

## **Risk Management in Banking: Measurement, Models and Emerging Horizons**

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**Abstract:** *In the process of financial intermediation, banks face risks of different kinds which are financial and non –financial viz., credit, interest rate, foreign exchange rate, liquidity, equity price, legal, regulatory, reputational, operational etc. These risks are highly interdependent and events that affect one area of risk can have ramifications for a range of other risk categories. Thus, top management of the banks should attach considerable importance to improve the ability to identify measure, monitor and control the overall level of risks undertaken. For the purpose of risk management, banks also create suitable organizational structure and process which directly reports to top management in the bank. Following the internationally best practices, Reserve Bank of India (RBI) has directed the banks in the economy to adopt such procedures which includes capital adequacy, provisioning, and other steps vital to maintain and protect the banks in the event of crises. This research paper begins with explaining the need for risk management in the banks on account of various types of risks. The second part presents case studies of two leading commercial banks in India with their risk management structure and recent experience of non-performing assets (NPA) during 2011-14. Third part discusses RBI's efforts on risk management at the macro level and key macroeconomic factors regulatory and industry issues. The paper further attempts to develop early warning system (EWS) with a unique rating of stress and risky outcomes for a bank. Emerging horizons for the banks in the economy would form the Conclusion.*

**Keywords:** *Risk Management, State Bank of India (SBI), ICICI Bank, Reserve Bank of India (RBI), Early Warning System (EWS)*

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### **I. Introduction**

Recent recession across the world and particularly in Indian economy highlighted the need for banks to incorporate the concept of Risk Management into their regular procedures. The various aspects of increasing global competition to Indian banks by foreign banks, increasing deregulation, introduction of innovative products, and have emphasized the need for Indian banks to be prepared in terms of risk management. Indian banks have started to expand and diversify at a rapid rate and have been making great advancements in technology and quality of performance. However, such expansion brings these banks into the context of risk especially at the onset of increasing Globalization and Liberalization Risk management in Indian banks is a relatively newer practice, but has already shown to increase efficiency in governing of these banks as such procedures tend to increase the corporate governance of a financial institution. In times of volatility and fluctuations in the market, financial institutions need to prove their strength by withstanding the market variations and achieve sustainability in terms of growth as well as have a stable share value. Hence, an essential component of risk management framework would be to mitigate all the risks and maximize rewards of the products and service offered by the bank. Thus the need for an efficient risk management framework is paramount in order to factor in internal and external risks. In banks and other financial institutions, risk plays a major part in the earnings of a bank. The higher the risk, the higher the return, hence, it is essential to maintain a parity between risk and return. Hence, management of financial risk incorporating a set systematic and professional methods especially those defined by the Basel norms becomes an essential requirement of banks.

**1.1 The types of risks faced by banks:** In the course of their operations, banks are invariably faced with different types of risks that may have a potentially negative effect on their business. Risk management in bank operations includes risk identification, measurement and assessment, and its objective is to minimize negative effects risks can have on the financial result and capital of a bank.

The following diagrams are meant to illustrate the risk management process and the types of risks faced by a bank.

