsidiary than through banks.

Securitisation pools suggest delinquency peaking in 10 and 16 months

We have analysed performance of 13 securitized pools (of ~INR 5.5 bn) from Fitch report "2-wheeler ABS performance", dated July, 2007, and four pools of INR 12 bn from ICRA's September 2007 report "ABS performance as of December-07". The peak delinquency of these pools was achieved in the 10-16 months since securitisation, (which implies loans originated 13-18 months back). During peak delinquency period, one of the pools from 2007 report showed a delinquency of about 6.3% (rise of more than 200bps in one year) and we believe post that period stress would have increased and current peak delinquency should be well above these limits. One pool from showed a delinquency of 8.5%, 19 months since securitisation.

Chart 90: Peak two-wheeler delinquency for securitised pools



Source: Fitch Ratings, ICRA

In the past one year, NPAs have built up sharply in the two wheeler portfolio. Most banks consider this portfolio as a small ticket unsecured loan. The three primary reasons for build-up in delinquency are:

- **Business model of sub-dealership:** Two-wheeler loans have been issued on the basis of temporary registrations. This puts the bank in a compromising position, since it has no permanent documents regarding the two wheelers, and hence, no collateral.
- **Cumbersome recovery process**: Recovery process is difficult, given the low ticket size of the loan. Also, with strong arm recovery practices coming under the RBI scanner, the higher operating cost is making it unfeasible from a return perspective.
- **Sharp increase in interest rates**: Customers with more than one loan are likely to default on a two wheeler loan first.

Outlook: Weak old portfolio, but incremental loans likely to improve

Our interactions with players indicate that the used two-wheeler market is relatively weak, barring few models, raising net credit costs for delinquent loans. Also, monitoring low ticket size disbursements is an expensive process, while the recovery cost is much higher.

Non collateralised loans will continue to remain weak, despite steady run-off of high risk short term personal loans

III. Personal and credit card portfolio: The pressure point

Signs of strain are clearly visible

Over the past two years, large retail banks went up the risk curve and ventured aggressievly into uncollateralised high yielding personal loan segment. The personal loan sector in India can be divided into two groups, viz., small ticket personal loans (STPLs)—typically smaller than INR 50,000 (highly deliquent portfolios) and large ticket loans of up to INR 1.5 mn. Further, to leverage on increased investments in the credit card business, banks were forced to build a high risk credit card portfolio.

With metros getting saturated in terms of business, banks in quest for growth, explored tier II and III cities where the income profile of borrowers is low and proportion of self employed population is higher. We believe default risk is higher in this category of borrowers.

Kotak Mahindra Bank and HDFC Bank have 12-13% of the overall loan book in unsecured portfolio, while for ICICI Bank it is in high single digit and Axis Bank is at 6%.

Table 41: Unsecured loan portfolio of some large banks (INR bn)

	Q2FY07	Q2FY08	Q2FY09
HDFC Bank	58	81	121
ICICI Bank	132	202	204
Kotak Mahindra Bank	14	25	31
Axis Bank		15	44
% of loan book			
HDFC Bank	14	13	12
ICICI Bank	8	10	9
Kotak Mahindra Bank	12	14	13
Axis Bank		3	6

Source: Company, Edelweiss research

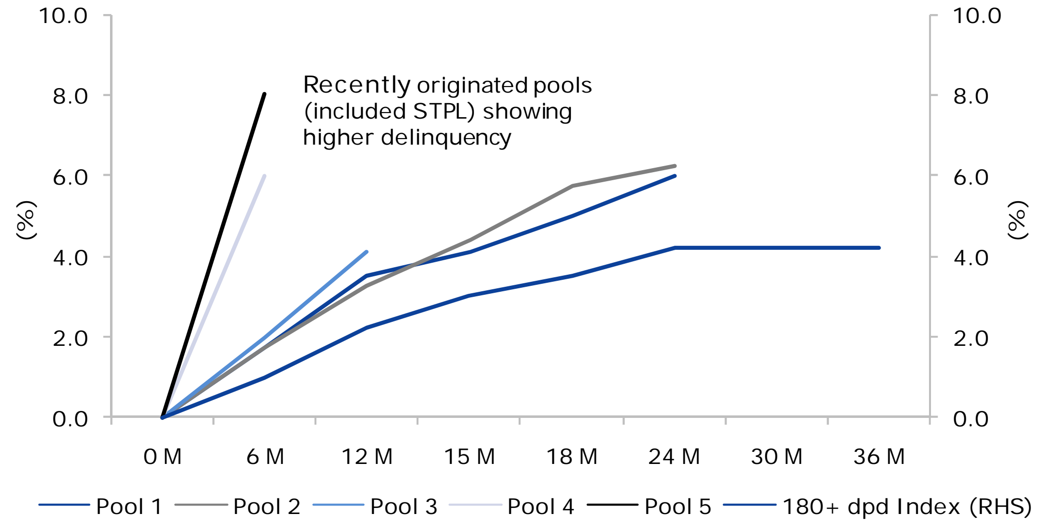
We believe that slippages and underlying risk of default will be higher in credit card portfolio than in the personal loan segment. Discussions with various banks indicate that unlike a personal loan where banks have taken PDCs, credit cards have no form of security.

We believe unsecured loans, which were roughly ~17% in FY08 (up from 6% in FY04) of the retail portfolio, will be the biggest sore point, especially considering the changed macro environment. According to Fitch ratings, delinquencies in Indian personal loans have been increasing further over the past 6-10 months.

Securitisation pools suggest slippages peak during 18-24 months

The Fitch 180+ dpd Index shows that slippages for personal loans peak at 24 months, with peak NPLs at about 4.2% (which would be higher, going forward). Some of the recently originated pools showing higher delinquency (90+ dpd) mainly due to impact of higher interest rates and inclusion of short-term personal loans (STPL). We expect slippages to rise to ~8-12% in FY10E.

Chart 91: Analysis of personal loan pools (Fitch rated) and Fitch 180+ dpd Index

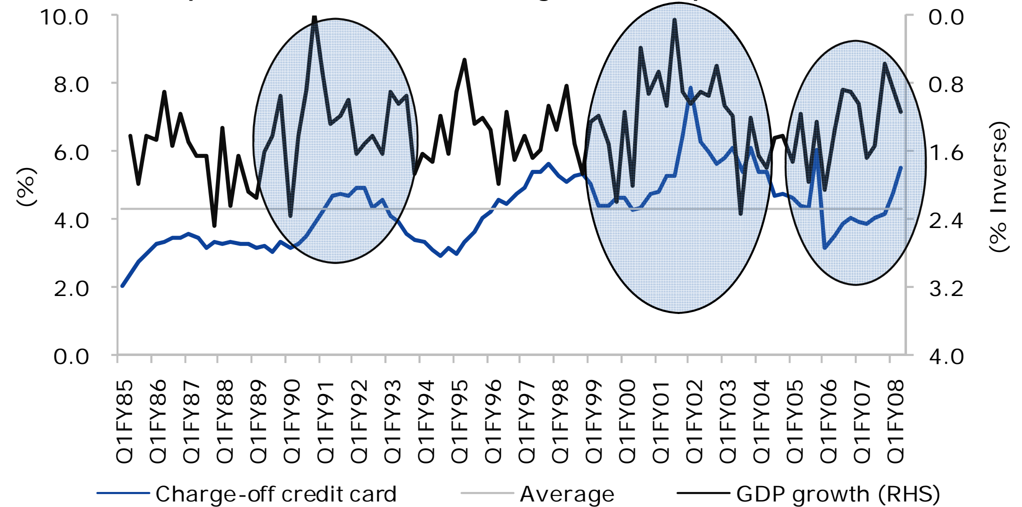


Source: ICRA, Fitch, Edelweiss research

International experience: US and Malaysia

The US experience in credit cards shows that there is a lag of two-three quarters in increase of NPA post a sharp decline in GDP. This is evident in the performance given in the chart below for 1992, 2002, and 2007 where the peak charge offs were in ~5-7.5% levels. However, the rise has been mainly because of a sharp decline in GDP growth.

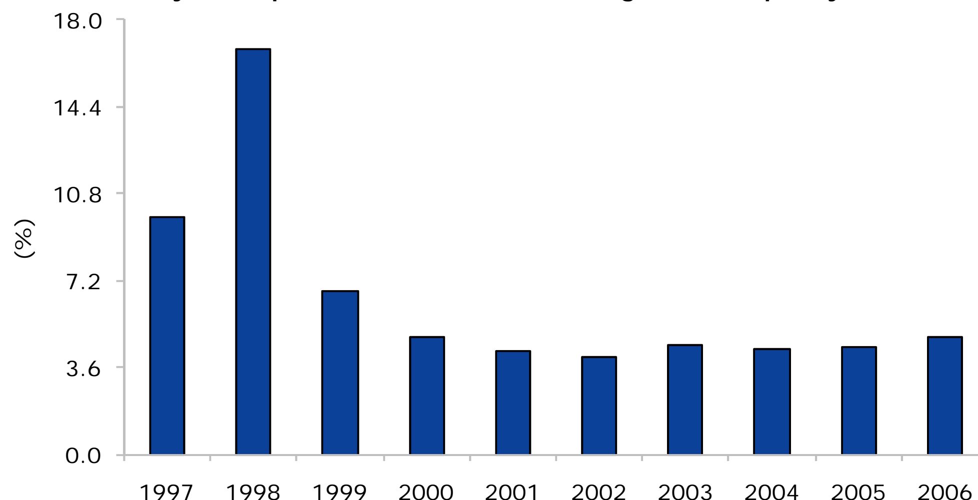
Chart 92: US experience on credit cards charge off in comparison to GDP



Source: Federal Reserve, Edelweiss research

The experience in Malaysia does not have a complete cycle, but it includes the Asian crisis where delinquency was sharp and rose well above 10%.

Chart 93: Malaysian experience on credit cards charge off delinquency



Source: Central Bank of Malaysia, Edelweiss research

Drawing parallels from Asian experiences

In the past six years, there have been three episodes of retail credit crisis (particularly credit cards) in Asia where intense competition, lower liquidity, and low rates led to excesses in the system which eventually culminated in increased delinquencies. Notable amongst these episodes were Hong Kong 2002, Korea 2003, and Taiwan 2006 where credit cards faced stress.

Background

Post the 1997 Asian crisis, with weak corporate demand and lose monetary policy, banks pursued the consumer business to grow their balance sheets, especially in high yield products like credit cards. Credit card debt grew at a rapid pace within a short period of time. Hong Kong's card balances increased from 3% of GDP in 1998 to 5% in 2001. Korea's outstanding credit card debt grew most rapidly, from 4% in 1999 to a peak of 15% by 2002. Taiwan was in between, with balances growing from 5% in 2002 to 9% in 2005 (Source: Credit card distress in Asia, BIS Quarterly Review, June 2007). According to BIS, the following factors were common in all the three crisis:

- **Relaxation of credit standards**: Ample liquidity led to banks pursuing the retail business, particularly credit card business, led to relaxed underwriting standards. Banks not only financed their own credit cards, but also invested in debt papers of other credit card issuers, thus increasing systemic leverage.
- **Entry of new and inexperienced players**: This period coincided with liberalisation of the financial sector, leading to new and less experienced lenders operating and competing in same markets. Also, lenders pursued the direct marketing channel rather than the branch distribution model which also led to dilution of credit standards. Lenders distributed credit cards through the "credit card brokers" channel that originated cards for a commission and, therefore, were less concerned about credit quality.
- **Undeveloped credit information bureau**: Credit reporting systems were underdeveloped in Hong Kong and Korea during development of the crisis, which further led to paucity of credit quality in these economies.
- **Unseasoned portfolio led to higher returns initially**: Due to low defaults initially, the credit card portfolio attracted higher incremental lending, thereby fueling competition and leading lenders to target lower end of the credit spectrum.
- All these factors led to excessive indebtedness of households, tightening of lending standards, and contraction of credit, affecting the demand side of the economy.

Table 42: Comparison with other Asian countries

	Per Capita 1	% of total loan	% of household loans	% of GDP
Korea	675	5.5	11.0	4.2
Korea (2002)	2,006	21.3	45.1	14.7
Taiwan, China2	1,369	6.7	14.9	8.8
Hong Kong SAR	1,181	3.3	8.2	4.6
Malaysia	168	3.0	6.1	3.4
Singapore	379	1.5	2.9	1.4
Thailand	59	2.5	14.0	2.0
Japan3	527	1.8	6.6	1.6
Memo: United States 4	2,854	10.5	37.0	6.8

Sources: Central banks, CEIC, Fitch Ratings, BIS

Note: 1 In 2005 US dollars 2 Includes cash card balances 3 both total and household loans are those from domestically licensed banks and Shinkin banks only. Credit card balances include cash card balances. 4 Household loans do not include mortgages.

Priority Sector Lending: Agriculture Stable, SSI At Risk

Priority sector lending (PSL), which is ~33% of total portfolio, was a highly delinquent portfolio for all banks till FY01. It has improved remarkably in the past six years. Despite 25% CAGR in credit growth to the sector in FY01-08, gross NPAs fell sharply from 17% in FY01 to 4% in FY08. On an absolute level, this has remained flat at ~INR 250-270 bn till FY07 but increased to INR 291 bn mainly after the implementation of the loan waiver scheme. Our discussions with banks indicate that the decline in gross NPA was assisted by a change in the agricultural loan portfolio focusing more on indirect finance, improvement in the SSI portfolio and strong credit growth in the lesser delinquent housing segment (less than INR 2 mn qualifies for PSL).

Agriculture loan portfolio showed sharp jump in NPA in March 2008, post the implementation of the loan waiver when gross NPA rose 35bps to 3.6%. SSI book has shown continuous improvement with 42% decline in NPA from FY01-08, to 4.2%.

Outlook: Portfolio to remain weak with higher delinquencies across segments

- The announcement of loan waiver is a clear dampener for the agriculture portfolio of PSU banks. SBI and PNB have witnessed higher delinquencies of over 100bps Y-o-Y, while some banks have not witnessed sharp deterioration.
- We believe delinquencies will rise in the SSI sector, but may not reach alarming levels of FY01. Our analysis of the SME portfolio of companies with turnover of less than INR 2 bn indicates that this segment sees a rapid deterioration in financials in an economic downturn.
- Delinquency in securitisation pools for some portfolios, which are classified as PSL like commercial vehicles and commercial equipment, are showing strains of higher delinquency in the 3-5% range.
- Private banks building a portfolio and relying more on bond-based exposure through NABARD and RIDF will witness delinquency, but will be restricted mainly by their housing loan portfolio, SME segment and indirect finance.

Chart 94: Composition of gross NPA

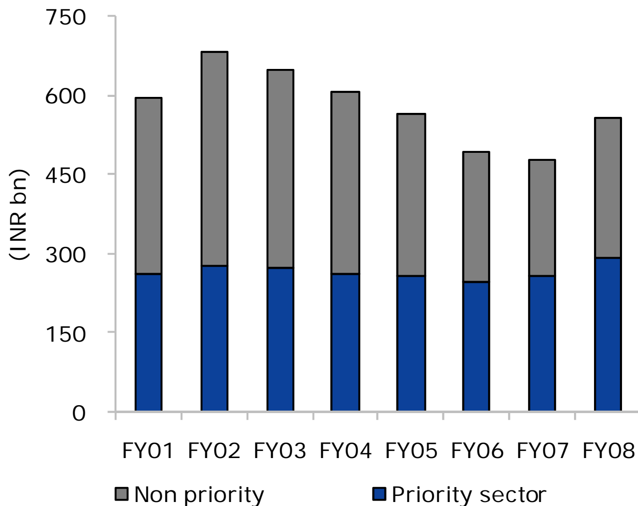
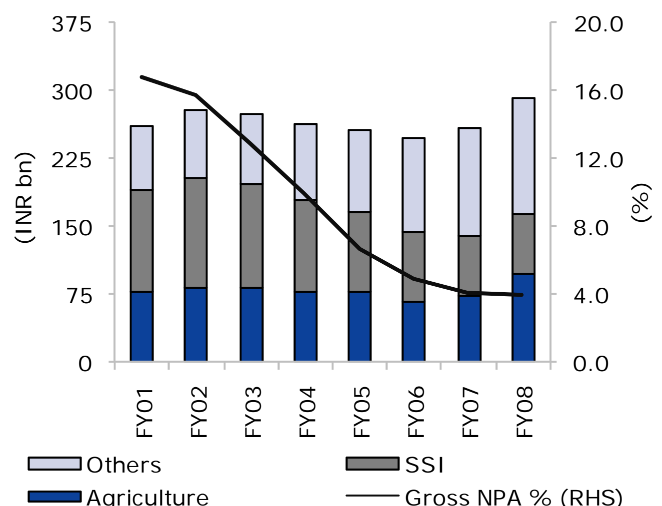


Chart 95: Composition of priority sector gross NPA



Source: RBI, Company, Edelweiss research

I. Agriculture: Structural improvement

Sector's asset quality has improved sharply post 2001

The agricultural output, at 9% CAGR has lagged 21% CAGR in credit growth to the sector for FY96-08. Despite consistent low output being a good lead indicator of weakness in the portfolio, the actual behavior shows the opposite. Gross NPA for the sector has declined from 15% in FY01 to 3.6% in FY08. On absolute basis, gross NPA, which was at INR 77 bn in FY03, declined marginally to INR 74 bn in FY07, but increased to INR 97 bn in FY08 post the announcement of the loan waiver scheme. At the individual bank level, SBI had the sharpest improvement with a 16% point decline in gross NPA from FY02-07 to 5.65% (but the impact of the loan waiver was visible with gross NPA rising sharply to 6.8% in FY08) while that of private banks is increasing steadily, albeit on a lower base. However, the impact of the loan waiver has receded as most banks have reported improvement in their gross NPA numbers in the agriculture loan portfolio in FY09.

Our discussions with banks indicate the following key reasons for a better portfolio:

- Banks have actively tied farmers with procurement agencies, thereby, improving repayment capacities. Unlike other lending products, end use of funds is restricted to the livelihood of the farmer; hence, defaults are restricted to crop failures.
- Aggressive write off of delinquent portfolios with strong growth in overall income.
- The government has been active in supporting farmers through many means to ensure lower delinquency such as agricultural loan waiver and lending at a flat interest rate of 7% for short-term loans, with interest subsidy of 2% from the government.
- Banks facing limited competition in select geographies are lending near the PLR. They have technical field staff to monitor end use of funds and ensure timely repayment.

Table 43: Relief measures offered by government in past few years helped improve asset quality

Date	Statement	Purpose
May-06	Interest subvention scheme of 2%	Flat interest rate of 7% for all short term credit from May 2006 to farmers up to INR 3 lakhs for Kharif and Rabi crops. Scheme is still in existence, ensuring lower credit losses
Mar-06	Credit interest relief to farmers' accounts before March 31, 2006	Crop loans for Kharif & Rabi disbursed to farmers during the financial year 2005-06 will be eligible for the interest relief of two percentage points. However, where each crop loan exceeds INR 1 lakh, the interest relief will be applicable on the principal amount up to INR 1 lakh only
May-06	Interest subvention scheme of 4% to poultry industries for term loans and working capital loans as on March 31, 06	Counter the losses in the poultry industry caused by bird flu
Jul-06	Package of relief measures to the Vidarbha region in Maharashtra	Entire interest on overdue loans as on July-06 was waived in six districts and an additional credit flow of INR 12.75 bn was ensured in these six districts
Jul-07	Relief measures by banks in areas affected by natural calamities	The bank assistance in relation to agriculture would be needed in the form of short-term loans for raising crops
May-08	Agricultural Debt Waiver and Debt Relief Scheme, 2008	The scheme will cover direct agricultural loans extended to 'marginal and small farmers' and 'other farmers' by scheduled commercial banks, regional rural banks

Source: RBI, Edelweiss research

Contribution to overall credit constant; direct finance dips to 70%

Agricultural loan book tracks the overall outstanding loan book. Its proportion has remained constant across years at ~11-12% of the total loan book. The nature of lending has, however, changed in the past, wherein the early 1990s saw over 90% in direct finance. As of FY07, this proportion has reduced to ~70% with the balance in financing equipment, construction, and storage facilities, irrigation facilities, etc. 70% of the total finance is in the form of long term and medium term loans. ~50% of advances is to above 5 acres and the balance is split equally between up to 2.5 acres and 2.5-5 acres. Public sector and regional rural banks have a higher exposure through direct finance, while new private banks are relatively low on direct finance and replace a portion of their commitments by investing in bonds.

Table 44: Nature of credit disbursed

(% of credit)	Direct finance	Indirect finance
Long term	46	32
Medium loans	25	36
Demand draft	17	22
Others	12	11

Source: RBI

Outlook: Limited impact of waiver; delinquency to be lower in private banks

The implementation of the loan waiver scheme was a clear dampener on the overall performance of the agriculture portfolio. Gross NPAs rose in Q4FY08 as the guidelines were not clearly spelt out. In FY08, the impact was maximum on SBI and PNB as their gross NPAs increased ~100bps to 6.6% and 5%, respectively. NPAs of Allahabad Bank and Union Bank of India improved even after the announcement. Bank of Baroda's and PNB's agricultural gross NPA currently stand between ~2% and 3%, post the announcement of the loan waiver.

