40 Years of Leadership

Debt Crisis Decoded

Unmasking the Mystery of Stressed Assets in the Indian Banking System

DEBT

March 2016 | RBSA - Research Initiative

https://rbsa.in

- Valuation
- Investment Banking
- Advisory Services

Preface

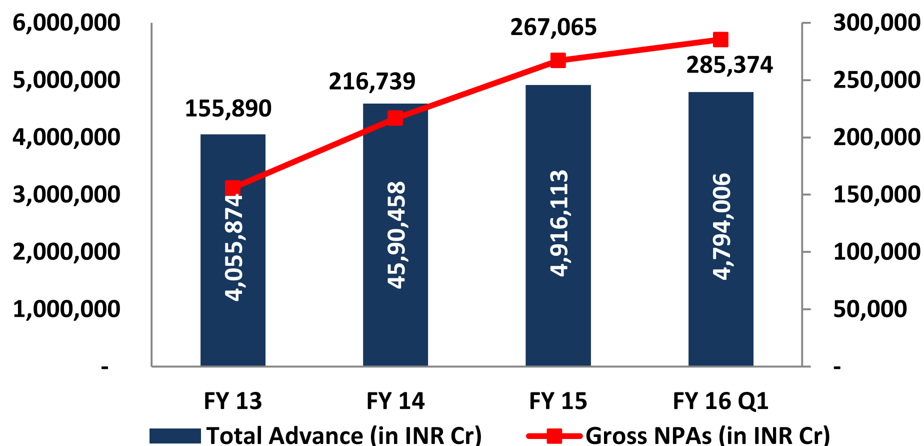
Banking system acts as a catalyst in economic growth of a country. For a country like India, which aspires to become a growth engine of the world, need of developed and well managed banking system is inevitable. Banking system accelerates capital formation, mobilizes saving, finances commercial activities and also helps country to implement monetary policy. Indian government is extensively looking at financial inclusion as an effective tool in bringing millions of its citizen out of poverty.

Today, India is at a sweet spot and this does not come so often. We are probably at a stage where USA was in early forties (period of baby boomers) and China was in late seventies (period of economic liberation). Indian Economy has all the ingredients like favorable commodity prices, lowering inflation, growth oriented monetary policies and better fiscal discipline to become a formidable force in global economy.

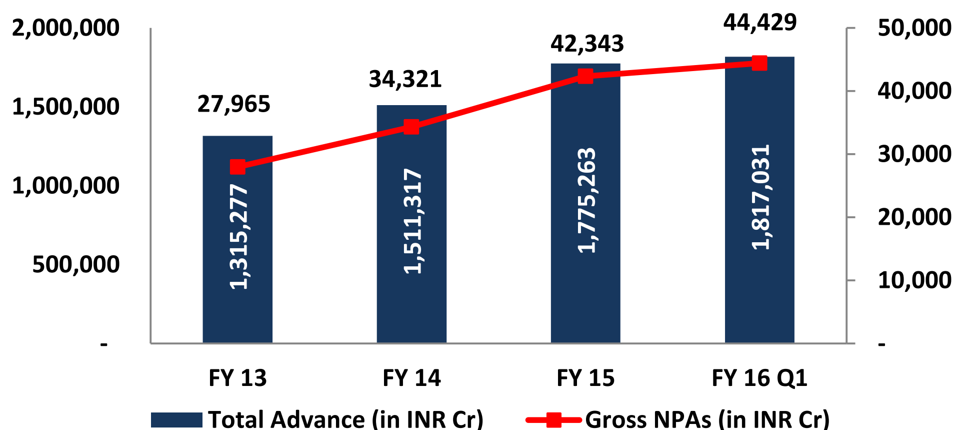
But there is a dent in this shining Indian growth story in the form of mounting stressed loans in the banking system. We have seen the failure of financial system in 2008 and its massive impact on global economy. India at this juncture cannot afford an ailing banking system. Through this report we have estimated how deep this dent is.

Downward Spiral of Indian Banking System

Deteriorating Asset Quality



2 Years CAGR in listed public sector Banks	
Advances	9%
GNPA	35%

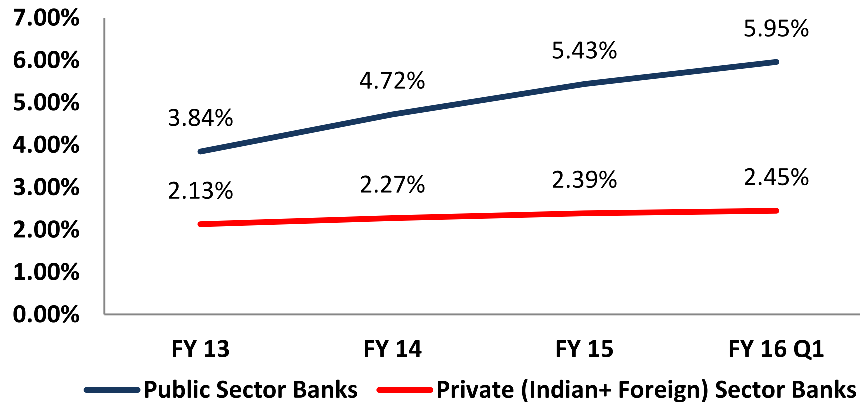


2 Years CAGR in all listed private sector Banks	
Advances	18%
GNPA	26%

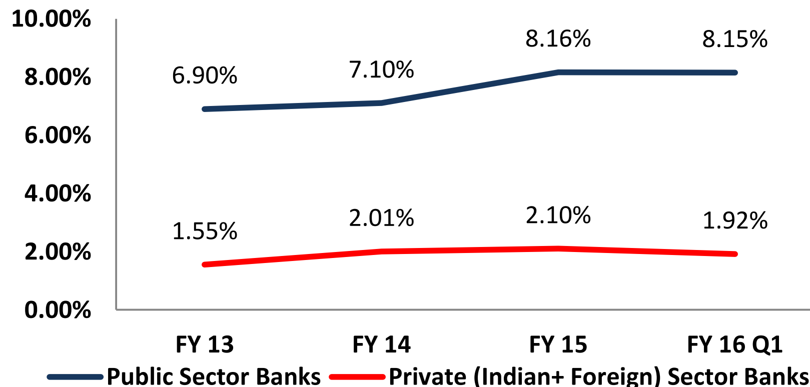
Source: RBI, RBSA Research

Downward Spiral of Indian Banking System

Deteriorating Asset Quality



Public Sector Banks	
GNPA	5.95%
RSA[1]	8.15%
Stressed Assets	14.1%



Private Sector Banks	
GNPA	2.45%
RSA[1]	1.92%
Stressed Assets	4.37%

Source: RBI, RBSA Research 1. RSA= Restructured Standard Advances

Downward Spiral of Indian Banking System

Declining Performance

FY16Q3 financial numbers reported by Indian banks are one of the worst in the last few years. Performance of Indian public sector banks deteriorated significantly as all listed public sector banks cumulatively reported PAT level loss of INR 10,653 Cr during FY16Q3. Public sector banks reported muted revenue growth of 1%, while their operating profits dipped by 6% on YoY basis.

