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CREDIT RISK MANAGEMENT WITH IMPLEMENTATION OF BASEL NORMS IN INDIAN BANKS

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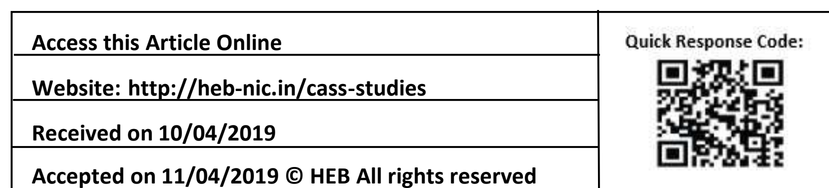
ABSTRACT:

The banks in the process of financial intermediation are confronted with various kinds of financial and non-financial risks, viz. Credit risk, interest risk and other risks. These risks are highly independent / inter-dependent events that affect the banks / financial institutions. Banking operations worldwide have undergone phenomenal changes in the last two decades since 1990s. Basel framework has been drawn by Bank for International Settlements (BIS) in consultation with supervisory authorities of banking sector in fifteen emerging market countries with the basic objective of advocating codes of bank supervision and promoting financial stability amidst economic crises. RBI has ensured implementation of the BASEL norms over the period of last decade under difficult conditions. This has paved the way for better risk management /governance and strengthened transparency of banks' and their disclosures. This research paper assumes relevance in terms of dynamics of changes in the financial and economic environment and the operations of commercial banks in India.

This research paper is divided in three parts. The research paper opens with the changes in the banking scenario since 2009 and the necessity of introducing Basel III to the Indian Banking sector. Part II presents the Basel standards framework and explains why the transition from Basel II to Basel III norms has become necessary to bring in measures and safety standards which would equip the banks to become more resilient during the financial crises. Part III brings out a discussion on the Basel III compliance process and internal rating exercises by the Indian banks. Emerging challenges faced by the Indian Banking sector are posed in the conclusion.

Keywords: Basel III guidelines, Public sector banks, Prompt Corrective Action, Stressed Assets, Risk Management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I. Current Scenario in Indian Banking

In the post Liberalization Period, the banking sector has witnessed tremendous competition not only from the domestic banks but from foreign banks alike. In fact, competition in the banking sector has emerged due to disintermediation and deregulation. The liberalised economic scenario of the country has opened various new avenues for increasing revenues of banks. In order to grab this opportunity, Indian commercial banks have brought about and adopted several new and innovated products including Telephonic banking, ATM and net banking. The banking system became faster and customer friendly. With further liberalization reforms, the number of financial products and neo –institutions (NBFC, Microfinance etc.) has expanded the financial sector. However Non-Performing Assets (NPA) could not be avoided as a consequence in the economy. NPAs create stress in bank assets and these have been rising since 2011 and have become materially crystallized in the form of 'Risky Assets' in the Public Sector Banks (PSB). NPAs in PSBs have failed to meet asset-quality, capitalization and/or profitability thresholds; others meet these thresholds for now but are precariously placed in case the provisioning cover for loan losses against their gross non-performing assets is raised to international standards are under the Reserve Bank's Prompt Corrective Action (PCA) and made commensurate with the low loan recoveries in India. **When bank balance-sheets are so weak, they cannot support healthy credit growth. The resulting weak loan supply the steady decline in loan advances growth since 2011 for public-sector banks, and the low efficiency of financial intermediation, has created significant headwinds for economic activity. In the absence of an effective, time-bound statutory resolution framework, various schemes were introduced by the Reserve Bank of India to facilitate viable resolution of stressed assets**. These stressed assets have severely hampered bank's capital requirements, especially in wake of the Basel III requirements. While the schemes were designed, and later modified, to address some of the specific issues flagged by various stakeholders in individual deals, the final outcomes have not been too satisfactory. All this has affected the asset quality, capital adequacy and profitability of Indian public sector banks (PSBs) for a relatively long period of time. Over the past four years since 2012-13, the performance of Indian banking sector have been facing serious difficulties, especially of Public Sector Banks has deteriorated. The net interest margin has been on a steady decline for most of the public sector banks in India. The average net margin of PSBs declined from 9 - 10% between 2006-07 and 2010-11 to 5 - 8% thereafter until 2013-14, and dropped to 3.5% in 2014-15, and was reported negative for most of the public sector banks in 2015-16. Likewise, the average return on assets for the PSBs has dropped from 0.7 - 1% until 2012-13 to mere 0.1% in 2015-16. The Government of India as a part of the 'Indradhanush' scheme has committed capital allocation worth Rs. 70,000 crores out of budgetary allocations till 2018-19. The main reason behind the lackluster performance has been the rising NPAs in the system; the ratio of total stressed assets to total advances in the Indian commercial banks have risen to 11.5% with the Public Sector Banks reporting the highest level at 14.5% as at end-March 2016. Various

