Asset Quality

That sinking feeling!

Slowing economic growth, rising interest rates and the ensuing risk of defaults for lenders (banks) impel us to revisit the stress analysis of bank credit, earlier undertaken in Feb-2009 post the global financial crisis. Our findings then (refer to Feb-09 report "Asset Quality: Hiccup or a Crisis") had indicated that 'restructured assets+NPAs' in the banking system would peak in FY11 at 5.7% (coinciding with 5.8% at present). In the current context of macro headwinds, we believe it is a mid-cycle slowdown and the environment is not as bad as it was in 2008 when liquidity was frozen and growth had tumbled to sub-6%. From our analysis, we deduce that ~17% of banks' outstanding credit is 'stressed' and a proportion is likely to manifest as NPAs (or get restructured) depending on severity and persistence of the pain points. In our base case, we expect NPAs+restructured assets to peak at 7.8% in FY13. In our assessment, a large part of the stress would get restructured, implying no material rise in associated credit costs for banks.

Red flag on asset quality; but not a crisis: Stubborn inflation, a spurt in interest rates and slower economy are straining India Inc's debt servicing capacity. Ongoing infrastructure projects are at risk due to policy paralysis and a plethora of scams. The issue of 'moral hazard' plagues agri loans with the pace of defaults rising due to technology-based recognition of NPAs. However, strong balance sheets (gearing at a mere 0.54x) and comfortable liquidity should assuage the extent of stress. Also, retail credit is benefiting from a structural improvement in credit discipline and higher incomes.

Quantifying the 'stress': We have applied credit screens (interest coverage and leverage ratios) indigenous to each segment of bank credit. We see ~17% of bank credit under stress, of which a proportion is likely to manifest as NPAs or get restructured. Corporate portfolios are the key source of stress (~24% of sectoral debt) followed by agriculture (20%). In our base case, we expect 50% of the stress to manifest over two years and NPAs + restructured loans to peak in FY13 at 7.8%. If the weak macros persist through FY13, the number could rise to 9.7%.

Rank order of banks in the risk spectrum: We have assessed the expected asset quality performance of large banks relative to peers. We have superimposed our industry-wise stress numbers on their portfolios to determine the stress levels. We have compared their pace of loan growth and balance sheet strength. On these criteria, HDFC Bank, ICICI Bank and Bank of Baroda are better placed to endure the rise in NPAs while Union Bank and Bank of India appear to be more vulnerable to the stress.

Comparative ranking

	Asset quality rank	Balance Sheet strength	Overall Rank
HDFC Bank	2	1	1
ICICI Bank	1	2	2
Bank of Baroda	3	4	3
Axis Bank	5	3	4
State Bank of India	4	8	5
PNB	6	5	6
Union Bank	7	7	7
Bank of India	8	6	8

Source: IDFC Securities Research

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Investment Argument

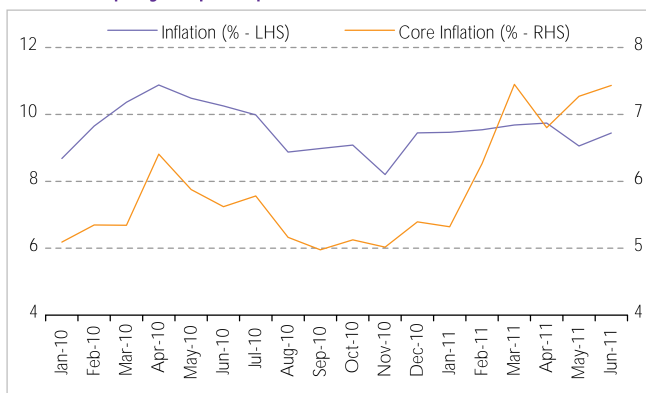
- A slower economy, elevated inflation (close to double-digits) and a 325bp hike in key policy rates since Mar-10 have dented corporate profitability
- In this context, asset quality concerns resurface for banks as periods of economic slack raise the risk of defaults in loan repayments – individual as well as corporate
- Similar to our February 2009 exercise in response to the 2008 economic crisis, we revisit our stress analysis of bank credit to ascertain the extent
- Granular analysis across industry sectors and income analysis indicate stress on ~17% of outstanding bank credit as of FY11, which could manifest as NPAs + restructured loans (more of the latter) over the next two years
- Assessment of expected asset quality performance of large banks shows that HDFC Bank, ICICI Bank and Bank of Baroda are better placed than peers

Macroeconomic headwinds: Distress signals?

Macroeconomic concerns have assumed worrying proportions. With inflation sticky at such elevated levels (average of 9.4% for the past one year), the RBI's aggressive stance has rendered key policy rates 325bp higher since March-10. Reeling under the impact of high borrowing costs and execution delays, corporate profitability has also taken a hit. Resultant, consensus GDP growth estimates have been pruned to 7.5-8% from 8-8.5% earlier.

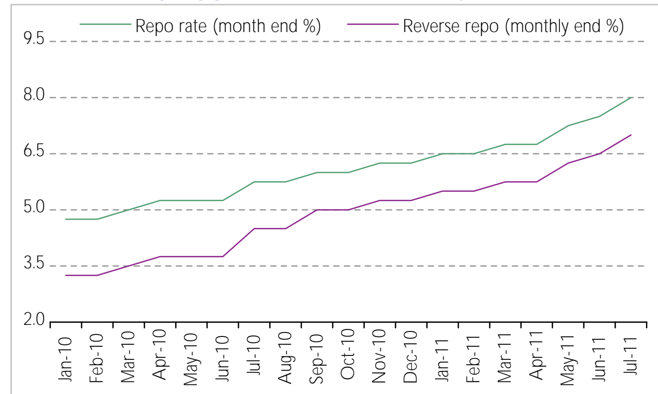
Headline inflation is likely to remain in the 9-10% range in H1FY12 with input cost pressures getting broad-based, the spike in crude oil prices yet to be fully passed on and increase in MSP (minimum support price) of agricultural commodities for the Kharif season. In such an inflationary environment, interest rates too would remain firm. However, the silver lining is that consumption growth remains healthy – imparting comfort that this is just a mid-cycle slowdown and not a broad-based recessionary trend. A revival in the industrial cycle, government action and easing commodity prices are the antidote in our view.

Inflation plays spoilsport…



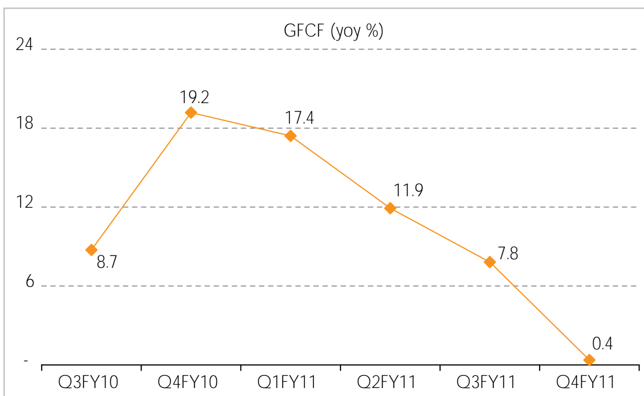
- After a brief hiatus in Aug-10 to Jan-11, core inflation on an upswing
- Inflation could hit double digits as impact of fuel price hike comes in (estimated at 70bp by RBI)…
- …notwithstanding the commodity price decline seen in last three months

…prompting aggressive rate hikes by the RBI



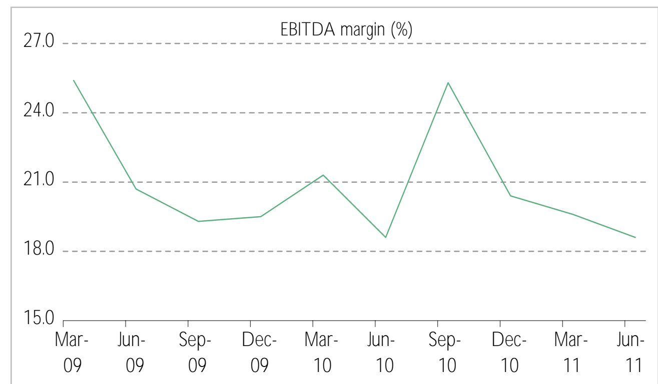
- Frontloading of rate hikes in CY11; 50bp increase vs consensus of 25bp in May and July policy review
- Another 25-50bp rate hike in FY12??? No clear answers to this

Policy paralysis derails the capex cycle



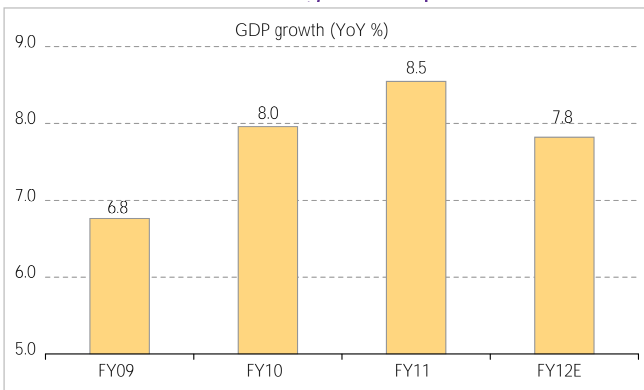
- Scams, delays in environmental clearances and land acquisition 'issues' put a question mark on government's intent to fast-track reforms
- Execution delays and high borrowing costs stall capital formation
- Gross fixed capital formation flat yoy as compared to a 17% yoy increase in Q1FY11

Corporate profitability declining



- Sluggish IIP numbers – tepid growth of 5.6% yoy and mom decline of 1% in May-11
- Corporate profitability has moderated – EBITDA margins of companies in our universe down to ~19% in Jun-11 from a high of 25% in Sep-10

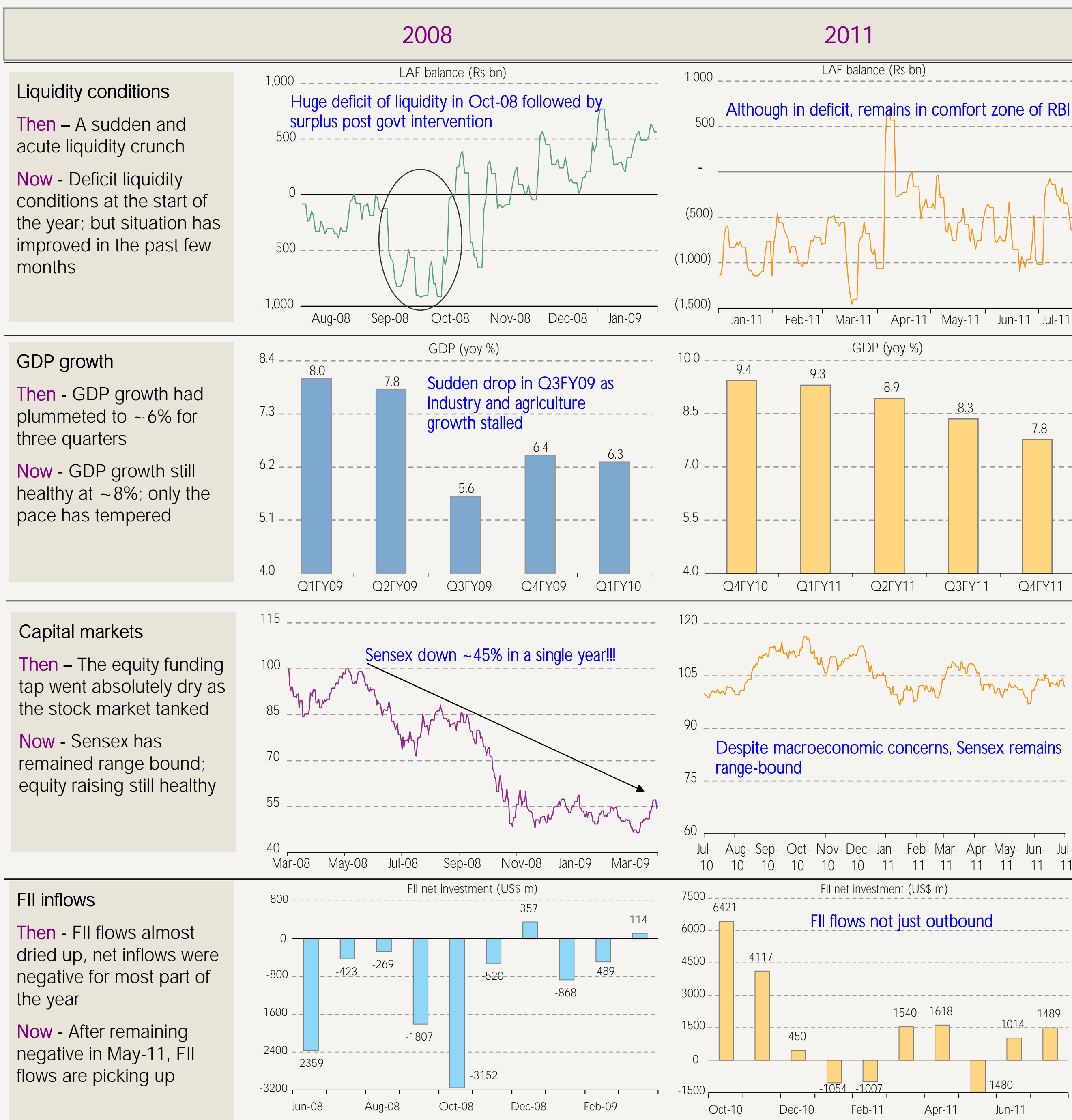
Moderation in economic growth expectations



