# CHAPTER III

## LITERATURE REVIEW

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LITERATURE REVIEW


1.1 (Dr. D Subbarao, 2012): The main charge against Basel II is its procyclical nature on account of being risk sensitive. During the bullish phase in the market, good performance in the banking sector can enable banks to raise finance easily; banks are not required to raise additional capital. During the bearish phase or in phases of stagflation or deflation wherein markets are capital deficient Basel II requires banks to raise additional capital. The financial crisis in US pronounced the difficulty of banks in raising additional capital from the market during stressed times which forced major international banks into a vicious cycle of deleveraging, thereby hurtling global financial markets into seizure and the world economies witnessed a financial catastrophe.

The second charge against Basel II is that revisions from Basel I have made it more risk sensitive, though it did not lead to any significant changes in the definition and composition of economic or regulatory capital to reflect the changing market dynamics. The third charge against Basel II concerns leverage. The risk of excessive leverage would be automatically leveraged through risk based capital requirement. Similarly, Liquidity risk was not covered under Basel II. Since solvency risk can be triggered by liquidity risk, if left unaddressed, this proved to be the undoing of virtually every bank that came under stress in the depth of the crisis. Finally, close coordination amongst international regulators with respect to sharing of information and actions will enable to seek solutions mutually. Building blocks of ‘global regulatory and supervisory convergence’ can be rethought in order to provide quick, feasible pragmatic, tangible/physical, efficient results, specifically for managing banking consortiums for complex supervisory international issues.

1.2 (Karels, Prakash, & Roussakis, 2006): The appropriate capital required to prevent a systemic crisis along with competitive returns on banking operations is questionable as the accord highlights lower risk measure correspond to higher levels of capital adequacy.

1.3 (Cannata & Quagliariello, 2009): The financial turmoil has highlighted the drawbacks and thus the revision is taking place as Pillar I dominates for products well defined, therapy for outlining off-balance sheet vehicles in line with credit exposures, a rigid course of action for credit rating agencies and a composition of prudential norms for trading of book-assets. In some countries financial regulation has shown several shortcomings mainly with regard to
increasing share of unregulated intermediaries and markets and the weakness in the supervisory framework.

They described the actual role played by the prudential norms in the crisis and provide recommendations to strengthen those aspects of Basel II that have not worked well during the crisis and the reasons do not provide for a satisfactory base to withdraw these norms. The financial turmoil has highlighted the drawbacks and thus the revision is taking place as Pillar I dominates for products well defined, therapy for outlining off-balance sheet vehicles in line with credit exposures, a rigid course of action for credit rating agencies and a composition of prudential norms for trading of book-assets. In some countries financial regulation has shown several shortcomings mainly with regard to increasing share of unregulated intermediaries and markets and the weakness in the supervisory framework. The research suggests that if Basel II does not serve the purpose, the authorities should not advance to Basel III but the remedy is receding to Basel I.

1.4 (Santos, Pedrio Cassiano, Aires, Lima and Moreira, Tiago Correia, 2010): outline the facts through their study that the Basel II concordat encourages banks to improve their risk management through proper identification and qualification of its underlying risks. The researchers stress that the norms facilitate a sophisticated and flexible supervision which in turn will enhance the security and safety in the operating of the banking system by imposing a philosophy for better handling of risk exposures. However, several grey areas have been identified in the accord leaving for the supervisory authorities a great deal of blanks to be filled in. Therefore, the revised Basel III norms have to include norms which would emphasize on the development of international financial market so as to deal with the downsides in Basel II.

1.5 (Suarez, Rojas Liliana, 1999) in his article “Can International Standards Strengthen Banks in Emerging Markets?” articulated the appropriateness for emerging markets in implementing the capital requirements as recommended by the Basel Committee for Banking Supervision. The research work highlights a very comprehensive insight taking into account several reasons for failure of capital requirements not serving their role in the emerging markets, impact of the norms on the banking system leading to deterioration in the system and thereby also providing alternatives to strengthen banks according to the degree of financial development in emerging markets. The study recommends initiating Risk-Based regulations in loan-loss provisions, providing a capital buffer against unexpected losses,
maintaining a simple classification of assets according to risk but drastically modifying the risk categories. The research concludes that these international standards do not strengthen banks in emerging markets. These standards are of little relevance for the first group of countries, they do not appropriately reflect the risk of banks’ assets in the second group of emerging market economies.

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1.6 (Dhumale, 2000): The object of this paper is to provide a link between the relative level of an individual bank’s adequacy and its effects on the vulnerability of the banking industry. This paper examines different responses of banks to one such universal standard i.e. capital adequacy and its effects on the probability of crisis which occurred in Thailand, Indonesia and Korea.

Due to liberalization, more banks and FIs grew in the above countries, leading to a more open and a wider market prone to foreign risk and credit risk requiring stricter and more stringent regulations to protect banks and FIs involving better risk management at the macroeconomic level, including those which monitor foreign exchange exposure, restrict insider trading, limit credit and exchange rate risk. Most countries have incorporated the Basel standards into their regulatory framework to strengthen the soundness of their commercial banks, to raise their credit rating in international financial markets and to achieve a universally recognized international standard. The author advocates that the changes in the composition and the size of bank’s portfolios to risk based capital requirements are crucial for formulating appropriate regulatory policies.