Table 45: Agricultural loan book performance as of FY08

	Loan book (INR bn)	Gross NPA (INR bn)	Gross NPA (FY08) (%)	Gross NPA (FY07) (%)
State Bank of India	428	29.2	6.8	5.7
Punjab National Bank	199	10.1	5.1	3.5
Allahabad Bank	91	2.8	3.0	4.2
Union Bank of India	117	3.2	2.8	3.1
Syndicate Bank	93	2.6	2.7	2.5
Oriental Bank of Commerce	69	1.7	2.4	2.3

Source: RBI, Company, Edelweiss research

Select banks have distinctly reported their direct and indirect lending

Chart 96: Lending proportion has remained stable

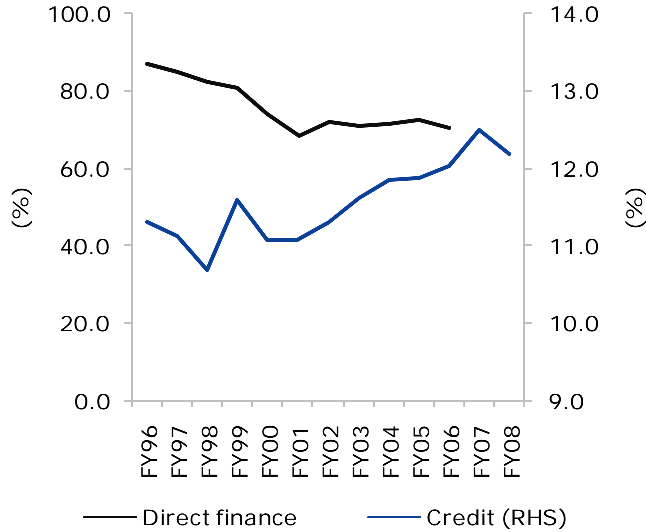
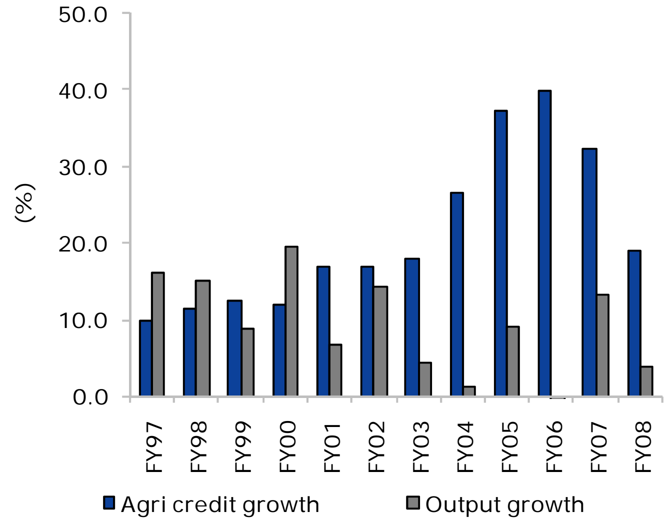


Chart 97: Credit growth ahead of output growth



Source: RBI, Edelweiss research

Chart 98: Gross NPA (%) in agriculture book

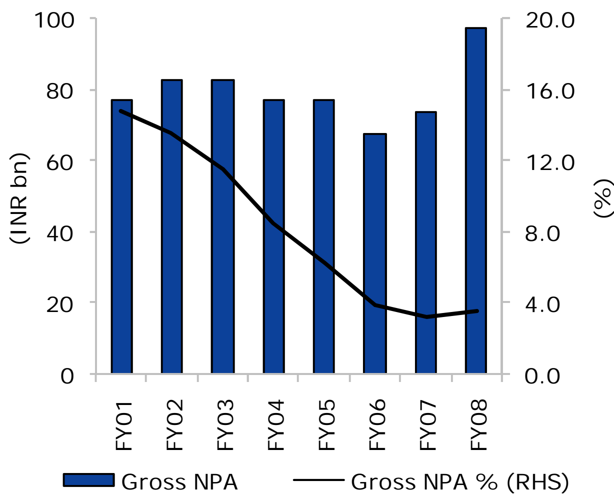
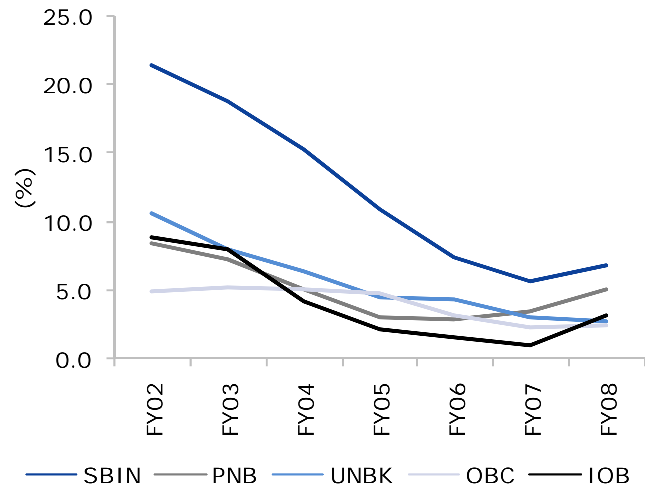
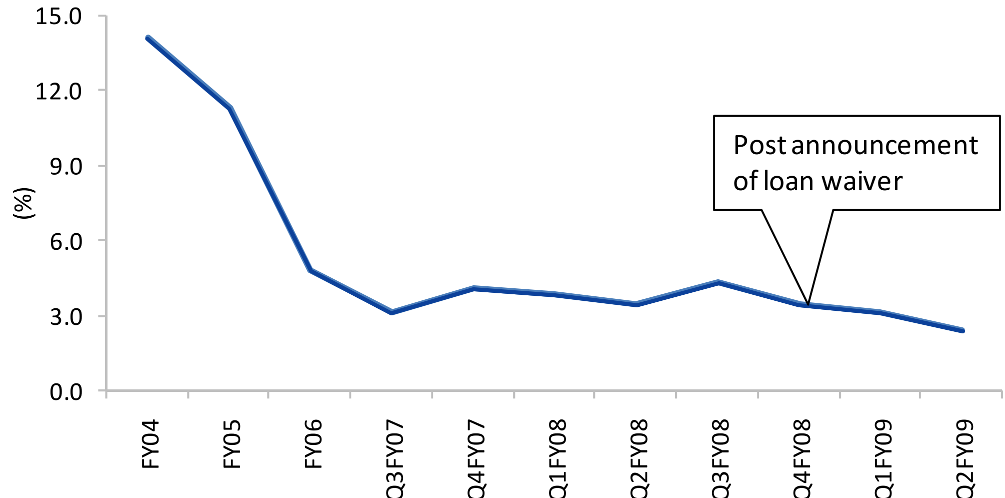


Chart 99: Bank specific Agri NPA is weak for SBI and PNB



Source: Business Beacon

Chart 100: Impact of loan waiver on gross NPA is limited for Bank of Baroda



Source: Company

II. Small Scale Enterprises: sensitive to slowdown

Absolute gross NPA declined for FY01-07 despite strong growth in advances

The performance of this portfolio mirrors agriculture on asset quality. Advances growth to the sector was at 15% CAGR for FY01-07, while gross NPA, which was at 17.4% in FY01, has declined sharply to 4.2% in FY07. However, performance on absolute basis has been remarkable with gross NPA declining 43% in FY01-07. Of this, we believe the one-time settlement issued in FY04 for SME has played a major part in the reduction of NPA where PSU banks recovered INR 6 bn. Allahabad Bank, South Indian Bank, and Syndicate Bank had NPAs in the 25-35% range in FY01 before it was brought down to 3-7% in FY08. PNB has one of the highest gross NPAs at ~7.5% for FY08.

Some primary reasons for improved performance in this portfolio are:

- Sustained improvement in the macro environment leading to better growth in business performance.
- PSU banks provided relief to sick but viable units and implemented OTS in the past.
- Banks have initiated rating systems with SIDBI, small industries services, state government industries, etc., to understand the portfolio.
- Focusing on SME clusters where revenue visibility is dependent on the overall sector.

Chart 101: Gross NPA at sector level

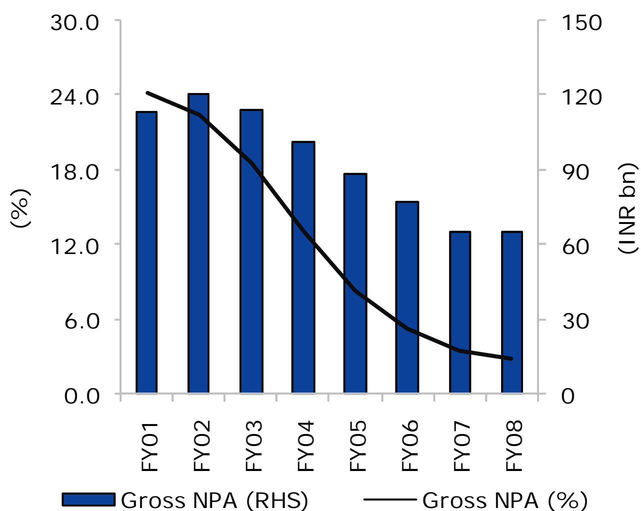
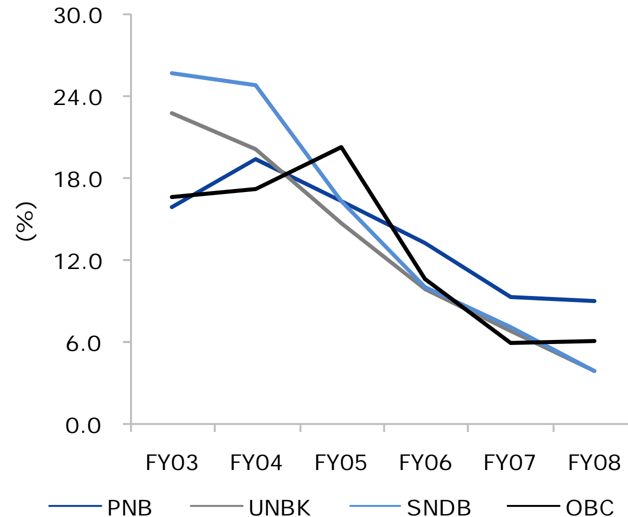


Chart 102: Company-wise gross NPAs show similar trend



Source: RBI, Edelweiss research

Contribution to overall credit book declined to 8% in FY07 from 16% in FY99

The small scale enterprise book is about INR 1,528 bn, representing 8% of the overall loan book of the sector. However, over the past few years, contribution of this book has been steadily declining from 16% in FY99 to 8% in FY07. Banks are a little wary of this portfolio as competition and lower margins can affect profitability. New private banks are yet to build big portfolios in this segment, and hence, the impact on their overall book would be fairly low.

Our discussions with various banks and reports indicate the following:

- **Nature of funding is mainly in working capital**: A recent report from RBI on banking shows ~55% of the total credit in the form of cash credit and packing credit and the balance in term loans. This is a distinct comparison to agriculture where the lending is mainly in the form of medium and long term crop loans.

- Given the short term nature of lending, any adverse impact on margins would directly affect this portfolio. There are no significant off balance sheet exposures to this segment.

Table 46: Nature of credit

	(%)
Cash credit	45.6
Long term	21.8
Packing credit	9.8
Others	22.8

Source: RBI

Outlook: Slowdown to impact asset quality

Our analysis of companies with turnover of less than INR 2 bn indicates that this segment of companies tend to see sharp deterioration in financials with change in the macro environment. Also, over the past decade, contribution to exports from SSI has increased 23-25% to 30%. Given the current slowdown in exports, we believe this portfolio will witness higher delinquency in the next two years. We expect PSUs to be more impacted than new private banks. However, banks have received reasonable support against delinquent portfolio from the government for on-lending in this portfolio.

A scenario analysis with 3% net slippage for FY09 loan book indicates that the impact would not be more than ~15bps on an average for the sector. Impact would be the highest for Union Bank of India (albeit on a lower base) while the least impact would be for Syndicate Bank and IOB.

Table 47: Scenario analysis with 3% slippage for FY09

	Loan book FY08 A (INR bn)	Gross NPA B (INR bn)	SSI NPA C=B/A (%)	Loan book FY09 D (INR bn)	Gross NPA E (INR bn)	SSI NPA F=E/D (%)	Change F-C (%)
Punjab National Bank	1,195	9	0.76	1,470	14	0.93	0.17
Union Bank of India	743	3	0.39	900	6	0.63	0.25
Allahabad Bank	497	1	0.25	587	3	0.43	0.17
Oriental Bank of Commerce	546	3	0.46	671	4	0.61	0.14
Indian Overseas Bank	604	2	0.40	779	4	0.57	0.17
Syndicate Bank	641	2	0.27	769	2	0.32	0.05
State Bank of India	4,168	13	0.30	5,386	30	0.56	0.26

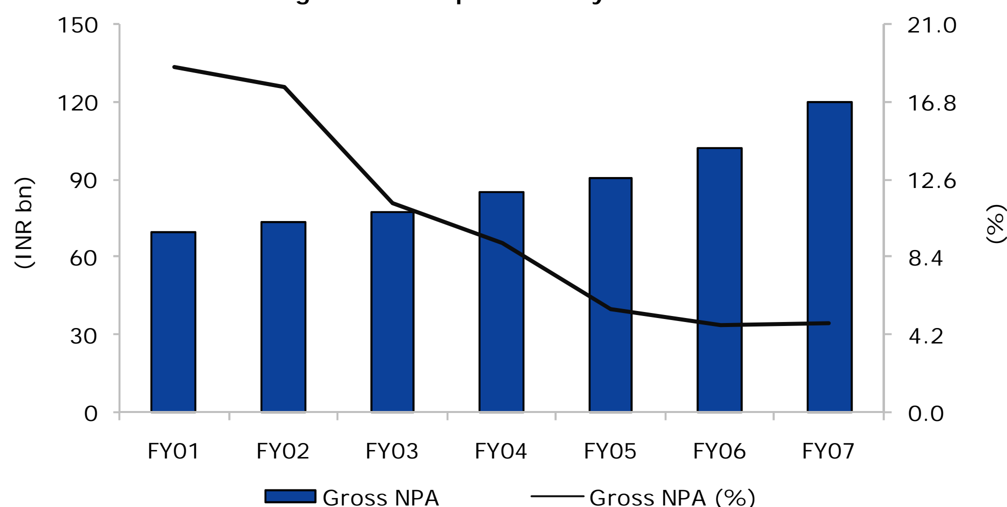
Source: RBI, Company, Edelweiss research

III. Other priority sector lending

Other segments left in the priority sector portfolio largely comprise housing, retail trade, education and lending to weaker sections.

- Housing under priority sector lending contributes ~18-20% to this book. Gross NPA has been steadily increasing in the sector mainly because of relaxed underwriting standards. We estimate the increase in delinquency is mainly because of the gradual shift of most banks towards the housing portfolio where delinquency was fairly low but is now steadily increasing.
- Education, another sector where the gross NPA is fairly low, contributes ~10% for select banks and has grown at over 50% CAGR in FY05-08. However, given the current environment we expect delinquency in this portfolio to rise steadily.

Chart 103: Movement of gross NPA in past seven years



Source: RBI

Table 48: "Others" priority sector gross NPA as of FY08 **(INR bn)**

Banks	"Others" loan book	"Others" gross NPA	Others gross NPA (%)
State Bank of India	865.6	33.9	3.9
Syndicate Bank	171.5	6.3	3.7
Union Bank of India	218.8	6.5	3.0
Punjab National Bank	329.4	8.4	2.5
Allahabad Bank	149.7	3.2	2.1
Oriental Bank of Commerce	144.3	2.7	1.9

Source: RBI, Company, Edelweiss research

Note: SBI's exposure to SSI has been taken at 10% of loan book to derive "other" exposure

AXIS BANK

INR 434

Balanced book

BUY

January 15, 2009

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Bloomberg	:	AXSB IN

Market Data

52-week range (INR)	:	1,291 / 362
Share in issue (mn)	:	358.9
M cap (INR bn/USD mn)	:	155.7 / 3,191.8
Avg. Daily Vol. BSE ('000)	:	3,208.4

Share Holding Pattern (%)

Promoters	:	42.4
MFs, FIs & Banks	:	10.9
FIIs	:	27.5
Others	:	19.2

Relative Performance (%)

	Sensex	Stock	Stock over Sensex
1 month	2.7	7.6	4.9
3 months	(17.0)	(24.5)	(7.6)
12 months	(54.9)	(54.5)	0.4

Corporate loans dominate loan book; steady increase in quality assets

Axis Bank's loan book is focused on corporate loans that form ~65-70% of the overall book, agriculture ~7%, and the balance in retail. Amongst corporates, the mid and SME segment contributes ~20% to the overall book. The flight to quality is visible with the bank steadily reducing its "BBB and below" exposure from ~23% in Q2FY08 to ~16% by Q2FY09. In SME, exposure to the lower rated papers was at 24% in Q2FY08 and increased to 29% by Q4FY08, but dipped to 22% by Q2FY09.

The bank has altered its sectoral exposure sharply. For example, exposure to financial companies was reduced from 15% in Q1FY08 to 7% in Q2FY09 in around five quarters, while real estate exposure was brought down from ~9% to 6% in four quarters.

The retail book is dominated by mortgage and vehicle loans, which constitute 66% of retail, while 26% comprises personal and credit cards as of Q2FY09. The proportion of personal loans is likely to decline in the coming quarters as a significant part of the book was on account of lending margin money for DDA allotment which should come on books in Q3FY09.

NPAs to increase across segments; steep rise unlikely

We expect NPAs to move upwards from 0.8% in FY08 to 1.1% by FY09E and 1.4% by FY10E. Of this, retail NPAs would be at 2.7% for FY09E and 3.6% by FY10E, while corporate NPA will increase to 1.8% by FY10E. In Q1FY09, the bank acknowledged its higher-than-expected delinquency in the credit card portfolio and has been working on improving its underwriting standards. Bulk of its retail loans primarily consist of secured loans, majority of which was created in last two years. Its top 10 corporate exposure is to some key stress sectors—metals (top exposure at 8.9%), textiles (5%), and gems & jewellery (8%).