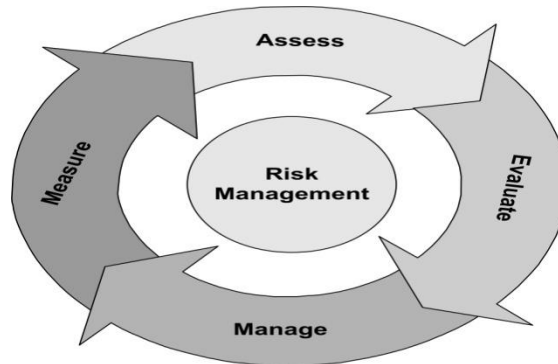
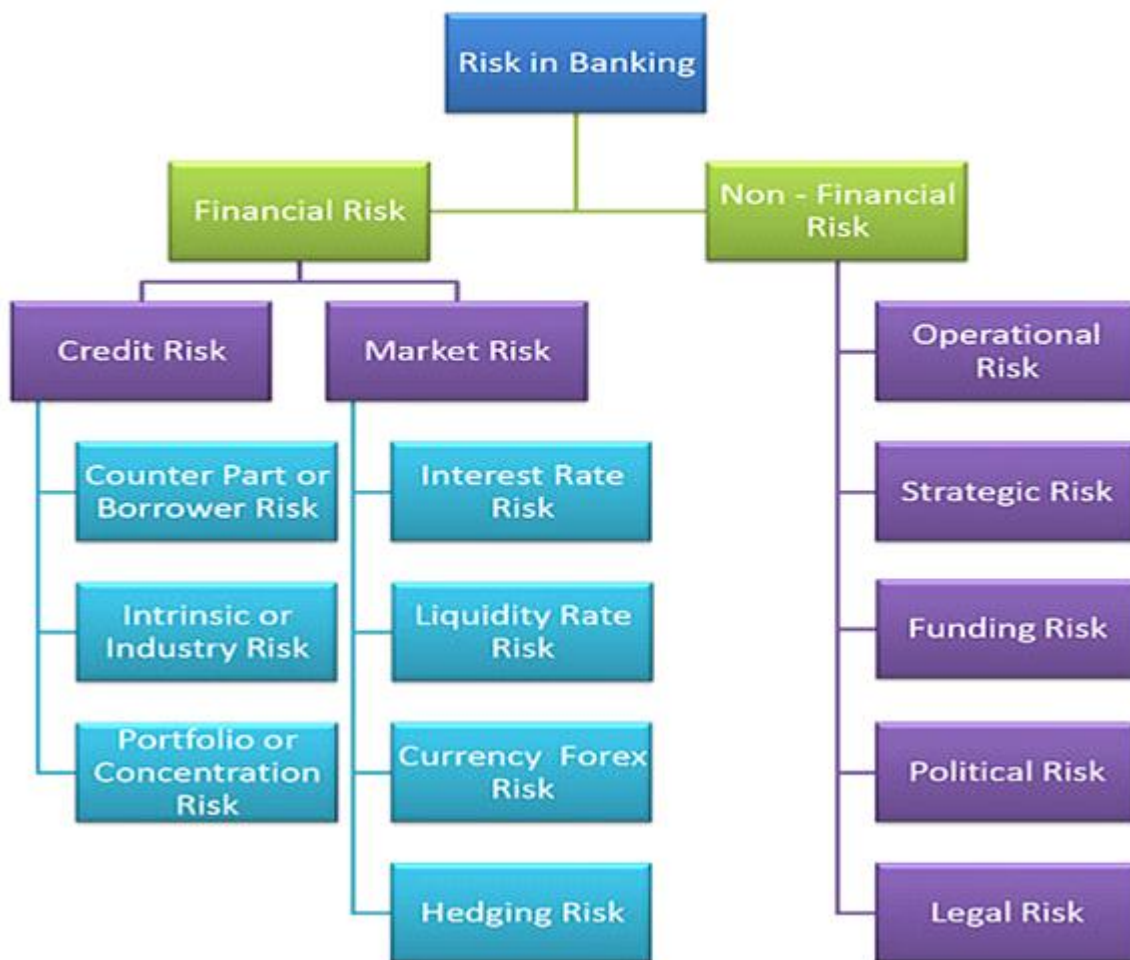


Diagram 1 Risk Management cycle  
 Diagram 2

# Types of Risks in Banking



The types of risks to which a bank is particularly exposed in its operations are: liquidity risk, credit risk, market risks (interest rate risk, foreign exchange risk and risk from change in market price of securities,

financial derivatives and commodities), exposure risks, investment risks, risks relating to the country of origin of the entity to which a bank is exposed, operational risk, legal risk, reputational risk and strategic risk. **Liquidity risk** is the risk of negative effects on the financial result and capital of the bank caused by the bank's inability to meet all its due obligations. **Credit risk** is the risk of negative effects on the financial result and capital of the bank caused by borrower's default on its obligations to the bank. **Market risk** includes interest rate and foreign exchange risk. **Interest rate risk** is the risk of negative effects on the financial result and capital of the bank caused by changes in interest rates. **Foreign exchange risk** is the risk of negative effects on the financial result and capital of the bank caused by changes in exchange rates. A special type of market risk is the *risk of change in the market price* of securities, financial derivatives or commodities traded or tradable in the market. **Exposure risks** include risks of bank's exposure to a single entity or a group of related entities, and risks of banks' exposure to a single entity related with the bank. **Investment risks** include risks of bank's investments in entities that are not entities in the financial sector and in fixed assets. **Risks relating to the country of origin of the entity to which a bank is exposed** (country risk) is the risk of negative effects on the financial result and capital of the bank due to bank's inability to collect claims from such entity for reasons arising from political, economic or social conditions in such entity's country of origin. Country risk includes political and economic risk, and transfer risk. **Operational risk** is the risk of negative effects on the financial result and capital of the bank caused by omissions in the work of employees, inadequate internal procedures and processes, inadequate management of information and other systems, and unforeseeable external events. **Legal risk** is the risk of loss caused by penalties or sanctions originating from court disputes due to breach of contractual and legal obligations, and penalties and sanctions pronounced by a regulatory body. **Reputational risk** is the risk of loss caused by a negative impact on the market positioning of the bank. **Strategic risk** is the risk of loss caused by a lack of a long-term development component in the bank's management.