Strengthening prudential supervision by preventing cosmetic changes and enhancing effective ways of increasing capital ratios seems to be essential for sound management of banks and financial systems. Additionally, similar efforts should be made to impose leverage restrictions. When institutions in recently liberalized countries have not been allowed to develop, FIs in these settings are more easily able to make cosmetic adjustments because
accounting principles, loan classification standards and disclosure requirements are not well developed. This has been the case particularly for the countries examined in this study, where banks carrying assets of a questionable quality did not make sufficient provisions. The Basel standards, as optimal as they can be, cannot substitute for a bank’s own internal scrutiny of the market participants and the market scrutiny of the banks. Therefore, every attempt ought to be made to escalate the quality and the quantum of such information from the regulated banks themselves.

1.7 (Carosio, 2003): The study outlines the objectives of the reform:

- Designing crisis resistant economies
- Setting aside capital on the basis of a more accurate and comprehensive risk assessment.
- Improvement of risk measurement and management in banks through incentives.
- Generating compliance with institutions across the globe rather than restricting it to only internationally active banks of G-10 countries.

Carosio advocates designing crisis resistant economies. (1) To achieve micro economic goal of setting adequate solvency standards for individual banks. (2) To achieve the macro economic goal of preventing a systemic crisis.

Banks are ordained to hold capital in order to minimise the impact of losses, capital in excess to the defined level may imply that banks have to cut back on lending in a recession, as the threat of credit or default risk will be high and banks will face difficulty in raising finance to set off the mounting risks. Since all banks will face similar situations in the event of a recessionary phase this will in turn exacerbate the recession and possibly lead to an increased risk of a systemic crisis.

The procyclical nature of the norms cannot be ignored which needs to be dealt with in Basel III. Banks are forced to lower their credit standards and increase their share of riskier loans during expansionary phases as a flat rate capital charge applies to all loans. This can lead to higher losses, declining capital base and tougher lending conditions during the following recessionary phase. In the revised accord, any such tendency would be contrasted by rising capital adequacy charges.
1.8 (Randall, Wray, 2006) in his research article “Can Basel II Enhance Financial Stability? A Pessimistic View” has examined the contribution of Basel II towards banking risk and financial stability. It debates advocating that risk-weighted capital requirements and greater reliance on external rating agencies will not do much to reduce the likelihood or costs of financial crisis. The research has conducted an in-depth analysis taking into account various financial crisis which have occurred in the past years and its impact on the economy. On account of several drawbacks in Basel II Accord the research highlights that it cannot positively impact the financial stability, thereby unable to protect banks from financial crisis.

1.9 (Sharma, Manoranjana, 2006) in his article “The Long Road to Basel II – Implications for Indian Banks” outlined the fact that the traditional face of banks as mere financial intermediaries has transformed because of the paradigm shift between off balance sheet and balance sheet, proceed to capital efficiency from capital adequacy and transformation from banking to financial services. The author concludes that the challenges are manifold such as bank-wise loan policy, advanced risk measures linked to variation, evaluating the off-balance sheet risk exposure etc. that needs to be addressed for succulent implementation of Basel II.

1.10 (Ayadi, Rym and De Rossi, Francesco, 2007) research “Practical Implications of the New Basel Capital Accord for the European Banking System: Results and Analysis of an Industry Survey”. A survey was conducted by the Centre for European Policy Studies on the effects of Basel II on the European Financial System. The seven areas of major interest are general aspects of Basel Accord its impact on European banks & SME’s, competitive implications, cost and benefits etc. As per the survey, the SME’s agreed that implementing Basel II would require the heavy costs as the treatment methods needed large IT infrastructure and data treatment.

1.11 (Jovic, Dean and Soeteber, Scot, 2007) in their research “Basel II Implementation in Asia: Who’s Ahead?” The research highlights that Austrian Singapore’s banking sector are leading the Asia Pacific region in terms of Basel II implementation. The basis of this study is a survey carried out by a research agency, Sungard which revealed the following results:

- Majority of banks in the Asian countries were in the initial stages of implementing overall Basel II program or have not started their work.
- 1/5 of these banks have not yet decided which of the Pillar 1 approaches will be used for credit and operational risks.
1/3 cannot measure the cost of implementing Basel II framework in the system.
More than 80% have not started or at an early stage with respect to implementing Pillar II and III requirements.
Almost 2/3 have plans which are incomplete for setting up the IT infrastructure required for Basel II.
More than 60% of banks prioritise the development of economic capital allocation and its management framework.

Thus, despite scarce skills and expertise, Asian banks will be able to live up to the challenge of implementing Basel II by raising senior management’s awareness, planning and executing project steps rigorously and getting help from outside IT vendors and consultancy companies where necessary.

1.12 (Deloitte, 2008) in their research paper “From Framework to Execution- Effective Planning and Implementation of Basel II Accord in Asia - Pacific” focuses on the keenness of banks across Asia and Pacific to maintain competitiveness. The study outlines that they need to incorporate:

- Clear business and risk management objectives.
- Improve risk management systems and capabilities.
- Tailoring approaches according to circumstances and issues governing their own markets and institutions.