Outlook and valuations: Concerns overdone; maintain 'BUY'

Despite a fairly high corporate loan book, higher-than-industry growth in balance sheet and recently originated retail book, we believe the bank has one of the better risk management systems that can weather asset quality issues better than most peers. The degree and quality of disclosures that the bank maintains is also comforting in our view, especially in the current volatile times. The stock is trading at 1.3x FY10E adjusted book delivering an average RoE of 18%. We maintain **'BUY'** recommendation

Financials

Year to March	FY08	FY09E	FY10E	FY11E
Revenues (INR mn)	43,808	64,002	80,100	97,269
Rev growth (%)	*70.0*	*46.1*	*25.2*	*21.4*
Net interest income(INR mn)	25,854	36,740	47,087	60,270
Net profit (INR mn)	10,712	17,180	21,330	26,153
Shares outstanding (mn)	360	360	360	360
Diluted EPS (INR)	29.8	47.7	59.3	72.7
EPS growth (%)	*31.2*	*60.4*	*24.2*	*22.6*
Diluted P/E (x)	14.6	9.1	7.3	6.0
Price to adj. book (x)	1.8	1.6	1.3	1.1
Price to PPOP (x)	0.1	0.1	0.2	0.0
ROAE (%)	17.6	18.1	19.1	19.6

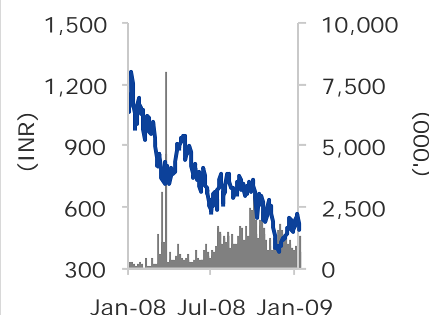

Table 1: Break up of corporate exposure

Stress exposures - as % of total industry exposure

	FY08E		FY09E		FY10E	
	Exposure (funded) (%)	Gross NPA (%)	Exposure (funded) (%)	Incremental slippage (%)	Exposure (funded) (%)	Incremental slippage (%)
Textiles	5.1	0.5	4.9	0.3	5.0	2.1
Iron/steel & products	2.5	0.7	2.6	0.2	2.5	0.9
Chemicals, dyes and paints	2.4	0.7	2.3	0.1	2.4	0.9
Automobiles	2.2	0.5	2.3	0.1	2.3	0.6
Gems and jewellery	1.5	2.7	1.6	1.6	1.4	3.4
Real estate (commercial)	10.8	0.6	11.8	0.2	10.4	1.7
Loan book (INR bn)	**411**	**0.3**	**573**	**0.9**	**723**	**1.8**

Note: Exposures adjusted for retail and agriculture

Table 2: Break-up of retail NPA

	FY08E			FY09E			FY10E		
	Loan Book (INR bn)	Gross NPA (INR bn)	Gross NPA (%)	Loan Book (INR bn)	Gross NPA (INR bn)	Gross NPA (%)	Loan Book (INR bn)	Gross NPA (INR bn)	Gross NPA (%)
Cars	9	0	2.0	19	1	3.0	24	1	3.5
CV	14	0	0.1	5	0	0.0			
Housing	77	1	0.8	98	1	1.0	123	2	1.4
Personal loans and credit cards	27	2	6.2	29	3	9.9	34	4	11.8
Other retail	8	0	1.0	9	0	1.3	12	0	1.5
Total	**136**	**3**	**1.9**	**160**	**4**	**2.8**	**193**	**7**	**3.5**

Table 3: Consolidated NPA outlook

Axis Bank

	FY08E			FY09E			FY10E		
	Loan book (INR bn)	Gross NPA (INR bn)	Gross NPA (%)	Loan book (INR bn)	Gross NPA (INR bn)	Gross NPA (%)	Loan book (INR bn)	Gross NPA (INR bn)	Gross NPA (%)
Retail	136	3	1.9	160	4	2.8	194	7	3.5
Corporate and others	411	1	0.3	573	5	0.9	723	13	1.8
Agriculture	50	1	2.2	67	1	1.9	82	2	1.9
Total	597	5	0.8	799	11	1.4	999	22	2.2
Est write off during year					(2)	(0.2)		(5)	(0.5)
Gross NPA (likely reported)				799	9	1.1	999	16	1.6
Net NPA		2.5	0.4		3.8	0.5		7.0	0.7
Provision coverage			49.8			57.8			56.9
LLP as % of BOP loans			1.3			1.4			1.4

Source: Edelweiss research

Financial Statements

Income statement (INR mn)

Year to March	FY07	FY08	FY09E	FY10E	FY11E
Interest income	45,604	70,053	109,367	138,448	171,100
Interest expenses	29,933	44,200	72,627	91,361	110,830
Net Interest income	15,671	25,854	36,740	47,087	60,270
Non interest income	10,101	17,955	27,262	33,013	36,999
- Fee & forex income	*9,073*	*15,317*	*23,951*	*30,295*	*35,748*
- Misc. income	*449*	*588*	*811*	*918*	*1,001*
- Investment profits	*580*	*2,051*	*2,500*	*1,800*	*250*
Net revenues	25,772	43,808	64,002	80,100	97,269
Operating expense	12,146	21,549	28,803	36,036	42,834
- Employee exp	3,813	6,702	10,144	13,958	17,139
- Other opex	8,333	14,847	18,659	22,078	25,695
Preprovision profit	13,626	22,259	35,199	44,064	54,434
Provisions	3,661	5,794	8,794	11,278	14,237
- Loan loss provisions	1,979	4,975	8,092	11,278	14,237
- Investment depreciation	670	65	702	0	0
- Other provisions	1,013	754	0	0	0
PBT	9,965	16,465	26,405	32,786	40,198
Taxes	3,372	5,753	9,225	11,455	14,045
PAT	6,592	10,712	17,180	21,330	26,153
Reported PAT	6,592	10,712	17,180	21,330	26,153
Diluted EPS	22.7	29.8	47.7	59.3	72.7
DPS	4.5	6.0	6.0	6.5	5.0
Payout ratio (%)	22.6	23.5	13.9	12.1	7.6

Growth ratios (%)

Year to March	FY07	FY08	FY09E	FY10E	FY11E
NII growth	45.3	65.0	42.1	28.2	28.0
Fees growth	56.6	68.8	56.4	26.5	18.0
Opex growth	49.2	77.4	33.7	25.1	18.9
PPOP growth	50.7	54.9	61.8	29.3	28.2
PPP growth	37.1	63.4	58.1	25.2	23.5
Provisions growth	39.5	58.3	51.8	28.3	26.2
PAT growth	35.9	62.5	60.4	24.2	22.6

Operating ratios (%)

Year to March	FY07	FY08	FY09E	FY10E	FY11E
Yield on advances	9.1	9.8	11.1	11.1	10.9
Yield on investments	7.6	7.4	7.7	7.6	7.5
Yield on assets	7.7	7.9	8.9	9.0	9.0
Net interest margins	2.7	2.9	3.0	3.1	3.2
Cost of funds	5.1	5.2	6.2	6.2	6.1
Cost of deposits	5.0	5.1	6.2	6.1	6.1
Cost of borrowings	7.8	8.0	8.7	8.8	8.8
Spread	2.6	2.8	2.7	2.8	2.9
Cost-income	47.1	49.2	45.0	45.0	44.0
Tax rate	33.8	34.9	34.9	34.9	34.9

Balance sheet (INR mn)

As on 31st March	FY07	FY08	FY09E	FY10E	FY11E
Liabilities					
Equity capital	2,906	3,599	3,599	3,599	3,599
Reserves	31,116	84,108	98,908	117,661	141,830
Net worth	34,022	87,707	102,507	121,260	145,429
Sub bonds/pref cap	35,019	34,293	49,293	59,293	69,293
Deposits	587,856	876,262	1,171,813	1,448,846	1,825,507
Borrowings	51,956	56,240	59,740	63,240	66,740
Other liabilities	23,724	41,276	44,734	54,924	68,231
Total	**732,577**	**1,095,778**	**1,428,088**	**1,747,564**	**2,175,202**
Assets					
Loans	368,765	596,611	799,458	1,015,312	1,269,140
Investments					
Gilts	*164,308*	*201,788*	*295,573*	*362,901*	*454,139*
Others	*104,659*	*135,263*	*153,496*	*187,377*	*227,218*
Cash & equi	69,183	125,042	137,269	132,872	166,650
Fixed assets	6,732	9,229	12,114	12,050	11,686
Other assets	18,930	27,845	30,178	37,053	46,368
Total	**732,577**	**1,095,778**	**1,428,088**	**1,747,564**	**2,175,202**
Balance sheet ratios (%)					
Credit growth	50.0	60.6	31.4	27.0	25.0
Deposit growth	46.5	49.1	33.7	23.6	26.0
EA growth	48.9	49.8	30.9	22.6	24.7
SLR ratio	25.7	21.6	24.0	24.0	24.0
C-D ratio	74.6	80.3	78.9	81.1	80.5
Low-cost deposits	39.9	45.7	38.7	38.9	39.2
Gross NPA ratio	0.9	0.7	1.0	1.4	1.7
Net NPA ratio	0.7	0.4	0.5	0.7	0.4
Provision coverage	36.4	49.8	57.8	56.9	80.9
Net NPA / Equity	7.8	2.8	3.7	5.8	3.2
Capital adequacy	11.6	13.7	13.2	11.7	10.9
- Tier 1	6.4	10.2	8.8	8.2	7.7
Book value	117	244	285	337	404

ROA decomposition (%)

Year to March	FY07	FY08	FY09E	FY10E	FY11E
Net interest income/Assets	2.7	2.9	3.0	3.1	3.2
Fees/Assets	1.6	1.8	2.0	2.0	1.9
Investment profits/Assets	0.1	0.2	0.2	0.1	0.0
Net revenues/Assets	4.4	5.0	5.2	5.2	5.1
Operating expense/Assets	(2.1)	(2.4)	(2.4)	(2.3)	(2.2)
Provisions/Assets	(0.6)	(0.7)	(0.7)	(0.7)	(0.7)
Taxes/Assets	(0.6)	(0.7)	(0.8)	(0.7)	(0.7)
Total costs/Assets	(3.2)	(3.7)	(3.8)	(3.8)	(3.7)
ROA	1.1	1.2	1.4	1.4	1.4
Equity/Assets	5.3	6.9	7.8	7.3	7.0
ROAE	21.0	17.6	18.1	19.1	19.6

Valuation metrics

Year to March	FY07	FY08	FY09E	FY10E	FY11E
Diluted EPS (INR)	22.7	29.8	47.7	59.3	72.7
EPS growth (%)	*36.6*	*31.2*	*60.4*	*24.2*	*22.6*
Book value per share (INR)	117.1	243.7	284.8	336.9	404.1
Adjusted book value/share (INR)	110.7	238.9	277.4	323.3	394.9
Diluted P/E (x)	19.1	14.6	9.1	7.3	6.0
Price/ BV (x)	3.7	1.8	1.5	1.3	1.1
Price/ ABV (x)	3.9	1.8	1.6	1.3	1.1
Dividend yield (%)	*1.0*	*1.4*	*1.4*	*1.5*	*1.2*
Price to income (x)	7.1	5.1	3.6	2.9	2.5
Price to PPOP (x)	9.7	7.7	4.8	3.7	2.9

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HDFC BANK

INR 925

Edelweiss
Ideas create, values protect

Best in class BUY

January 15, 2009

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Book tilting towards unsecured retail; aggressive provision policy a comfort

HDFC Bank's retail book contributes ~55% to its overall book. Its auto book is ~25% of the overall book while the unsecured portfolio contributes ~12% to the book. The balance of retail is in business banking that constitutes ~21% to the overall book. In its corporate book, the bank has exposure to over 43 industries. Of its funded exposure, auto and auto ancillaries is one of the highest at ~7%. Owing to its relation with HDFC, the bank does not have mortgage on its book which skews the retail book towards other higher yielding and riskier assets. Hence, the bank follows a prudent provisioning policy that helps recognise NPA assets early and charging them to the P&L. The average four year loan loss provisions (one quarter lag) are ~2-2.4% of loans. Also, the bank provides ~100% on its doubtful assets.

Focused retail player with gross NPAs in 2-2.3% range for FY09-10E

We expect HDFC Bank's gross NPAs to increase steadily from ~1.3% in FY08 to ~2% by FY09E and 2.3% by FY10E. Of this, we expect retail NPA to increase from 1.8% in FY08 to 3.7% by FY09E and 4.9% by FY10E. We estimate weakness in the unsecured portfolio and business banking to be the key contributors to the rise in NPAs. For FY09-10, personal loans and credit cards could witness delinquencies of around 11%. CVs will be impacted by higher interest rates (largely fixed interest portfolio) and weakening industrial environment in which we estimate NPAs in the 4-6% range, while cars would be relatively safe at 2-3.5%. We estimate substantial exposure to corporate banking is in the working capital, and have factored in NPA at ~1% for FY09E and 1.7% for FY10E. While due to a weak demand environment the business banking segment will be particularly vulnerable where we estimate NPA ratios to be ~1.0% in FY09 and 2% in FY10.

Outlook and valuations: Best in class; maintain 'BUY'

Post the Centurion Bank of Punjab (CBoP) acquisition, HDFC Bank's asset quality has not deteriorated sharply and the bank has indicated that slippages are well within expected limits. The bank has tightened credit requirements to keep slippages under control. We expect HDFC Bank to be better placed than peers, though on absolute basis, we expect NPAs to increase to ~2.3% in FY10E. However, owing to its strong provisioning policies, the incremental impact on profitability is likely to be minimal. We expect the bank's EPS to grow at 24%, posting RoEs of 18-19% over FY09-10E. The stock is trading at 2.3x FY10E adjusted book and 14.0x FY10E earnings. We maintain **'BUY'** recommendation on the stock.

Reuters	:	HDBK.BO
Bloomberg	:	HDFCB IN

Market Data

52-week range (INR)	:	1,825 / 800
Share in issue (mn)	:	425.0
M cap (INR bn/USD mn)	:	393.1 / 8,055.8
Avg. Daily Vol. BSE/NSE ('000)	:	1,561.2

Share Holding Pattern (%)

Promoters	:	19.4
MFs, FIs & Banks	:	9.5
FIIs	:	27.1
Others	:	44.0

Relative Performance (%)

	Sensex	Stock	Stock over Sensex
1 month	2.7	12.7	10.1
3 months	(17.0)	(8.4)	8.5
12 months	(54.9)	(41.0)	13.9

Financials

Year to March	FY08	FY09E	FY10E	FY11E
Revenues (INR mn)	72,091	105,592	131,374	156,971
Rev growth (%)	*44.0*	*46.5*	*24.4*	*19.5*
Net interest income (INR mn)	49,260	76,043	95,111	114,805
Net profit (INR mn)	15,902	22,196	27,902	35,194
Shares outstanding (mn)	354	424	424	424
Diluted EPS (INR)	44.9	52.3	65.8	82.9
EPS growth (%)	*25.5*	*16.6*	*25.7*	*26.1*
Diluted PE (x)	20.6	17.7	14.1	11.1
Price to book (x)	2.9	2.7	2.3	2.0
Price to PPOP (x)	10.2	8.1	5.9	4.9
ROAE (%)	17.7	17.0	17.8	19.4

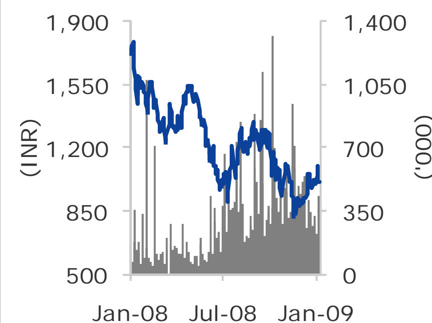

Table 1: Break-up of corporate exposure

	FY08E		FY09E		FY10E	
	Exposure (funded) (%)	Gross NPA (%)	Exposure (funded) (%)	Incremental slippage (%)	Exposure (funded) (%)	Incremental slippage (%)
Metals and metal products	5.2	0.6	5.2	0.9	5.0	0.9
Automobiles and auto ancillaries	4.0	0.3	4.0	0.3	3.6	0.7
Real estate (commercial)	7.9	0.3	7.9	0.4	7.1	1.8
Loan book (INR bn)	**161.0**	**1.6**	**326.2**	**1.0**	**444.9**	**1.7**

Note: Exposures adjusted for retail and agriculture

Table 2: Break-up of retail NPA

	FY08E			FY09E			FY10E		
	Loan Book (INR bn)	Gross NPA (INR bn)	Gross NPA (%)	Loan Book (INR bn)	Gross NPA (INR bn)	Gross NPA (%)	Loan Book (INR bn)	Gross NPA (INR bn)	Gross NPA (%)
Cars	96	1	1.4	166	4	2.2	209	8	3.8
CV	59	1	1.5	103	3	3.4	119	8	6.4
Personal loans and credit cards	97	5	4.8	117	12	10.3	148	19	12.5
Other retail - business banking	140	1	0.5	192	2	1.1	256	6	2.4
Total	**393**	**7**	**1.9**	**579**	**21**	**3.7**	**731**	**40**	**5.5**

Table 3: Consolidated NPA outlook

	FY08E			FY09E			FY10E		
	Loan book (INR bn)	Gross NPA (INR bn)	Gross NPA (%)	Loan book (INR bn)	Gross NPA (INR bn)	Gross NPA (%)	Loan book (INR bn)	Gross NPA (INR bn)	Gross NPA (%)
Retail	393	7	1.9	579	21	3.7	731	40	5.5
Corporate and others	161	3	1.6	326	3	1.0	445	8	1.7
Agriculture	80	0	0.5	131	1	0.6	170	1	0.5
Total	634	10	1.6	1,036	25	2.4	1,347	49	3.6
Est write off during year					(4)	(0.3)		(15)	(1.1)
Gross NPA (likely reported)				1,036	22	2.1	1,347	34	2.5
Net NPA		3.0	0.5		7.6	0.7		10.0	0.7
Provision coverage			67.1			64.8			70.8
LLP as % of BOP loans			2.6			2.6			2.5

Source: Edelweiss research

Financial Statements

Income statement (INR mn)

Year to March	FY07	FY08	FY09E	FY10E	FY11E
Interest income	66,690	98,131	166,978	205,491	243,584
Interest expenses	31,795	48,871	90,936	110,380	128,779
Net Interest income	34,896	49,260	76,043	95,111	114,805
Non interest income	15,162	22,832	29,549	36,263	42,167
- Fee & forex income	*14,827*	*19,976*	*26,968*	*34,519*	*41,423*
- Misc. income	*1,030*	*430*	*581*	*744*	*744*
- Investment profits	*(695)*	*2,425*	*2,000*	*1,000*	*0*
Net revenues	50,058	72,091	105,592	131,374	156,971
Operating expense	24,208	37,456	55,207	64,280	76,968
- Employee exp	7,769	13,014	23,261	29,309	38,761
- Other opex	16,439	24,443	31,945	34,971	38,207
Preprovision profit	25,850	34,635	50,385	67,094	80,003
Provisions	9,459	11,824	17,743	26,062	28,247
- Loan loss provisions	8,610	12,160	16,779	26,062	27,747
- Investment depreciation	211	(3,019)	300	0	500
- Other provisions	638	2,683	664	0	0
PBT	16,392	22,811	32,642	41,032	51,756
Taxes	4,977	6,909	10,445	13,130	16,562
PAT	11,415	15,902	22,196	27,902	35,194
Reported PAT	11,415	15,902	22,196	27,902	35,194
EPS	35.7	44.9	52.3	65.8	82.9
DPS	7.0	8.5	9.9	12.5	16.0
Payout ratio (%)	22.9	22.2	22.1	22.2	22.3

Growth ratios (%)

Year to March	FY07	FY08	FY09E	FY10E	FY11E
NII growth	68.9	41.2	54.4	25.1	20.7
Fees growth	29.6	34.7	35.0	28.0	20.0
Opex growth	43.2	54.7	47.4	16.4	19.7
PPOP growth	71.2	21.3	50.2	36.6	21.0
PPP growth	72.5	34.0	45.5	33.2	19.2
Provisions growth	285.8	25.0	50.1	46.9	8.4
PAT growth	31.1	39.3	39.6	25.7	26.1

Operating ratios (%)

Year to March	FY07	FY08	FY09E	FY10E	FY11E
Yield on advances	10.6	12.6	13.7	13.3	12.7
Yield on investments	8.0	8.5	9.1	8.3	7.5
Yield on assets	8.5	9.2	9.8	10.0	9.6
Net interest margins	4.4	4.6	4.5	4.6	4.5
Cost of funds	3.9	4.4	5.1	5.1	4.8
Cost of deposits	4.3	5.2	6.6	6.0	5.6
Cost of borrowings	9.1	7.3	8.4	7.8	7.7
Spread	4.6	4.8	4.7	4.9	4.7
Cost-income	48.4	52.0	52.3	48.9	49.0
Tax rate	30.4	30.3	32.0	32.0	32.0

Balance sheet (INR mn)

As on 31st March	FY07	FY08	FY09E	FY10E	FY11E
Liabilities					
Equity capital	3,194	3,544	4,243	4,243	4,243
Reserves	61,138	111,428	141,402	163,098	190,455
Net worth	64,332	114,972	145,645	167,341	194,698
Sub bonds/pref cap	32,826	32,491	55,641	58,141	60,641
Deposits	682,979	1,007,686	1,504,918	1,845,452	2,337,081
Borrowings	28,154	44,789	57,047	74,779	91,390
Other liabilities	104,065	131,828	201,784	215,657	272,736
Total	**912,356**	**1,331,766**	**1,965,036**	**2,361,371**	**2,956,546**
Assets					
Loans	469,448	634,269	1,035,845	1,346,599	1,683,249
Investments					
Gilts	*225,449*	*316,662*	*437,356*	*499,266*	*631,408*
Others	*80,197*	*177,272*	*247,547*	*296,233*	*372,550*
Cash & equi	91,539	147,783	149,224	112,862	142,829
Fixed assets	9,667	11,751	20,336	17,092	13,551
Other assets	36,057	44,029	74,726	89,319	112,959
Total	**912,356**	**1,331,766**	**1,965,036**	**2,361,371**	**2,956,546**
Balance sheet ratios (%)					
Credit growth	25.8	28.2	61.2	30.0	25.0
Deposit growth	22.4	47.5	49.3	22.6	26.6
EA growth	31.1	36.4	58.6	21.4	23.3
SLR ratio	31.7	30.1	28.0	26.0	26.0
C-D ratio	79.6	69.1	74.6	79.2	78.2
Low-cost deposits	57.7	54.5	41.0	43.0	45.0
Gross NPA ratio	1.2	1.3	1.9	2.3	2.7
Net NPA ratio	0.4	0.5	0.7	0.7	0.7
Provision coverage	69.2	67.1	64.8	70.8	76.6
Net NPA / Equity	3.2	2.6	5.3	5.9	0.0
Capital adequacy	13.1	13.6	13.4	11.2	10.7
- Tier 1	8.6	10.3	9.1	8.2	8.1
Book value (INR)	201.4	324.4	343.3	394.4	458.9

ROA decomposition (%)

Year to March	FY07	FY08	FY09E	FY10E	FY11E
Net interest income/Assets	4.4	4.6	4.5	4.6	4.5
Fees/Assets	2.0	1.9	1.6	1.7	1.7
Investment profits/Assets	(0.1)	0.2	0.1	0.0	0.0
Net revenues/Assets	6.4	6.7	6.2	6.4	6.2
Operating expense/Assets	(3.1)	(3.5)	(3.2)	(3.1)	(3.0)
Provisions/Assets	(1.2)	(1.1)	(1.0)	(1.3)	(1.1)
Taxes/Assets	(0.6)	(0.6)	(0.6)	(0.6)	(0.7)
Total costs/Assets	(4.9)	(5.2)	(4.9)	(5.0)	(4.8)
ROA	1.5	1.5	1.3	1.4	1.4
Equity/Assets	7.5	8.4	7.7	7.6	7.1
ROAE	19.5	17.7	17.0	17.8	19.4

Valuation metrics

Year to March	FY07	FY08	FY09E	FY10E	FY11E
Diluted EPS	35.7	44.9	52.3	65.8	82.9
EPS growth (%)	*28.5*	*25.5*	*16.6*	*25.7*	*26.1*
Book value per share	201.4	324.4	343.3	394.4	458.9
Adjusted book value/share	197.0	318.5	330.6	378.0	440.0
Diluted P/E	25.9	20.6	17.7	14.1	11.1
Price/ BV	4.6	2.9	2.7	2.3	2.0
Price/ ABV	4.7	2.9	2.8	2.4	2.1
Dividend yield (%)	*0.8*	*0.9*	*1.1*	*1.4*	*1.7*
Price to income	9.1	7.3	6.6	5.6	4.9
Price to PPOP	11.1	10.2	8.1	5.9	4.9

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ICICI BANK

INR 409

Edelweiss
Ideas create, values protect

Retail pressure BUY

January 15, 2009

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Credit growth has sharply slowed down; improving underwriting standards

ICICI Bank was one of the early players in the entire banking sector to slow down its pace of credit growth while concentrating on growing only its international book. Its retail book has remained almost flat at INR 1.2 tn in the past seven-eight quarters. The international book contributes ~25% to the overall book. On the corporate side, the bank's exposure is well diversified with highest exposure to power and NBFCs (services-finance).