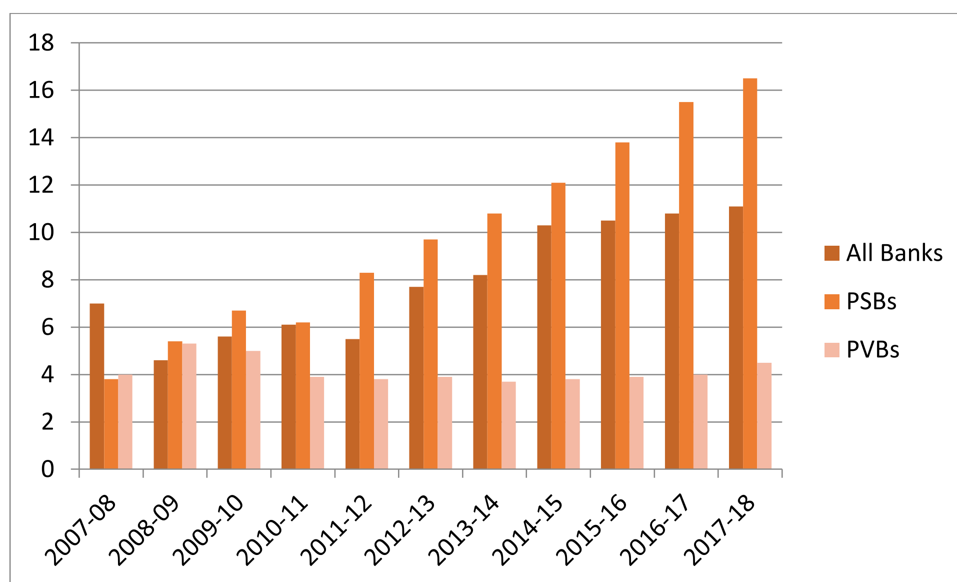
measures have been taken by the government and the RBI to address the issue of NPA and restore the health of banking sector. Impairment in the asset quality of the banking sector remains high, necessitating sizeable provisioning and deleveraging, thereby constraining banks' capacity to lend. Consequently, profitability and capital positions of banks have faced some erosion, especially in the case of public sector banks (PSBs). In the process, businesses have increasingly switched to alternate and more cost effective sources of funds to meet their financing needs, resulting in tapping more funds from the capital markets, domestic as well as disintermediation for the banks. The enactment of the Insolvency and Bankruptcy Code (IBC), 2016 and promulgation of the Banking Regulation (Amendment) Act, 2017 has significantly altered the financial scenario and paved the way for resolution of stress in balance sheets of banks and corporations in a time-bound and effective manner. The Reserve Bank's pre-emptive approach to recognition and resolution of incipient financial distress and the revised system of prompt corrective action (PCA) triggered in April 2017 are intended to bring in confidence in the system that accumulation of excessive financial imbalances in the form of NPAs has to be prevented with a strong set of measures. The Government's in-principle approval in August 2017 for the consolidation of PSBs through an 'Alternative Mechanism' and the massive recapitalisation plan for PSBs announced in October 2017 as part of a comprehensive strategy to address banking sector challenges should make them strong and competitive as they gear up to meet the credit needs of a growing economy. Credit growth fell to a record low of 2.8 per cent pulled down by persistent decline in asset quality which necessitated a sharp increase in provisioning requirements. Commercial banking sector' especially PSB's profitability was adversely impacted under these circumstances. Only private sector banks (PVBs) were able to manage positive credit growth during the year. Demonetization had a destabilizing effect on the availability of credit and liquidity to the broader economy and causes spillover across the sectors. RBI continues to play a central role in Demonetization and its outcomes in credit management. PSBs in India have limited experience in modern banking techniques, products, and risk management models and it can be attributed to the following factors:

- ✓ Lack of accurate, reliable and complete data for decision making
- ✓ Little capital is spent to cushion or protect banks against risks due to small profit
- ✓ "poorly developed accounting, reporting and bank supervision guidelines to deliver timely and useful information on the performance of PSBs
- ✓ Non-transparent legal and regulatory environment, e.g. legal security over assets, recovery of bad debts, and unprofitable banking activities.
- ✓ Assistance to Agriculture and infrastructure sectors has been a dominant segment in the credit policy and loan sanctions in the six decades since the Planning era . In the wake of poor harvests, farmers who had availed loans have suffered losses and had become defaulters to PSBs and these have added pressure on the working of the PSBs.

Stressed assets have been rising rapidly in India, mainly in public sector banks. A number of factors can be identified that have led to this situation. These include global slowdown, governance related issues, political factors as well as mal-intentions and misconduct. Consequently, significant losses are incurred by the public as well as the Union Government

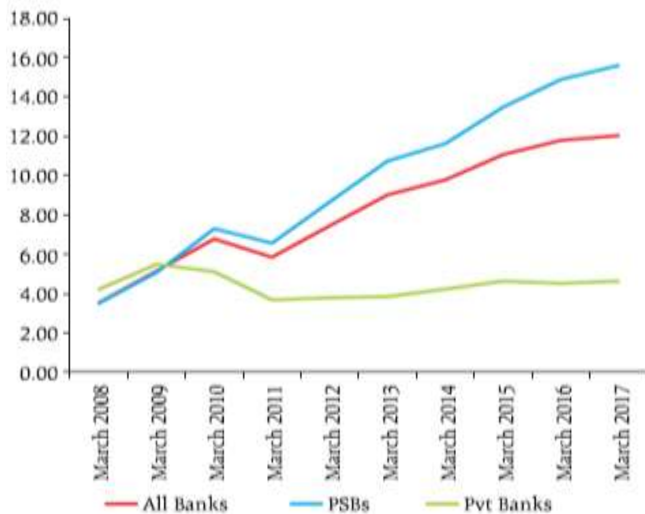
which basically owns PSBs. The chances of misconduct are substantially large in case of infrastructure projects especially under public private partnership (PPP). There is need to take this opportunity to undertake extensive research into the factors which have led to deteriorating asset quality in public sector banks. In recent years since recession of 2007-08, incidence of NPAs and SAs in PSBs is significantly larger than Private sector banks (PVBs) as depicted below:

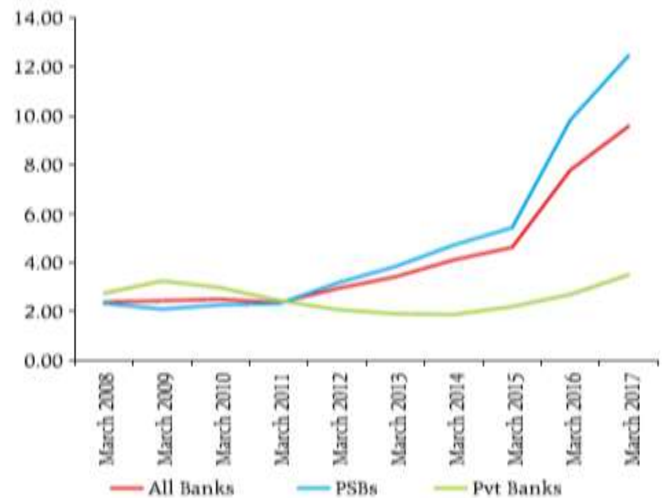
Table 1: Impaired assets among banks (per cent of total loans)



Note: Impaired: Gross NPA + Restructured NPA
Source: RBI

As observed earlier, PSBs account for a substantially large share of Stressed Assets (SAs) in mining, iron and steel, textiles, infrastructure and aviation as compared to Private Sector Banks (PVBs) because of substantially larger exposure to these sub-sectors.