The most prominent and well recognized gap outlined by the study for many domestic banks in Asia Pacific is insufficient consistent quality data for credit and operational risk assessment and risk estimate determination. Further, in order to sustain and assure performance at the target accreditation level on an ongoing basis, banks should make the effort to proactively engage with their regulators, understand regulator expectations and as part of their plans be able to in time demonstrate consistent performance at the target accreditation level providing explicit and implicit evidence of compliance.

1.13 (Dr. Bihari, S.C, 2010) – the study lead to the conclusion that the Indian banking system emerged resilient against international financial crisis and downturn of the Indian economy during 2008-09. Indian banks have remained well capitalized due to their nature of domestic assets, which are mostly represented by straight credit extensions and relatively less complex off – balance sheet products. In comparison to global banks, Indian banks are quite
strong in asset quality, diversified risk portfolio and low cost deposit base perspective. This is due to their effective management of the business and partly due to the conservative nature of our bankers and regulators.

1.14 (Sitheswaran, K and Pradeep, Raj S, 2010) have conducted a study on challenges and opportunities of Indian Banking Industry. The study majorly highlighted the impact of financial and economic crisis on the banking industry. The need to use IT as a competitive tool to manage retail banking, treasury, risk management and development banking. The study recommended the convergence with Basel norms and uses its risk models to manage credit and operational risk and it should identify fresh talents and change management benefits of compliance with Basel II norms. The study further recognized a need for the implementation of new accounting standards, enhancement of transparency and disclosures, good corporate governance, alignment of regulatory and accounting requirement, minimizing outsourcing risks and application of advanced technology to globalize Indian banking system to the mark of International standards.

1.16 (Barot, Haresh, 2010) – his study concluded that financial sector reforms have had a considerable effect on the banking sector to mobilize financial savings. The restructuring of the banking sector and the liberal entry and exit policies resulted in the dynamic growth of banks. This efficiency gains profit enhancement, improvement in the quality of assets and reduction of non-performing assets. The liberalization of the foreign exchange market resulted in considerably increase in foreign exchange assets of the banks. However, the financial markets in India need to go further to improve their efficiencies to bring them up to the standards of International financial markets. Furthermore, substantial empirical studies are needed to examine the impact in a more robust way however, necessary micro level data has been a major obstacle.

1.17 (Dr. Pawar, S D, 2011) studied the convergence effect of IFRS on the Indian Banking system. The regulatory framework currently comprising of RBI guidelines, norms issued by various working groups and committees, Basel guidelines etc. With the advent of implementation of IFRS the research highlighted various gap areas such as Capital Adequacy, NPA’s, disclosures, preparation and presentation of financial statements. Thus if further research is conducted to develop strategies for meeting these gap areas, then will IFRS serve as a replacement for existing International Basel guidelines.
1.18 (Raj & Sindhu, 2011): suggested that global banks can learn lessons from Indian banks with respect to risk management strategies and practices during global recession as follows: (1) Foreign banks should emulate models such as “Best Practices” and state-of-the-art risk management models adopted by Indian banks. (2) Transparency, robust risk management, optimum internal controls reliable risk management practices. (3) To bring market risks under effective under effective control and ensure their healthy and steady development, foreign players should be perfectionists in their methods and techniques for controlling risks and their risk management functions should be localised. (4) Establishment of effective and impudent departments for managing and controlling risk with adequate and experienced human resource for controlling risk factors and looking into the RMB activities/transactions in international banks is essential. (5) Accurate evaluation of risk exposures, profits and losses of foreign lenders, provision of reliable data to authorities in order to exercise better control over market risks. Thus the study concluded that Indian banks are efficient in managing risks, risk identification and risk assessment by averting any expected risk through risk management practices when compared to foreign banks.

1.19 (Andersen, Lene, 2004) in his study “Basel II : The Path to Promoting Financial Stability in Asia and Pacific Region” assumed that on account of the transparency in applying credit ratings extensively it may result in a substantial impact on the movement of capital through private channels amongst developing economies. The second and the third Pillar of the accord demand coordination amongst regulatory bodies ensuring a common forum for addressing issues as well as reducing deviations for multinational banks present across the globe. Protection of the interests of the stakeholders on account of implementation of capital adequacy norms will minimise the chances of using government funds in a systemic crisis. Moreover, demand for increased capital can enhance the external credit ratings of banks in cases where the risk management system in a bank has been strengthened on account of the CRAR.

1.20 (Dr. Reddy, Y V, 2006) in his study “Challenges and Implications of Basel II for Asia” analyses the fact that Basel II requires more capital for banks in India due to the operational risk not being recognized under Basel 1. The research analyses limitations and impact of revised Basel concordat in Asia. The study favors the banking sector regulators to implement Basel II framework at their own pace and in a manner appropriate to their economies, banking systems and supervisory mechanisms. Ideally each country may devise a road map to be implemented flexibly taking into account of the country context.
1.21 (Talwar, 2011): The main objective of the researcher is to analyse the gaps in the existing risk management framework of banks. The financial crisis, 2008 has proved that systemic risk is a big threat to the financial system, as it affects the banking system and produces a cascading effect on the economy leading to its failure.