- Downward adjustment in our GDP growth estimate – FY12 growth now seen at 7.8% vs. 8%+ earlier

But 2011 seems 'different' from 2008

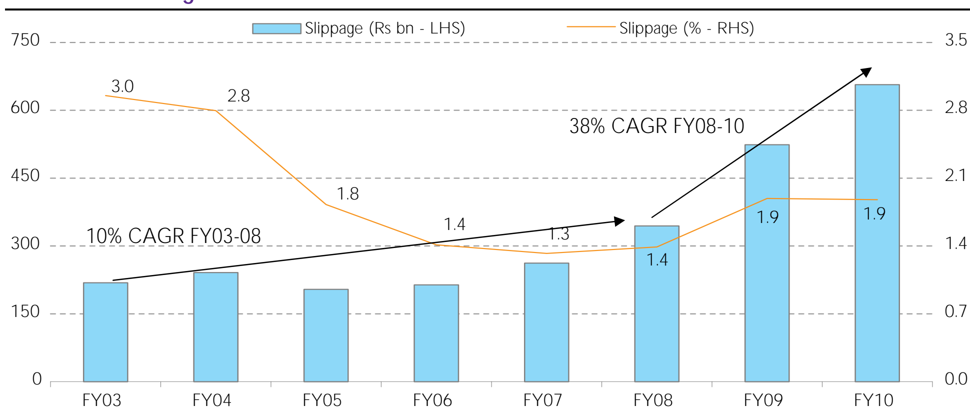
While the prevailing economic sluggishness cannot be shrugged off, the shades are indeed different from the economic crisis of 2008. The previous downcycle, triggered by an acute liquidity crunch in global as well as domestic markets, saw all funding taps going dry for corporates. Also, FII flows were negative for more than three quarters -- triggering a massive ~45% correction in the Sensex. GDP growth too had plummeted to sub-6% levels. In the prevailing cycle, we believe the environment is not as bad. While liquidity has been in the deficit for most part of the year, it remains within the RBI's comfort zone. Further, moderation in GDP growth has been gradual and capital markets have held-up. The current environment, we believe, represents a mid-cycle slowdown compared to the recessionary trends of 2008. However, the slowdown could turn steeper if interest rates remain high for a longer period of time, thereby curtailing consumption. We also believe that unlike the stimulus provided by the government in the previous cycle, private spends would be the catalyst for economic recovery the current cycle.



Asset quality concerns assume centre-stage, yet again

As observed in past cycles, the cyclical slowdown is set to exert strain on various quarters of the economy. Weak domestic as well as international demand, high commodity prices and dithering capital markets have impacted cash flows of borrowers – thereby raising the probability of loan repayment defaults. While retail credit's quality remains resilient owing to strong personal incomes, stress points are already visible on SME and agriculture portfolios, from which bulk of slippages have emanated in FY11. Agriculture portfolio continues to face stress due to the issue of 'moral hazard' – fallout of the government's agriculture debt waiver scheme. Further, PSU banks are in the process of transferring their agriculture portfolios to the CBS (core banking system) platform, which would lead to accelerated recognition of NPAs in this portfolio in the near term. Also, a rapid increase in bank exposure towards certain sectors has made the lenders vulnerable to performance in these pockets.

Exhibit 1: Banks' gross NPAs have risen after moderation over FY05-08

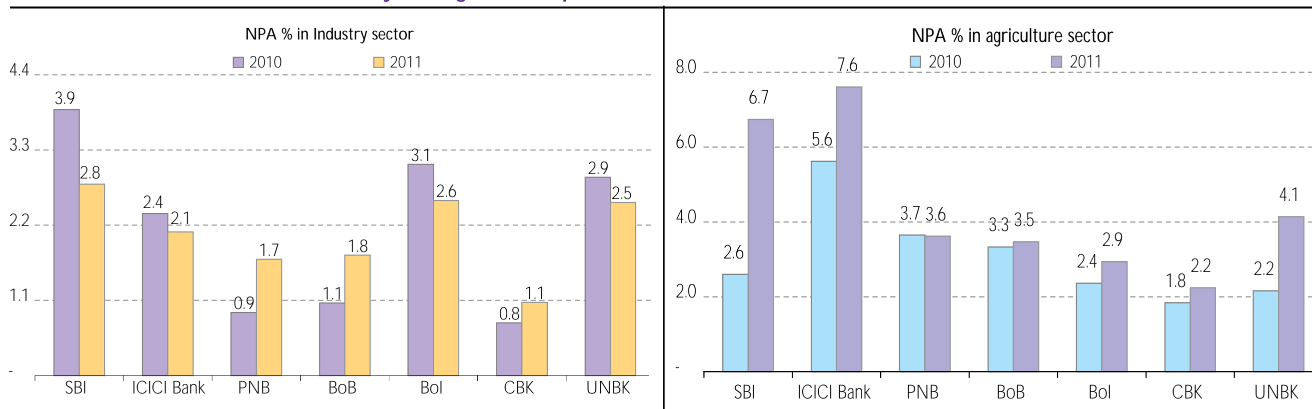


Source: The RBI and IDFC Securities Research

Stress has already manifested in SME and agriculture loans

Improvement in asset quality for banks has not been in line with market expectations, and gross NPAs have increased for most PSU banks. The stress, we believe, is emanating primarily from industry (especially small and medium enterprises) and agriculture loans. Deterioration in repayment culture post the agri debt relief scheme and the ongoing transfer of agriculture loans on to the CBS platform have contributed significantly to the rising NPAs within this segment.

Exhibit 2: Continued stress in industry and agricultural portfolio over FY10-11



Source: The RBI and IDFC Securities Research

Assessing the damage

In order to analyze the concerns building around asset quality of banks, we have dissected various components of bank credit with a granular analysis of corporate credit. We had conducted this exercise in *February 2009 (refer below; Indian Banks – Asset Quality: Hiccup or a crisis)*, wherein we had concluded that gross NPAs (plus restructured loans) would increase to 5.7% by FY11 (gross NPAs + restructured loans currently stands at 5.8%).

Exhibit 2: Indian Bank: Asset quality February 2009 report

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Indian Banks-Asset Quality

Hiccup or a crisis?

The clouds of economic gloom and the ensuing liquidity crunch have dealt a double blow to corporate bottomlines. Worries are growing on asset quality of banks as borrowers are on a shaky ground, and lenders (banks) cannot be but vulnerable to the risk of rising defaults. But a remarkably long stint of economic prosperity has led to tenable balance sheets (60% lower leverage than in the NPA cycle of late-1990s) and much higher personal income levels while banks have lower exposure to troubled sectors. After applying our credit screens to the sample set of corporates and assessment of personal incomes, we conclude that 14% of bank credit is vulnerable. Of this, a proportion is likely to manifest as NPAs (or get restructured) and the impact would be spread over the next 2-3 years. While we expect NPAs to peak at 5.7% in FY11 (7.7% in the worst case), our estimates build in a 60-70% rise in FY10 credit costs.

Rise in NPAs imminent...: A cyclical turn in the economy, accentuated by the global credit freeze and subsequent domestic liquidity squeeze, has dented the confidence of an effervescent India Inc. The demand slump and steep fall in commodity prices pose a threat to corporate bottomlines. As a result, a host of smaller and leveraged companies are facing acute liquidity shortage – threatening to translate into a solvency crisis. Uncertainty on personal incomes also builds a case for rise in retail NPAs.

...dimensioning the threat: Our analysis suggests that NPAs will be well below that in the previous cycle due to lower leverage of corporates (0.36x vs peak of 0.88x in FY97), banks' limited exposure to vulnerable sectors as also better restructuring and recovery practices. Our view rests on analysis of components of bank credit, detailed evaluation of balance sheets of ~3,000 companies and assessment of personal income levels. After applying our credit screens, we see 14% of bank credit under stress, of which a proportion is likely to manifest as NPAs or get restructured. As the impact is likely to be spread over the next 2-3 years, we expect gross NPAs to peak in FY11 at 5.7%.

Rank order in the risk spectrum: We have assessed expected asset quality performance of large banks relative to peers. We have superimposed our understanding of industrywise stress on their portfolios, compared the exposure to vulnerable segments, credit growth and their balance sheet strength. We find that HDFC Bank, ICICI Bank and Bank of Baroda are better placed to endure the rise in NPAs while SBI and Bank of India appear to be more vulnerable to the stress.

Stress score of banks

Company	Asset quality rank	Balance sheet rank	Overall stress rank
HDFC Bank	1	2	1
ICICI Bank	3	1	2
Bank of Baroda	2	6	3
PNB	4	3	4
Axis Bank	6	4	5
State Bank of India	5	7	6
Bank of India	7	5	7

Note: Banks with higher rank are better placed

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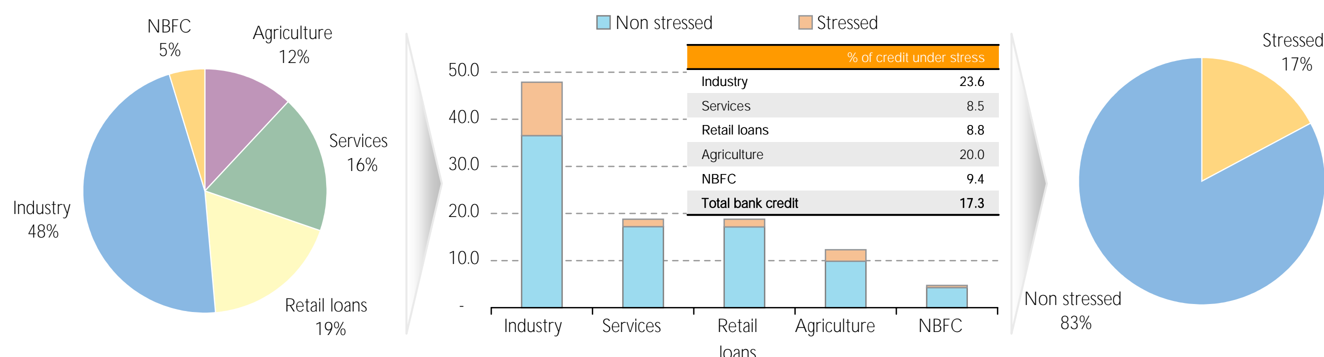
Source: The RBI and IDFC Securities Research

In this edition too, we strive to quantify extent of the potential damage to asset quality of banks over the next couple of years.