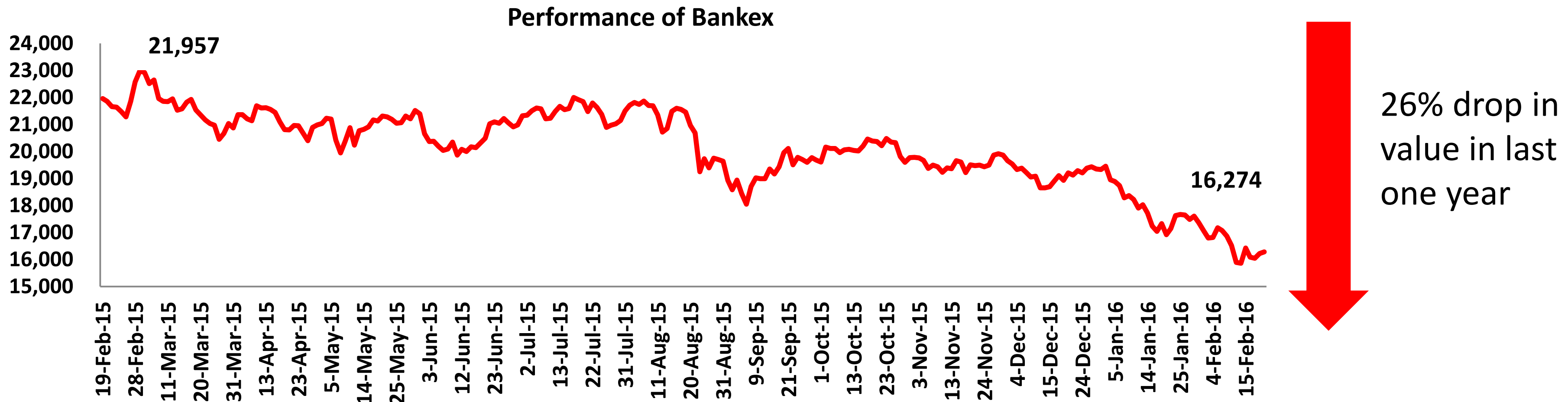
Private sector banks performed better compared to public sector banks though performance was muted when compared to their historical performance.

in INR Cr	Total Income			Operating Profit			Profit after Tax		
	FY 16 Q3	FY 15 Q3	Var % YoY	FY 16 Q3	FY 15 Q3	Var % YoY	FY 16 Q3	FY 15 Q3	Var % YoY
Sample Select Public Sector Banks									
Allahabad Bank	5030	5387	-7%	860	1075	-20%	-486	164	Loss in FY 16 Q3
Andhra Bank	4801	4541	6%	1030	923	12%	34	202	-83%
Bank Of Baroda	11727	11808	-1%	1704	2339	-27%	-3342	334	Loss in FY 16 Q3
Bank Of India	11087	11947	-7%	1409	1865	-24%	-1506	173	Loss in FY 16 Q3
State Bank Of India	67594	64605	5%	12734	12106	5%	1374	3893	-65%
All Listed Public Sector Banks	203534	202046	1%	33015	34991	-6%	-10653	7881	Loss in FY 16 Q3
Sample Private Sector Banks									
Axis Bank Ltd.	12531	10929	15%	3985	3315	20%	2175	1900	15%
DCB Bank Ltd.	477	404	18%	84	68	23%	41	43	-3%
Dhanlaxmi Bank Ltd.	309	345	-10%	-10	6	Loss in FY 16 Q3	-56	17	Loss in FY 16 Q3
HDFC Bank Ltd.	18283	14931	22%	5736	4779	20%	3357	2795	20%
ICICI Bank Ltd.	17563	15527	13%	6560	5037	30%	3018	2889	4%
All Listed Private Sector Banks	73924	63754	16%	22055	17676	25%	11522	10163	13%

Source: ACE Equity, RBSA Research

Downward Spiral of Indian Banking System

Deteriorating Market Value



Source: BSE

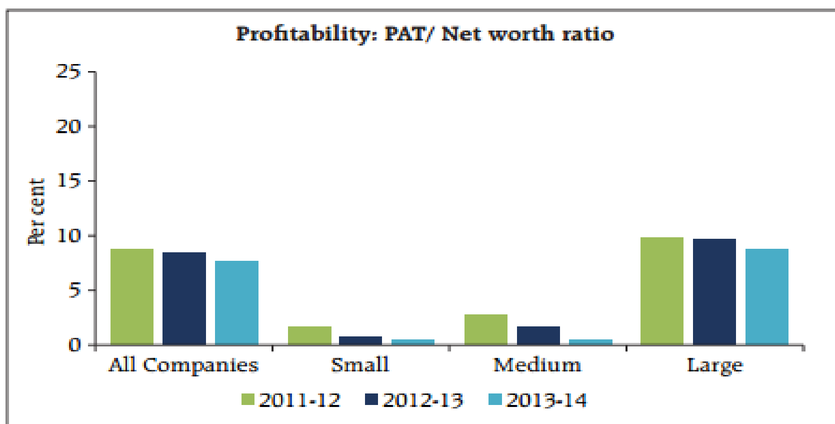
Investors have duly noted the subdued performance of Indian Banks. Bankex – An Index that tracks banking stocks has gone down by 26% in last one year. Among the banks, public sector banks are the worst performers. As on February 19, 2016, all public sector banks were trading below their book value. On the same date, all private sector banks barring four were trading at a price more than their book value. On an average PSU Banks have lost more than 44% of their market capitalization in last one year. During the same period private sector banks lost 26% of their market capitalization.