Strebel and Lu outline the fact that risk management framework is related to executive judgement rather than computer modelling. UBS had the most prudent risk management systems which are backed by quantitative modelling techniques. These models encouraged a mechanistic application of the risk assessments they produced. Cole portrayed the need timely and effective communication about risks can rectify the weakness in risk management. MIS should produce comprehensive, accurate and timely information.

In today’s diversified environment there is a need to overhaul surveillance models as traditional supervisory models may not be able to identify important risk factors in the international banking environment.

The history of the banking sector crisis has revealed that risk management systems in banks are far from effective because of the ad-hoc and piecemeal approaches.

The study advocates two important variables in shaping the risk management processes are: types of risk any bank is exposed to and the measurement techniques available for quantification of measurable risks.

1.22 (Powell, Andrew, 2004): His research paper highlights a dilemma over the acceptance of Basel II over Basel I. It questions specifically with respect to implementation of Basel norm in developing countries. Powell has suggested five alternative island standards and five navigational tools to aid countries to select their preferred standard within the plethora of standards and norms. The research work has also laid down a proposal for a centralised rating based approach. It has addressed several issues in different countries relating to acceptance and implementation of standardised approach which will not enable banks to generate profits by correlating capital to the risk factor whereas on the contrary many nations have to invest good amount of time and expertise in building up a framework to execute business with the advanced techniques. The researcher advocates Basel II approaches for credit risk mitigation and securitisation especially for those countries seeking a boost in their capital markets. The biggest disadvantage of Basel II norms is that it has several alternatives which have reduced the impact of the accord as a whole. The regulatory authorities in different countries world
wide need to define the potential of their banks in order to ensure proper disclosure under Pillar III of the accord.

1.23 (Repullo, Rafeal & Suarez, Javier, 2008): The research paper highlights the impact of the cyclical movements from insensitivity of risk to sensitivity of the risk factor in the background of a dynamic equilibrium model of relationship lending in which banks are unable to target the equity markets in every time segment. Changes in the regulatory norms transform the behaviour of these norms from countercyclical to procyclical. A key aspect governing Basel II is during periods of recessionary phases banks will be unable to provide loans to maintain capital limits as per norms. Furthermore, banks can speculate several downturns or financial shocks to prevail in the market thereby hold larger amount of capital impairing their lending ability. It is still unproven whether these capital buffers can protect banks from financial shocks and downturns, maintaining financial stability in the market. The correlation of banks relationship lending and inability of banks with the existing relationships to access the equity markets has established an automatic connection between deficiency of capital of some banks at a prescribed time and the credit rationing of some borrowers at the same prescribed time span.

1.24 (Heid, Frank, 2007): The researcher opines that Basel norms will increase the volatility of regulatory capital with the introduction of revised Basel norms. The paper focuses on capital induced lending cycles and their procyclicality on macroeconomy in particular. Since Basel II focuses on quality of assets rather than type of assets, enhancing banks risk management architecture. Alignment of regulatory capital with several economic risks is definitely proved to have microeconomic benefits as it reduced the probability of regulatory arbitrage. Banks face several write-offs in their equity capital arising on account of their bad loan portfolios, this issue can be triggered on account of the existing capital regulations. Banks deficient in capital can be restricted from lending in the market which can exacerbate an economic downturn. The issue with respect to cyclicality of capital is the major concern under Basel II which being highly researched internationally. This issue is highlighted in the paper too inferring that with special reference to cyclicality in lending the capital cushions are likely to mitigate the effect of alterations in capital charges. According to the researcher it would be incorrect to see volatility in capital cushions will fall in the similar pattern as compared to Basel I. In countries where banks play a pivotal role in lending the potential influence of Basel II on aggregate demand will be significant even if banks fully comply with
Basel norms. Though the procyclical impact on macro economic fluctuations will vary between countries. In a nutshell, economies driven by bank lending will face higher constraints as compared to economies driven through financial markets. The paper fails to highlight the specific factors which will result in inability of the banks in keeping the required amount of capital. The size of corporate organisations, sectoral specialisation of the economy, the accounting framework and the level of competition in the industry are a few factors outlined in the research which have a strong influence on the procyclicality. The paper opens avenue for future research focussing on the assessment of dependency of the prudential regulation of the banks and the monetary policy.