~17% of banks' outstanding credit is stressed

Our analysis indicates that 17.3% of banks' outstanding credit is exposed to stress. ***However, we believe that not all the stressed assets would convert into slippages (NPAs + restructured assets)*** *and also that it would accrue to banks in a staggered manner over the next 2-3 years*. Further, we believe that 60% of this incremental stress in likely to play out in FY12 as the impact of slower growth manifests. The remaining 40% is expected to spill over to FY13. Given the fact that we do not expect broad-based recessionary conditions to prevail in the economy, we expect maximum stress to get restructured and not convert into NPAs, which would limit the rise in credit costs for banks. ***We deduce that asset quality is under duress, but we expect the deterioration to be manageable.***

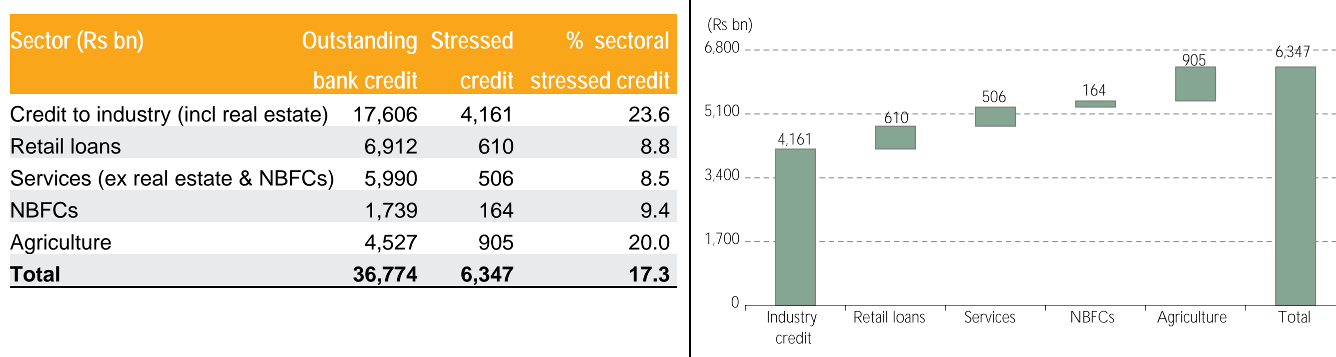
Exhibit 3: Identifying the pain points



	% of credit under stress
Industry	23.6
Services	8.5
Retail loans	8.8
Agriculture	20.0
NBFC	9.4
Total bank credit	17.3

Source: RBI, Capitaline, IDFC Securities Research

Exhibit 4: Significant proportion of stressed debt flows from corporate segment



Sector (Rs bn)	Outstanding bank credit	Stressed credit	% sectoral stressed credit
Credit to industry (incl real estate)	17,606	4,161	23.6
Retail loans	6,912	610	8.8
Services (ex real estate & NBFCs)	5,990	506	8.5
NBFCs	1,739	164	9.4
Agriculture	4,527	905	20.0
Total	**36,774**	**6,347**	**17.3**

Source: RBI, Capitaline, IDFC Securities Research

We construct *three different scenarios:*

1. Base case: This scenario factors in peaking of inflation and interest rates over the next six months, led by softening commodity prices. We assume that ~50% of the stressed credit would manifest as NPAs or restructured assets. In such a case, we see stressed loans rising to 7.4% in FY12 and peaking at 7.8% in FY13.
2. Best case: Here we assume that only 25% (considering no economic slowdown) of the debt will culminate into slippages. In such a case, we see stressed loans stable at 6.1% in FY12 and declining to 5.9% in FY13. A large proportion of this credit is likely to get restructured and associated credit costs would also be negligible.
3. Worst case: This scenario assumes 75% (assuming a significant economic slowdown) of the stressed loans to manifest into NPAs or restructured loans. We build in elevated levels of inflation and interest rates for an extended period of time. In such a case, we see stressed loans accelerating to 8.8% in FY12 and peaking at 9.7% in FY13.

Exhibit 5: Scenario analysis – gross NPAs to peak at 7.8% in FY13E in our base case

	Base case (50% of stressed debt)		Best case (25% of stressed debt)		Worst case (75% of stressed debt)	
(Rs bn)	FY12E	FY13E	FY12E	FY13E	FY12E	FY13E
Opening Gross NPAs	2,214	3,454	2,214	2,834	2,214	4,074
Allocation of incremental NPAs over yrs (%)	60.0	40.0	60.0	40.0	60.0	40.0
Additions	1,240	827	620	413	1,860	1,240
Closing Gross NPAs	3,454	4,280	2,834	3,247	4,074	5,314
Bank Credit	46,476	54,842	46,476	54,842	46,476	54,842
yoy growth (%)	18.0	18.0	18.0	18.0	18.0	18.0
Gross NPAs (%)	**7.4**	**7.8**	**6.1**	**5.9**	**8.8**	**9.7**

Source: RBI, IDFC Securities Research

Corporate credit – 48% of the total credit

We have analyzed balance sheet strength and debt repayment ability of the ~3,000 listed corporates (together forming 64% of total bank credit as of FY11) which, we believe, is a fair representation of the industry. We have screened each sector under different criteria based on liquidity and leverage ratios. Companies failing our screens are deemed to be stressed. The screens are indigenous to a sector and we have applied them to the companies within a sector to ascertain the level of stress on each sector.

Exhibit 6: Criteria used for the stress test

Sector	Criteria used	Total debt (Rs m)	Stressed debt (Rs m)	% of debt of the sector in distress
Mining	IC<2 or Net D/E>2.5	92,573	15,074	16.3
Telecom	IC<2 or D/EBITDA>2.5	1,441,152	467,985	32.5
Logistics	IC<2 or Net D/E>3	27,474	13,109	47.7
Auto Ancillaries	IC<2 or D/EBITDA>5	153,191	6,638	4.3
Automobile	IC<2 or Net D/E>2.5	582,128	18,789	3.2
Consumer Durables	IC<2 or Net D/E>2	172,146	19,696	11.4
Diamond, Gems and Jewellery	IC<2 or Net D/E>2	110,451	61,429	55.6
Retail	IC<2 or D/EBITDA>4	57,260	10,034	17.5
Textiles	IC<2 or Net D/E>3	784,199	276,752	35.3
Tyres	IC<2 or D/EBITDA>5	58,157	7,444	12.8
Computer Education	IC<2 or Net D/E>2	16,279	177	1.1
IT	IC<2 or Net D/E>2	313,900	44,309	14.1
Healthcare	IC<2 or D/EBITDA>5	67,224	711	1.1
Pharmaceuticals	IC<2 or D/EBITDA>4.5	396,760	154,127	38.8
Crude Oil	IC<1.5 or Net D/E>2.5	443,693	141,641	31.9
Gas Distribution	D/E>3 or D/EBITDA>5	81,685	-	-
Oil Drill Allied	IC<2 or Net D/E>3	1,931	-	-
Petrochemicals	IC<1.5 or Net D/E>2.5	34,187	13,127	38.4
Refineries	IC<2 or Net D/E>3	1,812,346	-	-
Capital goods	IC<2 or D/EBITDA>4	358,408	198,184	55.3
Cement	IC<3 or D/EBITDA>4	223,524	34,408	15.4
Construction	IC<2 or Net D/E>4	696,080	382,276	54.9
Infrastructure Developers	IC<3 or D/EBITDA>4	703,423	80,999	11.5
Power Generation & Distribution	IC<2 or D/EBITDA>7	1,900,131	324,566	17.1
Castings, Forgings & Fastners	IC<2 or D/EBITDA>5	85,794	10,887	12.7
Non Ferrous Metals	IC<2 or Net D/E>2.5	370,728	23,372	6.3
Steel	IC<2 or Net D/E>2	1,622,746	262,903	16.2
Alcoholic Beverages	IC<2 or Net D/E>2	80,999	5,263	6.5
Entertainment	IC<2 or D/EBITDA>6	95,615	24,362	25.5
Media - Print/Television/Radio	IC<2 or D/EBITDA>6	29,575	7,202	24.4
Air Transport Service	IC<2 or Net D/E>4	220,782	216,399	98.0
FMCG	IC<2 or D/EBITDA>6	125,650	77,993	62.1
Shipping	IC<2 or Net D/E>2.5	289,262	121,870	42.1
Tobacco Products	D/E>4 or D/EBITDA>5	3,376	-	-
Realty	IC<1 or Net D/E>0.6	551,462	126,315	22.9
Agro Chemicals	IC<2 or Net D/E>3	39,330	375	1.0
Ceramic Products	IC<2 or Net D/E>2	21,419	14,844	69.3
Chemicals	IC<2 or Net D/E>2.5	181,543	57,077	31.4
Diversified	IC<1.5 or D/EBITDA>5	205,395	49,571	24.1
Dry cells	IC<2 or Net D/E>2	7,738	-	-
Edible Oil	IC<2 or Net D/E>2	75,243	14,269	19.0
Fertilizers	IC<2 or Net D/E>2	264,603	78,749	29.8
Glass & Glass Products	IC<2 or Net D/E>3	40,651	18,279	45.0
Hotels & Restaurants	IC<2 or Net D/E>2	135,582	17,642	13.0
Leather	IC<2 or Net D/E>2	9,114	6,355	69.7
Miscellaneous	IC<1.5 or D/EBITDA>5	139,132	40,153	28.9
Packaging	IC<2 or Net D/E>2	85,392	15,347	18.0
Paints/Varnish	IC<2 or Net D/E>2	10,481	3,874	37.0
Paper	IC<2 or Net D/E>2	108,552	26,141	24.1
Plantation & Plantation Products	IC<2 or Net D/E>3	76,021	23,426	30.8
Plastic products	IC<2 or Net D/E>2	66,739	9,064	13.6
Refractories	IC<2 or Net D/E>2	1,174	230	19.6
Sanitaryware	IC<1 or Net D/E>2.5	4,926	-	-
Stock/ Commodity Brokers	IC<1 or D/EBITDA>5	94,109	-	-
Sugar	IC<2 or Net D/E>2	246,587	133,716	54.2
Trading	IC<2 or Net D/E>2	357,290	34,504	9.7
Cables	IC<2 or Net D/E>2	29,349	16,736	57.0

Source: IDFC Securities Research, IC= Interest coverage ratio, D/E = Debt to equity ratio

While rising cost pressure and moderating top-line growth have put pressure on corporate profitability, the decline in margins is expected to be more gradual compared to the previous cycle. Our analysis also indicates that <u>incidence of stress is limited to ~22.9% of the sample debt and 23.6% for the entire segment.</u>

Exhibit 7: Stress in corporate debt

Corporate debt	(Rs bn)
Total debt of sample companies	16,205
% of bank credit	*70*
Stress in sample	3,708
% of stress in the sample	*22.9*
Total bank credit to the industry	17,606
Bank credit covered in the sample	11,343
Balance bank credit to industry	6,262
% of stress assumed in the balance	*25.0*
% of corporate bank debt in stress	**23.6**

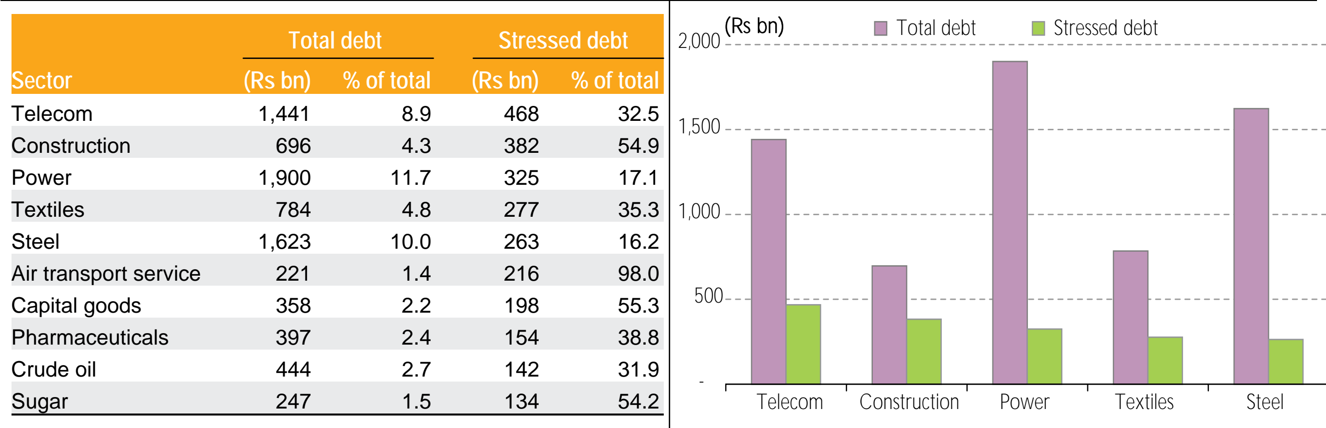
Source: RBI, Capitaline and IDFC Securities Research

Notably, the estimated stress in industry segments has not changed materially from the previous cycle. While it was ~22% in FY09, it has only marginally increased to ~24% in FY11. However, a few salient points have emerged:

i. Build-up of banks' exposure to infrastructure assets has emerged as a key concern as telecom, construction and power (~25% of total corporate credit) contribute ~32% to the total stress in corporate credit.

ii. Distribution of stressed assets was more broad-based in the previous cycle; it is concentrated in select sectors now. The top five stressed sectors together contribute ~46% and top 10 form ~70% of the total stressed assets of the industry. Hence, the asset quality problem is not a widespread industry phenomenon.