Stressed Asset Ratio (%) for Indian Banks **Gross NPA Ratio (%) for Indian Banks**

Note: Stressed Assets = Impaired Assets equal to Gross NPA+ Restructured Assets
Source: RBI

In a slowing economy, it is natural to assume that NPAs will increase but the primary cause of rising NPAs may not only be economic slowdown but also deficiencies in procedures followed in extending and monitoring credit itself as there are significant differences in approaches pursued by PSBs and private sector banks (PVBs). It is not the first time that stressed assets have increased in the economy. The financial performance and efficiency of Indian banks improved dramatically with increased competition between public sector banks and new generation technology oriented private banks. This could be observed in the profitability, net interest margins, return on assets (ROA) and return on equities. (ROE) The capital position improved significantly and the banks were able to bring down their non-performing assets (NPA) sharply. This reform phase also revealed increased use of technology which in turn helped improve customer service. In the Indian context, the multiple indicator approach to monetary policy as well as prudent financial sector management together with a synergetic approach though close Coordination between RBI and other financial sector regulators has ensured financial stability. Some of the other policy measures include capital account management, management of systemic interconnectedness, strengthening the prudential framework. These initiatives for improving and broadening the financial marketing

infrastructure and a host of other measures. Systemic issues arising out of interconnectedness among banks and between banks and non-banking financial companies (NBFCs) and from common exposures were addressed by prudential limits on aggregate interbank liabilities as a proportion of banks' net worth, restricting access to uncollateralized funding market to banks and primary dealers with caps on both borrowing and lending, increasingly subjecting NBFCs to contain regulatory arbitrage.

Credit growth of scheduled commercial banks (SCBs) picked up during 2017-18 amidst sluggish deposit growth. The stress in the banking sector continues as gross non-performing advances (GNPA) ratio rises further. Profitability of SCBs declined partly reflecting increased provisioning. This has added pressure on SCBs' regulatory capital ratios. SCBs' gross non-performing advances (GNPA) ratio rose from 10.2 per cent in September 2017 to 11.6 per cent in March 2018. However, their net non-performing advances (NNPA) ratio registered only a smaller increase during the period due to increase in provisioning as per Basel III standards. The banking stability indicator showed that deteriorating profitability as well as asset quality poses elevated risks to the banking sector stability (Financial Stability Report June 2018). Such a trend of asset quality had compelled RBI to bring in a series of merger of public sector banks, the first by a merger of State Bank of Bikaner & Jaipur, State Bank of Travancore, State Bank of Mysore, State Bank of Patiala & Bhartiya Mahila Bank with State Bank of India, the second, Bank of Baroda, Dena Bank & Vijaya Bank and other mergers among PSU Banks to be pursued shortly.

II. Basel standards Framework

Banking operations worldwide have undergone phenomenal changes in the last two decades since 1990s. Financial liberalization and technological innovations have created new and complex financial instruments/products have increased their role and turnover in financial markets and have rendered banking operations vulnerable to a variety of risks. The 2007-2009 financial crises revealed that the fragile banking system led to huge costs for the society. One of the main reasons the recent crisis became so severe was that banks in many countries built up excessive on- and off-balance sheet leverage. This was accompanied by a gradual erosion of the level and quality of the capital base and by inadequate liquidity buffers (Locarno, IMF Working Paper (2012)). Basel framework has been drawn by Bank for International Settlements (BIS) in consultation with supervisory authorities of banking sector in fifteen emerging market countries with the basic objective of advocating codes of bank supervision and promoting financial stability amidst economic crises. Generally, the adoption of Basel standards is to be viewed in the context of regulatory approach to bank supervision by the central bank of the country and the incentives system for the banks to improve their risk measurement procedures. It also takes cognizance of the fact that the new technological innovations in information technology have revolutionized the banking operations and the market practices have altered substantially since the introductory period of Basel standards .Consequently, Basel standards envisage a change in the oversight function of the central bank as a regulatory body over the commercial banks operating in the country and the capital adequacy requirements of the banks. Rapid transformation of financial system around the globe has brought sweeping changes in the banking sector across the countries. Though new avenues and opportunities have been opened

up for augmenting the revenue generation for banks, yet new processes and technological progress has exposed the banks to higher risk. Therefore, the need was felt for strengthening the soundness and stability of banks and to protect the depositors and the financial system from disastrous developments which could threaten the banks solvency.