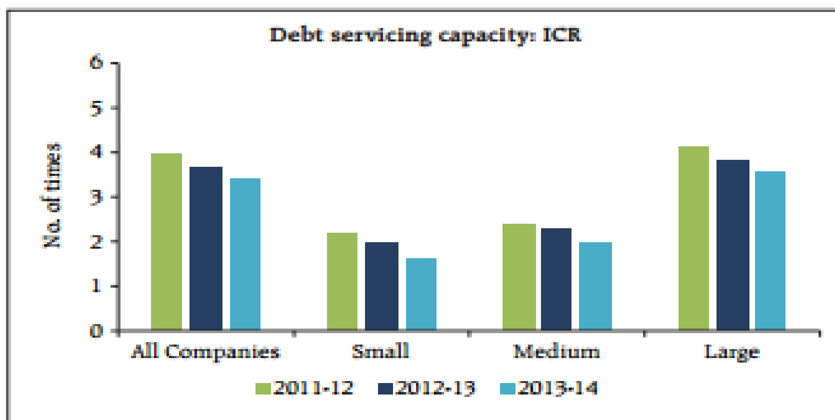
Price to Book Value as on 19th Feb 2016	
Private Sector Bank*	1.56
Public Sector Banks*	0.39

Source: ACE Equity, RBSA Research* All listed private and public sector banks

Weak Fundamentals of Indian Corporates

Parameter	% of Total Companies			Share in Total Debt		
	Sep-14	Mar-15	Sep-15	Sep-14	Mar-15	Sep-15
Negative net worth or Debt to Equity >=3	13.6%	14.2%	15.3%	22.9%	23.0%	24.9%





Growing number of weak companies

As per the financial stability report of RBI dated December 2015, proportion of weak companies (Non Government Non Financial Companies with negative net worth and DE>=2) has increased from 13.6% as of Sep 2014 to 15.3% as of Sep 2015. During the same period, share of weak companies in total debt has increased from 22.9% to 24.9%.

Deteriorating Profitability

Profitability as measured by return on equity has decreased from FY12 to FY14 across all types of the companies. Profitability of small and medium enterprises eroded more than large corporations.

Weak debt servicing capability

During the same period, debt servicing capacity as measured by interest coverage ratio has also decreased significantly.

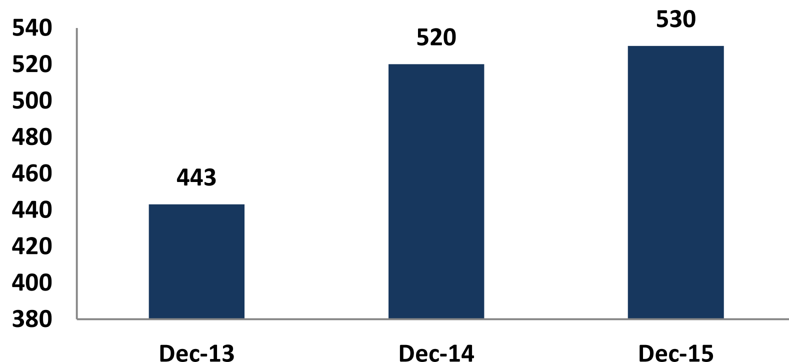
Source: RBI's Fianancial Stability Report, 2015, RBSA Research

How Banks Mask Bad Debts?

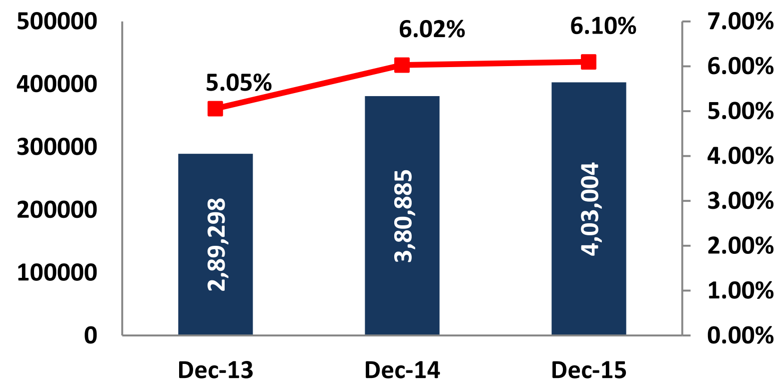
Banks are provided with various tools by RBI to restructure assets so that they can manage their loan portfolio efficiently, but these very tools are being misused by banks to mask their bad assets.

Corporate Debt Restructuring (CDR)

Corporate debt restructuring was designed to revive the stressed corporates and to ensure the recovery of the debt issued to these corporates. CDR scheme had a very rough time so far. As of 31st December 2015, only 16% of the CDR cases were successful. Failure of CDR mechanism indicates banks' inability to assess borrowers ability and willingness to meet their restructuring commitment. CDR schemes may have been used by banks to delay the recognition of bad debts rather than solving the underlying problem.