Exhibit 8: Sectors throwing up maximum stress



	Total debt		Stressed debt	
Sector	(Rs bn)	% of total	(Rs bn)	% of total
Telecom	1,441	8.9	468	32.5
Construction	696	4.3	382	54.9
Power	1,900	11.7	325	17.1
Textiles	784	4.8	277	35.3
Steel	1,623	10.0	263	16.2
Air transport service	221	1.4	216	98.0
Capital goods	358	2.2	198	55.3
Pharmaceuticals	397	2.4	154	38.8
Crude oil	444	2.7	142	31.9
Sugar	247	1.5	134	54.2

Source: Capitaline, IDFC Securities Research

Infrastructure loans – stress higher in a few pockets

Infrastructure, especially power, has been facing various challenges (lack of fuel, execution delays and SEB losses). In order to determine the stress in power sector, we have analyzed key projects being set up over FY12-15E within our coverage universe. As coal shortage is the biggest risk to power projects, we have analyzed debt repayment capacity of these companies based on the assumption that ~60% of their coal requirement will be met through domestic linkages. Projects with negative cash flows (more than loss of Rs250m) are classified as 'stressed'.

For projects under operations or scheduled to be commissioned between FY12-13, we see limited stress as most of these projects have existing power off-take and tariff tie-ups. However, stress is likely to be higher due to increased unavailability of coal for capacity additions scheduled over FY14-15. Most gas-based projects commissioned over the next 15-18 months are likely to be under stress as there is a clear shortfall of gas supply. We expect bulk of these projects to get restructured (or slip into NPAs) in the near term.

Overall, we estimate 17% of banks' credit to power sector currently under stress. Typically, these are projects where agreements do not build in tariffs high or flexible enough to allow for any fuel cost pass-through. We see restructuring and some slippages from these loans. Incrementally, banks are likely to be more cautious in lending to the power sector till further clarity emerges on fuel supply, tariff agreements and SEB losses.

Power sector: SEB reforms – high on intent but low on action

Accumulating SEB (state electricity boards) losses, estimated at Rs700bn in FY11 - 17.5% of India's fiscal deficit, could emerge as a potential pain point in the future. In a recent (July-11) conference on "Distribution Sector Reforms", state power ministers highlighted an urgent need to bring down AT&C losses to 15% (~28% in FY09). While we view these actions in a positive light, we believe it will be at least 2-4 years before one can expect any material changes on the ground. Having said that, we see limited risk of defaults in banks' power portfolios as most of the SEB loans are backed by the respective state governments. Any default in such a case would imply a state government default, which is highly unlikely in our view. *At the same time, longer repayment cycles cannot be ruled out and there is a significant risk of restructuring of SEB loans.*

Retail assets – 19% of the total credit

Various changes in lending practices, presence of credit bureau and predominance of safer mortgage loans are likely to keep delinquencies in check within the retail portfolio. On the 'no-shocks for the economy' hypothesis over the next 2-3 quarters, we do not expect any outsized rise in mortgage delinquencies (~51% of retail credit). On the other hand, unsecured loans have seasoned and increasing reliance on credit bureaus should curtail defaults. Another factor that merits notice is that banks have already provided aggressively on retail loans over the past couple of years and the incremental hit is likely to be limited. We estimate ~9% of the overall retail book to be under stress.

Exhibit 9: Estimated stress on retail loans

Rs bn,	Total loans	% of total retail	% of stress	Stressed loans
Housing (including priority sector)	3,533	51.1	4.0	141
Vehicle loans	802	11.6	10.0	80
Advances against Fixed Deposits	602	8.7	0.0	-
Education	438	6.3	20.0	88
Consumer durables	106	1.5	25.0	26
Credit card outstanding	173	2.5	15.0	26
Adv to ind against share, bonds, etc	34	0.5	10.0	3
Other personal loans	1,224	17.7	20.0	245
Retail loans	**6,912**	**100.0**	**8.8**	**610**

Source: Industry estimates; IDFC Securities Research

Services sector – 16% of the total credit

For advances to services sector (ex-real estate, shipping and NBFCs), we estimate 8% of the credit to be under stress. Within this segment, we assume that 8% of the trade debt, 10% of credit to transport operators and 10% of credit to other services is stressed.

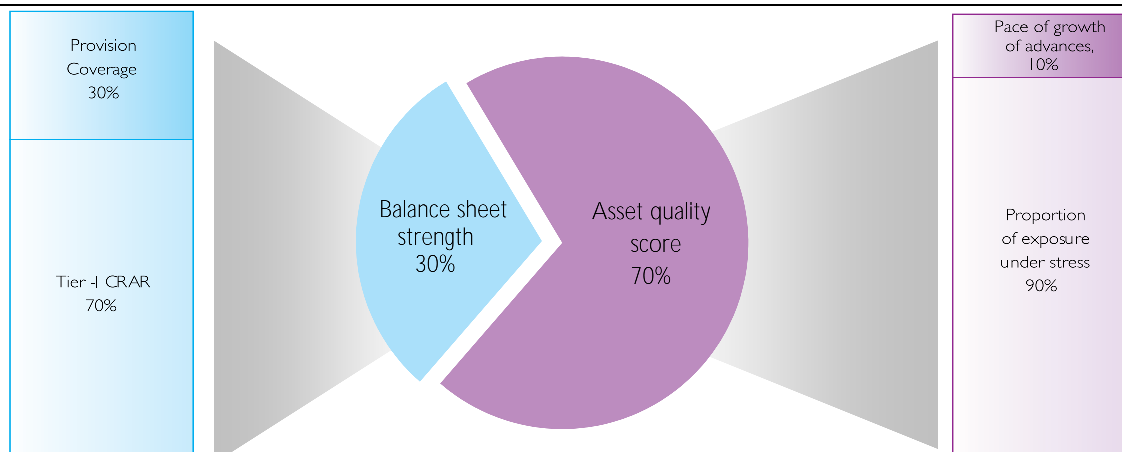
Agriculture sector – 12% of the total credit

Based on our interaction with various banks, we believe that 20% of the agricultural credit in under stress. Post the agriculture debt waiver scheme, banks are witnessing deterioration in repayment culture among borrowers – and thereby higher defaults - over the past few years. Additionally, PSU banks are in the process of migrating agriculture accounts to system-based recognition of NPAs, which would increase delinquencies within agriculture accounts.

Relative asset quality positioning of large banks

Mapping our bank credit analysis on to the portfolio of select large banks and evaluating their balance sheet capabilities we establish a rank order of anticipated performance on the asset quality parameter. a

Exhibit 10: Methodology of assessing the risk ranking of banks



Source: IDFC Securities Research

For the purpose of this analysis, we have compared banks under two broad heads:

1. Criterion 1 – asset quality ranking (70% weight): We have tried to determine exposure which is anticipated to come under stress based on two criteria. For this, we have evaluated large banks based on proportion of exposure under stress (90% weight) and pace of growth in advances (10% weight).

2. Criterion 2 – balance sheet strength (30% weight): We have evaluated the ability of banks' balance sheet to absorb the higher credit costs in case of any rise in delinquencies. We have looked at Tier-I CRAR (70% weight) and provision coverage (30% weight) of the banks and assigned weights to them.

   Based on our analysis we conclude that HDFC Bank, ICICI bank and Bank of Baroda are relatively better placed than peers. Union Bank and Bank of India are more vulnerable to rise in stress.

Exhibit 11: Ranking of banks

(%)	Asset quality score			Balance sheet strength			Overall	
	Exposure under stress*	Loan growth (CAGR FY09- 11)*	Rank	Tier-I CRAR	Coverage	Rank	Score	Rank
HDFC Bank	12.5	27.2	2	11.4	82.6	1	70.0	1
ICICI Bank	15.4	-0.4	1	13.2	76.0	2	69.9	2
Bank of Baroda	17.1	26.0	3	9.1	70.1	4	65.6	3
Axis Bank	18.1	32.1	5	9.4	70.6	3	64.3	4
State Bank of India	18.5	18.6	4	7.8	51.2	8	63.3	5
PNB	19.6	25.1	6	8.5	57.3	5	63.0	6
Union Bank	20.3	24.0	7	8.8	49.4	7	61.9	7
Bank of India	21.5	21.3	8	8.0	53.6	6	61.5	8
Weightage	**90.0**	**10.0**	**70.0**	**70.0**	**30.0**	**30.0**		

** Low exposure to stressed assets and lower loan growth results in higher score; Source: IDFC Securities Research*

Corporate Credit: Our key findings

- 22.9% of our sample universe's debt (as of FY10) under stress
- For remaining 36% of industry credit, stress assumed at 25%
- Overall, 23.6% of industry credit with stressed companies
- Banks' exposure to sensitive sectors ranges from 7-21%; higher share of PSU banks

Exhibit 12: Stress levels in corporate debt

Corporate debt	(Rs bn)
Total debt of sample companies	16,205
% of bank credit	*70*
Stress in sample	3,708
% of stress in the sample	*22.9*
Total bank credit to the industry	17,606
Bank credit covered in the sample	11,343
Balance bank credit to industry	6,262
% of stress assumed in the balance	*25.0*
% of corporate bank debt in stress	**23.6%**

Source: RBI, Capitaline and IDFC Securities Research

Based on our analysis, we have identified sectors where risk of default is the highest:

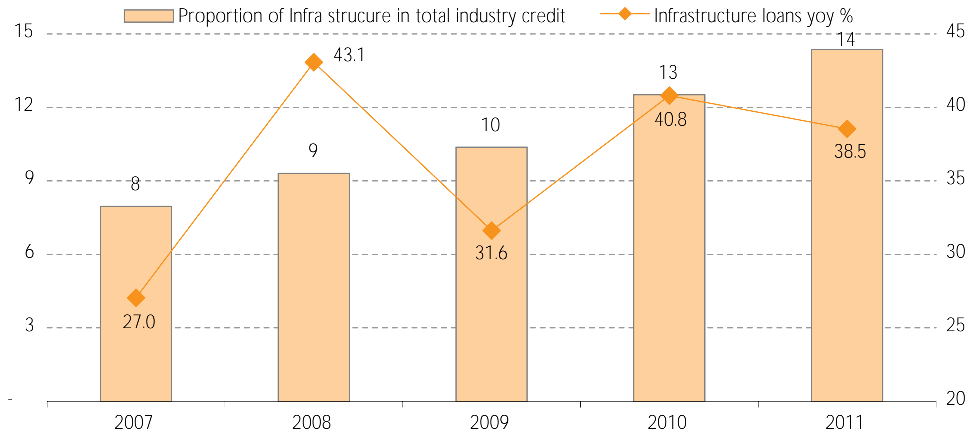
- Telecom: Companies with debt to EBITDA greater than 2.5 or interest coverage ratio less than 2 are considered under stress. Based on our screen, we believe that 32.5% of telecom debt is under stress
- Construction (includes roads): Road projects with aggressive bidding prices and slower-than-expected traffic growth are likely to face revenue shortfall and could be stressed. Pure construction player companies with net debt to equity greater than 4 or interest coverage ratio less than 2 are considered to be under stress. We estimate ~55% of the construction sector exposure under stress.
- Power Generation & Distribution: Lack of visibility on fuel availability, execution delays and accumulating SEB losses have raised concerns on asset quality of the sector. We have examined the debt repayment capability key power projects under our coverage universe and have used screen (interest coverage ratio less than 2 and debt to equity ratio greater than 7) to ascertain the stress in the sector. We estimate 17% of power exposure to be under stress
- Textiles: Rising cotton prices due to inadequate output and an inconsistent export policy have put a strain on textile sector. Companies with debt to EBITDA greater than 3 and interest coverage ratio less than 2 are under stress. Based on our screen, we estimate that 35% of textile credit to be under stress.
- Steel: Raw material cost pressure and slower demand growth put steel companies under the scanner on the asset quality count. Companies with debt to EBITDA greater than 2 and interest coverage ratio less than 2 are considered under stress. Our screen suggests that 16% of steel sector credit is under stress.