Basel Committee on Banking Supervision (BCBS) under the auspices of Bank for International Settlements (BIS) took initiative putting in place adequate safeguards against bank failure with central banks across the globe. The first initiative from BIS can be identified with Basel I Accord with over 100 central banks in different countries accepting the framework stipulated by agreement. The accord provided a framework for fair and reasonable degree of consistency in the capital standards in different countries, on a shared definition of capital. Although these standards were not legally binding, they have made substantial and significant impact on banking supervision in general, and bank capital provisioning and adequacy in particular. However, Basel I comprised of some rigidities, as it did not discriminate between different levels of risks. As a result, a loan to an established corporate borrower was considered as risky as a loan to a new business. So all loans given to corporate borrowers were subject to the same capital requirements, without taking into account the ability of the counterparties to repay. It also did not take cognizance of the credit rating, credit history and corporate governance structure of all corporate borrowers. Moreover, it did not adequately address the risk involved in increasing the use of financial innovations like securitization of assets and derivatives and credit risk inherent in these developments. The important category of risk i.e., operational risk also was not given the attention it deserved. Recognizing the need for a more comprehensive, broad based and flexible framework, Basel III has measures to ensure that the banking system as a whole does not crumble and its spill-over impact on the real economy is minimized. Basel III has in effect, some micro –prudential elements so that risk is contained in each individual institution and macro prudential overlay that will 'lean against the wind 'to take care of issues relating to the systemic crisis. The Basel III framework sets out higher and better quality capital, enhanced risk coverage, the introduction of a leverage ratio as a back-stop to the risk-based requirement, measures to promote the build-up of capital that can be drawn down in times of stress and the introduction of compliance to global liquidity standards.

Risks are an integral part of business of Commercial Banks in any economy. It should be borne in mind that banks are very fragile institutions which are built on customers' trust, brand reputation and above all dangerous leverage. In case something goes wrong, banks can collapse and failure of one bank is sufficient to send shock waves right through the economy Therefore, as risk is directly proportionate to return, the more risk a bank takes, it can expect to make more money. However, greater risk also increases the danger that the bank may incur huge losses and be forced out of business. Banks, therefore, try to ensure that their risk taking is informed and prudent. Thus, maintaining a trade-off between risk and return is the business of risk management. The implementation of Basel norms as an integral part of bank administration is contributory to the balanced risk management in the banking sector and maintenance of financial stability in the economy. The 'too-big-to-fail' banks took upon themselves too much risk which they could not cover. Therefore, the crisis has led to a reinforcement of the regulatory framework. The new regulatory framework for banks was published after the financial crisis on

12 September 2010 and is referred to as Basel III. The reforms had a major impact on the overall efficiency and stability of the banking system. The outreach of banks increased in terms of branch /ATM presence geographically across the country and segments of the population. The balance sheets and the overall banking activities combined with financial and investment banking services grew in size and scope.

III. The importance of Credit risk management for the banks

Credit risk is more simply defined as the potential of a bank borrower or counterparty to fail to meet its obligations in accordance with the agreed terms. In other words, credit risk can be defined as the risk that the interest or principal or both will not be paid as promised and is estimated by observing the proportion of assets that are below standard. Credit risk is borne by all lenders and will lead to serious problems, if excessive. For most banks, loans are the largest and most obvious source of credit risk. It is the most significant risk, more so in the Indian scenario where the NPA level of the banking system is significantly high (Sharma, 2003). A financial institution or bank must know which, when and how much credit risk to accept to strengthen bottom line and also conduct proper evaluation of the default risks associated with borrowers. In general, protection against credit risks involves maintaining high credit standards, appropriate portfolio diversification, good knowledge of borrower's affairs (or behaviour) and accurate monitoring and collection procedures.