## II. Case studies of major banks on risk management

After describing the types of risks faced by banks, here we present two case studies of leading Indian banks, one from public sector bank, State Bank of India and another one from private sector bank, ICICI Bank for their risk management processes and the related live data.

### 2.1 State Bank of India

#### SBI Risk Management Structure and process

A depressed macro-economic environment in 2013-14 led to increased loan defaults with deterioration in asset quality of Indian banks. Slippages have occurred across all sectors and today, resolution of NPAs is the single largest challenge before all banks. SBI has constituted a Stressed Assets Management Group [SAMG] is a dedicated and specialized vertical, headed by a Deputy Managing Director, created specially to efficiently resolve high value NPAs. Today SAMG has 16 SAMG branches and 43 stressed assets recovery units across the country. Currently, SAMG covers 23.79% and 54.33% of the Bank's Non Performing Assets (NPAs) and Advances under Collection Account [AUCA] respectively. The recovery efforts of SAMG are supplemented by efforts put in by front line operating staff at 15,869 branches across the country. Besides, Account Tracking & Monitoring [AT & M] Centers have been operationalised in all Circles to contact retail Special mention Accounts (SMAs) NPAs. Business Correspondents/Business Facilitators and Self Help Groups are also involved in recovery of Agricultural NPAs.

Though the challenges of the environment were felt across the banking system, SBI displayed great resilience and could sustain a sound performance under most parameters due to strategic and market oriented initiatives. The Net interest Margin (NIM) for SBI is in line with the guidance and better than the average industry norm. Looking to the severe competition and NPA position, the NIM was under pressure. Though this is lower than that achieved the earlier years, SBI continued to rank high amongst peers.

**Table – 1. SBI's NPA management Performance (Rs.in Crores)**

	<b>FY 2011-12</b>	<b>FY 2012-13</b>	<b>FY 2013-14</b>
<b>Gross NPAs at the end of the year</b>	39,676	51,189	61,605
<b>Gross NPA%</b>	4.44	4.75	4.95
<b>Net NPA%</b>	1.82	2.10	2.57
<b>Fresh Slippages</b>	24,712	31,993	41,516
<b>Cash Recoveries / Upgradation</b>	9,618	14,885	17,924
<b>Write Offs</b>	744	5,594	13,176
<b>Recoveries in Written Off Accounts</b>	962	1,066	1,543

### **Source: SBI Annual Report & Accounts**

The level of impaired assets has shown an upward bias, symptomatic of the state of the economy, and experienced an unprecedented level of delinquencies. The deterioration has occurred in the mid-corporate space in sectors under stress in the economy namely Paper and Plastic, Iron and Steel, Textiles, Engineering Goods, Transport, etc. Gross NPAs are currently at 4.75% with Net NPA level of 2.10%. Special efforts made during the course of the year, especially during Q4 2012-13, in the direction of NPA management paid good dividends which enabled control, significant improvement in the last quarter and prevented from declining further. SBI has done the requisite provisioning the provision for NPAs during the year at Rs.11, 368 crores. The provision Coverage ratio was at 66.58%. The total restructured assets book stood at Rs.43, 111 crores of which Rs.32, 228 crores are in the standard category and Rs.10, 883 crores in the NPA category for SBI. While macro factors had a large bearing on the growth of NPAs special efforts were made by SBI to contain the impact through stringent loan screening, close follow-up and interaction with the borrowers, setting up of special teams of recovery, re-structuring and re-scheduling on a case to case basis and merits, recourse to SARFAESI, real time monitoring through account tracking centers and related ground level resolution strategies. In fact in the last quarter of the 2012-13, there was a significant contraction of Gross NPAs from Rs.53, 458 crores (5.30%) in Q3FY12-13 to Rs.51, 189 crores (4.75%) at the end of Q4FY12-13. Overall, the effort saw Upgradation of Rs.10, 119 crores and Cash Recovery of Rs.4, 766 crores in the NPA accounts. Recovery in Written Off accounts was to the tune of Rs.1066 crores during the year. In the times ahead and supported by the growth in the real economy, SBI would not to allow any let up in the efforts at resolving the impaired assets through timely and proactive measures.