Infrastructure Loans: All's not lost

What are the key issues wrt infrastructure loans?

➢ Above industry growth in credit to the sector

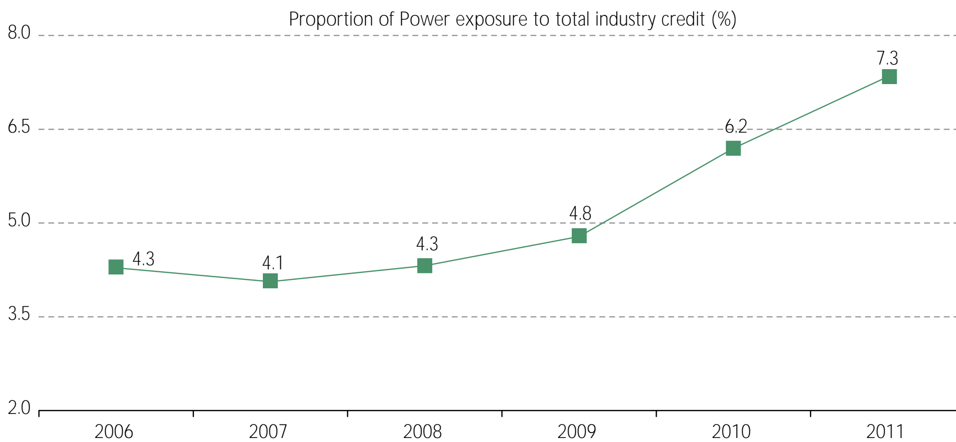
Exhibit 13: Aggressive growth in infrastructure loans.....



Source: IDFC Securities Research and the RBI

- 40% CAGR in infra loans over FY09-11 - above industry growth of 24%
- Bank's exposure to infrastructure loans up from 10% in FY09 to 14% in FY11
- Infrastructure loans form ~25% of incremental bank lending over FY10-11

Exhibit 14: ...with a build-up in power sector



Source: IDFC Securities Research and the RBI

- 47% CAGR in credit to power segment over FY09-11
- Banks' exposure to power up from 4.8% in FY09 to 7.3% in FY11
- Power sector loans form 14.6% of incremental bank lending over FY10-11

- Power generation companies (operational and under construction) dependent on domestic coal
- Expect 38,457MW of power capacity to be commissioned in FY12-13 and 41,946MW over FY14-15…
- …which will significantly increase demand for coal, but production stagnant over past couple of years
- Overall, coal shortage expected to increase to 200-250m tonnes per year by FY17

➢ Lack of visibility on fuel supply

Exhibit 15: Significant capacity additions (85% over FY11-15) from coal based power plants and no visibility on fuel supply likely to result in demand-supply mismatch

Year	Capacity additions (MW)	Aggregate capacity (MW)	% capacity addition	% Aggregate capacity (%)
Mar-12	16,380	16,380	20	20
Mar-13	22,077	38,457	27	48
Mar-14	22,116	60,573	28	75
Mar-15	19,830	80,403	25	100
Total	**80,403**		**100**	

Source: IDFC Securities Research

- Poor visibility on domestic gas production - KG D6 production has stalled at ~50 mmscmd, after the initial guidance of reaching 80-90 mmscmd by Q4FY11
- Limited probability of growth coming through domestic sources for next two years
- Additional gas supply over FY12-13E will have to be via imported LNG route which, at ~US$10-14/mmbtu, is economically unviable for power plants
- Gas fired power capacity would face hurdles in the near term

Exhibit 16: An immediate shortfall in gas supply

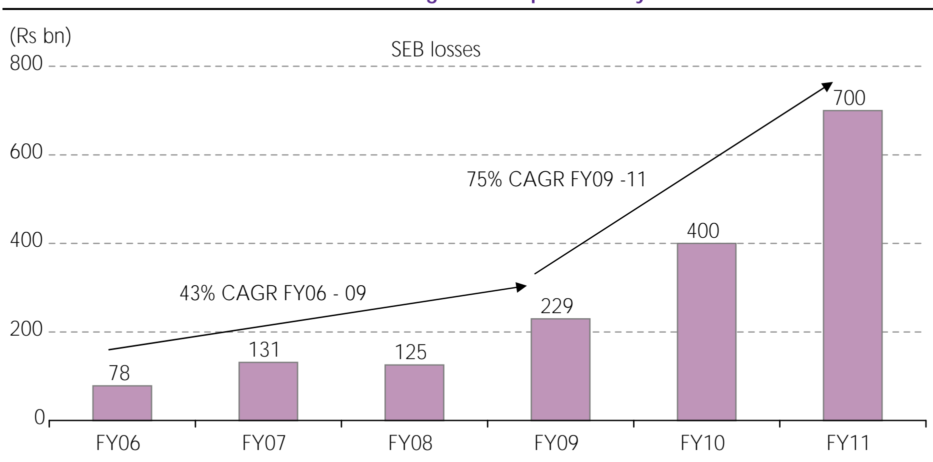
Demand composition estimated FY10-15 (mmscmd)	FY10	FY11	FY12E	FY13E	FY14E	FY15E
Power	66.6	69	74.6	87	99	107
Fertilizer	42.9	44.4	44.4	46	56	57
Captive Power	12	14	15.7	17.5	19.5	22.3
CGD	10.1	14	16.7	21.2	25.4	31.7
Refinery	11.4	13	14.4	15.6	16.3	17.3
Petchem	6.7	8.5	8.6	12.5	13.7	13.7
Sponge iron	6.3	7.1	7.4	7.5	7.5	7.7
Total demand	156	170	181.8	207.3	237.4	256.7
Supply composition (mmscmd)	155.6	172	181.8	197.2	223	237
Imputed supply gap /(surplus)	0.4	-2	0.04	10.07	14.35	19.68

Source: Crisil and IDFC Securities Research

- SEBs losses estimated to have increased from Rs229bn in FY09 to Rs400bn and Rs700bn in FY11 (up ~74% yoy)
- Losses correspond to 9.6% of the India's fiscal deficit in FY10 and 17.5% in FY11
- SEBs ability to service bank loans as well as pay for new capacity additions under strain
- Changes in SEB working model likely to be lengthy and dependent on political climate in each state

➢ Accumulating SEB losses

Exhibit 17: SEB losses have been mounting over the past three years



Source: IDFC Securities Research

Will power be a pain point?

- Our analysis

To determine the stress in power sector, we have analyzed key projects being set up over FY12-15E within our coverage universe. As 57%-68% of the power commissioned over FY12-13 depend on coal for fuel and there exists lack of clarity on availability of coal, coal shortage is the biggest risk to power projects. *We have analyzed coal based power projects' debt repayment capability based on the assumption that only 60% of their coal requirement is available via domestic linkage while the remaining would need to be imported*. Thus we have analyzed the cash flows of these projects assuming a higher blended cost of coal. The projects with a "negative" cash flow after debt repayment have been classified as under stress. For projects with negative cash flows less than Rs250m, we have assumed sponsor funding for the cash flow gap and these projects have also not been classified as being under stress.

- Our conclusion

Expect limited stress on coal-based projects commissioned over FY12-13…

Most of the projects operational or scheduled to be commissioned over FY12-13 have existing power off-take and tariff tie-ups. The tariffs are expected to be sufficiently higher to absorb incremental input costs due to blending of imported coal. *Hence, we envisage limited stress on these projects*. However, for capacity additions scheduled over FY14-15 (52% of capacity additions over FY12-15), coal shortfall is bound to aggravate and add to the input cost burden, and subsequently stress. Nevertheless, the impact on banks is difficult to ascertain as incrementally banks are likely to align fresh disbursements to only viable projects with visible execution deadlines.

…but gas-based projects face risk in the short term

For gas based projects, 2,929MW of capacity is due for commissioning over the next 15-18 months. As domestic gas production has been in decline and there is lack of visibility on future production, bulk of these projects are seen to be under stress and could convert into slippages (restructuring + NPAs).

Incremental disbursements to the power sector likely to be curtailed

Overall, for power sector we estimate that 17% of the credit is under stress. Typically, projects where agreements do not build in tariffs high or flexible enough to allow for incremental fuel cost pass-through could be 'stressed'. Incrementally, banks are likely to be more cautious in lending to the segment till further clarity emerges on fuel supply, tariff agreements and SEB losses.

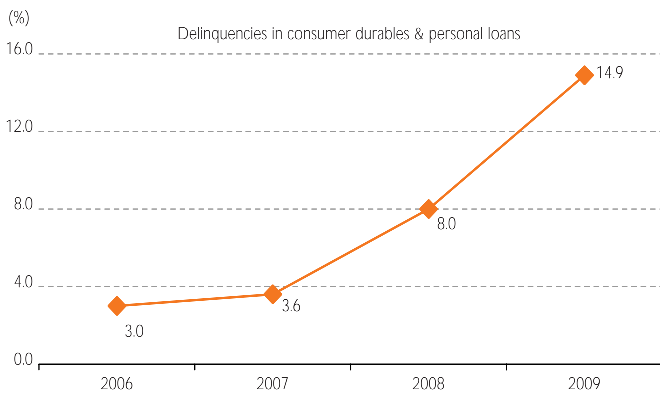
SEB reforms – high on intent, low on action

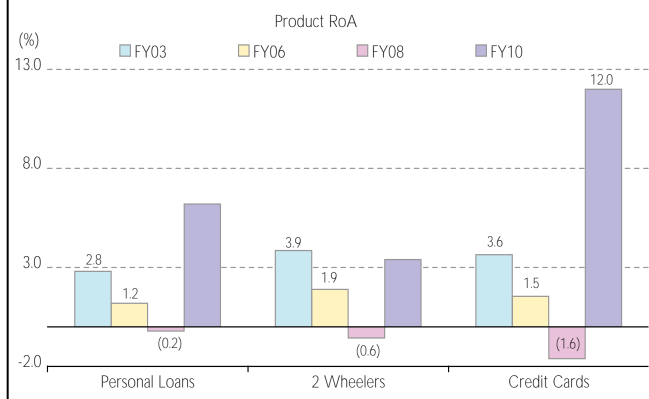
In a recent conference on "Distribution Sector Reforms" held in Jul-2011, the power ministers of various states highlighted that individual states are responsible to implement reforms and the goal is to bring down distribution losses to 15% vs 28% in FY09. We believe that the resolution to bring down SEB deficits is good in theory but difficult to implement. While directionally the action towards reducing losses is positive for the power sector, we believe it will be at least 2-4 years before there are any material changes on the ground. Having said that, most of the SEB loans are backed by the respective state governments and any default in such a case would imply a state government default, which is highly unlikely. *At the same time, longer repayment cycles should not be ruled out and there is a significant risk of restructuring of SEB loans.*