1.25 (Cornford, Andrew, 2006): Andrew advocated that BCBS should concentrate on strengthening the guidelines in a way such that the banks keep the required amount of capital closely in relation to the posed risks. The centre point of these norms should define various techniques and methods for computing and assessing risks rather than the capital adequacy ratio. Though BCBS has incorporated several approaches for the primary risks – credit, market and operational posed to banks worldwide. These norms also aim at differentiating between banks depending upon varied levels of sophistication and complexity. Assignment of risk weights has also been a key factor of the norms introduced in 2004. Particularly with respect to Pillar II there is lack of coordination between home and host country regulators especially for uniform international implementation of the norms. BCBS proposal for global cooperation amongst supervisors of various nations imposing Basel norms on their banking sector has been put forward. The committee identifies the need of external auditors who are largely required to play a major role in banking supervision across the world. Basel II merely aligns the regulatory capital with the economic capital and lays down techniques for managing credit risk. Basel II fails to identify largely the impact of procyclicality of bank lending with special reference to capital adequacy ratio. Though procyclical variation can result in loss given default and probability of default. Revised Basel doctrine places more emphasis on default probability on the contrary default causing loss rises when recovery charges on bad loans decline. Certain drawbacks underlying the Basel II framework can be eliminated through dynamic provisioning. Due to this provisioning a capital buffer of loss reserves can be accumulated over time which can aid in periods of distress thereby mitigating procyclical pressures on bank’s lending. International diversity of financial markets and banking systems has been a major reason for Basel II accord particularly for problems arising on account of improper financial reporting framework and supervision.
1.27 (Balin, Bryan, 2008): Bryan points out both Basel I & Basel II ignore the effect of implementation on the emerging market economies. The study assesses the influence of Basel norms on the international financial system especially in the emerging economies of the world. Basel I being pretty narrow in its approach and its omission for market and operational risk as well as market discipline has limited its ability to influence banking systems in emerging economies world wide. The inherent drawback in terms of Basel I is the leeway the risk weightings provide in terms of writing off the riskier loans in its books through securitisation of loans and sell off least risky securitised assets. However, the money earned through securitisation can be included in the asset reserves of the bank permitting banks to lend out even more riskier loans. Though Basel II has left no room and included all the ignored aspects under Basel I market and operational risk, market discipline, surveillance, corporate governance and regulatory mandates. The research work highlights even though new Basel framework is a revision from the first Basel accord but the limitations of both these accords is the same. Firstly both size out the implications of its regulations on the banking segment in the emerging economies. Although both the accords seem unfit for implementation in the emerging market economies but neither one provides an answer to the guidelines or capital based norms which are suitable for implementation in these developing nations. These nations are still facing several difficulties and the banks are coping up with the advanced approaches while the smaller banks in these nations are still on Basel I leading to a huge discrepancy in the financial and banking sector. This discrepancy can also lead to smaller banks becoming sick or unable to grow while the larger banks will gain more risk as their markets transform from emerging to developed.

1.28 (Herring, Richard, 2007): This working paper primarily addresses the issue that U.S. officials have faced in the due course of implementation of Basel II norms. This paper also takes into account whether it would be contain the potential in capturing the enhancements in the architecture for managing risks of banks economically and assurance for financial stability. The leverage ratio, corrective action measures, rigorous transition floors should be applied for Basel II apart from the regular prudential safeguards. It broadly reflects the in efficiencies in the implementation process in the United States. In exercising power regulatory authorities in United States are responsible for solving the monetary issue deficiency in the banking sector. In the U.S. FDIC is responsible for setting off the cost of capital restraint and also the cost of imposing additional prudential regulations. The research also raises question regarding due importance to protective measures imposed by the Basel
regime. Costs for complying with Basel II for banks and regulatory authorities and set limitations for the reduction of capital as per Basel II norms. It would certainly tone down the risk of exacerbating the business cycle fluctuations and escalate the need for public disclosure for capital adequacy provisions and capital charges. As per the second arm of the Basel accord central banks responsible for surveillance would require to adopt advanced risk management techniques by uncompromising the imposition of architecture for managing risk in the banking industry.

1.29 (Financial Stability Institute, 2006): Through this paper the Financial Stability Institute has conducted primary research in 115 jurisdictions across Asia, Africa, Carribean, Latin America, Non- BCBS Europe and the Middle east. Though the principles under Basel II have been well adopted in the above nations but the smaller nations have decided to adopt several approached under the second Basel regime for operational, market and credit risk with no pre defined time frame.

The results of the primary research conducted reveal that:

1. For managing risks under credit exposures the standardised approach is the most widely used approach, half of the respondents adopt the Foundation Approach for Internal Ratings whereas 1/3 of the respondents adopt the Advanced Approach based on Internal Ratings.

2. Majority of the respondents manage operational risk using the Basic Indicator Approach whereas the remainder adopt the standardised approach and a small proportion of respondents adopt the Advanced Measurement Approach.

3. Out of the sample, only 10 countries have effectively planned out to implement the Pillar II – supervisory review process by the end of 2008.

4. 37% of the jurisdictions plan to implement Pillar III – market discipline by the end of 2007 while the others plan to implement market discipline requirements by the end of 2008.