ICICI Bank does not write-off NPAs even when provisions have reached 100% due to which gross NPAs appear higher than peers. We expect that with declining loan book, the bank will start following write off policy in line with others. Its LLP as % of opening advances has improved to 1.6% in Q2FY09.

Retail portfolio slowed ahead of curve; wound will take time to heal

We expect NPAs to rise steadily from 3.4% in FY08 to ~5% by FY09E and ~5.5% by FY10E. Of this, we expect retail net slippages to be at ~2.5% by FY09-10E mainly due to higher delinquencies in the unsecured portfolio in credit cards and personal loans (~18% by FY09-10E). Housing will be relatively comfortable with net slippage of ~1% for FY09-10E. Cars will be about 2% and CV will be about 4%. Retail NPA will contribute close to 75% to overall NPA, and we estimate the unsecured portfolio at ~50% of retail NPAs. As of FY08, the bank's exposure to top stress sectors is: iron and steel, metal and metal products, textiles, and we estimate the other sectors at less than 1%. The international book based out of their subsidiaries (UK, Canada, Eurasia) with a balance sheet size of USD 12.5 bn has not been factored into our numbers. However, we have included exposures of international branches.

Outlook and valuations: Asset quality factored in prices; maintain 'BUY'

Asset quality will continue to deteriorate, especially in the retail portfolio, primarily because of its unsecured personal loan portfolio. Short term personal loans are steadily running off its book, but we expect NPAs to increase from current levels, while CVs is likely to steadily deteriorate in line with the overall market conditions.

In our view, the current price is more than factoring in weak FY09 profits and increase in NPA, while attractive valuations for a diversified franchise and decline in NPA in FY10 are being ignored. We maintain our **'BUY'** recommendation due to inexpensive valuation. However, near term operating performance would remain weak.

Reuters	:	ICBK.BO
Bloomberg	:	ICICIBC IN

Market Data

52-week range (INR)	:	1,465 / 282
Share in issue (mn)	:	1,113.2
M cap (INR bn/USD mn)	:	455.2/9,329.8
Avg. Daily Vol. BSE/NSE ('000)	:	9,926.9

Share Holding Pattern (%)

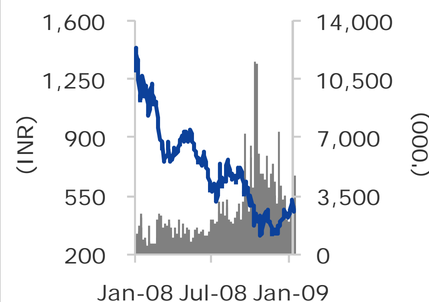
Promoters	:	0.0
MFs, FIs & Banks	:	19.7
FIIs	:	36.4
Others	:	43.9

Relative Performance (%)

	Sensex	Stock	Stock over Sensex
1 month	2.7	23.0	20.3
3 months	(17.0)	0.3	17.3
12 months	(54.9)	(65.9)	(11.0)

Financials

Year to March	FY08	FY09E	FY10E	FY11E
Revenues (INR mn)	161,149	158,459	170,806	195,897
Rev growth (%)	*28.3*	*(1.7)*	*7.8*	*14.7*
Net interest income(INR mn)	73,041	79,165	92,863	110,704
Net profit (INR mn)	41,577	39,182	44,008	53,416
Shares outstanding (mn)	1,113	1,113	1,113	1,113
Diluted EPS (INR)	37.4	35.2	39.6	48.0
EPS growth (%)	*8.0*	*(5.8)*	*12.3*	*21.4*
Diluted P/E (x)	10.9	11.6	10.3	8.5
Price to book (x)	1.0	0.9	0.9	0.8
Price to PPOP (x)	7.4	5.5	4.8	4.1
ROAE (%)	11.6	8.1	8.6	9.8



The NPA ratios for the bank look higher product-wise as this is prior to write-offs and as the loan book is contracting.

Table 1: Break-up of retail NPA

	FY08E			FY09E			FY10E		
	Loan Book (INR bn)	Gross NPA (INR bn)	Gross NPA (%)	Loan Book (INR bn)	Gross NPA (INR bn)	Gross NPA (%)	Loan Book (INR bn)	Gross NPA (INR bn)	Gross NPA (%)
Cars	183	6	3.2	153	7	4.9	173	10	6.0
CV	194	8	4.2	167	16	9.7	205	23	11.0
Housing	667	15	2.2	615	19	3.1	591	26	4.4
Personal loans, 2W and credit cards	247	25	10.3	247	49	19.6	348	59	16.8
Other retail	26	1	3.0	0	0	0.0	0	0	0.0
Total	**1,317**	**55**	**4.2**	**1,183**	**92**	**7.7**	**1,317**	**117**	**8.9**

Table 2: Break-up of corporate exposure

Stress exposures - as % of total industry exposure

	FY08E		FY09E		FY10E	
	Exposure (funded) (%)	Gross NPA (%)	Exposure (funded) (%)	Incremental slippage (%)	Exposure (funded) (%)	Incremental slippage (%)
Iron/steel & products	6.7	0.9	6.8	0.4	6.8	0.8
Chemicals and fertilizers	3.8	3.1	3.4	0.7	3.4	0.8
Textiles	2.2	3.0	2.3	0.9	2.2	2.0
Automobiles	2.2	2.2	2.2	0.2	2.2	0.2
Gems and jewellery	1.8	0.5	1.9	1.6	1.8	1.6
Real estate (commercial)	8.9	0.1	8.4	0.4	7.9	1.6
Loan book (INR bn)	**770**	**1.4**	**817**	**2.2**	**865**	**3.5**

Note: Exposures adjusted for retail and agriculture

Table 3: Consolidated NPA outlook

	FY08E			FY09E			FY10E		
	Loan book (INR bn)	Gross NPA (INR bn)	Gross NPA (%)	Loan book (INR bn)	Gross NPA (INR bn)	Gross NPA (%)	Loan book (INR bn)	Gross NPA (INR bn)	Gross NPA (%)
Retail	1,317	55	4.2	1,183	92	7.7	1,317	117	8.9
Corporate and others	770	11	1.4	817	18	2.2	865	30	3.5
Agriculture	170	10	5.8	217	12	5.3	238	13	5.3
Total	2,256	76	3.4	2,216	121	5.5	2,420	160	6.6
Est write off during year					(12)	(0.5)		(24)	(1.0)
Gross NPA (likely reported)				2,216	109	4.9	2,420	136	5.6
Net NPA		34.9	1.5		44.4	2.0		43.1	1.8
Provision coverage			52.0			59.4			68.3
LLP / BOP loans			1.4			1.5			1.7

Source: Edelweiss research

Financial Statements

Income statement (INR mn)

Year to March	FY07	FY08	FY09E	FY10E	FY11E
Interest income	229,943	307,883	320,187	322,908	342,429
Interest expenses	163,585	234,842	241,022	230,045	231,725
Net interest income	66,358	73,041	79,165	92,863	110,704
Non interest income	59,292	88,108	79,294	77,943	85,193
- Fee & forex income	*50,900*	*57,811*	*68,239*	*70,286*	*77,315*
- Misc. income	*7,577*	*12,175*	*6,774*	*6,797*	*6,878*
- Investment profits	*815*	*18,121*	*4,281*	*860*	*1,000*
Net revenues	125,650	161,149	158,459	170,806	195,897
Operating expense	66,906	81,542	71,590	75,045	83,205
- Employee exp	*16,167*	*20,789*	*20,373*	*21,596*	*24,943*
- Other opex	*50,738*	*60,753*	*51,217*	*53,450*	*58,262*
Preprovision profit	58,744	79,607	86,869	95,761	112,692
Provisions	22,264	29,046	34,627	37,084	41,470
- Loan loss provisions	*21,593*	*27,010*	*34,627*	*37,084*	*41,470*
- Investment depreciation	*419*	*623*	*0*	*0*	*0*
- Other provisions	*251*	*1,413*	*0*	*0*	*0*
PBT	36,480	50,561	52,242	58,677	71,221
Taxes	5,378	8,984	13,061	14,669	17,805
PAT	31,102	41,577	39,182	44,008	53,416
Reported PAT	31,102	41,577	39,182	44,008	53,416
Diluted EPS (INR)	34.6	37.4	35.2	39.6	48.0
DPS (INR)	10.0	11.0	10.6	10.3	12.5
Payout ratio (%)	33.9	33.1	35.1	30.4	30.0

Growth ratios (%)

Year to March	FY07	FY08	FY09E	FY10E	FY11E
NII growth	40.9	10.1	8.4	17.3	19.2
Fees growth	45.8	13.6	18.0	3.0	10.0
Opex growth	33.5	21.9	(12.2)	4.8	10.9
PPOP growth	45.0	6.1	34.3	14.9	17.7
PPP growth	51.1	35.5	9.1	10.2	17.7
Provisions growth	181.3	30.5	19.2	7.1	11.8
PAT growth	22.4	33.7	(5.8)	12.3	21.4

Operating ratios (%)

Year to March	FY07	FY08	FY09E	FY10E	FY11E
Yield on advances	9.4	10.7	10.7	10.5	10.2
Yield on investments	9.2	9.1	7.6	7.3	6.8
Yield on assets	8.2	8.8	8.5	8.5	8.4
Net interest margins	2.4	2.1	2.1	2.4	2.7
Cost of funds	5.9	7.0	6.9	6.5	6.1
Cost of deposits	5.9	7.2	7.0	6.6	6.2
Cost of borrowings	7.8	8.1	8.5	8.0	8.0
Spread	2.3	1.8	1.7	2.0	2.3
Cost-income	53.2	50.6	45.2	43.9	42.5
Tax rate	14.7	17.8	25.0	25.0	25.0

Balance sheet (INR mn)

As on 31st March	FY07	FY08	FY09E	FY10E	FY11E
Liabilities					
Equity capital	8,993	11,127	11,127	11,127	11,127
Reserves	234,139	461,571	487,000	517,621	555,004
Net worth	243,133	472,698	498,127	528,748	566,130
Sub bonds/pref cap	197,551	211,002	213,502	213,502	218,502
Deposits	2,305,102	2,444,311	2,469,695	2,592,560	2,950,332
Borrowings	512,560	656,484	600,541	528,471	567,002
Other liabilities	194,778	219,673	219,673	243,837	280,412
Total	**3,453,124**	**4,004,167**	**4,001,538**	**4,107,118**	**4,582,378**
Assets					
Loans	1,958,656	2,256,162	2,216,162	2,434,940	2,775,181
Investments					
Gilts	*676,648*	*755,180*	*928,964*	*826,627*	*893,813*
Others	*235,930*	*359,265*	*387,518*	*415,467*	*427,902*
Cash & equi	371,213	380,411	217,422	160,716	183,890
Fixed assets	39,234	41,089	40,056	35,884	31,017
Other assets	171,443	212,060	211,416	233,484	270,574
Total	**3,453,124**	**4,004,167**	**4,001,538**	**4,107,118**	**4,582,378**
Balance sheet ratios (%)					
Credit growth	34.0	14.7	(1.6)	10.0	14.0
Deposit growth	39.6	6.0	1.0	5.0	13.8
EA growth	38.1	15.7	(0.0)	2.3	11.5
SLR ratio	24.0	24.4	27.0	24.2	23.7
C-D ratio	86.0	93.1	90.7	99.1	99.1
Low-cost deposits	21.8	26.1	29.0	32.0	32.0
Gross NPA ratio	2.1	3.3	4.8	5.4	6.1
Net NPA ratio	1.0	1.5	2.0	1.8	1.5
Provision coverage	67.9	52.0	59.4	68.3	75.6
Net NPA / Equity	8.2	7.4	8.9	8.2	7.5
Capital adequacy	11.7	14.0	14.3	13.9	13.3
- Tier 1	7.4	11.8	10.1	9.9	9.4
Book value (INR)	270	425	448	475	509

ROA decomposition (%)

Year to March	FY07	FY08	FY09E	FY10E	FY11E
Net interest income/Assets	2.4	2.1	2.1	2.4	2.7
Fees/Assets	2.1	2.0	2.0	2.0	2.1
Investment profits/Assets	0.0	0.5	0.1	0.0	0.0
Net revenues/Assets	4.5	4.6	4.2	4.5	4.8
Operating expense/Assets	(2.4)	(2.3)	(1.9)	(2.0)	(2.0)
Provisions/Assets	(0.8)	(0.8)	(0.9)	(1.0)	(1.0)
Taxes/Assets	(0.2)	(0.3)	(0.3)	(0.4)	(0.4)
Total costs/Assets	(3.4)	(3.4)	(3.2)	(3.3)	(3.5)
ROA	1.1	1.2	1.0	1.2	1.3
Equity/Assets	8.3	10.2	12.9	13.5	13.5
ROAE	13.4	11.6	8.1	8.6	9.8

Valuation metrics

Year to March	FY07	FY08	FY09E	FY10E	FY11E
Diluted EPS (INR)	34.6	37.4	35.2	39.6	48.0
EPS growth (%)	*21.2*	*8.0*	*(5.8)*	*12.3*	*21.4*
Book value per share (INR)	270.3	424.8	447.7	475.2	508.8
Adjusted book value/share (INR)	254.8	402.9	419.8	448.1	482.2
Diluted P/E (x)	11.8	10.9	11.6	10.3	8.5
Price/ BV (x)	1.5	1.0	0.9	0.9	0.8
Price/ ABV (x)	1.6	1.0	1.0	0.9	0.8
Dividend yield (%)	*2.4*	*2.7*	*2.6*	*2.5*	*3.1*
Price to income (x)	3.4	3.5	3.6	3.5	3.2
Price to PPOP (x)	6.3	7.4	5.5	4.8	4.1

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STATE BANK OF INDIA

INR 1,147

Bond gains to offset asset quality risk

BUY

January 15, 2009

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Diversified portfolio with risk of corporate and SME exposure

State Bank of India (SBI) has been growing its balance sheet aggressively in the past three years, and continues to grow ahead of the industry, which we believe raises risk of the underlying quality of the asset in the coming few quarters. However, the bank has one of the most diversified portfolios across sectors. Large corporate, mid corporate, SME, housing contribute 11%, 25%, 19%, and 10%, respectively. The bank's international book (asset quality risk not different from domestic) constitutes ~15%, while agriculture book is ~10%.

LLP provisions (one quarter lag) are fairly low at 0.5% of assets, while provision coverage is one of the lowest in the industry at 47%.

NPA to rise steadily with aggressive balance sheet growth

We expect NPAs to be 2.8% by FY09E and 3.7% by FY10E. Of this, we expect retail NPAs to rise from 3.1% in FY08 to ~3.3% by FY09E and ~4.4% by FY10E. Corporate NPAs, which we currently estimate to be at ~2.5%, are expected to remain flat at 2.5% by FY09E and 3.4% by FY10E. The international loan book contributes 16% to the loan book where peer banks like Bank of Baroda are running an NPA of less than 1%. However, the credit propensity of the international credit book will not be much different from domestic corporate credit as the bank has restricted lending to Indian corporates to fund their overseas expansions. Others, which include priority sector loans, will be higher at 5%. In FY08, the bank's NPA (of its exposure) was highest for food processing (4.5%), fertilizers (3.8%) and engineering (3%).

Outlook and valuations: Bond gains cushion credit costs; maintain 'BUY'

Despite being the largest bank, SBI continues to grow its balance sheet well above the industry average, which can lead to higher risk in a rapidly deteriorating environment. However, in our view, existing provisions and future treasury profits will be able to cushion the impact of higher credit costs.

Our sum-of-the-parts calculation comes to INR 1,518. Our banking business value is at INR 1,329 and a combined value of INR 189/share of non-banking businesses (life insurance at INR 168). The implied value of the banking business is at 0.9x FY09E adj. book value. We maintain **'BUY'** recommendation on the stock.