Retail Credit: Credit costs in check

- What had happened between FY08-10?
- Aggressive loan growth between FY03-07 (47% CAGR), followed by a spike in interest rates, exacerbated loan losses for the retail industry FY08 onwards
- To garner a higher market share, financiers had started relying heavily on outsourced channels for loan origination at hefty commissions
- Focus on market share led to lax underwriting standards without enough regard for borrowers' repayment capability
- Regulatory changes prevented forcible recoveries through agents and triggered willful defaults
- Subsequently, delinquencies rose across the industry, especially within unsecured portfolios and consumer durables

Exhibit 18: Surge in delinquencies... **....Profitability plummeted**

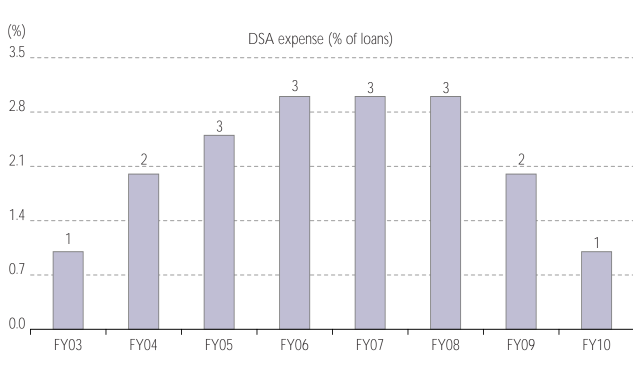


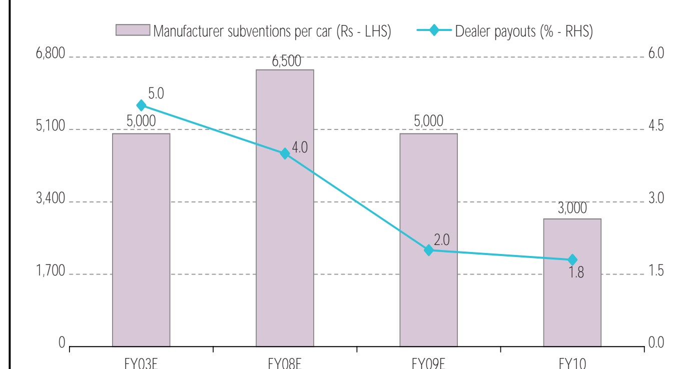


Source: IDFC Securities Research

- What is the situation now?
- High losses forced many players to exit the business, and existing players revamped their business models towards in-house sourcing of credit. This has enabled lenders to control credit quality and keep credit costs under check
- Subventions paid to manufacturers and dealers have disappeared as product profitability leaves no room for such paybacks by financiers
- Extensive use of credit bureaus (like CIBIL) has curtailed willful defaults

Exhibit 19: The proportion of loans sourced through DSAs has come off significantly and subventions have declined

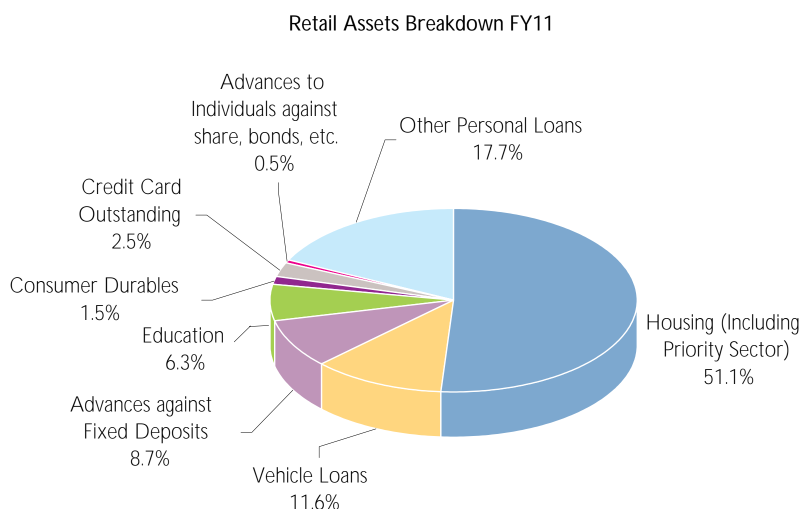




Source: IDFC Securities Research

➢ Portfolios dominated by mortgages – a safer asset class

Exhibit 20: Mortgages at ~51% dominate bulk of the portfolio



Source: The RBI and IDFC Securities Research

- 60-70% of advances to salaried employees; 90%+ of mortgagers borrowed for self occupancy
- Low incidence of defaults as home loans repayment remain priority; LTVs at a comfortable level of ~71%
- Current delinquencies at ~2%
- Incremental stress likely due to high interest rates; but situation better than in 2008 as wages have not declined
- Adopting a conservative stance, we have assumed stress levels to double to 4%

➢ Overall stress in retail portfolio remains low

Exhibit 21: Estimated stress on retail loans

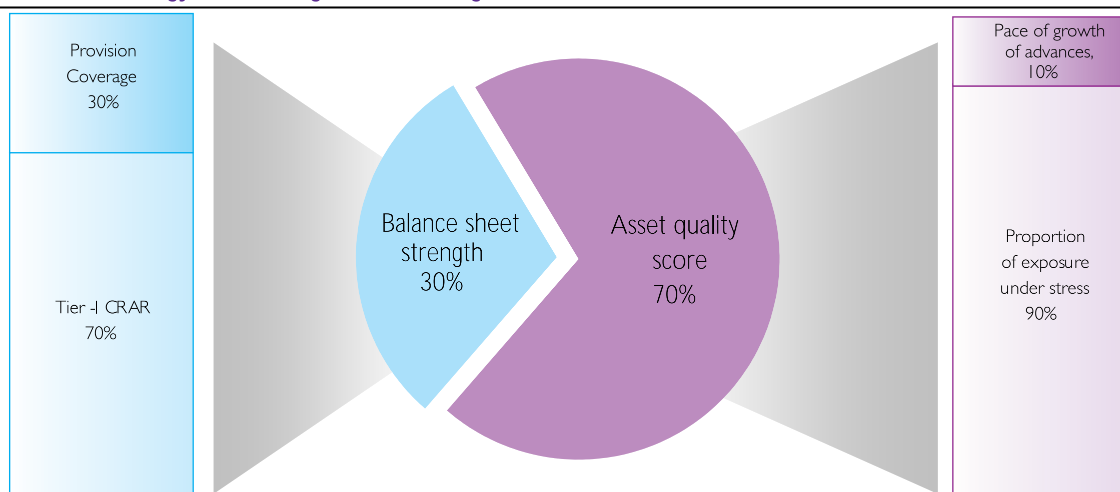
Rs bn	Total loans	% of total	% of stress	Stressed loans
Housing (including priority sector)	3,533	51.1	4.0	141
Vehicle Loans	802	11.6	10.0	80
Advances against fixed deposits	602	8.7	0.0	-
Education	438	6.3	20.0	88
Consumer durables	106	1.5	25.0	26
Credit card outstanding	173	2.5	15.0	26
Adv to individuals against share, bonds, etc	34	0.5	10.0	3
Other personal loans	1,224	17.7	20.0	245
Retail loans	**6,912**	**100.0**	**8.8**	**610**

Source: Industry estimates; IDFC Securities Research

- Revamped business strategy likely to keep delinquencies low
- Banks already aggressively providing for retail loans; we see limited incremental hit
- We estimate 9% of the overall retail book to be under stress

HOW BANKS STACK UP?

Exhibit 22: Methodology of assessing the risk ranking of banks



Our methodology

Assumption: We have analyzed the portfolios of eight large banks in our coverage universe to rank them in the order of their anticipated performance on asset quality. We assume that the quality of borrowers is homogeneous across all these banks, which is not essentially the case. As a result, while our analysis points to how a bank's asset quality is placed relative to peers, it does not indicate the expected levels of NPAs for that bank. We assign weights of 70% (asset quality ranking) and 30% (balance sheet strength) to arrive at an overall score. A higher rank under each category indicates relatively less stressed exposure or lower pace of loan growth. Consequently, a bank with lower weighted score is placed better.

Process: We have compared banks under two broad heads:

- Criterion 1 – asset quality ranking (70% weight): We have tried to determine exposure which is anticipated to come under stress based on two criteria. For this, we have evaluated large banks based on proportion of exposure under stress (90% weight) and pace of growth in advances (10% weight).
- Criterion 2 – balance sheet strength (30% weight): We have evaluated the ability of banks' balance sheet to absorb the higher credit costs in case of any rise in delinquencies. We have looked at Tier-I CRAR (70% weight) and provision coverage (30% weight) of the banks and assigned weights to them.

Criteria 1- Asset quality ranking

Proportion of exposure under stress (90% weight): HDFC Bank and ICICI Bank surpass peers, while Union Bank and Bank of India are more vulnerable to the risk of rising delinquencies

Exhibit 23: Exposure under stress

Banks	% of exposure under stress
HDFC Bank	12.5
ICICI Bank	15.4
Bank of Baroda	17.1
Axis Bank	18.1
State Bank of India	18.5
Punjab National Bank	19.6
Union Bank	20.3
Bank of India	21.5

Source: IDFC Securities Research

Exhibit 24: Growth in advances

	Advances growth (yoy %)			Loan growth
	FY09	FY10	FY11	(CAGR over FY09- 11)
HDFC Bank	23.3	27.3	27.1	27.2
ICICI Bank	-3.2	-17.0	19.4	-0.4
Bank of Baroda	34.9	21.6	30.6	26.0
Axis Bank	36.7	27.9	36.5	32.1
State Bank of India	30.2	16.5	19.8	18.6
PNB	29.5	20.6	29.7	25.1
Union Bank	29.8	23.6	26.5	24.0
Bank of India	25.9	17.9	26.5	21.3

Source: IDFC Securities Research

Pace of growth in advances (10% weight) – banks with faster pace of growth in loans over the past 3-4 years appear to be more vulnerable

Exhibit 25: Asset quality ranking

	% of exposure under stress	Loan growth (CAGR over FY09- 11)	Weighted score	Rank
ICICI Bank	15.4	-0.4	86.2	1
HDFC Bank	12.5	27.2	86.0	2
Bank of Baroda	17.1	26.0	82.1	3
State Bank of India	18.5	18.6	81.5	4
Axis Bank	18.1	32.1	80.5	5
PNB	19.6	25.1	79.9	6
Union Bank	20.3	24.0	79.4	7
Bank of India	21.5	21.3	78.6	8
Weightage	**90.0**	**10.0**		

**Low exposure and low loan growth gives higher score*

ICICI Bank, with no growth in loans and a well seasoned book, is relatively better placed than peers

ICICI Bank, HDFC Bank and Bank of Baroda ahead of peers on asset quality

Criterion 2 – balance sheet strength

Exhibit 26: Balance sheet strength ranking

	Tier-I CRAR	Coverage	Weighted Score	Rank
HDFC Bank	11.4	82.6	32.8	1
ICICI Bank	13.2	76.0	32.0	2
Axis Bank	9.4	70.6	27.7	3
Bank of Baroda	9.1	70.1	27.4	4
PNB	8.5	57.3	23.1	5
Bank of India	8.0	53.6	21.7	6
Union Bank	8.8	49.4	21.0	7
State Bank of India	7.8	51.2	20.8	8
Weightage	70.0	30.0		

Source: IDFC Securities Research

ICICI Bank emerges on the top due to its high capital adequacy, while HDFC Bank has the best provision coverage ratio