Source: CDR Cell

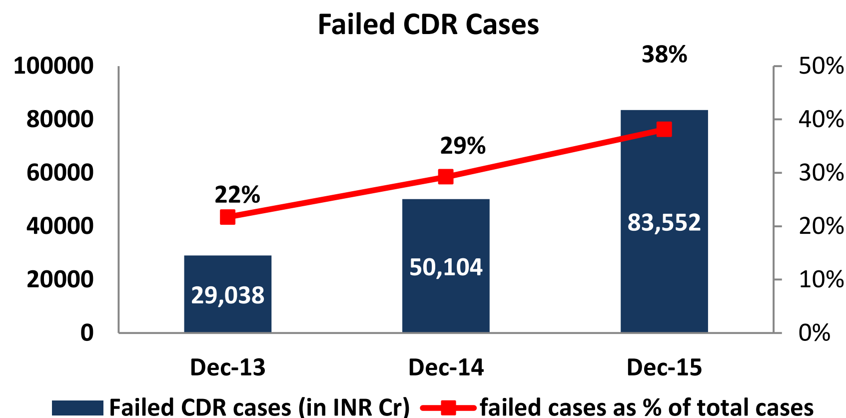


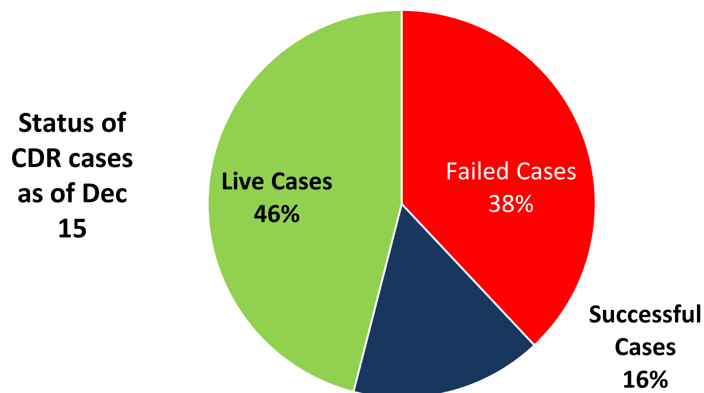
CDR cases have gone up from 443 as of Dec 13 to 530 as of Dec 15

CDR outstanding as % of total lending in Indian banking system has gone up from 5% as of Dec 2013 to 6.10% as of Dec 2015

How Banks Mask Bad Debts?

RBSA Advisors





Classification of live cases across top five Industries

Industry	Number of cases	Debt (INR Cr)	% share
Iron & Steel	52	54051	21%
Infrastructure	19	42823	17%
Engineering	12	25484	10%
EPC	5	23522	9%
Construction	11	18644	7%

As on Dec 2015, 38% of the CDR cases (worth INR 83,552 Cr) have failed as per the data reported by CDR cell. Number of failed CDR cases shot up from 22% as on Dec 2013 to 29% as on Dec 14 and eventually to 38% as on Dec 2015 which indicates systematic failure of CDR scheme.

Also, as on Dec 2015, 16% of the CDR cases were successful where as 46% were still under CDR mechanism ("live CDR cases").

Most of the live CDR cases are in stressed sectors such as Iron & Steel (21% cases), Infrastructure (17% cases) and Engineering (10%). Stressed sectors may take few more years for complete revival and some portion from the live cases may fail. This could result into failed cases going beyond 38% in future.

RBI has recently introduced other restructuring mechanisms such as SDR and 5:25 to overcome the limited success it had with traditional CDR schemes.

Source: CDR Cell

How Banks Mask Bad Debts?

Strategic Debt Restructuring (SDR)

SDR scheme allows banks to convert the outstanding loan into equity and eventually acquire majority control of the entity. Ultimate objective is to improve the financial performance of ailing company and eventually recover the dues. Banks across public and private sectors have invoked SDR as it allows stressed debt to be classified as *"Standard"* for eighteen months.

Equity shares of the companies which are under SDR scheme are trading at extremely low prices. Conversion of debt into equity in these companies will barely yield anything to the banks as most have Outstanding Debt Obligations to the tune of 17 to 57 times of their respective Market Capitalization.

Company	Market Capitalisation (INR Cr)	Debt Amount (INR Cr)	Debt / M.Cap (RHS)
Gammon India	520	15000	29
Monnet Ispat	206	11705	57
Electrosteel Castings	718	10235	14
IVRCL	378	7500	20
Visa Steel	182	3094	17
Jyoti Structures	140	2356	17
Rohit Ferro-Tech	59	2280	39
GOL offshore Ltd	187	2000	11
Ankit Metal & Power	28	1208	43

Source: News article, RBSA Research

How Banks Mask Bad Debts?

SDR Cases

Name of the Company	Date of SDR Announcement	Debt (in INR Cr)
Adnunik Power and Natural Resources	Dec-15	3116
AMW Motors	Dec-15	1432
Ankit Metal & Power	Dec-15	1208
Electrosteels Steels	Oct-15	10235
Gammon India	Nov-15	15000
GOL offshore Ltd	Dec-15	2000
IVRCL	Sep-15	7500
Jyoti Structure	Aug-15	2356
Lanco Testa	Aug-15	2400
Monnet Ispat	Aug-15	11705
Rohit Ferro-Tech	Nov-15	2280
Shiv-Vani Oil	Sep-15	3500
Transstroy	Dec-15	4300
Visa Steel	Sep-15	3094

Source: News articles, RBSA Research

SDR scheme requires the change in management so that stressed companies can be managed better but SDR may be used by existing errant promoters to buy back the assets of their own companies at much cheaper price by floating shell companies. RBI has recently sent a note to banks where it has asked banks to establish that there is no connection between new buyer and current promoter of the company.

Restructuring loans under SDR may require banks to put additional funds into the company to make it operationally viable. Most of the restructuring schemes have moratorium period where interest payment is funded by additional debt which results in increased banking exposure to stressed companies.

SDR companies are operating in the stressed sectors like infrastructure, power, metals and mines and may take few years for revival. As most of the SDR cases are from failed CDR cases, restructuring these loans through SDR would result in simply delaying the recognition of bad assets.

SDR may result in deferring of NPA recognition of : INR 1.5 Lac Cr/ USD 23 bn representing 2.2% of total advances of Indian banking system

As per ''SDR: A band-aid for a bullet wound'' by Religare Institutional Research

How Banks Mask Bad Debts?

5:25 Scheme

The 5:25 flexible structuring scheme allows bankers to fix longer amortization period for loans to projects in the infrastructure and core industries sector, for 25 years, based on the economic life of the project, with periodic refinancing/restructuring every 5 years. Refinancing essentially means giving new loan so that the older loan can be repaid and new loan can be started on better terms for the borrower.

As with other debt restructuring mechanisms, 5:25 schemes may require banks to infuse additional debt into stressed companies which would further increase the banking sector's exposure to stress companies. Most of the stress companies would require the additional debt funding even to pay the interest on the old loans.

Banks can misuse 5:25 scheme as loan restructured under this scheme is not treated as bad loan in their books. This will result in lower provision and artificially showing healthy picture of assets. It will ultimately delay recognition of non performing assets and it may also result in higher losses in future due to additional funding that would require in 5:25 scheme.