The sale of final assets of assets recovery corporation (ARCs) has resulted in reduction of NPAs by Rs.3, 590 crores and debt reversal of Rs.1, 092 crores, different strategies were adopted for achieving optimum sales level and price. SBI resorts to various strategies to resolve stressed assets. Some of these are enumerated below:

- Restructuring of both Standard assets and NPAs, either through the corporate debt restricting mechanism or through a bilateral arrangement.
- Recovery through auction of assets using the Securitization and Reconstruction of Financial Assets and Enforcement of Security Interest (SARFAESI) route.
- Filing suits in Debt Recovery Tribunals and other Courts for recovery of dues.
- Identifying and engaging with strategic investors for takeover of stressed assets.
- Sale of NPAs to Asset Reconstruction Companies.
- Entering into One-time Settlements with borrowers.
- Using Resolution Agents to take possession of properties mortgaged to the Bank and arranging for their auction.
- Using the e-auction platform to reach out to as many prospective bidders as possible.
- Considering debt Asset swaps in some cases.
- Engaging investigation agencies to tract out unencumbered promoter and guarantor assets and obtaining attachment before judgments over these properties.
- Identifying Companies and promoters as Willful Defaulters and arranging for display of their names on the websites of Credit Information Companies such as CIBIL. These names are also re-posted to the RBI.
- Publishing photographs of defaulters in newspapers when warranted.
- Persuading Large Corporate borrowers under stress to sell non-core assets dilute their shareholding and bring in strategic investors thus reducing debt and improving viability.

Despite a harsh environment last year, SBI achieved a deceleration in NPA accretion due to SAMG's relentless efforts along with the support of stressed assets recovery units.

The SAMG and other recovery outfits of the SBI are fully geared to meet the asset quality challenges of FY 2014-15, when near-term pressure is expected to continue. SBI is formulating an Early Warning System (EWS) to identify incipient sickness and stress in loan accounts so that we can take in advance corrective action, including timely restructuring in deserving cases and would prevent slippages and maintain good asset quality.

## **2.2 ICICI Bank**

### **ICICI Bank's Risk Management structure and process**

Risk is an integral part of the banking business and ICICI aims at delivering superior shareholder value by achieving an appropriate trade-off between risk and return. ICICI Bank has constituted a Board Level Committee which is empowered to review ICICI Bank's risk management policies pertaining to credit, market, liquidity, operational, outsourcing, reputation risks, business continuity and disaster recovery plan. The Committee is also empowered to review the Enterprise Risk Management (ERM) framework of the Bank, risk appetite, stress testing framework. Internal Capital Adequacy Assessment Process (ICAAP) and framework for capital allocation. The Committee is empowered to review the status of Basel II and Basel III implementation, risk return profile of the Bank, outsourcing activities, compliance with RBI guidelines pertaining to credit, market and operational risk management systems and the activities of Asset Liability Management Committee. The Committee also reviews the risk profile template and key risk indicators pertaining to various risks. In addition, the Committee has oversight on risks of subsidiaries covered under the Group Risk Management Framework. The Asset Liability Management Committee (ALCO) comprises whole time Directors and senior executives. ALCO meets periodically and reviews the Bank's business profile and its impact on asset liability management and determines the asset liability management strategy in light of the current and expected business environment. ALCO reviews the positions of the trading groups and the interest rate and liquidity gap positions on the banking book. ALCO also sets deposit and benchmark lending rates. The Market Risk Management Group recommends changes in risk policies and controls and the processes and methodologies for quantifying and assessing market risks. Risk limits including position limits and stop loss limits for the trading book are monitored by the Treasury Control and Services Group and reviewed periodically. Foreign exchange risk is monitored through the net overnight open position limit. Interest rate risk is measured through the use of re-pricing gap analysis and duration analysis. Interest rate risk is further monitored through interest rate risk limits approved by ALCO. ICICI Bank uses various tools for measurement of liquidity risk including the statement of structural liquidity, dynamic liquidity gap statements, liquidity ratios and stress testing. We maintain diverse sources of liquidity to facilitate flexibility in meeting funding requirements. Incremental operations in the domestic market are principally funded by accepting deposits from retail and corporate depositors. The deposits are augmented by borrowings in the short-term inter-bank market and through the bonds. Loan maturities and sale of investments also provide liquidity. International branches are primarily funded by debt capital market issuances, lines of financing from export credit agencies, syndicated loans, bilateral loans and bank lines, while ICICI Bank's international subsidiaries raise deposits in their local markets.

The Board level committees that undertake supervision and review of operational risk aspects are the Risk Committee, Fraud Monitoring Committee, Audit Committee and Information Technology Strategy Committee. The Bank has also constituted an Operational Risk Management Committee (ORMC) to oversee the operational risk management in the Bank. The ORM Policy specifies the composition, roles and responsibilities of the ORMC. Other executive level committees that oversee operational risk related aspects are Product and Process Approval Committee, Outsourcing Committee, information Security Committee and Business Continuity Management Steering Committee.