HDFC Bank, ICICI Bank and BOB are relatively stronger on asset quality

Exhibit 27: Relative ranking of large banks

	Asset quality score (i)	Balance Sheet strength (ii)	Overall weighted score (i + ii)	Rank
HDFC Bank	86.0	32.8	70.0	1
ICICI Bank	86.2	32.0	69.9	2
Bank of Baroda	82.1	27.4	65.6	3
Axis Bank	80.5	27.7	64.7	4
State Bank of India	81.5	20.8	63.3	5
PNB	79.9	23.1	62.9	6
Union Bank	79.4	21.0	61.9	7
Bank of India	78.6	21.7	61.5	8
Weightage	70.0	30.0		

Note: Banks with lower score are better placed

HDFC Bank, ICICI Bank and Bank of Baroda better placed than peers to handle a rise in NPAs. At the same time, Union Bank and Bank of India appear to be more vulnerable

Mapping the portfolio of banks

Exhibit 28: HDFC Bank

Industry, FY11 (Rs m)	% of total exposure	% stress	Exposure under stress
Agriculture and Allied Activities	2.5	20.0	9,940
Automobile & Auto Ancillary	4.6	3.5	3,227
Banks and Financial Institutions	6.7	5.0	6,759
Capital Market Intermediaries	1.9	5.0	1,945
Cement & Cement Products	0.6	15.4	1,985
Chemical and Chemical Products	0.6	31.4	3,713
Coal & Petroleum Products	3.2	-	0
Infrastructure (Construction and Development)	1.1	33.1	7,615
Consumer Durables	0.3	11.4	708
Drugs and Pharmaceuticals	0.7	38.8	5,608
Engineering	2.6	55.3	28,749
Fertilisers & Pesticides	1.9	29.8	11,655
FMCG & Personal Care	0.3	62.1	4,355
Food and Beverage	1.9	10.0	3,814
Gems and Jewellery	0.7	55.6	8,309
Housing Finance Companies	1.5	-	0
Information Technology	0.6	14.1	1,718
Iron and Steel	3.1	16.2	10,123
Mining and Minerals	0.6	16.3	1,948
NBFC / Financial Intermediaries	3.0	9.4	5,655
Non-ferrous Metals and Products	2.0	6.3	2,541
Paper, Printing and Stationery	0.4	24.1	1,963
Power	2.1	17.1	7,352
Real Estate & Property Services	2.0	22.9	9,216
Road Transport	4.6	10.0	9,253
Services	2.0	8.5	3,338
Telecom	1.5	32.5	9,885
Textiles & Garments	1.1	35.3	7,989
Wholesale and Retail Trade	6.4	7.8	10,004
Other Industries	2.1	15.0	6,448
Retail Assets	**37.1**	**8.9**	**66,233**
Of which:			
Auto Loans	11.0%	10.0	22,100
Personal Loans	5.0%	10.0	10,000
CVs	4.0%	10.0	8,000
Loan Against Securities	0.5%	-	0
2-Wheelers	1.0%	10.0	2,000
Business Banking	7.4%	10.0	15,000
Credit Cards	2.0%	10.0	4,049
Home Loans	5.7%	4.0	4,600
Others	0.1%	20.0	484
Total	**100.0%**	**12.5**	**252,052**

Source: Annual report, IDFC Securities Research

Exhibit 29: Bank of Baroda

Industry, FY11 Rs m	% of total exposure	% stress	Exposure under stress
Coal	0.1	16.3	277
Mining	0.4	16.3	1,670
Iron and Steel	4.2	16.2	18,378
Other metal and metal products	1.2	6.3	2,033
All engineering	3.6	55.3	54,009
Electricity (gen. & trans.)	3.1	17.1	14,094
Cotton textiles	1.4	35.3	13,568
Jute textiles	0.1	35.3	542
Others textiles	2.1	35.3	19,957
Sugar	0.3	54.2	4,402
Tea	0.0	10.0	34
Food processing	0.9	10.0	2,277
Vegetable oils (incl.vanaspati)	0.5	19.0	2,620
Tobacco & tobacco Products	0.1	-	-
Paper & paper products	0.5	24.1	3,130
Rubber & rubber products	0.3	12.8	1,046
Chemicals,dyes,paints & Phar	2.4	34.2	22,052
Of which :Fertilizers	0.4	29.8	3,068
Petro-chemicals	0.2	38.4	1,712
Drugs & pharmaceuti	0.8	38.8	8,532
Others	1.0	31.4	8,739
Cement	0.4	15.4	1,455
Leather & leather products	0.2	69.7	2,909
Gems & jewellery	0.3	55.6	5,086
Construction	1.7	54.9	24,365
Petroleum	1.3	-	-
Automobiles including Trucks	0.8	3.2	678
Computer software	0.1	14.1	246
Infrastructure	8.7	21.7	50,576
Of which:Power	2.8	17.1	13,004
Telecommunication	2.1	32.5	18,370
Roads	2.0	17.4	9,290
Ports	0.5	20.7	2,636
Other Infrastructure	1.3	21.3	7,276
NBFCs	3.2	9.4	7,988
Trading	4.6	9.7	11,793
Other Industries	2.3	20.7	12,700
Of Which: Beverages	0.1	6.5	156
Wood	0.2	9.4	420
Glass	0.2	45.0	2,893
Plastic	0.9	13.6	3,277
Others	0.9	25.0	5,954
Retail loans	12.1	18.1	58,601
- Housing Loans	4.7	15.0	18,809
- other retail	7.4	20.0	39,792
Agriculture	9.2	5.0	12,265
Foreign advances	22.1	10.0	59,268
Misc. including Trade	12.0	15.0	48,365
Total	**100.0**	**17.1**	**456,383**

Source: Annual report, IDFC Securities Research

Exhibit 30: ICICI Bank

Industry, Rs m	% of total exposure	% stress	Exposure under stress
Retail finance	18.0	6.2	70,470
Home loans	8.5	4.0	21,561
car loans	1.2	10.0	7,700
CV	2.3	10.0	14,815
Personal Loans	0.4	20.0	4,687
Credit cards	0.4	15.0	4,143
Others	1.8	20.0	17,563
Bank	8.7	10.0	55,184
Electronics and engineering	7.9	15.0	75,221
Services – finance	7.6	9.4	45,215
Services - non finance	6.2	8.5	32,924
Crude petroleum/refining and petrochemicals	6.1	-	0
Road, port, telecom, urban development & other infra	5.9	28.5	106,701
Power	5.9	17.1	63,599
Iron/steel and products	4.9	16.2	50,483
Construction	3.9	54.9	135,583
Metal and products (excluding iron and steel)	3.1	6.3	12,238
Food and beverages	2.4	10.0	15,070
Mutual funds	2.3	15.0	21,863
Wholesale/retail trade	2.2	7.8	10,588
Chemical and fertilizers	1.8	30.4	35,157
Cement	1.5	15.4	14,887
Mining	1.5	16.3	15,444
Automobiles	1.2	3.2	2,527
Shipping	1.2	42.1	31,219
Drugs and pharmaceuticals	1.2	38.8	28,249
Gems and jewellery	0.7	55.6	25,022
Manufacturing products excluding metal	0.7	20.0	8,630
Textiles	0.6	35.3	13,636
FMCG	0.2	62.1	9,056
Venture capital funds	0.0	5.0	95
Other industries	4.1	20.0	51,992
Agri and rural advances	3.3	20.0	41,975
Grand Total	**100.0**	**15.4**	**973,027**

Source: Annual report, IDFC Securities Research

Exhibit 31: Punjab National Bank

Industry, Rs m	% of total exposure	% stress	Exposure under stress
Coal	0.1	16.3	335
Mining	0.7	16.3	3,502
Iron and Steel	8.1	16.2	39,829
Other Metal & Metal Products	0.6	6.3	1,231
All Engineering	3.7	55.3	62,188
Electricity	2.2	17.1	11,456
Cotton Textiles	0.8	35.3	8,104
Jute Textiles	0.0	35.3	390
Other Textiles	1.6	35.3	17,359
Sugar	1.2	54.2	19,582
Tea	0.0	10.0	5
Food Processing	1.5	10.0	4,695
Vegetable Oils & Vanaspati	0.7	19.0	3,748
Tobacco & Tobacco Products	0.0	-	-
Paper & Paper	0.5	24.1	3,925
Rubber & Rubber	0.1	12.8	385
Chemicals, Dyes, Paints etc.	1.4	35.9	14,707
of which Fertilisers	0.0	29.8	369
of which Petrochemicals	0.3	38.4	3,104
of which Drugs and & Pharmaceuticals	0.6	38.8	6,778
of which others	0.5	31.4	4,456
Cement	0.5	15.4	2,213
Leather & Leather	0.2	69.7	4,397
Gems and Jewellery	1.2	55.6	20,044
Construction	1.4	54.9	23,044
Petroleum	1.4	-	-
Automobiles including Trucks	0.6	3.2	549
Computer Software	0.0	14.1	117
Infrastructure	14.3	21.3	92,505
of which Power	7.0	17.1	36,302
of which Telecommunications	3.4	32.5	33,947
of which Roads & Ports	2.2	17.4	11,757
of which others	1.6	21.3	10,499
NBFCs	2.7	9.4	7,644
Trading	4.6	9.7	13,330
Other Industries	7.4	25.0	55,989
TOTAL	57.4	23.6	411,272
Residuary Advances (ex-retail)	23.1	25.0	175,248
	-		
Retail loans	7.8	9.7	22,843
- Housing Loans	3.9	4.0	4,726
- Education loans	0.9	20.0	5,640
- Vehicle, Personal, etc	1.8	20.0	10,986
- other retail	1.2	20.0	6,984
Agriculture	11.7	20.0	70,924
Grand Total	**100.0**	**19.6**	**593,275**

Source: Annual report, IDFC Securities Research

Exhibit 32: Axis Bank

Industry, Rs m	% of funded exposure	% stress	Exposure under stress
Mining and quarrying (incl. coal)	0.4	16.3	1,835
Iron and Steel	3.8	16.2	18,153
Other Metal and Metal Products	1.0	6.3	1,832
All Engineering	3.3	55.3	53,659
Power Generation & Distribution	5.8	17.1	29,227
Cotton Textiles	1.0	35.3	10,307
Jute Textiles	0.0	35.3	113
Other Textiles	0.7	35.3	6,874
Sugar	0.4	54.2	5,961
Tea	0.0	10.0	82
Food Processing	1.0	10.0	3,042
Edible Oils and Vanaspati	1.2	19.0	6,815
Beverages & Tobacco	0.1	6.2	216
Wood & wood products	0.2	9.4	451
Paper and Paper Products	0.5	24.1	3,245
Rubber, plastic and their products	0.3	12.8	1,150
Chemicals and chemical products	3.9	35.3	41,196
Of which Petrochemicals	1.3	38.4	14,191
Of which Drugs & Pharmaceuticals	0.9	38.8	10,329
Of which Others	1.8	31.4	16,675
Glass and glassware	0.1	45.0	679
Cement and cement products	0.7	15.4	3,275
Leather and Leather Products	0.0	69.7	711
Gems and Jewellery	2.7	55.6	44,882
Construction	0.6	54.9	9,712
Petroleum, coal products and nuclear fuels	0.2	-	-
Vehicles, vehicle parts and transport equipments	0.7	3.2	641
Computer Software	0.9	14.1	3,852
Infrastructure (excluding Power)	9.0	23.1	61,242
Of which Roads & ports	2.1	17.4	10,716
Of which Telecommunication	2.4	32.5	23,398
Of which Others	4.4	20.7	27,128
NBFCs	2.7	9.4	7,447
Trade	6.5	7.8	14,932
Other Industries	17.2	15.0	76,353
Of which Banking & Finance	6.4	5.0	9,471
Of which Commercial Real Estate	1.8	22.9	12,452
Of which Shipping	0.8	42.1	10,305
Of which Professional Services	0.9	5.0	1,349
Others	7.2	20.0	42,776
Residual exposures to balance the total exposure	20.0	15.0	88,587
Retail	9.4	7.9	21,985
- Housing Advances	6.4	4.0	7,550
- 4-Wheelers	1.0	10.0	3,053
- Personal Loans	1.3	20.0	7,773
- Non-Schematic	0.5	20.0	2,776
- Cards	0.2	15.0	833
Agriculture	5.9	10.0	17,320
Total Exposure	**100.0**	**18.1**	**535,777**