5:25 Refinancing Cases

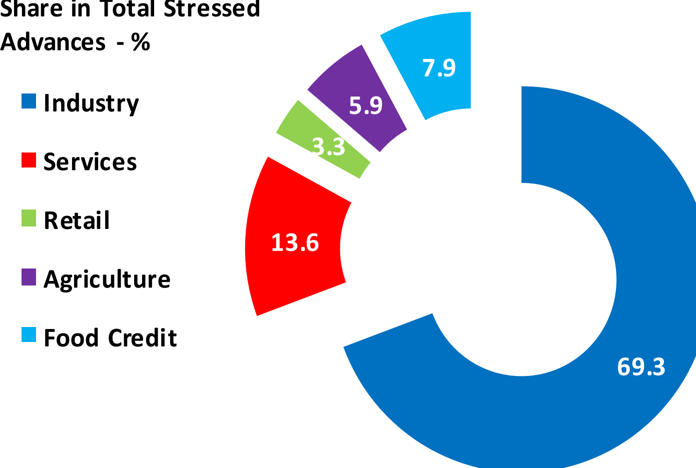
Name of Organisation	Debt (in INR Cr)
Adani Power	15,000
Bhushan Steel	35,000
Essar Ports	6,000
Essar Power	3,300
Essar Steel	14,500
JP Infratech	10,300
JSW Energy	6,000
Uttam Galva	1,300

Source: News articles, RBSA Research

Disclosed Stressed Advances

According to RBI's Financial Stability Report - December 2015, 11.2% of the overall credit exposure of Scheduled Commercial Banks as on June, 2015 is classified as stressed[1].

Sectors	Total Exposure (INR Bn)	% Disclosed Stressed	Disclosed Stressed Advances (INR Bn)
Iron and Steel	982.8	27.0	265.4
Power	5,730.5	23.8	1,366.0
Telecommunication	892.5	14.2	127.2
Aviation	1,208.0	60.0	724.8
Other Industry	17,487.7	15.1	2,645.5
Industry	**26,301.5**	**19.5**	**5,128.8**
Services	14,331.3	7.0	1,003.2
Retail	12,134.7	2.0	242.7
Agriculture	7,946.5	5.5	437.1
Food Credit	5,396.4	10.9	586.0
Total	**66,110.4**	**11.2**	**7,397.7**



In our report, we are analyzing the health of exposures to the Industrial and Services sector which account for ~ INR 40,633 Bn (~61.5%) of the overall banking sector exposure of INR 66,110.4 Bn.

1. Stressed Advances = Gross NPAs + Restructured Standard Advances

Source : RBI

Unmasking the Stressed Advances

In our opinion, disclosed stressed advances as on June, 2015 from the industry and services sector are not indicative of the real chunk of stressed loans lying as assets in balance sheets of the Indian Banking Sector.

To support our hypothesis, we have subjected companies from the above sectors in our sample to Altman's Z Score Model for Emerging Markets. Our sample covers 1,609 companies with total outstanding debt of INR 17,869 Billion.

Altman's Z Score for Emerging Markets:

Altman's Z Score is used to predict the probability that a firm will go into bankruptcy. They are primarily used predict corporate defaults and act as a control measure for the financial distress status of companies. The Z-score uses multiple corporate income and balance sheet values to measure the financial health of a company.

Altman's Z Score Model is a linear combination of four ratios weighted by coefficients. The model is formulated as follows:

Z Score = 6.56 X1 + 3.26 X2 + 6.72 X3 + 1.05 X4,

Wherein –

1) X1 = Net Working Capital / Total Assets which is a measure of company's *liquidity*,
2) X2 = Retained Earnings / Total Assets which measures *profitability* reflecting company's *earning power*,
3) X3 = Earnings Before Interest and Taxes / Total Assets which is a measure of company's *operating efficiency apart from tax and leveraging factors and stresses importance to company's long term stability*,
4) X4 = Book Value of Equity / Total Assets which factors in the *fluctuation in value of equity as a possible red flag*.

The Interpretation of Altman's Model is as follows –

Z < 1.1 means STRESS zone,

1.1 < Z< 2.6 indicates GRAY zone,

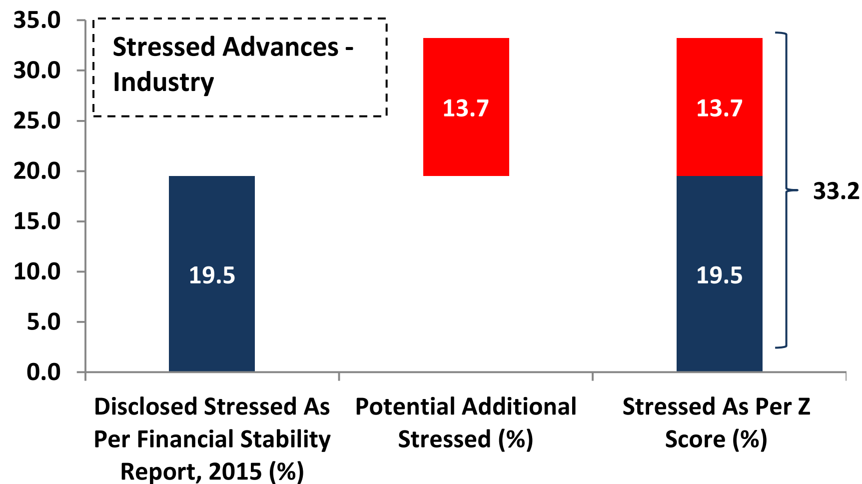
Z > 2.6 reflects SAFE zone.

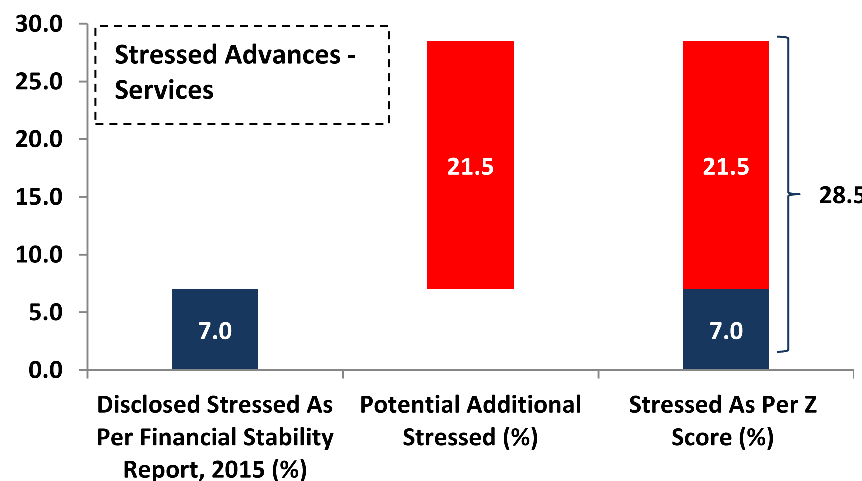
Empirical studies suggest that there is 70% probability, that a company categorized in Stress Zone will default in repayment of its outstanding debt obligation.