Therefore the above results clearly indicate that the emerging and developing nations are making continuous efforts to adopt the Basel guidelines in their banking framework.
1.30 (Lall, Ranjit, 2009): Basel II was introduced internationally with a view to maintain financial stability and prevent any other systemic crisis in the world. However this research paper presented by Lall does not agree to this rather argues that Basel II is an underlying cause to this effect. The research paper outlines the facts on account of which the Basel norms have failed. The premier aim of Basel guidelines is to safeguard and promote soundness of the banking arena internationally. The recent global crisis which triggered in 2007 was seen as a shock to the regulators of the Basel norms. The supervisory regulators of Basel guidelines opined that if these norms were well implemented it would definitely curb any financial crisis in the world but the author on the other hand feels that it was the principles under these Basel norms which led to crisis such as risky lending practices. Large international banks were able to systemically manipulate the principles under Basel II to suit their practices and processes. For the purpose of research the author has identified two sides one the supply side which concerns the institutional context in which these norms were drafted and the other the demand side concerning the societal need for such universal regulations. According to Benjamin Cohen ‘banks are the oil that lubricates the wheels of commerce’ and for spinning the wheels of the industry the primary requirement is financial resources. This is where the regulations cause problems as banks have to maintain a huge amount of capital as regulatory capital meeting the requirements of norms under Basel II and in turn they will be left with lesser capital for lending to industrial and corporate houses. The author also feels that the inherent weakness in the Basel II accord will fail to create any progress in the banking sector neither be able to prevent another systemic crisis. Basel II was also a regulatory failure as a number of central banks at the apex could not take charge of the implementation and regular appraisal of these norms implemented world over. Large international banks always had a say in framing these norms or even making subsequent changes in them and they had to be followed by the smaller banks without any question. The smaller and unsophisticated banks found it difficult to upgrade their systems with the change in these norms moreover they have to incur high end costs for maintaining capital based on regulations. The author feels that some distance between regulatory bodies and the banking industry will give the industry some breathing space and help them function as per their constraints and resources.

1.31 (Karacadag, Cem and Taylor, Micheal, 2000): This paper aims to establish a relationship amongst the revised capital regime and the Basel doctrine. The Basel II framework represents a shift across dimensions pertaining to regulatory capital v/s economic
capital. The authors highlight that the framework holds several theoretical advantages but the real test is when this has to be implemented uniformly in the developed and the developing financial markets. This study also aims to identify several challenges with respect to the three pillar approach put up in the Basel II concordat. The three pillars of the accord are interdependent and the smooth functioning of the new capital framework is totally based on these pillars.

The first pillar seeks to build competencies of the banking institution totally on the internal capital resources. The research points out a drawback that even the large multinational banks differ in terms of their internal rating systems and the accuracy of these ratings is highly subjective and rarely validated or back tested. The authors recommend application of the external credit ratings in place of the internal ones.

The battle between supervision and regulation seems to spoil the show for the execution of Basel II in the markets. Supervision in opposition to regulation is essential for the banking systems. However strict regulations can hamper the functioning and the operations of the banking business.

The researchers argue that definitely market discipline is essential under the approach but incentives for true and fair disclosure are essential for the benefit of the banking institutions as well the participants in the market associated with the banks viz. depositors, investors etc.

Moreover researchers say the accord is very crude in terms of keeping a strict CRAR of 8% and increased CRAR in times of stressed scenarios. The risk weightings to OECD nations and non-OECD members have been criticised world over. The achievement of minimum capital adequacy ratio has been overrated in the test of banking soundness and prevention of a financial catastrophe however the emphasis on asset quality, valuation of loan and recognition of loss has been ignored in the framework.

2. Tier I & Tier II capital

2.1 (Ahmed, 2009): The major concern for the banking sector is to maintain adequate capital required under Basel II norms, this will result in causing banks to raise capital appreciably and thus undermine their existing capital position. In such a situation subordinated debt can
play a complementary role in enhancing bank capital. Subordinated debt can provide quality market signal which can be used by supervisors to identify distress in bank management.

In order to raise **Tier I capital** immediately the bank can issue **right shares**. For state owned banks, government will require to inject capital while branches of foreign banks will require collecting funds from the parent office and issuance of **non-cumulative irredeemable preference shares**. **Tier II capital can be raised through perpetual subordinated debt or preference shares or both.**

*The government of India has earmarked Rs. 12517 crore funds to be injected in Public Sector Banks to increase the liquidity of these banks as well as enable them to meet stringent capital requirements under Basel III norms. The government has also approved to provide additional need based capital to public sector banks for a five-year period from 2013-14 to 2018-19. The government has injected Rs. 32000 crore in the previous two financial years. During the year 2011-12 the government infused Rs. 12000 crore in nationalised banks to improve their capital adequacy ratio. The government pumped in Rs. 20157 crore in the nationalised banks in 2010-11 to maintain tier I capital @ 8% and it has also increased the government’s equity in some banks to 58%. Thus the capital infusion or recapitalisation by the government as approved by the ministry of Finance and based on the assessment by them to inject capital in a phased manner to achieve the capital adequacy provisions under Basel norms - Source: Hindustan Times. 10 January 2013.*

*Though the government has proposed to infuse Rs. 12517 crore in the banking sector but the actual capital requirement is Rs. 260000 crore by 2018 which seems a challenging task before the government due to high current account deficit and economic slowdown. This limiting factor will impact the banking industry even lead to a inability to abide by the required capital adequacy norms (which is generally higher as compared to the benchmark capital demand in India as ordained by RBI’s risk conservative policy) and raise capital through preferential allotment, through foreign capital issues, further issue of equity shares or relying on subordinated debt with limited exposure for market for hybrid investments in India.*

*Through the policy of capital infusion the government is injecting Rs. 3004 crore in State Bank of India through preferential allotment of equity shares in current fiscal (March 2013)*
enabling the bank to support national and international banking operations undertaken through its subsidiaries and associates. In the year 2012-13 infusion of Rs. 7900 crore was undertaken by the government to enhance the Tier I capital of India’s apex bank, thereby the government’s shareholding increased in the bank to 61.58% from 59.4%. – Source: Economic Times. January 19, 2013.