In general, credit risk management for loans involves:

- **Borrower selection:** Selection of borrowers by u sing proper rating models, and the delegation of rules that specify responsibility for taking informed credit decisions.
- **Limit setting:** Set credit limits at various levels to avoid or control excessive risk taking. Most banks develop internal policy statements or guidelines, setting out the criteria that must be met before they extend various kinds of loan.
- **Portfolio diversifications:** Banks spread their business over different types of borrowers, sectors and geographical regions in order to avoid excessive concentration of credit risk problems and conduct proactive loan portfolio monitoring. In order to monitor and restrict the magnitude of credit risk, prudential limits have been laid down in the loan policy. The portfolio quality is evaluated by tracking the migration of borrowers from one rating category to another under various industries, business segments etc.
- **Risk-based pricing:** Implementation of a more systematic pricing and adoption of Risk Adjusted Return on Capital (RAROC) framework enhances the organization value. A benchmark rate reflective of lending costs of the bank which can be used with an appropriate mark up (credit spread) to lend to various categories of borrowers. For example, a bank can formulate an interim risk pricing policy to price its borrower accounts based on the rating category. A robust credit risk pricing model needs to generate a credit term structure consistent with empirical properties. Banks should be looking to formulate pricing models that reflect all of the costs and risks they undertake. The pricing model should be realistic, intuitive and usable by the business people.

Credit risk management framework should enable the top management of banks to know which, when and how much credit risk to accept to strengthen bottom line. It constitutes of following steps:

- **Identifying the risks:** Data capturing and identifying the drivers through various rating models.
- **Measure the risks:** Assess in terms of size, timing and probability for which the bank should have proper systems and tools in place.
- **Manage / control the risks:** Based on these measures, various reports can be generated that will help the management in avoiding mitigating, off - setting and diversifying the credit risks in various portfolio segments.
- **Monitor the risks:** Categorize significant changes in risk profile or controls.

The critical element in successfully managing a credit risk portfolio is that one must manage the dynamics of credit risk. An understanding of risk taking and transparency in risk taking are key elements in the bank's business strategy. The bank's internal risk management processes support this objective. The bank's general ambition should be to match the best practices in risk management. Risk management is a process conducted independently of the business units of the bank.

The sound practices of credit risk management specifically address the following areas:

- Establishing an appropriate credit risk environment.
- Operating under a sound credit granting process.
- Maintaining an appropriate credit administration, measurement and monitoring process. Ensuring adequate controls over credit risk.

Although specific credit risk management practices may differ among banks depending upon the nature and complexity of their activities, a comprehensive credit risk management programme will address the above four areas. These practices should also be applied in conjunction with sound practices related to the assessment of asset quality, the adequately of provisions and reserves and the disclosure of credit risk (BCBS, 2000).

The credit risk management process in a bank should aim at:

- Taking informed credit decisions.
- Setting provisioning and reserve requirements against current / future levels of profitability in order to measure risk adjusted performance.
- Establishing minimum pricing levels at which new credit exposures to an obligor may be undertaken (termed as base rate).

- Pricing credit risky instruments and facilities (through estimation of credit spread).
- Measuring the Regulatory Capital (RC) charge following Standardized or IRB approaches.
- Measuring the actual risk capital or Economic Capital (EC).
- Calculating the risk adjusted performance measures.

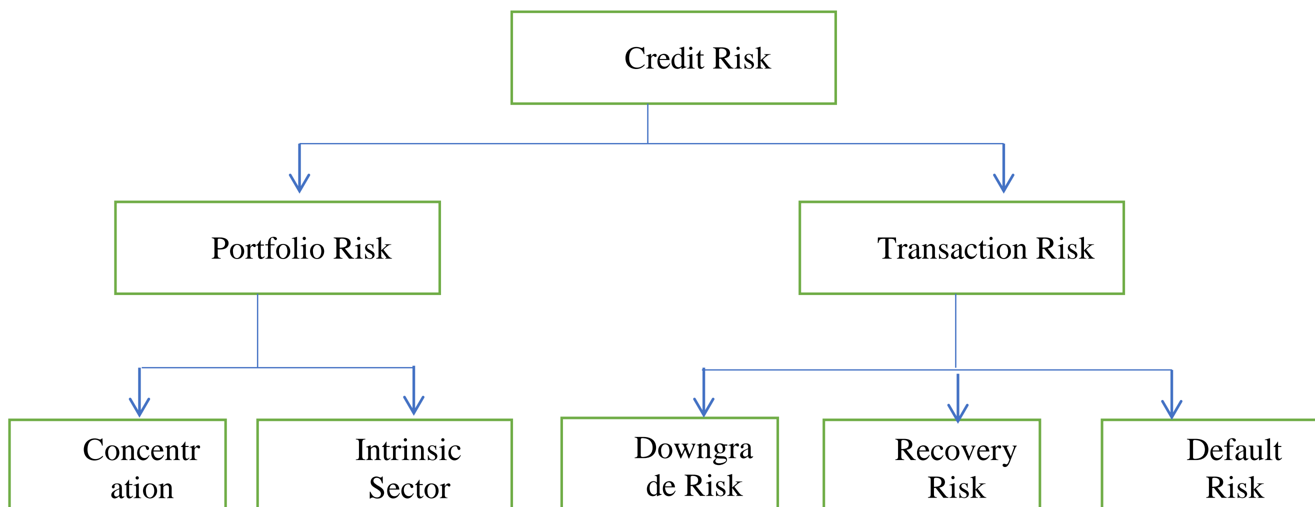
In order to facilitate compliance with Basel norms, Indian banks have made major investments in risk management systems, combining software tools with internal processes. For Credit Risk Management, most of the banks in India now have proper risk management policy that links with loan policy and robust credit rating models, especially for corporate and SME loans, and takes annual review of accounts. As a perquisite for establishment of an effective risk management system, a robust MIS data infrastructure has been set up in all Scheduled Commercial Banks in India. The risk management is a complex function and it requires specialized skills and expertise. Banks have been moving towards the use of sophisticated models for measuring and managing risks.