Source: Annual report, IDFC Securities Research

Exhibit 33: Bank of India

Industry	% of total exposure	% stress	Exposure under stress
Coal	0.1	16.3	264
Mining	0.6	16.3	2,452
Iron and Steel	3.9	16.2	16,577
Other Metal & Metal Products	1.4	6.3	2,237
All Engineering	1.2	55.3	17,437
Electricity	2.8	17.1	12,621
Cotton Textiles	1.6	35.3	14,873
Jute Textiles	0.0	35.3	318
Other Textiles	1.5	35.3	13,734
Sugar	0.5	54.2	7,644
Food Processing	0.5	10.0	1,236
Vegetable Oils & Vanaspati	0.1	10.0	146
Tobacco & Tobacco Products	0.2	-	-
Paper & Paper	0.4	24.1	2,212
Rubber & Rubber	0.8	12.8	2,669
Chemicals, Dyes, Paints etc.	1.8	36.1	17,365
of which Fertilisers	0.1	29.8	706
of which Petrochemicals	0.4	38.4	4,121
of which Drugs and & Pharmaceuticals	0.8	38.8	8,071
of which Others	0.5	31.4	4,467
Cement	0.4	15.4	1,437
Leather & Leather	0.2	69.7	3,275
Gems and Jewellery	1.6	55.6	23,142
Construction	1.0	54.9	13,895
Petroleum	0.5	-	-
Automobiles including Trucks	1.3	3.2	1,136
Computer Software	0.0	14.1	25
Infrastructure	7.0	20.7	37,975
Other Industries	7.0	20.0	36,529
TOTAL	36.1	24.7	233,667
Residuary Other Advances (ex-retail, Agri, foreign)	30.1	25.0	197,095
Retail Advances	6.3	8.8	14,686
Agriculture credit	8.7	20.0	45,476
Foreign advances	18.3	15.0	71,924
Grand Total	**100.0**	**21.5**	**562,847**

Source: Annual report, IDFC Securities Research

Exhibit 34: State Bank of India

Industry	% of total exposure	% stress	Exposure under stress
Coal	0.2	16.3	4,535
Mining	0.6	16.3	13,541
Iron & Steel	5.1	16.2	122,790
Metal Products	1.6	6.3	14,489
All Engineering	4.1	55.3	335,742
Electricity	2.2	17.1	55,892
Cotton Textiles	2.1	35.3	110,269
Jute Textiles	0.0	35.3	1,595
Other Textiles	2.2	35.3	114,908
Sugar	0.6	54.2	46,287
Tea	0.1	10.0	1,812
Food Processing	1.4	10.0	21,385
Vegetable Oils & Vanaspati	0.6	19.0	17,479
Tobacco / Tobacco Products	0.3	-	-
Paper / Paper Products	0.3	24.1	12,048
Rubber / Rubber Products	0.4	12.8	6,800
Chemicals / Dyes / Paints etc.	4.2	35.1	215,571
Of which Fertilizers	0.3	29.8	14,128
Of which Petrochemicals	0.7	38.4	37,943
Of which Drugs & Pharmaceuticals	1.5	38.8	85,135
Of which others	1.7	31.4	78,365
Cement	0.7	15.4	15,355
Leather & Leather Products	0.2	69.7	17,696
Gems & Jewellery	1.0	55.6	78,188
Construction	1.2	54.9	96,808
Petroleum	3.6	-	-
Automobiles & Trucks	0.7	3.2	3,154
Computer Software	0.2	14.1	4,167
Infrastructure	9.1	21.2	286,123
Of which Power	2.5	17.1	63,267
Of which Telecommunication	1.7	32.5	79,875
Of which Roads & Ports	2.4	17.4	60,701
Of which other infra	2.6	21.3	82,279
Other Industries	10.1	25.0	373,196
NBFCs & Trading	5.4	5.0	40,244
Res. Adv to bal. Gross Advances	16.9	10.0	249,602
Retail loans	11.1	10.3	169,412
- Housing Loans	5.9	4.0	34,708
- Education loans	0.7	20.0	21,959
- Auto	1.4	10.0	20,909
- other retail	3.1	20.0	91,836
Agriculture	6.4	20.0	189,652
International	7.4	10.0	109,358
Total	**100.0**	**18.5**	**2,728,097**

Source: Annual report, IDFC Securities Research

Exhibit 35: Union Bank of India

Industry	% of total exposure	% stress	Exposure under stress
Coal	0.0	69.3	541
Mining	0.3	69.3	3,505
Iron and Steel	4.5	16.2	12,995
Other Metal & Metal Products	1.0	6.3	1,090
All Engineering	1.6	55.3	15,869
Electricity	6.6	17.1	20,331
Cotton Textiles	1.2	35.3	
Jute Textiles	0.0	35.3	299
Other Textiles	1.9	35.3	11,780
Sugar	0.5	54.2	4,782
Tea	0.1	10.0	184
Food Processing	1.3	10.0	2,328
Vegetable Oils & Vanaspati	0.3	19.0	1,060
Tobacco & Tobacco Products	0.0	-	-
Paper & Paper	0.2	24.1	1,055
Rubber & Rubber	0.5	12.8	1,156
Chemicals, Dyes, Paints etc.	1.8	32.5	10,246
of which Fertilisers	0.0	29.8	207
of which Petrochemicals	0.3	38.4	1,907
of which others	1.4	31.4	8,132
Cement	0.5	15.4	1,344
Leather & Leather	0.2	69.7	2,649
Gems and Jewellery	1.2	55.6	12,185
Construction	2.4	54.9	23,813
Petroleum	1.8	-	-
Automobiles including Trucks	1.6	3.2	924
Computer Software	0.6	14.1	1,518
Infrastructure	4.23	28.51	21,618
NBFCs	6.9	5.0	6,212
Other Industries	3.0	20.0	10,780
Residuary Other Advances	34.8	20.0	124,657
Retail	9.1	10.9	17,738
- Housing Loans	5.1	4.0	3,684
- Education loans	0.9	20.0	3,164
- other retail	3.0	20.0	10,890
Agri	11.7	20.0	42,092
Grand Total	**100.0**	**20.3**	**362,792**

Source: Annual report, IDFC Securities Research

Exhibit 36: Summary stress across sectors

Rs bn	Rs bn	% of total	% of category	% of stress	Stressed loans
Non-food Credit (1 to 5)	**36,774**			**17**	**6,382**
1. Agriculture & Allied Activities	**4,527**	**12**	**100**	**20**	**905**
2. Services (ex- NBFCs, CRE, shipping)	**5,990**	**16**		**8**	**506**
Trade	1,854	5	31	8	144
Wholesale Trade (other than food procurement)	1,028	3		10	103
Retail Trade	826	2		5	41
Transport Operators	652	2	11	10	65
Professional Services	602	2	10	5	30
Tourism, Hotels & Restaurants	283	1	5	5	14
Computer Software	142	0	2	5	7
Other Services	2,456	7	41	10	246
3. Retail Loans	**6,912**	**19**		**9**	**610**
Housing (Including Priority Sector)	3,533	10	51	4	141
Vehicle Loans	802	2	12	10	80
Advances against Fixed Deposits	602	2	9	0	-
Education	438	1	6	20	88
Consumer Durables	106	0	2	25	26
Credit Card Outstanding	173	0	2	15	26
Advances to Individuals against share, bonds, etc.	34	0	0	10	3
Other Personal Loans	1,224	3	18	20	245
4. Industry (Micro & Small, Medium and Large)	**17,606**	**48**		**24**	**4,196**
5. Non-Banking Financial Companies (NBFCs)	**1,739**	**5**	**29**	**9**	**164**
Of which: PFC, REC, IDFC, HDFC, LIC HF, STFC, MMFS	1,082			0	-
Others	657			25	164

Exhibit 37: Distressed debt across industry segments

(Rs m)		Total debts 2010	Stressed Debt	% of debt of the sector in distress	% allocation of stressed debt
Total Debt		**16,204,658**	**3,708,392**	**22.9**	
Telecom	8.89	1,441,152	467,985	32.5	12.6
Construction	4.30	696,080	382,276	54.9	10.3
Power Generation & Distribution	11.73	1,900,131	324,566	17.1	8.8
Textiles	4.84	784,199	293,673	37.4	7.5
Steel	10.01	1,622,746	262,903	16.2	7.1
Air Transport service	1.36	220,782	216,399	98.0	5.8
Capital Goods	2.21	358,408	198,184	55.3	5.3
Pharmaceuticals	2.45	396,760	154,127	38.8	4.2
Crude Oil	2.74	443,693	141,641	31.9	3.8
Sugar	1.52	246,587	133,716	54.2	3.6
Realty	3.40	551,462	126,315	22.9	3.4
Shipping	1.79	289,262	121,870	42.1	3.2
Infrastructure Developers	4.34	703,423	80,999	11.5	2.2
Fertilizers	1.63	264,603	78,749	29.8	2.1
FMCG	0.78	125,650	77,993	62.1	2.1
Diversified	1.27	205,395	67,322	32.8	1.8
Diamond, Gems	0.68	110,451	61,429	55.6	1.6
Chemicals	1.12	181,543	57,077	31.4	1.5
IT	1.94	313,900	44,309	14.1	1.2
Miscellaneous	0.86	139,132	40,153	28.9	1.1
Trading	2.20	357,290	34,504	9.7	0.9
Cement	1.38	223,524	34,408	15.4	0.9
Glass & Glass products	0.25	40,651	33,268	81.8	0.9
Paper	0.67	108,552	26,141	24.1	0.7
Entertainment	0.59	95,615	24,362	25.5	0.6
Plantation	0.47	76,021	23,426	30.8	0.6
Non ferrous metals	2.29	370,728	23,372	6.3	0.6
Consumer Durables	1.06	172,146	19,696	11.4	0.5
Automobile	3.59	582,128	18,789	3.2	0.5
Hotels & Restaurants	0.84	135,582	17,642	13.0	0.5
Cables	0.18	29,349	16,736	57.0	0.4
Packaging	0.53	85,392	15,347	18.0	0.4
Mining	0.57	92,573	15,074	16.3	0.4
Ceramic products	0.13	21,419	14,844	69.3	0.4
Edible oil	0.46	75,243	14,269	19.0	0.4
Petrochemicals	0.21	34,187	13,127	38.4	0.3
Logistics	0.17	27,474	13,109	47.7	0.3
Castings, Forgings & Fastners	0.53	85,794	10,887	12.7	0.3
Retail	0.35	57,260	10,034	17.5	0.3
Plastic products	0.41	66,739	9,064	13.6	0.2
Tyres	0.36	58,157	7,444	12.8	0.2
Media - print television radio	0.18	29,575	7,202	24.4	0.2
Auto Ancillaries	0.95	153,191	6,638	4.3	0.2
Leather	0.06	9,114	6,355	69.7	0.2
Alcoholic Beverages	0.50	80,999	5,263	6.5	0.1
Paints varnish	0.06	10,481	3,874	37.0	0.1
Healthcare	0.41	67,224	711	1.1	0.0
Agro Chemicals	0.24	39,330	375	1.0	0.0
Refractories	0.01	1,174	230	19.6	0.0
Computer Education	0.10	16,279	177	1.1	0.0
Refineries	11.18	1,812,346	-	-	-
Stock commodity brokers	0.58	94,109	-	-	-
Gas Distribution	0.50	81,685	-	-	-
Dry cells	0.05	7,738	-	-	-
Sanitaryware	0.03	4,926	-	-	-
Tobacco products	0.02	3,376	-	-	-
Oil drill allied	0.01	1,931	-	-	-

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