Reuters	:	SBI.BO
Bloomberg	:	SBIN IN

Market Data

52-week range (INR)	:	2,396 / 991
Share in issue (mn)	:	634.9
M cap (INR bn/USD mn)	:	728.2/14,922.7
Avg. Daily Vol. BSE/NSE ('000)	:	2,651.8

Share Holding Pattern (%)

Promoters	:	59.4
MFs, FIs & Banks	:	12.5
FIIs	:	12.0
Others	:	16.1

Relative Performance (%)

	Sensex	Stock	Stock over Sensex
1 month	2.7	2.2	(0.4)
3 months	(17.0)	(8.0)	8.9
12 months	(54.9)	(47.7)	7.2

Financials

Year to March	FY08	FY09E	FY10E	FY11E
Revenues (INR mn)	264,197	325,272	363,340	410,035
Rev growth (%)	*17.6*	*23.1*	*11.7*	*12.9*
Net interest income (INR mn)	170,212	221,214	247,527	283,549
Net profit (INR mn)	67,291	89,851	98,870	114,169
Shares outstanding (mn)	631	631	631	631
Diluted EPS (INR)	106.6	142.3	156.6	180.8
EPS growth (%)	*23.5*	*33.5*	*10.0*	*15.5*
Diluted P/E (x)	10.8	8.1	7.3	6.3
Price to book (x)	1.5	1.3	1.1	1.0
Price to PPOP (x)	0.1	0.1	0.1	0.0
ROAE (%)	16.8	17.1	16.6	16.8

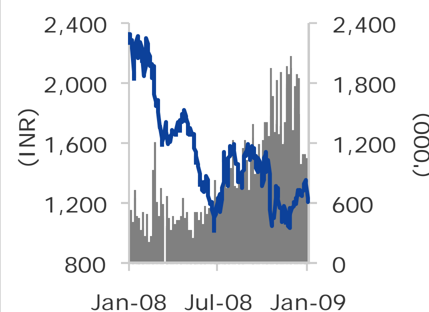


Table 1: Break-up of corporate exposure

Stress exposures - as % of total industry exposure

	FY08E		FY09E		FY10E	
	Exposure (funded) (%)	Gross NPA (%)	Exposure (funded) (%)	Incremental slippage (%)	Exposure (funded) (%)	Incremental slippage (%)
Textiles	8.3	1.6	8.3	0.8	8.3	2.5
Iron/steel & products	7.9	1.8	7.9	0.5	7.9	1.0
Gems and jewellery	2.5	0.7	2.5	2.0	2.5	2.0
Automobiles	1.7	1.0	1.7	0.2	1.7	0.8
Fertilizers	0.6	3.8	0.6	0.7	0.6	0.8
Real estate (commercial)	2.7	1.0	2.7	0.7	2.7	2.0
Loan book (INR bn)	**2,880**	**2.5**	**3,594**	**2.6**	**4,186**	**3.5**

Note: Exposures adjusted for retail and agriculture

Table 2: Break-up of retail NPA

	FY08E			FY09E			FY10E		
	Loan Book (INR bn)	Gross NPA (INR bn)	Gross NPA (%)	Loan Book (INR bn)	Gross NPA (INR bn)	Gross NPA (%)	Loan Book (INR bn)	Gross NPA (INR bn)	Gross NPA (%)
Auto	87	2	2.8	102	3	3.2	119	5	4.3
Housing	447	15	3.4	573	19	3.2	666	28	4.2
Personal loans	318	9	2.8	395	13	3.4	466	22	4.6
Other retail - business banking									
Total	**851**	**26**	**3.1**	**1,070**	**35**	**3.3**	**1,250**	**55**	**4.4**

Table 3: Consolidated NPA outlook

	FY08E			FY09E			FY10E		
	Loan book (INR bn)	Gross NPA (INR bn)	Gross NPA (%)	Loan book (INR bn)	Gross NPA (INR bn)	Gross NPA (%)	Loan book (INR bn)	Gross NPA (INR bn)	Gross NPA (%)
Retail	851	26	3.1	1,070	35	3.3	1,250	55	4.4
Corporate and others	2,880	73	2.5	3,594	93	2.6	4,186	148	3.5
Agriculture	436	29	6.7	545	26	4.7	635	32	5.0
Total	4,168	128	3.1	5,209	154	3.0	6,071	234	3.9
Est write off during year					(8)	(0.1)		(12)	(0.2)
Gross NPA (likely reported)				5,209	146	2.8	6,071	222	3.7
Net NPA		74.2	1.8		70.4	1.4		118.4	1.9
Provision coverage			42.2			52.2			47.7
LLP as % of BOP loans			0.8			0.8			0.9

Source: Edelweiss research

Financial Statements

Income statement (INR mn)

Year to March	FY07	FY08	FY09E	FY10E	FY11E
Interest income	394,910	489,503	627,700	714,780	787,804
Interest expenses	234,368	319,291	406,485	467,252	504,255
Net interest income	160,542	170,212	221,214	247,527	283,549
Non interest income	64,096	93,984	104,058	115,813	126,486
- Fee & forex income	*52,614*	*66,499*	*78,664*	*90,881*	*104,513*
- Misc. income	*5,683*	*10,987*	*13,131*	*12,619*	*13,973*
- Investment profits	*5,799*	*16,498*	*12,263*	*12,313*	*8,000*
Net revenues	224,638	264,197	325,272	363,340	410,035
Operating expense	118,235	126,086	155,680	166,352	173,742
- Employee exp	79,326	77,859	101,721	106,112	107,173
- Other opex	38,909	48,227	53,959	60,240	66,569
Preprovision profit	106,403	138,111	169,592	196,988	236,292
Provisions	30,149	33,722	35,486	49,422	65,891
- Loan loss provisions	20,175	25,679	34,486	49,422	65,891
- Investment depreciation	10,192	6,148	0	0	0
- Other provisions	(218)	1,894	1,000	0	0
PBT	76,254	104,389	134,106	147,566	170,401
Taxes	30,838	37,098	44,255	48,697	56,232
PAT	45,417	67,291	89,851	98,870	114,169
Reported PAT	45,417	67,291	89,851	98,870	114,169
EPS	86.3	106.6	142.3	156.6	180.8
DPS	14.0	21.5	29.0	32.0	36.0
Payout ratio (%)	19.0	22.6	23.8	23.9	23.0

Growth ratios (%)

Year to March	FY07	FY08	FY09E	FY10E	FY11E
NII growth	2.7	6.0	30.0	11.9	14.6
Fees growth	6.3	26.4	18.3	15.5	15.0
Opex growth	0.8	6.6	23.5	6.9	4.4
PPOP growth	(6.1)	20.9	29.4	17.4	23.6
PPP growth	(5.8)	29.8	22.8	16.2	20.0
Provisions growth	(31.4)	11.9	5.2	39.3	33.3
PAT growth	3.0	48.2	33.5	10.0	15.5

Operating ratios (%)

Year to March	FY07	FY08	FY09E	FY10E	FY11E
Yield on advances	8.3	9.3	9.9	9.7	9.4
Yield on investments	8.5	8.5	8.3	7.8	7.3
Yield on assets	7.8	8.1	8.5	8.5	8.2
Net interest margins	3.2	2.8	3.0	2.9	3.0
Cost of funds	4.7	5.3	5.6	5.6	5.3
Cost of deposits	4.7	5.6	5.8	5.9	5.7
Cost of borrowings	9.9	8.1	8.0	7.0	6.3
Spread	3.2	2.8	2.9	2.9	2.9
Cost-income	52.6	47.7	47.9	45.8	42.4
Tax rate	40.4	35.5	33.0	33.0	33.0

Balance sheet (INR mn)

As on 31st March	FY07	FY08	FY09E	FY10E	FY11E
Liabilities					
Equity capital	5,263	6,315	6,315	6,315	6,315
Reserves	307,723	484,012	552,438	627,666	715,589
Net worth	312,986	490,327	558,752	633,981	721,904
Sub bonds/pref cap	144,307	187,818	167,743	168,743	169,743
Deposits	4,355,211	5,374,039	6,447,825	7,194,251	8,450,388
Borrowings	397,033	517,274	698,209	723,974	760,505
Other liabilities	456,116	645,805	579,340	641,943	746,741
Total	**5,665,652**	**7,215,263**	**8,451,870**	**9,362,891**	**10,849,281**
Assets					
Loans	3,373,365	4,167,685	5,208,761	6,094,679	7,107,562
Investments					
Gilts	*1,216,135*	*1,434,723*	*1,742,431*	*1,769,392*	*2,053,779*
Others	*275,350*	*460,290*	*539,457*	*576,931*	*619,774*
Cash & equi	519,687	674,663	526,440	406,203	474,966
Fixed assets	28,189	33,735	36,327	36,202	35,438
Other assets	252,927	444,167	398,454	479,485	557,762
Total	**5,665,652**	**7,215,263**	**8,451,870**	**9,362,891**	**10,849,281**
Balance sheet ratios (%)					
Credit growth	27.3	25.5	25.0	17.0	16.6
Deposit growth	14.6	23.4	20.0	11.6	17.5
EA growth	14.9	25.1	19.0	10.4	15.9
SLR ratio	25.6	24.4	24.0	22.0	22.0
C-D ratio	79.5	80.8	84.2	88.9	88.2
Low-cost deposits	48.5	47.0	42.0	40.1	39.1
Gross NPA ratio	2.9	3.0	2.8	3.7	4.6
Net NPA ratio	1.6	1.8	1.4	1.9	2.5
Provision coverage	47.4	42.2	52.2	47.7	45.9
Net NPA / Equity	16.8	15.1	12.6	18.7	24.8
Capital adequacy	12.3	13.5	12.9	11.2	10.6
- Tier 1	8.0	9.1	8.6	8.3	8.1
Book value	595	776	885	1,004	1,143

ROA decomposition (%)

Year to March	FY07	FY08	FY09E	FY10E	FY11E
Net interest income/Assets	3.2	2.8	3.0	2.9	3.0
Fees/Assets	1.2	1.3	1.2	1.2	1.2
Investment profits/Assets	0.1	0.3	0.2	0.1	0.1
Net revenues/Assets	4.5	4.4	4.4	4.3	4.3
Operating expense/Assets	(2.3)	(2.1)	(2.1)	(2.0)	(1.8)
Provisions/Assets	(0.6)	(0.6)	(0.5)	(0.6)	(0.7)
Taxes/Assets	(0.6)	(0.6)	(0.6)	(0.6)	(0.6)
Total costs/Assets	(3.6)	(3.2)	(3.2)	(3.1)	(3.1)
ROA	0.9	1.1	1.2	1.2	1.2
Equity/Assets	5.9	6.6	7.1	7.1	7.1
ROAE	15.4	16.8	17.1	16.6	16.8

Valuation metrics

Year to March	FY07	FY08	FY09E	FY10E	FY11E
Diluted EPS	86.3	106.6	142.3	156.6	180.8
EPS growth (%)	*3.0*	*23.5*	*33.5*	*10.0*	*15.5*
Book value per share	594.7	776.5	884.8	1,004.0	1,143.2
Adjusted book value/share	524.8	694.2	806.7	872.7	944.8
Diluted P/E	13.3	10.8	8.1	7.3	6.3
Price/ BV	1.9	1.5	1.3	1.1	1.0
Price/ ABV	2.2	1.7	1.4	1.3	1.2
Dividend yield (%)	*1.2*	*1.9*	*2.5*	*2.8*	*3.1*
Price to income	6.2	5.8	5.0	4.4	3.9
Price to PPOP	6.0	6.0	4.6	3.9	3.2

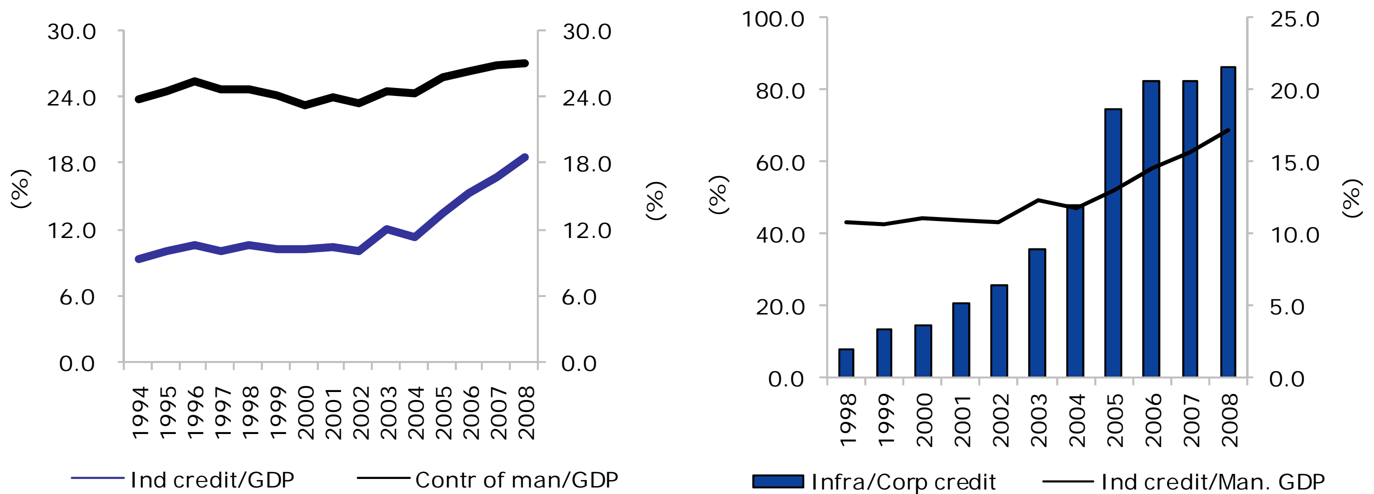
Annexure 1

Divergence in corporate credit and contribution to GDP indicate lag effect

Corporate debt/GDP, which was ~11.3% in FY03, is now at 17.3% and inching upwards, while contribution of manufacturing sector/GDP which was at 24.4% in FY03 has moved to 27%, implying a 16% CAGR compared with 22% CAGR rise in corporate debt. While the ratio is strictly not comparable, as this ratio is equivalent to comparing debt to sales, the primary reason of bringing this data is to show divergence in corporate growth and lag in finally reflecting in sales, especially when credit is being extended to sectors with longer gestation periods.

Is India Inc. investing in needless expansion creating a glut of future underperformance? We do not think so. First, the current credit expansion in the corporate segment will continue with drivers coming mainly from the infrastructure space (power, telecommunications, and roads and ports) where there is a substantial lag (in excess of three-five years) when it finally reflects in our GDP numbers. Second, our analysis of financials of India Inc. shows that companies are still in their prime despite slowing end user consumption and imported inflation, especially against the backdrop of strong expansion announcements by most corporate houses.

Chart 1: India Inc. still in investment phase; contribution to be back ended



Source: RBI, Edelweiss research

We expect a steady increase from current levels as segments that are driving corporate growth like infrastructure (power, roads, ports and telecommunications) are heavy on debt, but strong consumer demand will ensure that overall numbers remain within comfortable levels.

Table 1: Break up of credit **(INR bn)**

	FY05	FY06	FY07	FY08	Q1FY09
Non food credit	10,048	14,032	17,954	20,601	21,748
Agriculture and allied activities	1,243	1,739	2,302	2,418	2,648
Industry (Small, medium & large)	4,231	5,499	6,915	8,150	8,581
Food processing	244	308	396	483	505
Textiles	440	577	783	903	939
Paper & paper products	69	92	115	132	138
Petroleum, coal prod.& fuels	156	241	355	393	473
Chemical and chemical products	395	489	555	609	654
Rubber, plastic & their products	37	70	90	98	111
Iron and steel	360	504	633	723	788
Other metal & metal products	116	144	828	233	251
Engineering	294	347	434	512	526
Vehicles, parts and trans equip	119	187	207	264	300
Gems & jewelery	143	199	238	244	248
Construction	81	139	195	234	261
Infrastructure	790	1,088	1,431	1,882	2,033
Personal loans	2,563	3,601	4,555	5,037	5,280
Housing	1,339	1,852	2,307	2,517	2,625
Advances against fixed deposits	298	343	405	427	422
Credit cards	64	91	133	193	266
Education	57	100	150	205	214
Consumer durables	90	71	92	94	83
Services	2,011	3,193	4,182	4,996	5,232
Transport operators	84	173	264	320	352
Professional and other services	97	153	238	267	319
Trade	582	834	1,080	1,189	1,224
Real estate loans	135	267	453	539	610
Non banking financial companies	228	343	485	641	720

Source: RBI

Table 2: Break up of corporate credit

(INR mn)	1990	1991	1992	1993	1994	1995	1996	1997	1998
Industry	**538,050**	**616,890**	**652,400**	**786,620**	**804,820**	**1,023,100**	**1,249,370**	**1,385,480**	**1,610,380**
1 Coal and mining	1,780	2,290	2,460	3,400	4,570	4,750	4,880	6,350	17,760
2 Iron and steel	28,350	32,920	36,920	57,100	45,280	67,250	84,820	116,680	157,670
3 Other metals and metal products	18,380	22,270	23,120	26,790	31,990	34,710	39,770	52,760	51,930
4 All engineering of which:	125,090	139,310	148,420	170,940	171,270	211,600	256,210	226,840	228,330
Electronics	12,900	18,740	20,920	23,270	25,120	35,440	52,760	46,990	44,720
5 Electricity	12,580	11,520	12,980	14,040	14,250	19,840	27,030	35,060	46,520
6 Cotton textiles	36,590	40,730	42,780	46,450	48,020	59,070	75,920	80,530	93,310
7 Jute textiles	3,400	3,390	3,300	3,480	4,100	5,020	6,050	5,430	10,890
8 Other textiles	32,970	37,610	39,700	46,530	49,160	65,900	78,020	96,850	106,510
9 Sugar	6,470	6,390	8,990	12,560	13,700	29,500	32,990	25,470	29,590
10 Tea	5,710	6,080	6,580	7,820	9,220	11,060	13,130	8,140	10,280
11 Food processing	10,560	12,160	12,410	14,230	16,010	24,700	31,030	36,550	41,340
12 Vegetable oils(inc. vanaspati)	7,000	8,650	8,980	10,170	10,750	12,190	15,650	19,550	22,960
13 Tobacco and tobacco products	3,790	3,910	5,500	7,390	6,230	8,540	10,090	9,340	10,760
14 Paper and paper products	13,460	14,820	15,010	15,950	17,350	21,850	23,660	25,800	27,420
15 Rubber and rubber products	9,120	9,890	10,770	11,860	11,960	15,690	17,480	18,170	25,340
16 Chemicals, dyes, paints, etc.	67,850	77,430	82,800	101,170	100,340	127,970	164,500	153,930	181,200
i) Fertilisers	10,750	13,090	13,570	17,130	15,400	16,630	21,080	23,580	29,100
ii) Petro-chemicals	6,810	6,800	6,140	9,450	7,470	7,470	16,330	19,230	29,560
iii) Drugs and pharmaceuticals	10,130	9,870	11,270	13,090	14,390	18,340	23,670	36,720	52,190
17 Cement	8,430	8,990	9,860	11,030	12,170	15,150	17,440	19,180	25,020
18 Leather and leather products	9,310	9,980	10,860	10,950	12,790	18,480	22,790	22,250	24,780
19 Gems and jewellery	12,140	12,360	13,000	16,240	19,750	23,610	27,850	30,960	35,300
20 Construction	10,910	13,210	13,440	15,670	16,700	20,320	18,540	24,940	26,460
21 Petroleum	1,370	540	190	4,360	2,270	6,220	15,100	33,740	61,550
22 Automobiles including trucks	-	-	-	-	-	-	-	-	28,700
23 Computer software	-	-	-	-	-	-	-	-	6,160
24 Infrastructure	-	-	-	-	-	-	-	-	31,630
i) Power	-	-	-	-	-	-	-	-	6,970
ii) Telecommunications	-	-	-	-	-	-	-	-	20,450
iii) Roads and ports	-	-	-	-	-	-	-	-	4,210
25 Ships acquired (new scheme)	1,490	870	680	460	300	100	20	-	-
26 Other industries	111,300	141,570	143,650	178,030	186,640	219,580	266,400	336,960	308,970

(INR mn)	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Industry	**1,789,990**	**2,001,330**	**2,188,390**	**2,295,230**	**2,955,620**	**3,130,650**	**4,231,360**	**5,504,440**	**6,973,340**	**8,719,000**
1 Coal and mining	24,740	23,660	23,370	30,020	31,030	28,000	21,390	41,460	77,040	106,160
2 Iron and steel	182,910	187,990	194,060	200,420	280,650	262,950	357,420	509,910	638,770	722,900
3 Other metals and metal products	59,180	62,940	63,510	64,960	85,560	81,680	112,730	149,050	199,930	324,290
4 All engineering of which:	215,130	230,690	233,970	241,990	262,720	263,480	289,340	348,780	440,260	524,420
Electronics	48,720	51,330	52,910	59,410	78,310	84,210	91,140	110,040	135,110	160,240
5 Electricity	68,130	74,380	85,900	93,430	111,730	140,900	-	-	-	-
6 Cotton textiles	104,300	116,820	132,440	117,440	157,620	171,660	227,820	297,810	380,510	473,370
7 Jute textiles	8,440	8,940	8,440	7,370	8,600	10,510	9,100	10,530	9,670	10,550
8 Other textiles	120,000	130,030	120,120	134,550	150,750	159,410	194,460	245,770	357,750	428,620
9 Sugar	33,380	38,320	46,820	50,280	57,260	63,630	69,280	87,760	115,510	167,260
10 Tea	8,250	10,340	10,580	9,860	10,520	12,220	16,270	18,510	23,400	23,340
11 Food processing	47,500	59,860	63,540	72,850	85,770	98,720	240,250	309,460	399,990	502,210
12 Vegetable oils(inc. vanaspati)	27,100	29,580	28,760	27,290	29,190	32,190	35,910	50,770	61,110	71,910
13 Tobacco and tobacco products	10,050	9,930	9,630	8,610	7,560	8,910	19,430	40,020	47,740	56,410
14 Paper and paper products	29,380	31,430	34,680	37,410	50,490	59,900	68,630	91,480	115,880	136,220
15 Rubber and rubber products	20,140	20,630	21,950	22,460	26,620	25,930	39,660	72,500	92,500	104,100
16 Chemicals, dyes, paints, etc.	199,290	234,400	240,650	259,880	318,050	306,290	390,210	486,380	557,740	643,910
i) Fertilisers	35,770	45,770	52,330	54,630	69,230	62,490	81,650	105,690	98,370	92,510
ii) Petro-chemicals	47,480	61,850	61,150	66,630	77,350	72,210	71,770	69,650	83,160	95,160
iii) Drugs and pharmaceuticals	53,230	56,930	53,890	63,930	78,920	86,670	123,350	162,730	185,840	232,860
17 Cement	27,460	36,240	38,420	42,240	64,310	56,890	80,050	77,990	93,890	142,100
18 Leather and leather products	25,420	26,640	27,640	28,520	29,400	31,670	32,640	44,860	47,740	57,500
19 Gems and jewelery	41,240	54,060	65,810	64,560	75,330	91,780	141,560	205,590	238,500	249,950
20 Construction	25,690	27,360	31,750	40,000	48,910	59,780	83,210	133,030	199,700	282,980
21 Petroleum	55,160	89,690	115,720	113,200	147,430	122,660	152,610	251,500	358,860	417,380
22 Automobiles including trucks	31,280	40,280	44,090	44,540	56,290	53,020	120,450	186,280	209,220	291,520
23 Computer software	7,470	10,220	12,230	16,650	26,110	30,290	27,600	36,370	51,560	81,630
24 Infrastructure	59,410	72,430	113,490	148,090	262,970	372,240	789,990	1,128,530	1,429,750	2,022,960
i) Power	21,090	32,890	52,460	73,730	150,420	196,550	382,350	601,570	728,160	938,990
ii) Telecommunications	22,730	19,920	36,440	39,720	57,790	84,080	157,050	184,550	194,460	371,210
iii) Roads and ports	15,590	19,620	24,590	34,640	54,760	91,610	145,000	196,950	249,410	329,900
25 Ships acquired (new scheme)	-	-	-	-	-	-	-	-	-	
26 Other industries	358,940	374,470	420,820	418,610	570,750	604,580	845,060	809,750	981,610	152,140

Source: RBI

Infrastructure lending definition

Any credit facility in whatever form extended by lenders (i.e., banks, FIs or NBFCs) to an infrastructure facility, as specified below, falls within the definition of "infrastructure lending". In other words, a credit facility provided to a borrower company engaged in:

- developing or
- operating and maintaining, or
- developing, operating and maintaining any infrastructure facility that is a project in any of the following sectors, or any infrastructure facility of a similar nature:
    - Road, including toll road, a bridge or a rail system.
    - Highway project including other activities being an integral part of the highway project.
    - Port, airport, inland waterway, or inland port.
    - Water supply project, irrigation project, water treatment system, sanitation and sewerage system or solid waste management system.
    - Telecommunication services whether basic or cellular, including radio paging, domestic satellite service (i.e., a satellite owned and operated by an Indian company for providing telecommunication service), network of trunking, broadband network and internet services; an industrial park or special economic zone.
    - Generation or generation and distribution of power.
    - Transmission or distribution of power by laying a network of new transmission or distribution lines.
    - Construction relating to projects involving agro-processing and supply of inputs to agriculture.
    - Construction for preservation and storage of processed agro-products, perishable goods such as fruits, vegetables, and flowers including testing facilities for quality.
    - Construction of educational institutions and hospitals.
    - Other infrastructure facility of similar nature.