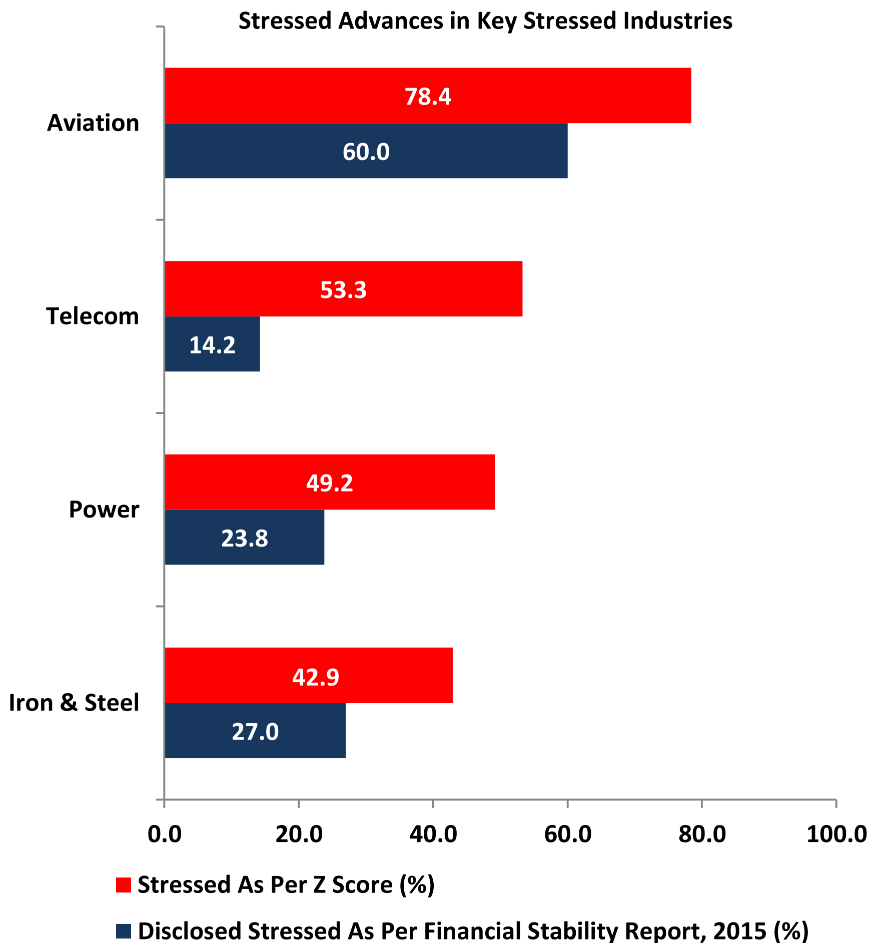
Source : RBI's Financial Stability Report, Dec 2015, RBSA Research

Unmasking the Stressed Advances

In support of our hypothesis, Altman's Z Score revealed that potentially ~33% of the debt to the industrial sector ~ 28% debt to the services sector are Stressed, as compared to disclosed figures of ~19.5% and ~7% as stated in the Financial Stability Report, Dec 2015 respectively for quarter ending June 2015.