### **Some of ICICI's Focused Risk Management efforts are discussed briefly:**

The Asset Liability Management Committee, which comprises whole time Directors and senior executives meets periodically and reviews the positions of trading groups, interest rate and liquidity gap positions on the banking book, sets deposit and benchmark lending rates, reviews the business profile and its impact on asset liability management and determines the asset liability management strategy, as deemed fit, in light of the current and expected business environment. The Market Risk Management Group recommends changes in risk policies and controls the processes, methodologies for quantifying and assessing market risks. Risk limits including position limits and stop loss limits for the trading book are monitored by the Treasury Middle Office Group and reviewed periodically. Foreign exchange risk is monitored through the netovernight open position limit. Interest rate risk is measured through the use of re-pricing gap analysis and duration analysis. Interest rate risk is further monitored through interest rate risk limits approved by the Asset Liability Management Committee. Risks on trading positions are monitored and managed by setting value-at-risk limits and stipulating daily and cumulative stop-loss-limits. ICICI Bank uses various tools for measurement of liquidity risk including the statement of structural liquidity, dynamic liquidity gap statements, liquidity ratios and stress testing. It maintains diverse sources of liquidity to facilitate flexibility in meeting funding requirements, incremental operations in the domestic market are principally funded by accepting deposits from

retail and corporate depositors. The deposits are augmented by borrowings in the short-term inter-bank market and through the issuance of bonds; Loan maturities and sale of investments also provide liquidity. Its international branches are primarily funded by debt capital market issuances, lines of financing from export credit agencies, syndicated loans, bilateral loans and bank lines, while the international subsidiaries raise deposits in their local markets. ICICI Bank seeks to ensure that our capital position is commensurate with the risks in our business and our future growth plans through a robust capital management framework. This includes a comprehensive internal capital adequacy assessment process conducted annually, which determines the adequate level of capitalization necessary to meet regulatory norms and current and future business needs, including under stress scenarios. ICICI Bank believes that the bank placed to comply with RBI's guidelines on the implementation of the Basel III framework in India. ICICI Bank is also working towards migration to the advanced approaches under the Basel II framework over the medium term, subject to applicable RBI guidelines and approvals.

The following table sets forth, at the dates indicated information regarding the asset classification of our gross non-performing assets (net of write-offs interest suspense and derivative income reversals):

**Table 2: ICICI Bank NPA Management performance (Rs. in billions)**

	2011 - 12	2012 - 13	2013 - 14
<b>Non - performing assets</b>			
Sub-standard assets	14.49	18.72	Rs.22.42
Doubtful assets	73.35	67.91	62.74
Loss assets	7.79	9.84	20.38
<b>Total non-performing assets</b>	<b>Rs.95.63</b>	<b>Rs.96.97</b>	<b>Rs.105.54</b>

Note: Include advances, lease receivables and credit substitutes like debentures and bonds. Exclude preference shares.

The following table sets forth, at the dates indicated, information regarding its non-performing assets (NPAs).

**Table - 3: NPA and Net Customer Assets (Rs. in billion, except percentages)**

Year ended	Gross NPA <sup>1</sup>	Net NPA	Net customer assets	% of net NPA to net customer assets <sup>2</sup>
March 31, 2011	Rs.101.14	Rs.24.58	Rs.2,628.16	0.94%
March 31, 2012	Rs.95.63	Rs.18.94	Rs.3,059.84	0.62%
March 31, 2013	Rs.96.47	Rs.22.34	Rs.3,517.62	0.64%
March 31, 2014	Rs.105.54	Rs.33.01	Rs.4,037.08	0.82%

**Notes:**

1. Net of write-offs, interest suspense and derivatives income reversal.
2. Include advances, lease receivables and credit substitutes like debentures and bonds. Exclude preference shares.
3. All amounts have been rounded off to the nearest Rs.10.0 million.

**Source: ICICI Bank Annual Reports & Accounts.**

At March 31, 2013, the gross NPAs (net of write-offs, interest suspense and derivatives income reversal) were Rs.96.47 billion compared to Rs.95.63 billion at March 31, 2012. Net NPAs were Rs.22.34 billion at March 31, 2013 compared to Rs.18.94 billion at March 31, 2012. The ratio of net NPAs to net customer assets increased marginally from 0.62% at March 31, 2012 to 0.64% at March 31, 2013. During fiscal 2013, we wrote-off NPAs, including retail NPAs with an aggregate outstanding of Rs.16.46 billion compared to Rs.11.83 billion during fiscal 2012. However in the year 2013-14, the NPA has increased despite best efforts of the bank. ICICI Bank's provision coverage ratio (i.e. total provisions made against NPAs as a percentage of gross NPAs at March 31, 2013) were 76.8%. At March 31, 2013, total general provision held against standard assets was Rs.16.24 billion compared to Rs.14.80 billion at March 31, 2012. Due to stringent monitoring efforts, ICICI Bank has maintained NPA at low levels in 2013-14.