Infrastructure investments to touch INR 5.8 tn by FY12E

According to Planning Commission report, investments in infrastructure projects are expected to grow by 22% CAGR in FY08-12E to INR 5,853 bn. Of this, ~50% will be funded through equity issuances/internal borrowings and the balance by debt. Investments from the private sector will touch INR 1,791 bn by FY12E, of which 70% will have to be funded via debt. We continue to remain positive on the corporate credit growth story and believe that banks will benefit from the strong expansion in credit.

Table 3: Break-up of investment by the Planning Commission

(INR bn)	FY08E	FY09E	FY10E	FY11E	FY12E
Electricity	742	928	1,165	1,469	1,860
Roads	514	543	587	679	795
Telecom	331	398	503	634	804
Railways	332	400	486	597	765
Irrigation	270	338	426	539	657
Water Supply and Sanitation	258	311	379	466	578
Ports	97	117	143	174	208
Airports	62	65	68	73	80
Storage	38	41	44	48	52
Gas	30	35	40	47	54
Total	**2,674**	**3,176**	**3,842**	**4,726**	**5,853**
Central and state govt	1,912	2,260	2,717	3,301	4,061
Internal generation/Equity	1,134	1,352	1,639	2,008	2,488
Borrowings	778	908	1,079	1,293	1,573
Private	762	916	1,125	1,425	1,792
Internal generation/Equity	228	275	337	428	538
Borrowings	533	641	787	998	1,254

Source: Planning Commission

Table 4: Thermal project commissioning schedule (updated as of Oct, 08)

S.No	Name of the project	Company	Capacity (MW)	Cost (INR mn) Original	Revised	Disbursed	Pending	Last update	Commissioning Date Original	Revised	Delay (Days)
1	Sagardighi TPP	WB Power Develop Corp		20,571	27,500	28,074	(574)	Dec-07	Jan-07	Jul-08	547
	Unit 1		300						Apr-07	Oct-08	549
	Unit 2		300								
2	Santalidh TPP	WB Power Develop Corp	250	9,100	9,100	9,200	(100)	Dec-07	Jul-09	Jul-09	-
3	Bakreshwar TPS Extn	WB Power Develop Corp		15,230	21,000	13,710	7,290	Dec-07			
	Unit 4		210						Mar-07	Aug-08	519
	Unit 5		210						Jun-07	Dec-08	549
4	Budge Budge	CESC	250	10,680	10,680	1,133	9,548	Aug-07	Jun-09	Sep-09	92
5	Sterlite TPP	Sterlite		76,690	76,690	7,447	69,243	Oct-07			
	Unit 1		600						Feb-09	Jun-09	120
	Unit 2		600						May-09	NA	
	Unit 3		600						Aug-09	NA	
	Unit 4		600						Nov-09	NA	
6	Valuthur GTPP	TNEB		3,555	3,555	2,850	705	Jun-08			
	GT		60						Dec-07	Aug-08	244
	ST		32						Mar-08	Aug-08	153
7	North Chennai	TNEB	600	33,980	33,980		33,980	Apr-08	May-11	May-11	-
8	Mettur TPP	TNEB	600	26,770	26,770		26,770	Jun-08	Sep-11	Sep-11	-
9	Bellary TPP Unit 1	Karnataka Power Corp	500	21,000	21,000	18,426	2,574	May-08	Mar-07	Aug-08	519
10	Bellary TPP Unit 2	Karnataka Power Corp	500	20,960	21,700	1,679	20,021	May-08	Nov-11	Nov-11	-
11	Raichur TPP	Karnataka Power Corp	250	9,250	9,860	1,982	7,878	May-08	Sep-09	Sep-09	-
12	Udupi TPP	Udupi Power Corp	1,015	54,960	42,990	10,127	32,863	May-08			
	Unit 1		508						May-10	May-10	-
	Unit 2		508						Sep-10	Sep-10	-
13	Torangallu Ex. Prj	JSW Energy		18,600	18,600	11,671	6,929	Jun-08			
	Unit 1		300						Sep-08	Jan-09	122
	Unit 2		300						Dec-08	Apr-09	121
14	Rayalseema TPP Unit 5	APGENCO	210	9,960	9,980	720	9,260	Mar-08	Aug-09	Nov-09	92
15	Kothagudem TPS	APGENCO	500	21,640	22,030	1,530	20,500	Jan-08	Mar-10	May-10	61
16	Dr. NT Roa TPS	APGENCO	500	21,000	21,000	10,630	10,370	Jan-08	Nov-08	Feb-09	92
17	Kakatia TPP	APGENCO	500	20,594	20,770	8,310	12,460	Jan-08	Apr-09	Aug-09	122
18	Konaseema CCPP	Konaseema Gas Power		13,830	18,040	15,689	2,352	Jan-08			
	GT 1		140						Nov-05	Nov-08	1,096
	GT 2		140						Feb-06	Nov-08	1,004
	ST		165						Mar-06	Dec-08	1,006
19	Gautami CCPP	GVK Gautami Power		14,500	18,315	15,048	3,266	Jan-08			
	GT 1		145						Feb-06	Dec-08	1,034
	GT 2		145						Feb-06	Dec-08	1,034
	ST		174						Jul-06	Dec-08	884
20	New Parli TPP	MSPGCL	250	10,910	10,910	2,404	8,506	May-08	Jun-09	Jun-09	-
21	Paras TPS Exp	MSPGCL	250	12,400	12,400	2,404	9,996	May-08	Aug-09	Aug-09	-
22	Kahaperkeda TPS	MSPGCL	250	21,700	21,700	1,507	20,193	May-08	Jun-10	Jun-10	-
23	Bhusawal TPS	MSPGCL		41,240	41,240	1,965	39,276	May-08			
	Unit 1		500						Jun-10	Jun-10	-
	Unit 2		500						Jun-10	Jun-10	-
24	Trombay TPS	TPCL	250	9,900	10,660	5,860	4,800	Jan-08	Oct-08	Oct-08	-
23	JSW Ratnagiri	JSW Energy		45,000	45,000	4,180	40,820	May-08			
	Unit 1		300						Aug-10	Aug-10	-
	Unit 2		300						Nov-10	Nov-10	-
	Unit 3		300						Feb-11	Feb-11	-
	Unit 4		300						May-11	May-11	-
24	Satpura										
	Unit 10	MPPGCL	250						Feb-11	Feb-11	-
	Unit 11		250						May-11	May-11	-
25	Kutch Lignite	GSECL	75	4,300	4,900	4,540	360	May-08	Oct-06	Oct-08	731
26	Surat Lignite	GIPCL		14,559	14,559	7,964	6,594	May-08			
	Unit 3		125						Nov-08	May-09	181
	Unit 4		125						Mar-09	May-09	61

S.No	Name of the project	Company	Capacity (MW)	Cost (INR mn) Original	Revised	Disbursed	Pending	Last update	Commissioning Date Original	Revised	Delay (Days)
27	Sikka TPS	GSECL		19,370	22,550	15,500	7,050	May-08			
	Unit 3		250						Apr-10	Apr-10	-
	Unit 4		250						Aug-10	Aug-10	-
28	Ukai TPS	GSECL	490	19,370	22,100	1,175	20,925	May-08	Mar-11	Mar-11	-
29	Ultran TPS	GSECL		13,365	12,150	2,950	9,200	May-08			
	GT		228						Jun-09	Jun-09	-
	ST		146						Aug-09	Aug-09	-
30	Sugen Gas Based CCPP	TPGL		30,960	32,170	23,130	9,040	May-08			
	Block 1		376						Oct-07	Sep-08	336
	Block 2		376						Jan-08	Feb-09	397
	Block 3		376						Mar-08	Apr-09	396
31	Mundra TPP	Adani Power		101,460	101,460	23,646	77,814	Mar-08			
	Unit 1		330						May-09	May-09	-
	Unit 2		330						Jul-09	Jul-09	-
	Unit 3		330						Feb-10	Feb-10	-
	Unit 4		330						May-10	May-10	-
	Unit 5		660						Jul-11	Jul-11	-
	Unit 6		660						Dec-11	Dec-11	-
35	Neyveli TPS II	Neyveli Lignite		20,308	24,536	13,095	11,441	Jun-08	Feb-09	Sep-09	212
	Unit 1		250						Jun-09	Dec-09	183
	Unit 2		250								
36	Barsingar Lignite	Neyveli Lignite		11,142	11,142	2,881	8,261	Mar-08	Dec-08	Apr-09	121
	Unit 1		125						Jun-09	Aug-09	61
	Unit 2		125								
37	Sipat SSTPI	NTPC		103,432	103,432	63,448	39,984	May-08			
	Unit 1		660						Jul-08	Jul-09	365
	Unit 2		660						May-09	May-10	365
	Unit 3		660						Mar-09	Mar-10	365
	Unit 5		500						Aug-08	Dec-08	122
38	Bhilai Expn	Sail-NTPC		24,825	26,905	11,720	15,185	Mar-08			
	Unit 1		250						Apr-08	Jul-08	91
	Unit 2		250						Nov-08	Dec-08	30
39	Korba	NTPC	500	24,485	24,485	8,818	15,667	Apr-08	May-10	May-10	-
40	Kahalagoan STPS	NTPC		58,684	58,684	41,862	16,822	Mar-08			
	Unit 5		500						Nov-06	Aug-08	639
	Unit 6		500						May-07	Oct-08	519
	Unit 7		500						Sep-08	Jan-09	122
41	National Capital	NTPC		51,353	51,353	14,627	36,726	May-08			
	Unit 5		490								
	Unit 6		490								
42	Barh STPP	NTPC		90,929	86,930	27,701	59,229	May-08			
	Unit 1		660						Mar-09	Jan-11	671
	Unit 2		660						Oct-10	Jul-11	273
	Unit 3		660						Nov-10	Jan-12	426
43	Farakka	NTPC	500	25,704	25,704	5,557	20,148	May-08	Nov-06	Aug-10	1,369
44	Simhadri STPP	NTPC		51,034	51,034	44,977	6,057	May-08			
	Unit 3		500						Mar-11	Mar-11	-
	Unit 4		500						Sep-11	Sep-11	-
45	Indira Gandhi STPP			82,930	82,930	10,815	72,115	May-08			
	Unit 1		500								
	Unit 2		500								
	Unit 3		500								
46	Vallur	NTPC		54,236	55,528	3,816	51,712	May-08			
	Unit 1		500						Feb-11	Feb-11	-
	Unit 2		500						Aug-11	Aug-11	-
47	Hazira CCGT	Essar Power	1,500								
	Block 1										
	Block 2										
	Total		**35,058**	**1,366,464**	**1,388,020**	**504,766**	**883,255**				

Source: CEA

Table 5: Hydel project commissioning schedule (updated as of Oct, 08)

S.No	Name of the project	State	Company	Capacity (MW)	Cost (INR mn) Original	Revised	Commissioning Date Original	Revised
1	Maheshwar	Uttaranchal	SMHPCL	400	15,693	24,492	Dec-02	Dec-12
2	Baglihar	J&K	JKSPDC	450	34,950	52,000	Dec-05	Dec-09
3	Koteshwar	Uttaranchal	THDC	400	13,016	13,016	Dec-06	Dec-11
4	Shrinagar	Uttaranchal	GVK Industries	330	16,991	20,690	Dec-06	Dec-12
5	Teesta Low Dam III	West Bengal	NHPC	132	7,689	10,733	Dec-07	Dec-10
6	Priyadarshini Jurala	AP	APGENCO	234	5,470	5,470	Dec-06	Dec-08
7	Kuttiyadi Addl Extn	Kerala	KSEB	100	2,205	1,683	Dec-07	Dec-10
8	Bhawani Kattalai II	Tamilnadu	NA	30	992	4,006	Dec-07	Dec-10
9	Bhawani Kattalai III	Tamilnadu	NA	30	992	3,986	Dec-07	Dec-10
10	Myntdu	Meghalaya	MeSEB	84	2,850	6,713	Dec-07	Dec-10
11	Sewa II	J&K	NHPC	120	6,655	8,500	Dec-08	Dec-10
12	Uhl III	HP	HPSEB	100	4,316	4,316	Dec-08	Dec-10
13	Allain Duhangan	HP	AD Hydro Power	192	9,224	9,224	Dec-08	Dec-10
14	Nagarjuna Sagar	AP	APGENCO	50	3,576	4,647	Dec-09	Dec-10
15	Varahi	Karnataka	KPCL	230	3,070	2,910	Dec-09	Dec-09
16	Karcham Wangtoo	HP	Jaypee Karcham	1,000	59,096	59,096	Dec-09	Dec-12
17	Budhil	HP	Lanco Green Power	70	4,188	4,188	Dec-09	Dec-09
18	Malana II	HP	Everst Power	100	5,980	5,980	Dec-09	Dec-09
19	Parbhati II	HP	NHPC	800	39,196	35,253	Dec-10	Dec-11
20	Kol Dam	HP	NTPC	800	45,272	45,272	Dec-10	Dec-10
21	Uri II	HP	NHPC	240	17,248	13,519	Dec-10	Dec-11
22	Teesta Low Dam IV	West Bengal	NHPC	160	10,614	10,614	Dec-10	Dec-11
23	Kameng	AP	NEEPCO	600	24,969	24,969	Dec-10	Dec-12
24	Chujachen	Sikkim	Gati Infrastructure	99	4,488	4,488	Dec-10	Dec-10
25	Chamera III	HP	NHPC	231	14,056	15,325	Dec-11	Dec-11
26	Parbati III	HP	NHPC	520	23,046	21,299	Dec-11	Dec-11
27	Chutak	J&K	NHPC	44	6,213	9,471	Dec-11	Dec-12
28	Nimoo Bazgo	J&K	NHPC	45	6,110	7,240	Dec-11	Dec-12
29	Subansiri Lower	Assam	NHPC	2,000	62,853	74,520	Dec-11	Dec-13
30	Swara Kuddu	HP	Pabbar Valley Corp	110	6,480	6,480	Dec-11	Dec-11
31	Paalivasal	Kerala	KSEB	60	4,710	4,710	Dec-11	Dec-11
32	Ram Pur (SJVNL)	HP	SJVNL	412	20,470	20,470	Dec-12	Dec-12
33	Loharinagpala	Uttaranchal	NTPC	600	28,951	28,951	Dec-11	Dec-12
34	Tapovan Vishnugad	Uttaranchal	NTPC	520	28,108	29,785	Dec-12	Dec-12
35	Lower Jurala	AP	APGENCO	240	9,084	9,084	Dec-12	Dec-12
36	Pulichintala	AP	APGENCO	120	3,800	3,800	Dec-12	Dec-13
37	Teesta III	Sikkim	Teesta Urja	1,200	57,056	57,056	Dec-12	Dec-12
38	Teesta IV	Sikkim	Lanco	500	32,831	32,831	Dec-13	Dec-13
39	Rangit IV	Sikkim	Jal Power	120	7,262	7,262	Dec-13	Dec-13
40	New Umtru	Meghalaya	MeSEB	40				
41	Sorang	HP	Himachal Sorang	100			Dec-13	Dec-13
	Total			**13,613**	**649,765**	**704,044**		

Source: CEA

Food processing

Table 6: Key characteristics

Loan book (INR bn)	502
% of total credit	2.3
Number of companies covered (Nos)	150
Average PAT margin for FY97-08	3.8
RBI reported credit growth CAGR FY97-08 (%)	26.9

Source: RBI, Capitaline, Edelweiss research

Chart 2: Share of credit maintained since the last cycle

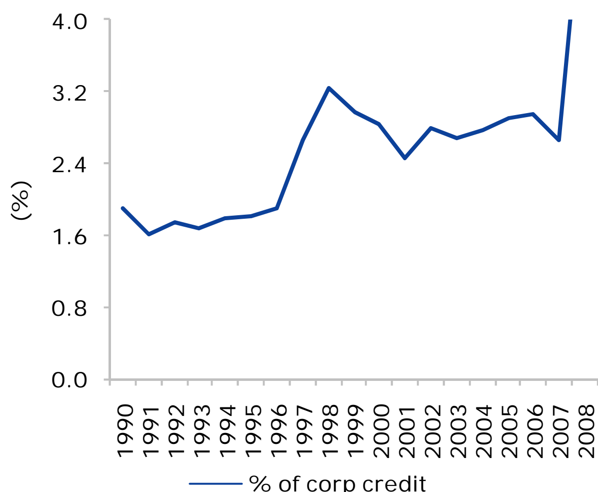


Chart 3: Companies with D/E above 1 and ICOR below 2

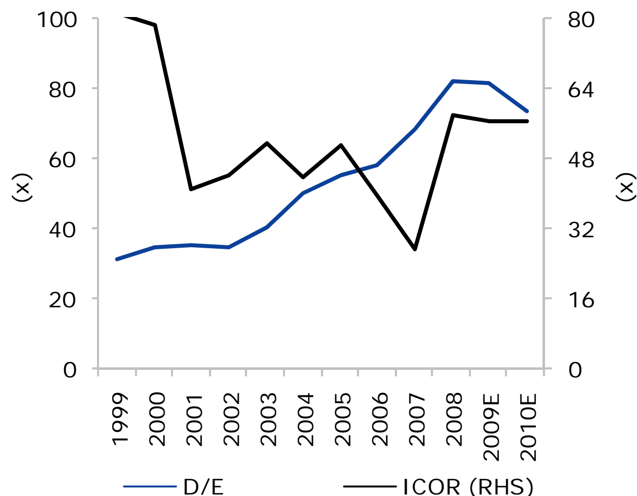


Chart 4: Consolidated financial performance

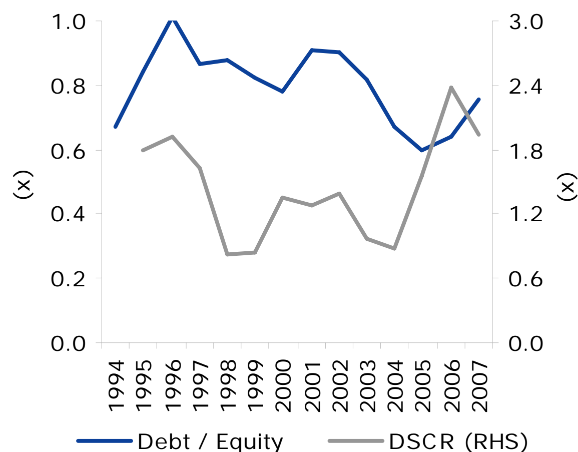
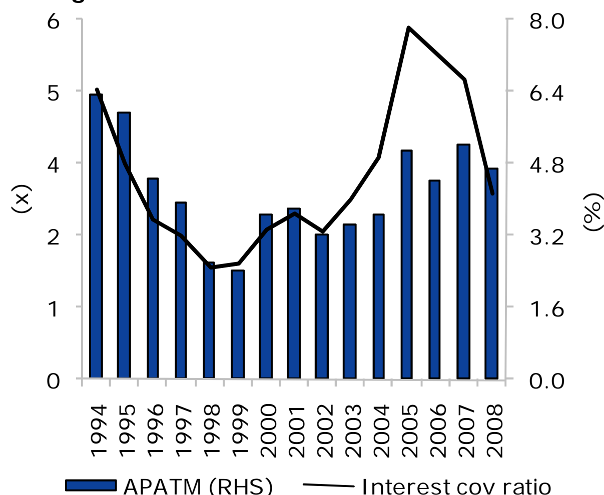


Chart 5: Improving margins and comfortable coverage



Source: Capitaline, Edelweiss research

Telecommunications

Our telcom analyst, Devyani Javeri believes that the fundamentals are on a strong footing with low penetration and increasing affordability drive subscriber growth, thereby providing visibility to revenue growth. Despite aggressive capex plans, companies seem to be adequately funded. We are comfortable with net debt/equity (<0.4x), and interest coverage ratios (at 24.0x for Bharti). Interest coverage ratio is low for Idea at ~2.0x (Q1FY09) and for RCOM at ~4.0x (FY09E). However, both companies currently have adequate cash to fund their immediate expansion plans. PSUs have adequate funds to support their expansion plans given their strong cash in books. Of the new telecos, while some like Swan Telecom have raised funds via equity, we have no visibility on the sources of funding secured by others.