Evanoff and Wall suggest that subordinated debt provides capital cushion, tax benefit and brings market discipline to banks. Subordinated debt is an unsecured instrument which is neither backed by the government nor supported by Deposit Insurance Fund. Enhancing capital through issuance of subordinated debt increases the asset size of banks. During insolvency, asset be liquidated and depositors claim will be settled before settlement of subordinated debt holders claims. This shows that raising capital through subordinated debt would mitigate depositor’s risk. Issuance of subordinated debt seems to be an immediate necessity for a shift to Basel II, which is likely to strengthen the capital structure mix of banks, help to develop bond market, facilitate harmonization of capital regulation.

2.2 (Petrou, Karen Shaw, 2005) in his research article “Basel II Regulation: US Market and Competitiveness Implications” he has analyzed the impact of increased competitiveness due to implementation of Basel II on small US banks. It takes into account specifically inclusion of operational risk under Basel 2 Accord and its impact on the capital structure of US banks and the economy.

2.3 (Karels, Prakash, & Roussakis, 2006): The research work derives results which indicate that in one period static analysis, the theoretical relationships are negative between primary capital adequacy ratio and various measures of risk (except for unsystematic risk). The assumption of a static model and no probability of bankruptcy have resulted in negative relationships. The appropriate capital required to prevent a systemic crisis along with competitive returns on banking operations is questionable as the accord highlights lower risk measure correspond to higher levels of capital adequacy.

2.4 (Lackman, 2006): The empirical studies of capital adequacy indicate: (i) Capital adequacy and bank failures hold little relationship with each other (ii) Capital adequacy and bank stock prices are not related at all. (iii) Corporate treasurers consider capital adequacy as an important factor in selecting depositories.
In order to test the inferences for bank portfolios of three different cases of bank capital constraints a model was developed. **Incase I:** Variance of ROE will be always reduced by applying the capital/ deposits ratio, but to varying degrees among different banks and will increase the probability of losses and the expected return. **Incase II:** The variance of return on capital can be reduced by applying the capital/ risky asset ratio which causes a shift of bank portfolios towards less risky assets. **Incase III:** The variance of return on capital can be reduced by applying the adjusted risky asset ratio which causes a shift of bank portfolios towards less risky assets. Bank examiners prefer results from the constraints in cases II & III yield results which seem closer.

**2.5 (Salmon, John and Robertson, Struan, 2007)** in their article “*Basel II: An Introduction to the Capital Adequacy Accord and the Capital Requirements Directive*” say that the objective of second Basel regime is to modernize the existing demand for capital in order to make it more risk comprehensive and risk – sensitive taking into account many modern financial institutions through risk management practices. Their research highlights the **Capital Requirements Directive (CRD) as per the European Union** which is being used to implement the new capital requirement framework. The framework under CRD reflects major components of Basel II and its flexible structure. CRD reflects that firms should have sound, effective and complex strategies and processes on a continuous basis the types, amounts and internal capital distribution to cover the nature and the extent of the risks inherent or will be exposed to in future.

**2.6 (Orgler, 2009):** The author outlines that **bank failures are caused by illiquidity, bad assets, mismanagement factors that are not often reflected in capital measures.** But even if adequate capital cannot always prevent bank failures, it can reduce losses to creditors once a bank does fail. For this reason, role of capital in failed banks is an important area of concern for regulatory agencies and large depositors.

**2.7 (Dhanda & Rani, 2010):** CRAR is the most widely employed measure for soundness of a bank globally; CRAR ranges between 7.1% - 34.9%. According to Indian Banking Regulation Act, 1949 section 17 each bank is expected to transfer 20% and if possible 25%-30% of its disclosed profit to the reserve fund. Implementation of the second Basel accord by the banks in India will help accomplish improvisation in the accountancy framework, regulatory policies and risk management are at par with best procedures and techniques implemented in banks across the globe.
2.8 (Berger, 2011): In order to precisely estimate the quantum of assets assigned risk weights for new innovative financial securities viz. securitizations Basel II implements several fluid formulas. The first and second Tier capital allows several deductions which are also required for these formulas in certain circumstances. Frequent correlation is required with credit ratings which carry a tendency of showing reactions as per the fluctuations in the market scenarios. Frequent anticipations can be undertaken by several participants in the market to forecast the fluctuations much before the reduction in the prices of the stocks on account of the changes in the credit ratings. Additional regulatory capital may be required under its capital adequacy formula in case adverse results are revealed through changes in the ratings or through an adverse impact on the asset class. Raising of excess finance by banks can prove to be expensive under this situation especially when the participants in the market have reduced prices of equity shares in estimation of changes in credit ratings.

2.9 (Dharmaraj, Joseph, & Santhosh, 2011): Industry experts have identified key performance indicators of banks – Net Interest Income, Cost to Income ratio, Capital Adequacy ratio, Net NPAs, Deposit growth, Return on Assets, Return on Capital Employed and Operating profit.