The following table sets forth, at March 31, 2012 to March 31, 2014, the composition of gross non-performing assets by industry sector.

**Table – 4: ICICI Bank Industry – wise NPA (Rs. in billion)**

	2011 – 12		2012 – 13		2013 – 14	
	Amount	%	Amount	%	Amount	%
<b>Retail finance</b>	Rs.76.73	80.2	<b>Rs.58.14</b>	60.3	Rs.41.17	39.0
Road, ports, telecom, urban development and other infrastructure	0.37	0.2	<b>0.14</b>	0.1	8.19	7.8
Services – non-finance	0.37	0.4	<b>8.77</b>	9.1	0.07	0.1
Power	0.09	0.1	<b>0.09</b>	0.1	<b>15.18</b>	14.4
Iron / steel and products	0.91	0.9	<b>1.99</b>	2.1	<b>2.43</b>	2.3
Services – finance	0.00	0.00	<b>0.04</b>	0.00	<b>0.57</b>	0.5
Crude petroleum / refining and petrochemicals	0.05	0.00	<b>0.04</b>	0.00	<b>0.02</b>	0.0
Mining	0.00	0.0	<b>0.04</b>	0.00	<b>3.19</b>	3.0
Construction	0.89	0.9	<b>2.24</b>	2.3	<b>2.93</b>	2.8
Food and beverage	1.54	1.6	<b>1.94</b>	2.0	<b>0.30</b>	0.3
Cement	-	-	-	-	<b>3.68</b>	3.5
Electronics and engineering	1.81	1.9	<b>2.59</b>	2.7	<b>1.05</b>	1.0
Wholesale / retail trade	1.15	1.2	<b>4.16</b>	4.3	<b>4.07</b>	3.9
Shipping	0.45	0.5	<b>0.38</b>	0.4	<b>0.20</b>	0.2
Metal & products (excluding iron & steel)	1.11	1.2	<b>1.06</b>	1.1	<b>0.67</b>	0.6
Chemical and fertilizers	1.52	1.6	<b>1.33</b>	1.4	<b>1.25</b>	1.2
Other industries	8.86	9.3	<b>13.40</b>	13.9	<b>20.57</b>	19.4
<b>Total</b>	<b>Rs.95.63</b>	<b>100.0</b>	<b>Rs.96.47</b>	<b>100.0</b>	<b>Rs.105.54</b>	<b>100.0</b>

**Notes:**

1. Includes home loans, commercial business loans, automobile loans, business banking, credit cards, personal loans, rural loans, loans against securities and dealer financing portfolio.
2. Other industries primarily include developer financing portfolio, automobiles, manufacturing products (excluding metal), textile, drugs and pharmaceuticals, gems and jewellery and FMCG.
3. From March 31, 2013, ICICI has changed the classification of the domestic loan portfolio to better reflect the nature of the underlying loans.

**Source: ICICI Bank Annual Reports & Accounts.**

At March 31, 2013, the net non-performing loans in the retail portfolio were 0.72% of net retail loans as compared with 1.22% at March 31, 2012. The decrease in the ratio was primarily on account of sharp decline in accretion to retail NPAs. RBI has issued guidelines revising the format of disclosures on restructured loans. (Annexure ) The revised format requires banks to disclose the movement of the borrower level outstanding of borrowers whose loans were restricted. During fiscal 2013, standard loans of Rs.16.78 billion of major borrowers were restricted as compared to Rs.35.95 billion of 28 borrowers during fiscal 2012. Net principal outstanding of standard restructured borrowers increased from Rs.45.54 billion at March 31, 2012 to Rs.53.15 billion at March 31, 2013. Industry wise data illustrate certain specific factors which were due to external reasons.