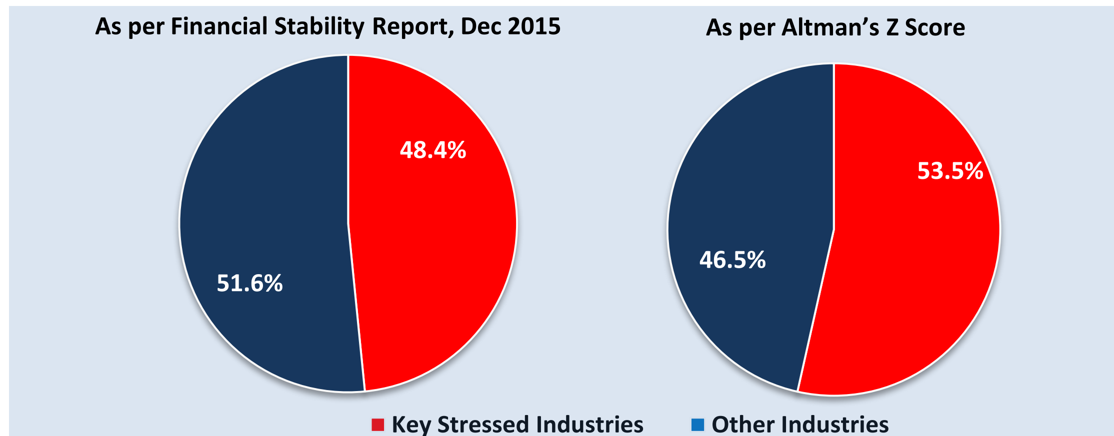
Source : RBI, RBSA Research

Unmasking the Stressed Advances

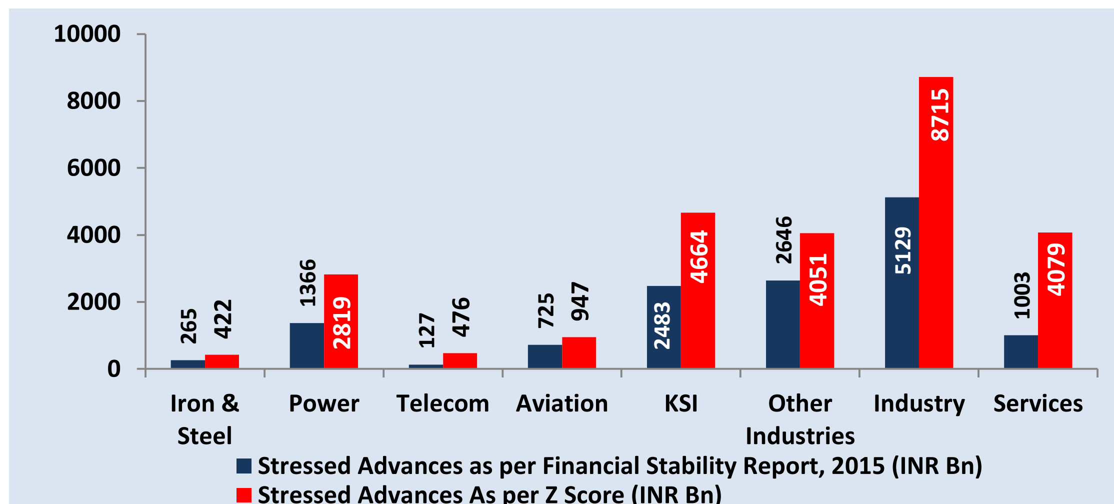
The amount of stressed assets in the Industry and Services sector is expected to increase by ~71% and 3X to **~INR 8715 Bn and ~INR 4079 Bn respectively. This translates to potential addition of ~INR 3586 Bn in stressed assets from Industry and ~INR 3076 Bn in stressed assets from Services sector.**

As per Altman's Z Score

~**2/3rd** of the potentially additional stressed assets in industry are from **Key Stressed Industries** (KSI - Iron & Steel, Power, Telecom and Aviation). Thus, KSI's share of stressed asset in industry is expected to rise from **48.4% to 53.5%.**



Of the widely disintegrated services sector, **Hotels & Restaurants, unlisted IT – Software and TV Broadcasting** sectors are estimated to contribute to **~18%, ~16% and ~12%** of the stressed advances from services sector respectively.

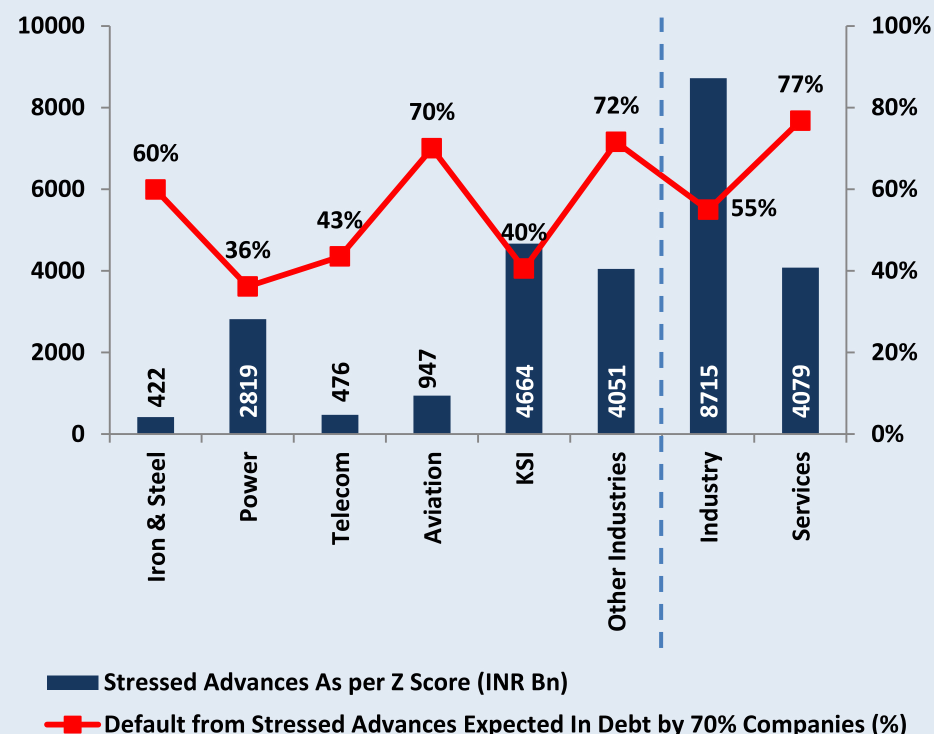


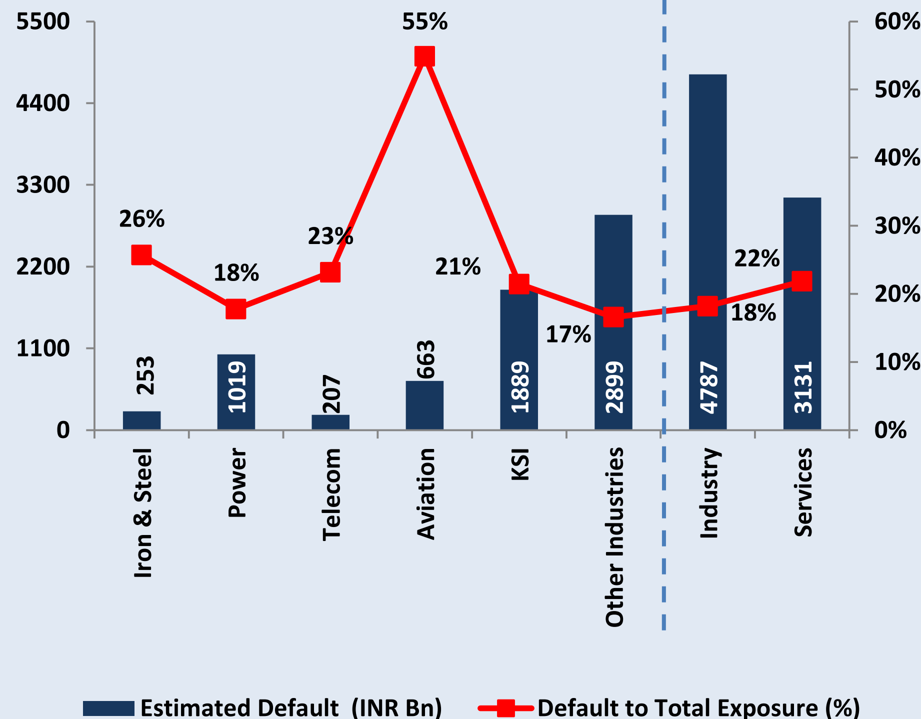
Source : RBI, RBSA Research

Unmasking the Stressed Advances

Empirical studies suggest that ~70% of the companies in the Stress Zone are expected to default on the outstanding debt obligations.