Table 7: Key characteristics

Loan book (INR bn)	371
% of total credit	1.7
Number of companies covered (Nos)	65
Average PAT margin for FY98-08	10.2
RBI reported credit growth CAGR FY98-08 (%)	33.6

Source: RBI, Capitaline, Edelweiss research

Chart 6: Share of credit has steadily increased

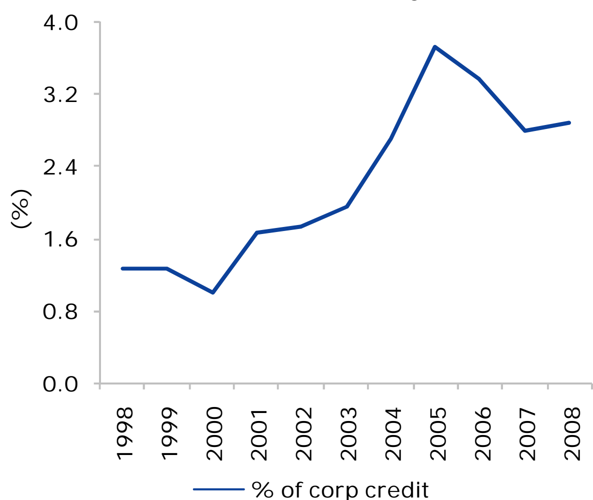


Chart 7: Companies with D/E >1 and ICOR <2

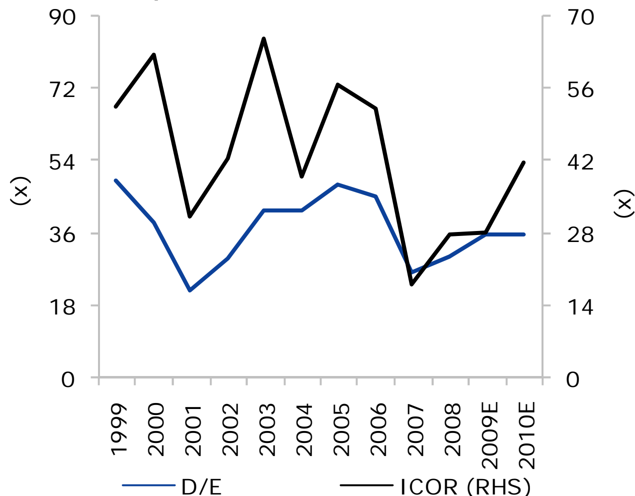


Chart 8: Consolidated Industry level are comfortable

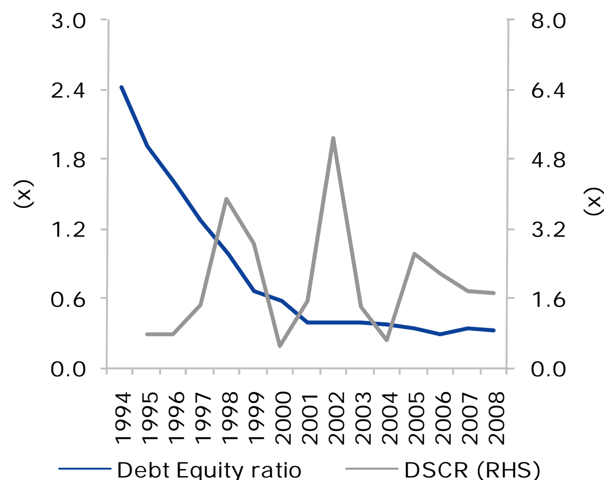
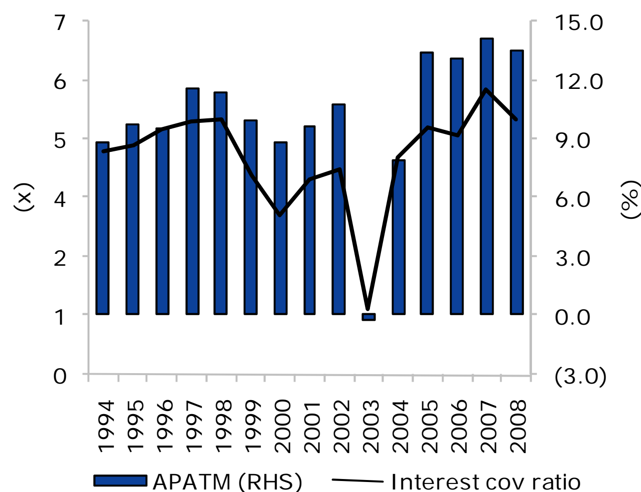


Chart 9: Margins and coverage ratios are strong



Source: Capitaline, Edelweiss research

Construction

Outlook: Sliding margins and rise in interest costs

The outlook is challenging due to twin pressures of sliding margins and rising interest costs. Consequently, earnings growth remains difficult in the near-to-medium term. Further, companies with BOT and real estate exposure are facing a tough time achieving financial closure for their projects. We believe banks at best are funding higher working capital requirements, albeit at increased rates, and are extremely cautious in funding BOT/real estate projects.

Table 8: Key characteristics

Loan book (INR bn)	283
% of total credit	1.3
Number of companies covered (Nos)	150
Average PAT margin for FY97-08	3.5
RBI reported credit growth CAGR FY97-08 (%)	24.7

Source: RBI, Capitaline, Edelweiss research

Table 9: Exposure amongst banks

	Fund based (INR bn)	Non fund based (INR bn)	Exposure (INR bn)	Fund based (%)	Total (%)
Axis Bank	35	1	36	3.8	3.2
Indian Overseas Bank	19	-	19	3.1	3.1
ICICI Bank	42	68	110	1.2	2.3
Punjab National Bank	25	6	32	2.1	2.1
State Bank of India	88	32	121	1.4	1.5

Source: Company, Edelweiss research

Chart 10: Steady rise in construction credit

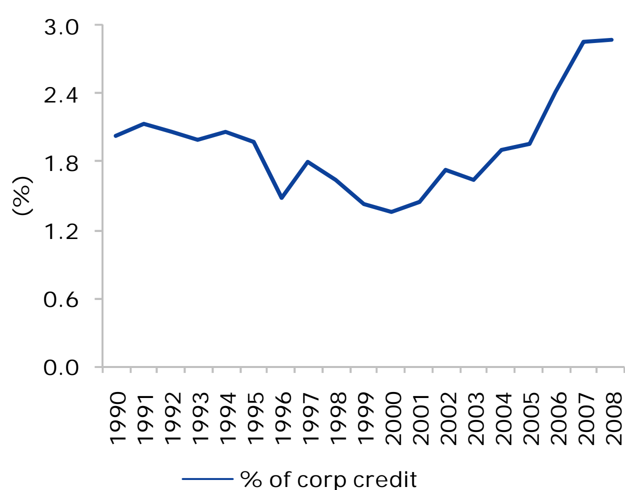


Chart 11: Companies with D/E >1 and ICOR < 2

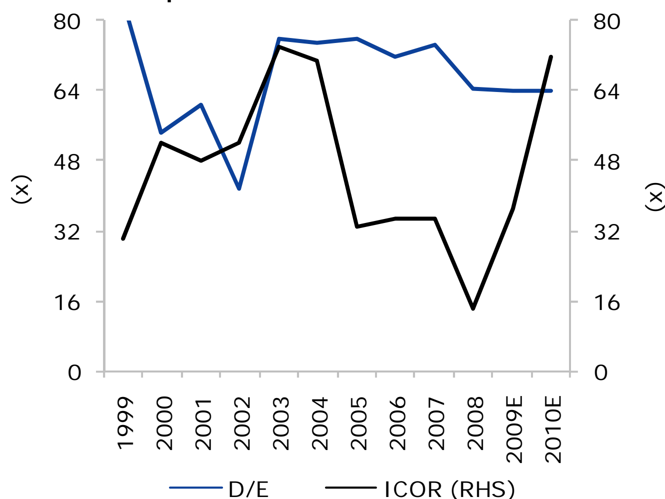


Chart 12: Leverage is expected to increase

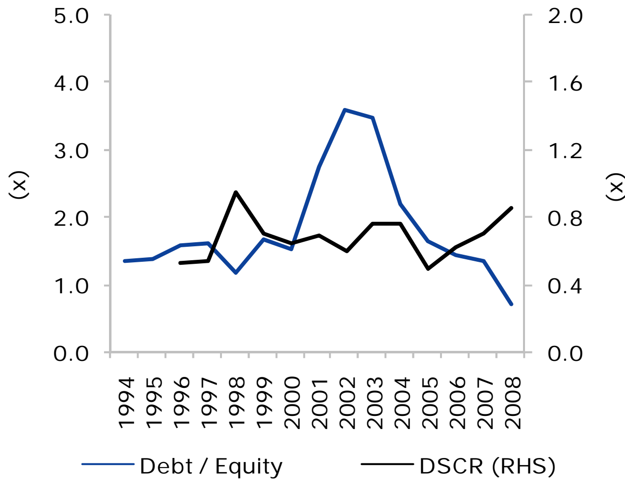
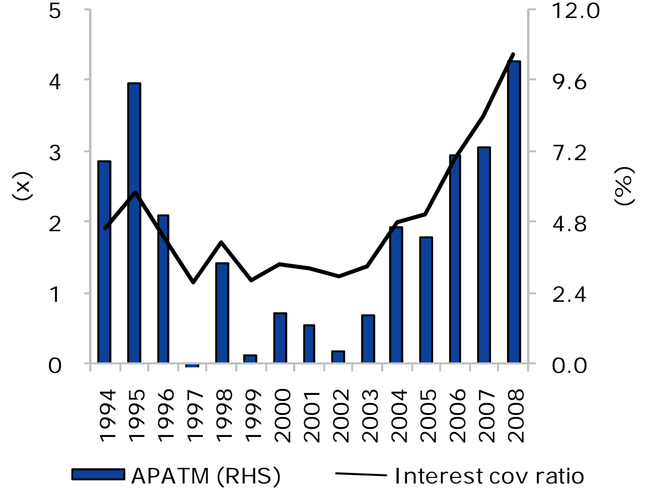
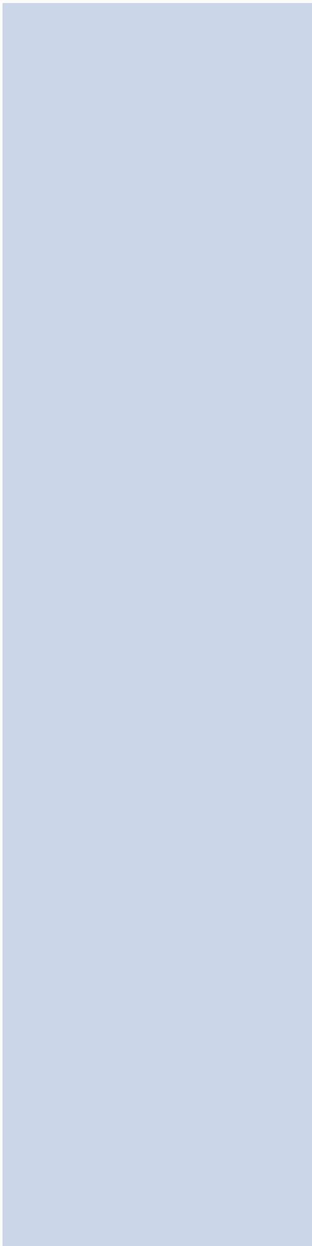


Chart 13: Margins and coverage ratios are sound



Source: Capitaline, Edelweiss research



Engineering

Table 10: Key characteristics

Loan book (INR bn)	524
% of total credit	2.4
Number of companies covered (Nos)	150
Average PAT margin for FY97-08	3.1
RBI reported credit growth CAGR FY97-08 (%)	7.9

Source: RBI, Capitaline, Edelweiss research

Table 11: Exposure amongst banks

	Fund based (INR bn)	Non fund based (INR bn)	Exposure (INR bn)	Fund based (%)	Total (%)
ICICI Bank	58	181	238	1.7	5.1
Punjab National Bank	34	27	61	2.8	4.0
State Bank of India	176	110	286	2.9	3.7
Indian Overseas Bank	15	-	15	2.5	2.5
Axis Bank	10	6	16	1.1	1.4

Source: Company, Edelweiss research

Chart 14: Share of credit is falling with strong financials

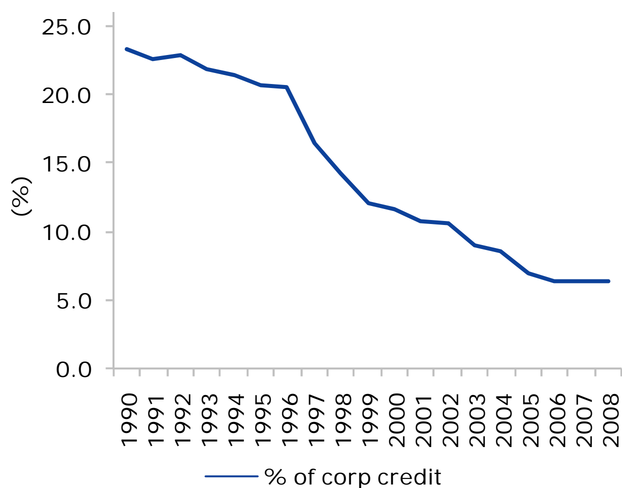


Chart 15: Companies with D/E >1 and ICOR <2

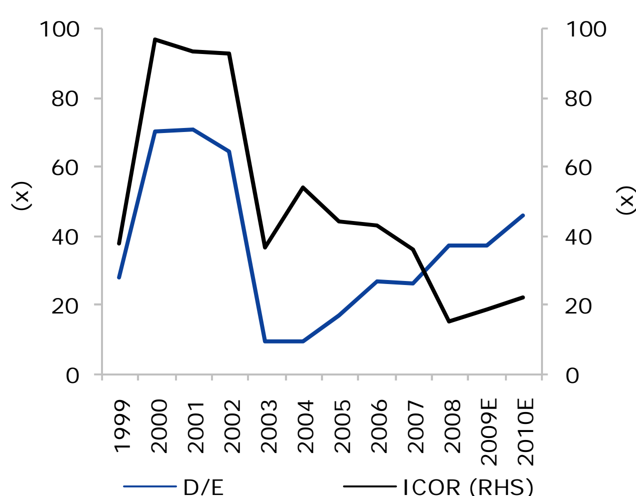


Chart 16: Consolidated financial snapshot

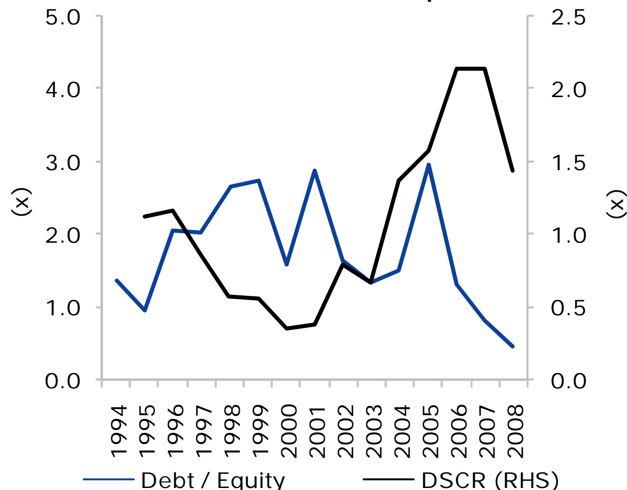
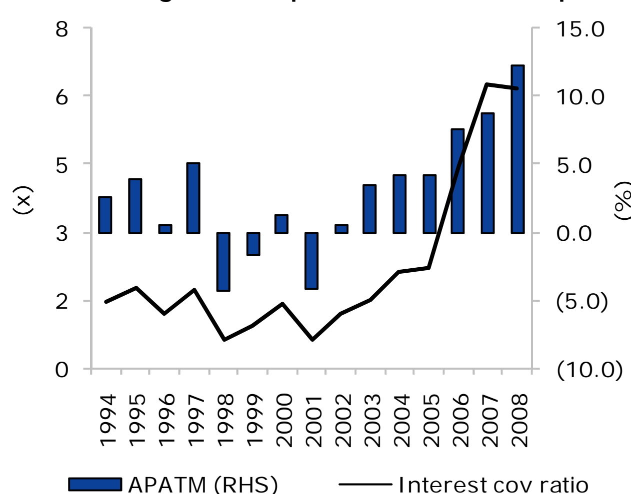


Chart 17: Margins are expected to come under pressure



Source: Capitaline, Edelweiss research

Petroleum and Petro Chemicals

Table 12: Key characteristics

Loan book (INR bn)	513
% of total credit	2.3
Number of companies covered (Nos)	50
Average PAT margin for FY97-08	6.5
RBI reported credit growth CAGR FY97-08 (%)	22.0

Source: RBI, Capitaline, Edelweiss research

Chart 18: Steady increase in share of credit

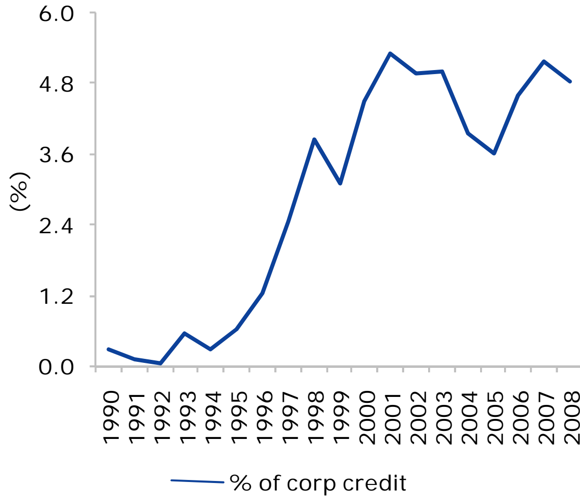


Chart 19: Companies with D/E > 1 and ICOR < 2

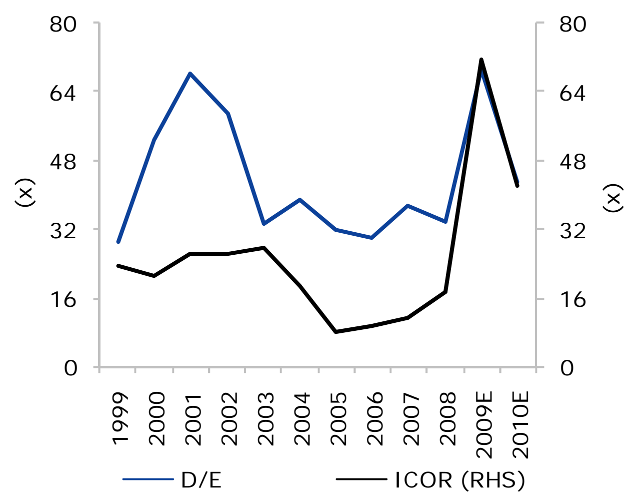


Chart 20: Consolidated industry level

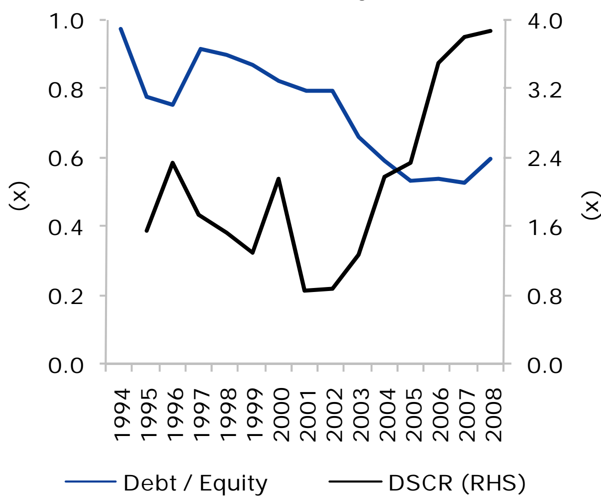
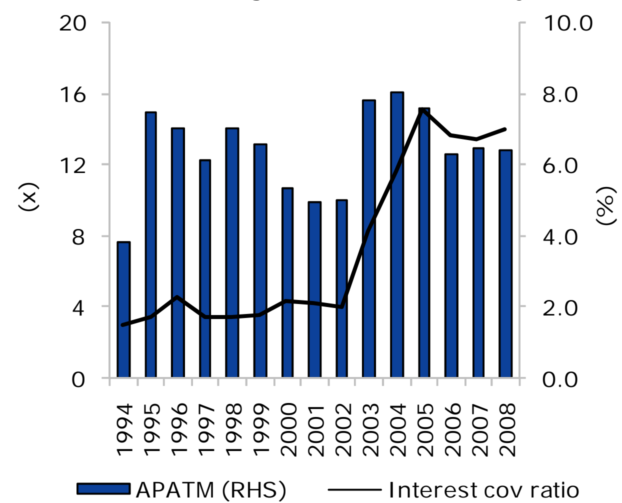