**III. Key macro – economic, regulatory and industry issues**

In emerging economies, banks are more than mere agents of financial intermediation and carry the additional responsibility of achieving the government's social agenda also. Because of this close relationship between banking and economic development, the growth of the overall economy is intrinsically correlated to the health of the banking industry. During the high growth phase of the economy from 2002 to 2008, credit growth in the Indian banking sector was in excess of 22%. A slackening in the economic growth rate has resulted in both, a lower credit demand as well as a receding appetite on the part of the banking industry, to extend credit. Stressed assets (SAs) in India have almost doubled from 5.7% in FY08 to 10.2% in FY13, which has impacted the banking industry adversely. RBI understands that India is one of the fastest growing economies in the world and is set to remain on that path, backed by the growth in infrastructure, industry services and agriculture. To support this growth, credit flow to various sectors of the economy has been increasing. Strong and sustainable credit growth is almost synonymous with a healthy operating environment and strong economic growth. This trend by and large leads to healthy and profitable asset creation within the economy and the banking sector. However, high growth phases are also when SAs are generated within the banking sector. This is due to excess

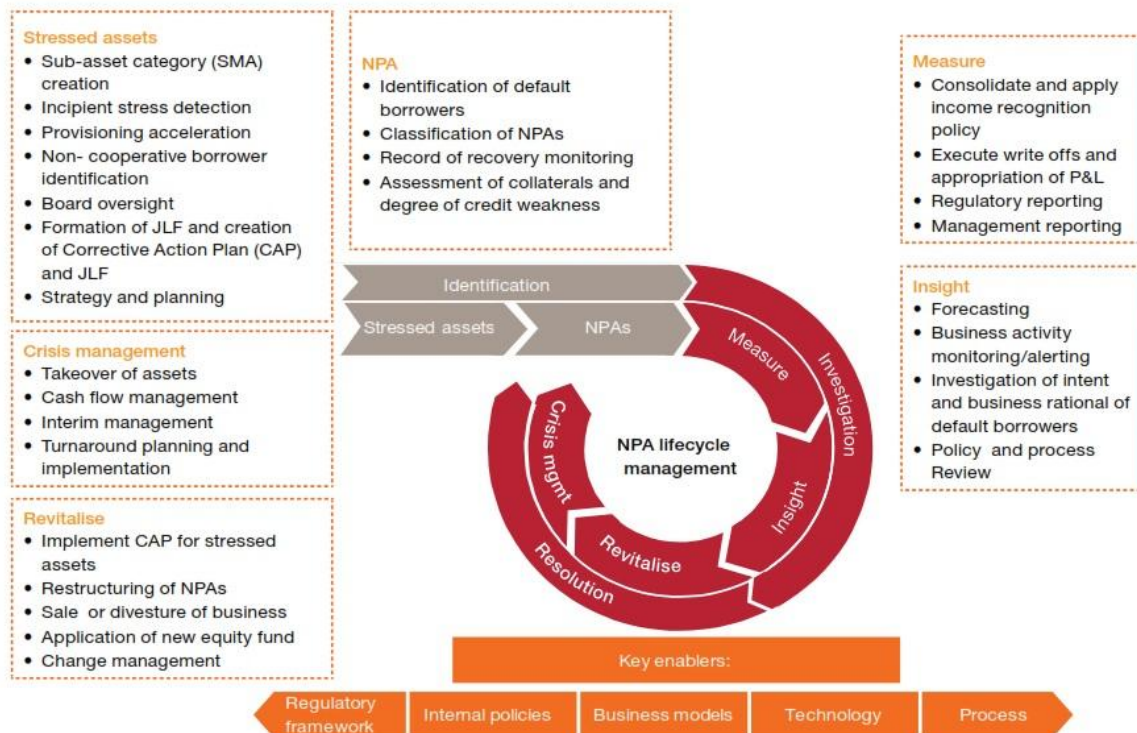
capacity creation, easy availability of credit, less strict underwriting and easier monitoring during such a phase. This SA accumulation is however masked by strong credit growth. As a result, SAs look very low during this growth phase of the economy. A period of downturn reverses this trend of low SA levels and asset quality concern increases as the growth in SA outpaces credit growth in the banking system. As a result, growth in SA increased by 40.2% in 2013 as against a 15.1% credit growth.

**Stressed assets: How big is the problem?**

The problem is not only restricted to rising gross national products to assets (GNPA) ratios. The rise in the percentage of RA and security receipts (SRs) issued by asset reconstruction companies (ARCs) are also a cause for concern. Owing to the lack of detailed data we have on SRs, RBI has limited our definition of SA in India to only GNPA and RAs. The true picture of SA can be depicted by combining the GNPA and recovered assets (RAAs a percentage of total advances). This figure, as on March 2013 is as high as 10.2% of the total banking credit.