A cornerstone of safe and sound banking is the design and implementation of written policies and procedures related to identifying, measuring monitoring and controlling credit risk. A robust risk management framework can be effectively utilized to enhance the productivity of business activities in a bank. Today's risk managers have to be concerned with the downside of risk (unpleasant surprise component) as well as asses assess various opportunities for growth. Risk adjusted return on capital (RAROC), which is the ratio of risk-adjusted net income to the level of risk that the asset or portfolio has, can be used as a tool to assess the profitability of a loan or a pool of loans on a risk adjusted basis.
Management of credit risk in the bank is mainly governed by Board approved Credit Risk Management Policy, Loan Policy and Recovery Policy. The credit risk management committee (CRMC) formulate policies on standards for presentation of credit proposals, financial covenants, rating standards and benchmarks, delegation of credit approving powers, prudential limits on large credit exposures, asset concentrations, standards for loan collateral, portfolio management, loan review mechanism, risk concentrations, risk monitoring and evaluation , pricing of loans, provisioning, regulatory / legal compliance, etc. The policy covers corporate, small and medium enterprises, retail, rural / agriculture and investment related exposure. Credit Risk Management Department (CRDM) enforces and monitors compliance of the risk parameters and prudential limits set by the CRMC or CCC. The CRMD also lays down risk assessment systems (e.g. risk rating), monitoring quality of loan portfolio, identifies problems and corrects deficiencies, develops MIS and undertakes loan review / audit.

The credit risk management process is generally articulated in the bank's loan policy, which is approved by the board. Following the RBI's guidelines, each bank has constituted a high level Credit Risk Management Committee (CRMC) or Credit Control Committee (CCC) headed by the Chairman / CEO / ED to deal with issues relating to credit policy and procedures and to analyse, manage and control credit risk on a bank wide basis. Banks have also set up a credit risk management department (CRMD) independent of the credit administration department. The risk management activities in bank in India are mainly driven by the top management (top-down approach). At portfolio level, Chief Risk Officer (CRO), Risk Management Department