Inculcating the same conclusion in our studies on the 70% companies with poorest Z Scores, we have estimated that the total amount of default on loan obligation can potentially extend to INR 7,918.2 Bn or to ~19.5% of overall exposure to Industry and Services.





Source : RBI, RBSA Research

RBSA Advisors

Conclusion

With a potential of default lurking at a staggering 19.5% (amounting to INR 7,918.2 Bn) from advances relating to Industry and Services Sectors (which account for ~61.5% of the overall banking sector exposure), a clean up in the Indian Banking System is the need of the hour. A clean and transparent banking system would indeed spur growth, build in accountability and help create a stable economy in the long term.

The failure of the CDR system and the challenges related to the SDR and 5:25 debt restructuring scheme have made it difficult to estimate a fair picture of stressed loans in the Indian Banking System. To build in accountability and to overcome these challenges, RBI had recently conducted an Asset Quality Review of banks and had identified specific accounts which the banks had to classify as Non Performing Assets by March 2016. These specified accounts would be classified as NPAs regardless of their repayment structure or restructuring scheme.

The said exercise has resulted in an increase in the amount of overall gross NPAs of the listed banks (which cater to ~ 89% of total exposure of the Indian Banking System) to the tune of 46% to INR 4,217.4 Bn in December 2015 from March 2015. Consequently, the share of overall Gross NPAs to overall exposure has increased from 4.4% in March 2015 to 6.0% in December, 2015.

Though we appreciate RBI's initiative which aims to clean the entire banking space by March 2017, we believe that the amount of standard advances awaiting to get classified as NPAs is much higher than what has been disclosed by banks.

"If you owe your bank a hundred pounds, you have a problem. But if you owe a million, it has."

— John Maynard Keynes

RBSA Advisors

Disclaimer

The purpose of this Document is to provide interested parties with information that may be useful to them in understanding the content related to this document. This Document includes statements which may reflect various assumptions and assessments arrived at by the RBSA Analysts. Such assumptions, assessments and statements do not purport to contain all the information that each interested party may require. This Document may not be appropriate for all Persons, and it is not possible for the RBSA, its employees or advisors to consider the investment objectives, financial situation and particular needs of each party who reads or uses this Document. The assumptions, assessments, statements and information contained in the Document may not be complete, accurate, adequate or correct. Each interested party should, therefore, conduct its own investigations and analysis and should check the accuracy, adequacy, correctness, reliability and completeness of the assumptions, assessments, statements and information contained in this Document and obtain independent advice from appropriate sources.

Information provided in this Document has been collated from several sources some of which may depend upon interpretation of Applicable Law. The information given is not intended to be an exhaustive account of statutory requirements and should not be regarded as complete. RBSA accepts no responsibility for the accuracy or otherwise for any statement contained in this document. RBSA, its employees and advisors make no representation or warranty and shall have no liability to any Person under any law, statute, rules or regulations or tort, principles of restitution or unjust enrichment or otherwise for any loss, damages, cost or expense which may arise from or be incurred or suffered on account of anything contained in this Document or otherwise, including the accuracy, adequacy, correctness, completeness or reliability of the Document and any assessment, assumption, statement or information contained therein or deemed to form part of this Document.

We have analysed the sample of 1,609 companies to opine on the industrial and service sectors of the Indian economy. Our analysis assumes that the conclusions and inferences derived on sample can be extended to a population. Our analysis is subjected to the limitations which are inherent to the method of sampling. Limitations of sampling include inadequacy of the samples, chances of bias, problem of accuracy and non-representative sample among others. Also, our analysis widely depends on Z Score Model. However, the model has its own limitations in the form of past financial results not being indicative of the future. Also, the Z score is applicable to all emerging nations, however a slight change in the coefficients of its measures suiting the macroeconomic factors specific to India may yield a slightly differentiated inference.

RBSA also accepts no liability of any nature whether resulting from negligence or otherwise howsoever caused arising from reliance of any person upon the statements contained in this document.

Contact Us

RBSA Advisors

Management:

Rajeev R. Shah | Managing Director & CEO

+91 93237 39669 / 97243 43870

rajeev@rbsa.in

Manish Kaneria | Director

+91 97243 44445

manish@rbsa.in

Gautam Mirchandani | Director

+91 90040 50600

gautam.mirchandani@rbsa.in

Research Analysts:

Tushar Shinde

+91 22 6130 6066

tushar.shinde@rbsa.in

Vatsal Shah

+91 22 6130 6069

vatsal.shah@rbsa.in

Vikas Biyani

+91 22 6130 6075

vikas.biyani@rbsa.in

India Offices:

Mumbai Office:
21-23, T.V. Industrial Estate, 248-A,
S.K. Ahire Marg, Off. Dr. A. B. Road, Worli,
Mumbai - 400 030
Tel : +91 22 6130 6000

Delhi Office :
9 C, Hansalaya Building,
15, Barakhambha Road, Connaught place,
New Delhi -110 001
Tel : +91 11 2335 0635

Bangalore Office:
Unit No. 104, 1st Floor, Sufiya Elite, #18,
Cunningham Road, Near Sigma Mall,
Bangalore - 560052
Tel : +91 80 4112 8593

Ahmedabad Office:
912, Venus Atlantis Corporate Park,
Anand Nagar Rd, Prahaladnagar,
Ahmedabad - 380 015
Tel : +91 79 4050 6000

Surat Office:
37, 3rd Floor, Meher Park,
'A', Athwa Gate, Ring Road,
Surat - 395 001
Tel : +91 261 246 4491

Jaipur Office:
Karmayog, A-8, Metal Colony,
Sikar Road,
Jaipur - 302 023
Tel : +91 141 233 5892

Global Offices:

Singapore Office:
17,Phillip Street ,
#05-01,Grand Building,
Singapore-048 695
Email: singapore@rbsa.in

Dubai Office :
ABCN, P. O. Box 183125
4th Floor, Block-B, Business Village, Deira
Dubai U.A.E.
Tel : +971 4 230 6084
Email: dubai@rbsa.in

New York Office:
24 Mission Dr.
Monroe Township,
NJ 08831, USA
Tel: +1 813 751 6474
Email: newyork@rbsa.in