RBI’s efforts to contain NPA include a number of macro and various focused strategies. With regard to market risk, banks in India have been using the Standardized measurement Method (SMM) since March 2005. The guidelines for the advanced Internal Models Approach (IMA) to market risk assessment for regulatory capital calculation were issued by Reserve Bank in April 2010. Reserve Bank has already undertaken the process of validation of market risk models in respect of two banks. These banks have been suggested to upgrade their market risk management systems and processes before the migration to IMA is allowed. Provisions against loan losses can be broadly divided into two categories: general and specific. The present provisioning policy, consisting of general and specific provisions, has several limitations. First, the rate of provisions on standard assets is not based on any scientific analysis. Second, banks make floating provisions without any pre-determined rules. Third, the provisioning framework does not have cycle smoothening elements built into it. A need was, therefore, recognized for introducing a comprehensive provisioning framework that has dynamic and countercyclical elements.

Arising from the above discussions, an attempt is made to formulate an Early Warning System at the bank level:



Early Warning Systems can be an important tool to mitigate credit risks through proactive monitoring. A good early warning system can include key parameters indicative of 'hidden' problems as well as the solutions required. The benefits of EWS are:



- Definite process to govern credit monitoring, ensuring a standardized bank-wide approach to detect and escalate EWSs
- Implementation of a knowledge management system to retain the organization's learning of each type of customer
- Relationship manager's time freed up to make him or her capable to handle more responsibilities at the ground level
- Better compliance to regulatory requirements and audits

### **Emerging Horizons**

- Across the globe, the banking sector acts as the catalyst for the country's economy. Banks play a vital role in providing financial resources especially to capital-intensive sectors such as infrastructure, automobiles, iron and steel, industrials and high-growth sectors such as pharmaceuticals, healthcare and consumer discretionary. In emerging economies, banks are more than mere agents of financial intermediation and carry the additional responsibility of achieving the government's social agenda also. Because of this close relationship between banking and economic development, the growth of the overall economy is intrinsically correlated to the health of the banking industry. Due to economy wide recession in recent years, from 2008 onwards stressed assets by way of non-performing assets have affected the banking sector.
- RBI has taken a number of steps which are pushing banks in India to be more proactive in recognition of stress and to take remedial steps so as to preserve the economic value of assets. As a part of such efforts, special mention accounts (SMAs) classification has been recently introduced coupled with defining a time bound procedure towards deciding the course and nature of remedial actions. The RBI, in addition, is also strengthening the NPA resolution eco-system in India including increase in foreign participation rules in ARCs in India and bringing a sunset clause to the regulatory forbearance accorded to restructured accounts up to March 2015.
- Over the last few years, the low interest rates, gave banks very little incentive to lend to projects, as the return did not compensate them for the risk involved. This led to the banks getting into the retail segment big time. It also led to a lot of banks playing it safe and putting in most of the deposits they collected into government bonds. Now with the bond party over and the bond yields starting to go up, the banks will have to concentrate on their core function of lending. The banking sector in India needs to tackle these challenges successfully to keep growing and strengthen the Indian financial system. These measures aim to improve the banking sector's ability to absorb shocks arising from financial and economic stress, whatever the source, improve risk management and governance and strengthen banks' transparency and disclosures.

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### **Annexure**

#### **Classification of NPA and review of prudential guidelines on restructuring of advances by banks and financial institutions.**

The RBI classifies its assets as performing and non-performing in accordance with RBI guidelines. Under RBI guidelines, an asset is classified as non-performing if any amount of interest or principal remains overdue for more than 90 days, in respect of term loans. In respect of overdraft or cash credit, an asset is classified as non-performing if the account remains out of order for a period of 90 days and in respect of bills, if the account remains overdue for more than 90 days. RBI has separate guidelines for restructured loans. A fully secured standard asset can be restructured by re-schedulement of principal re-payments and / or the interest element, but must be separately disclosed as a restructured asset. The diminution in the fair value of the loan, if any measured in present value terms, is either written off or a provision is made to the extent of the diminution involved. Similar guidelines apply to sub-standard loans.

The regulatory forbearance available on asset classification on restructuring presently needs to be withdrawn after two years. During the interregnum, provision on standard restructured accounts which get the

asset classification benefit on restructuring be increased from the present 2 per cent to 5 per cent, in a phased manner in case of existing accounts (stock) and immediately in case of newly restructured accounts (flow). In view of the Reserve Bank may prescribe the board benchmarks for viability parameters based on those used by CDR Cell, and banks may adopt them with suitable adjustments, if any, for specific sectors. Compulsory promoters stake in the restructured accounts to be increased by way of higher sacrifice and personal guarantee. Right of recompense may be made mandatory in all cases. Disclosure requirements to be made comprehensive but to exclude standard restructured accounts which have shown consistent satisfactory performance. Importance of infrastructure sector, asset classification benefit on restructuring may however be allowed for a longer period in cases where restructuring is due to change in date of commencement of commercial operation of infrastructure projects. A cap of say 10 percent, to be prescribed on amount of restructured debt which can be converted into preference / equity shares.