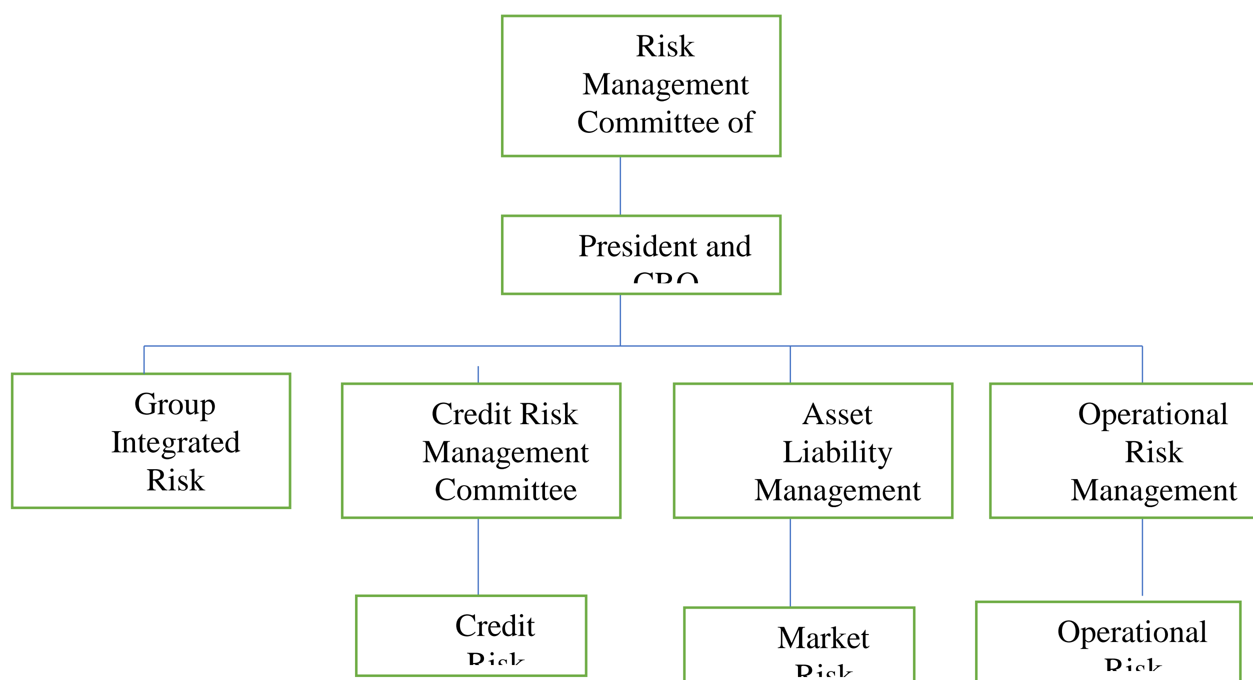
(RMD) and Asset Liability Committee (ALCO) manage the overall risks in a banking institution through various committees by setting risk management policies and reporting framework. At transaction level, traders swap dealers and loan officers manage the risk. The risk culture varies from bank to bank depending upon the nature and complexity of their business operations, risk appetite and ownership pattern. Diagrams illustrating the key drivers of credit risk and risk governance structure in a leading scheduled commercial bank follows:

Key Drivers of Credit Risk



Source: Arindam Bandyopadhyay

Risk Governance Structure in Leading SCB in India



Source: Rating Management Policy Documents of various banks.

Under the IRB approach, banks will have to track the drawl rates from the un-availed portion from the NPA history. Default implies that non - fund facility has got converted into funded facility. When the borrower defaults in completing with the terms of the LC or BG and the counterparty invokes his claim, the liability gets capitalized into a fund liability when the claim settled by the bank. The devolved liability is to be repaid by the party. When devolved guarantee phenomenon happens, the chance that the entire non-fund-based liability gets crystallized to a fund-based liability. As a result, UGD percentage may become higher. In such cases the non-fund-based outstanding at the observation point and the amount converted into default (i.e. the development amount) need to be recorded property to correctly estimate the UGD (or CCF). In order to obtain a more stable CCF estimate, quarterly rolling estimate should be made for both undrawn and non - fund based facilities. For traded products, EAD is determined by the expected future exposure (EEE) obtained from the mark-to-market value over the time period.

Conclusion: Emerging Challenges

- In recent years, Indian banks have been making great advancements in terms of technology, quality as well as stability such that they have started to expand and diversify at a rapid rate. As a result of this, the needs for professional skills in the modelling and management of

credit risk have rapidly increased and credit risk modelling has become an important topic in the field of finance and banking in India.

- The introduction of Basel advanced approaches has incentivized many of the best – practiced banks in the Indian economy to adopt better risk management framework to evaluate their performance relative to the market expectations.
- The IRB advanced approaches under Based regime would entail fundamental changes in their balance sheet management philosophy: From deposit taking to lending, from investments to diverse ancillary business, from pricing to capital allocation and stakeholder wealth maximization. The banks will have to incorporate model outputs in business decision – making. This will create a risk – sensitive framework to align capital more closely with underlying risks. Therefore, banks need to correctly assess the capital cushion that would protect them against various business risks in future.

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