Chart 21: Stable margins across business cycles



Source: Capitaline, Edelweiss research

Leather

Table 13: Key characteristics

Loan book (INR bn)	58
% of total credit	0.3
Number of companies covered (Nos)	40
Average PAT margin for FY97-07	1.0
RBI reported credit growth CAGR FY97-08 (%)	9.0

Source: RBI, Capitaline, Edelweiss research

Chart 22: Steady decline in share of credit from FY95

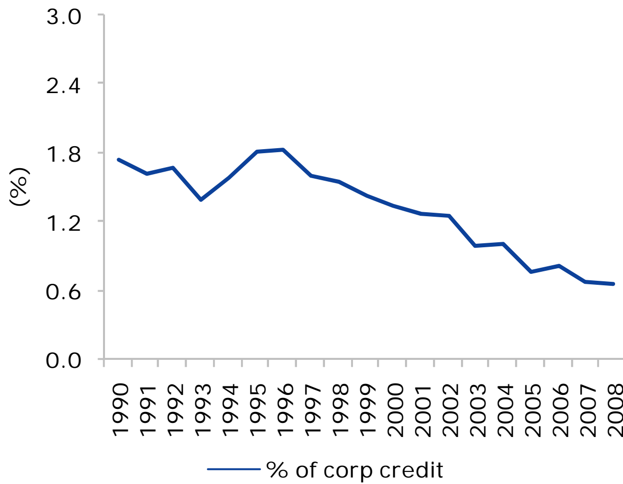


Chart 23: Companies with D/E >1 and ICOR < 2

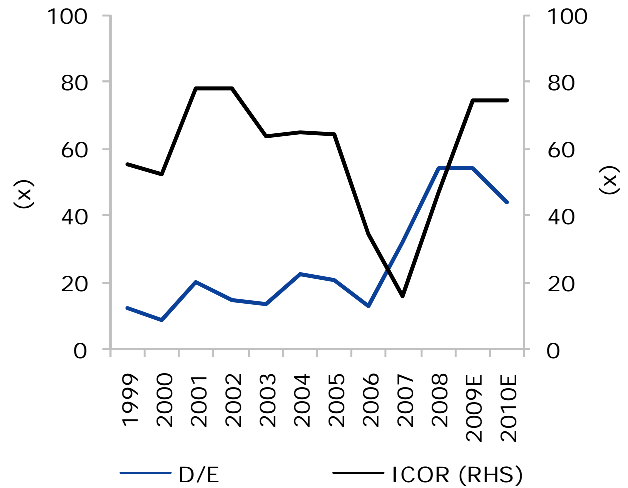


Chart 24: Consolidated industry snapshot

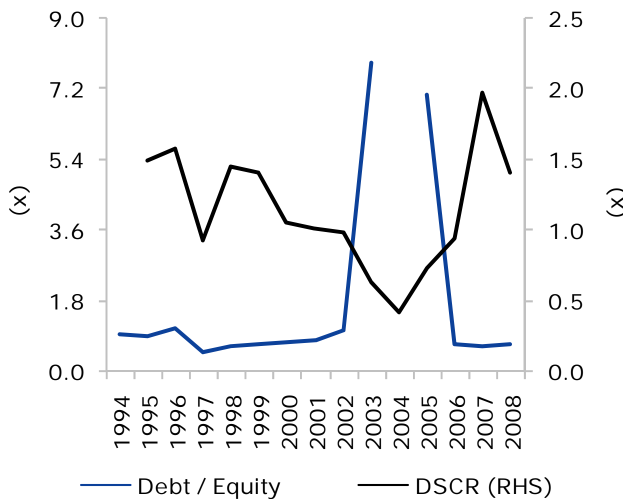
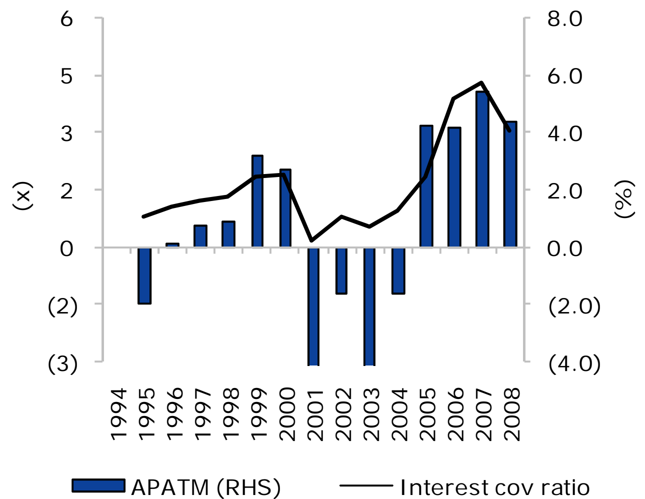


Chart 25: Weak demand outlook can impact profitability



Source: RBI, Capitaline, Edelweiss research

Pharmaceuticals

Table 14: Key characteristics

Loan book (INR bn)	233
% of total credit	1.1
Number of companies covered (Nos)	225
Average PAT margin for FY97-08	8.4
RBI reported credit growth CAGR FY97-08 (%)	18.3

Source: RBI, Capitaline, Edelweiss research

Chart 26: Share of credit has been maintained

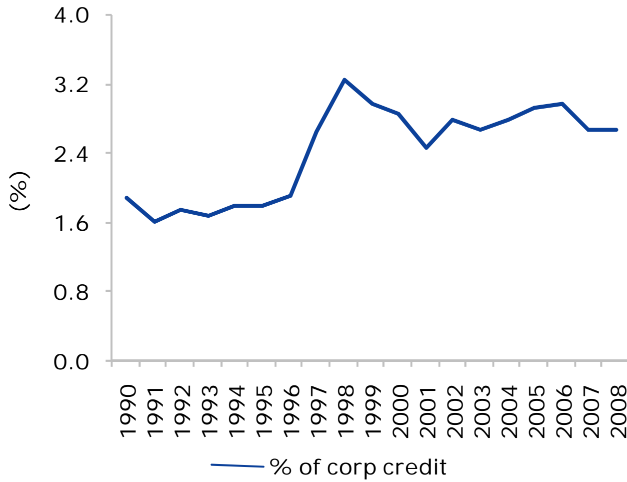


Chart 27: Companies with D/E > 1 and ICOR < 2

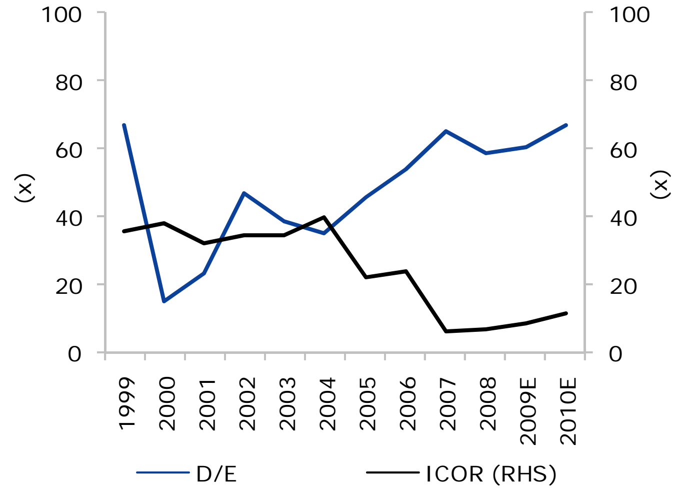


Chart 28: Leverage ratio is comfortable

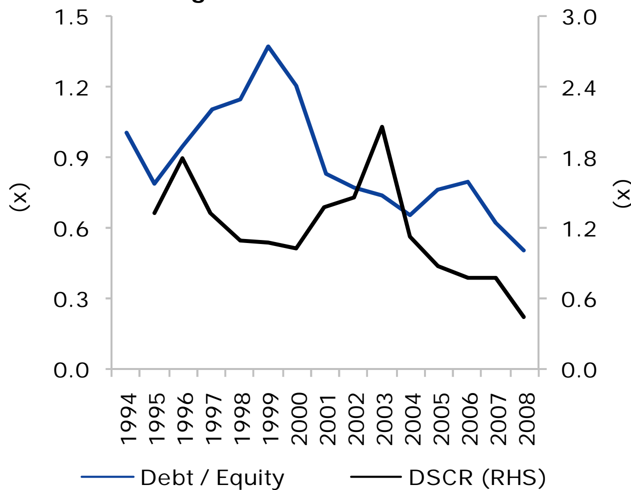
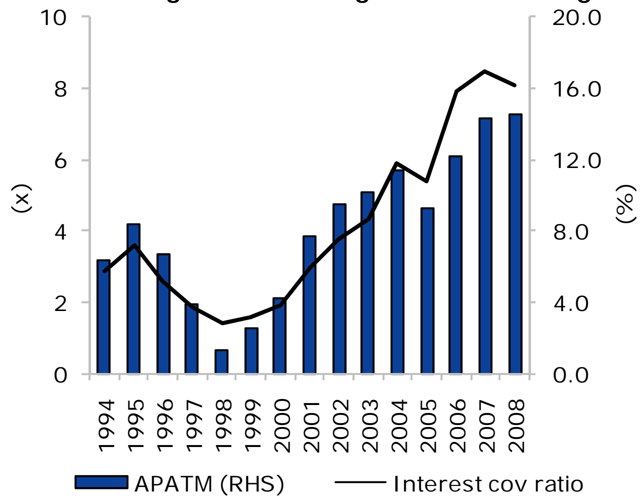


Chart 29: Margins and coverage ratios are strong



Source: Capitaline, Edelweiss research

Rubber

Table 14: Key characteristics

Loan book (INR bn)	104
% of total credit	0.5
Number of companies covered (Nos)	40
Average PAT margin for FY97-08	2.3
RBI reported credit growth CAGR FY97-08 (%)	17.2

Source: RBI, Capitaline, Edelweiss research

Chart 30: Decline in consumption from FY05

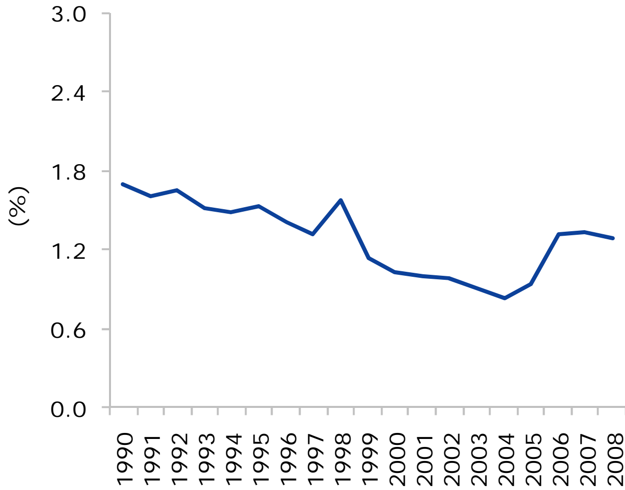


Chart 31: Companies with D/E > 1 and ICOR < 2

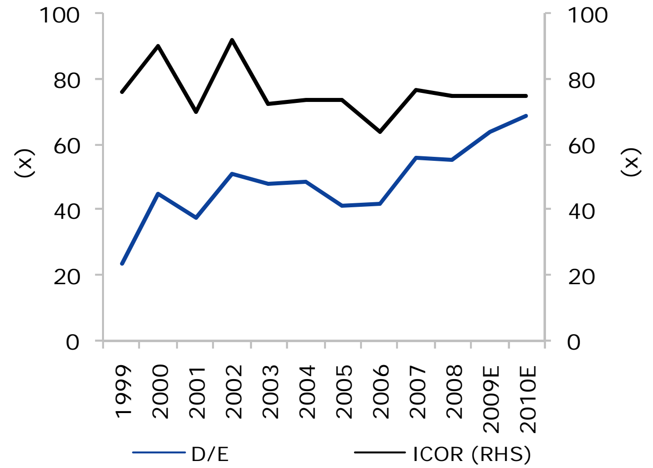


Chart 32: Leverage ratio is steadily increasing

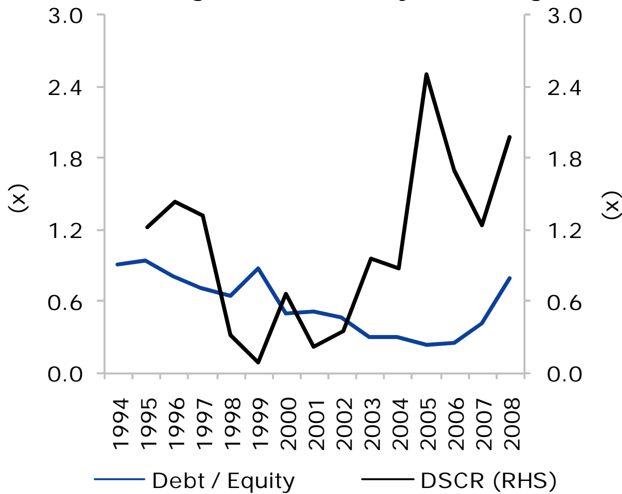
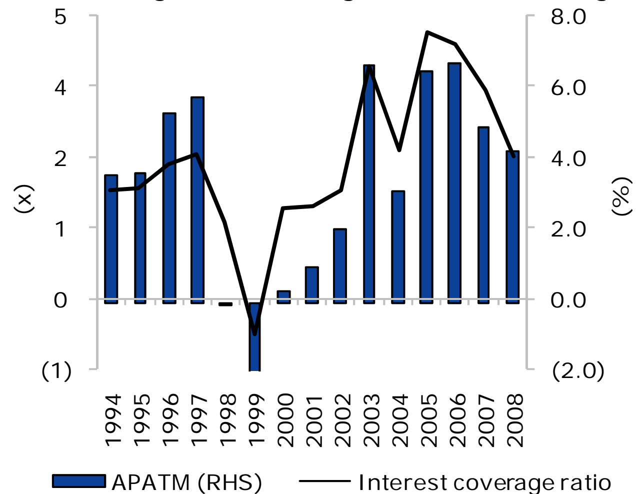


Chart 33: Margins and coverage ratios are declining



Source: RBI, Capitaline, Edelweiss research

Table 15: Key assumptions for housing market

Year	Interest rates (%)	Appreciation (%)	Salary growth (%)	LTV (%)	IIR (%)
Mar-02	11.5	5.0	10.0		
Mar-03	9.8	5.0	10.0		
Mar-04	8.3	5.0	10.0		
Mar-05	8.3	20.6	10.0	72.0	40.0
Mar-06	8.0	28.0	20.0	74.0	40.0
Mar-07	10.8	27.0	20.0	75.0	40.0
Mar-08	10.3	10.0	15.0	76.0	40.0
Mar-09 E	11.0	(20.0)	(20.0)		

Source: External reports, Edelweiss research

Residential mortgage market

Residential mortgage refers to lendings fully secured by mortgages on residential property that is or will be occupied by the borrower or that is rented (individual housing borrower or that is rented). Products are fairly straightforward, as most players are yet to start lending under reverse mortgage, adjustable interest rates (teaser rates). Banks, which were initially offering fixed interest rates, have moved most of their portfolio to variable interest rates linked to the banks' PLR.

Residential mortgage has grown at ~35% CAGR to INR 2,750 bn from FY05-08 with private sector banks having a higher market share than public sector players. Given their franchisee, public sector banks have lower ticket lending compared with private sector banks. As of FY08, HDFC (HDFC bank is one of its primary clients for loan origination) was the leading player in disbursements with ~27-30% market share. As of FY08, ICICI Bank's residential loan book was at INR 630 bn compared with HDFC's INR 484 bn, and SBI's at INR 421 bn.

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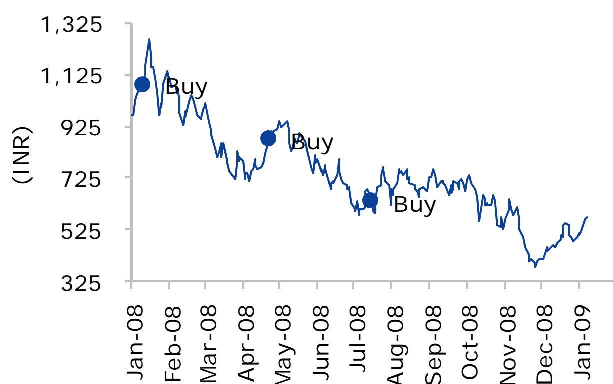
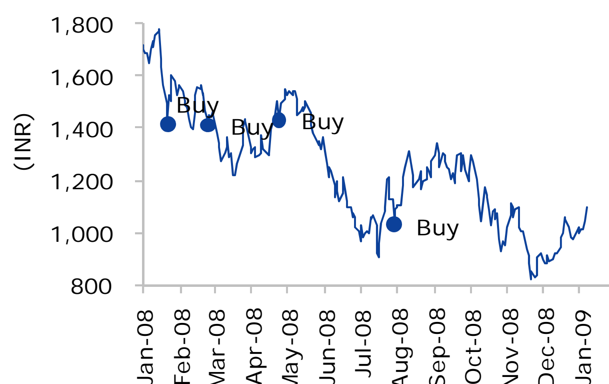
Coverage group(s) of stocks by primary analyst(s): ***Banking and Financial Services:***

Allahabad Bank, Axis Bank, Centurion Bank of Punjab, Federal Bank, HDFC Bank, ICICI Bank, IOB, Karnataka Bank, Kotak Mahindra Bank, OBC, SBI, Yes Bank, IDFC, HDFC, LIC Housing Finance, PNB, Power Finance Corporation, Reliance Capital, SREI Infrastructure Finance, Shriram City Union, Syndicate Bank and Union Bank.

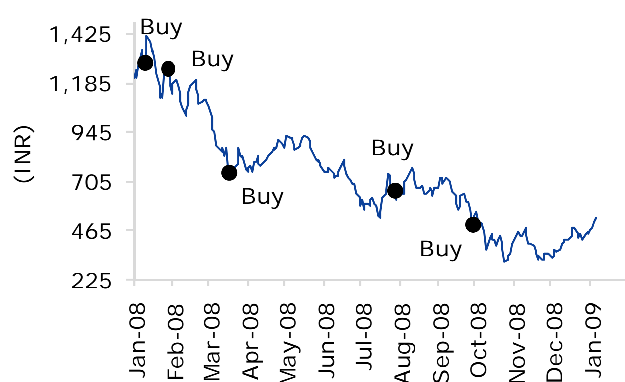
Axis Bank



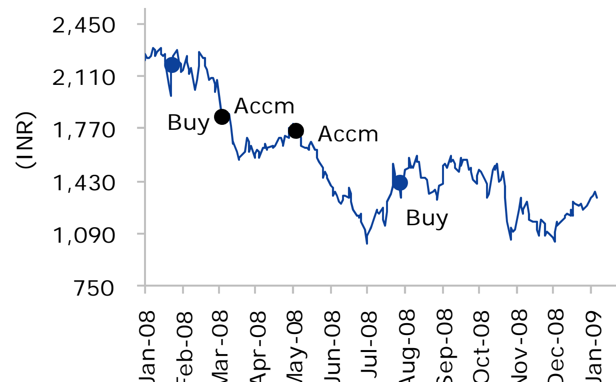
HDFC Bank



ICICI Bank



State Bank of India



Recent Research

Date	Company	Title	Price (INR)	Recos
14-Jan-09	**HDFC Bank**	Doing well in otherwise stress environment; *Result Update*	977	Buy
13-Jan-09	**South Indian Bank**	Stable quarter *Result Update*	57	Buy
9-Jan-09	**Axis Bank**	Margins squeeze *Result Update*	487	Buy
08-Dec-08	**BFSI**	Monetary stimulus; *Sector Update*		

Distribution of Ratings / Market Cap

Edelweiss Research Coverage Universe

	Buy	Accumulate	Reduce	Sell	Total
Rating Distribution*	86	58	31	9	187

* 2 stocks under review / 1 rating withheld

	> 50bn	Between 10bn and 50 bn	< 10bn
Market Cap (INR)	70	56	61

Rating Interpretation

Rating	Expected to
Buy	appreciate more than 20% over a 12-month period
Accumulate	appreciate up to 20% over a 12-month period
Reduce	depreciate up to 10% over a 12-month period
Sell	depreciate more than 10% over a 12-month period

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