Top ten banks surveyed in the research include Axis bank, BOI, PNB, BOB, HDFC, Indian bank, Corporation bank, Union bank, Citibank. These banks have got the top ten ranking in the category of balance sheet size of more than ₹24,000 crores in a leading business magazine ‘Business Today’.

2.10 (Dr Reddy, Maheshwara and Prasad, K.V.N, 2011) conducted a study evaluating the performance of Regional Rural Banks- Andhra Pragathi Grameen Bank and Sapthagiri Grameen Bank through the application of the CAMEL Model. (C- Capital Adequacy, A- Asset Quality, M- Efficiency of Management, E- Quality of Earnings, L- Liquidity of Institutions). With respect to capital adequacy ratio it was found that Andhra Pragathi Grameen Bank outdid Sapthagiri Grameen Bank by maintaining adequate capital for their risk appetite.

Formerly Regional Rural Banks were not included under the purview of Basel guidelines, but since they have become building blocks and serve as a ‘Model Financial Infrastructure’ for rural development they are evaluated for capital adequacy.
2.11 (Chaudhary, BASEL III: A TOOL OF RISK MANAGEMENT IN BANKING SECTOR, 2012): outlined the several reasons why Basel II failed to meet the needs of the dynamic and globalizing banking environment and protect them from the financialmeltdowns. The factors which still need to be incorporated in the concordat Basel II are which are now being implemented in Basel III Accord:

- Focussing on common equity and loss absorbing capacity, require higher quality of capital.
- Accurate assessment of market risks especially for capital market activities.
- Restricting increased risk exposure along with serving as a booster to the capital adequacy regime, an internationally harmonized leverage ratio is required.
- Reduction in the impact of stressed scenarios through built up capital buffers during boom phases.
- Improvement of the resistance power of the banks to withstand severe stress in a short tenure and funding in the long run through minimum global liquidity standards.
- Enhancement of risk management systems, supervision and public disclosures by setting stronger and prudent norms.

2.12 (Chaudhary, 2012): Sahila strongly recommended competitiveness and a sound banking system in India through effective cost management, recovery management, technological intensity of banking, governance and risk management, financial inclusion. Harmonising with the global perspective in order to serve societal needs, perceptions of the market, improvisation in the policy outline, legal framework, and corporate governance and ethical practices followed in banks should be the priority. The research concluded that capital adequacy norms have brought about significant improvement in the banking sector. Therefore, it can be concluded that banking reforms have indeed transformed Indian banks into strong, stable and prosperous entities with an adequate capital base.

3. Pillar I risk – Credit

3.1 (Oliver, Prato 2002) has classified the use of credit derivatives – hedging instruments, investment instruments, trading instruments. Credit default swap is a credit derivative contract between two counterparties. Credit Default Swaps can positively as well as negatively impact the financial stability.
3.2 (Banerjee, 2004) in his research “Basel II: Are Indian Banks Prepared?” brought out the contentious issues for effective implementation of Basel norms. These norms are as follows:

- High cost of compliance
- Cross border implementation
- Higher probability of national discretions leading to disparity in capital regimes
- Implications for bank loans to SME’s as they carry more risk etc.

The study advocates Internal Rating Based Approach for evaluating credit risk will benefit banks in the long run. Though, in the current scenario the standardized approach is suitable for meeting the requirements of Pillar I.

3.3 (Reserve Bank of India, RBI) comments on the convergence of Basel norms in the Indian Banking sector the fact of delinking risk weighting of banks from the credit rating of sovereigns in which they are incorporated and assigning the preferential risk weights on the basis of underlying strength and creditworthiness. RBI opines that in the approach adopted for retail exposures the benefits of diversification are similar to the risk weights assigned to sovereign exposures especially when the exposures are aggregated as a portfolio, these risk exposures require revisiting. RBI concludes the study by stating that financial stability can be ensured through the use of supervisory oversight with market discipline which would also reinforce the supervisory framework.

3.4 (Akkunoor, Pradeep, 2005) in his study “Impact of Basel on the Indian Banking Sector” says that banks should set aside capital for frauds and thefts, which have become common in the emerging market economies. Salient feature of the research is the comparative study between Basic and Advanced Risk Management System which emphasizes that even a small change in the degree of risk gets translated into a large quantum of funds for banks employing the Approach based on Internal Ratings (IRB) as they will shun high risk clients. Thus these clients would eventually approach banks employing the Standardized Approach since they are unable to obtain loans from IRB banks. The study supported that Basel II is going to provide the much needed impetus to understand and manage risk.

3.5 (European Council Bulletin, ECB, 2005) highlighted that Basel II aims to safeguard banks’ safety and soundness and to increase the financial system stability as a whole. This new methodology is suitable for banks of different sizes, business structures and risk profiles;
a common approach to modelling credit risk across all types of banks is available for regulatory purposes for the first time. The research highlights the salient features and the impact of Internal Ratings Based Approach (IRB) which is closely linked to key results of modern asset pricing theory. The IRB model assumes very low concentration in the loan portfolio and that an individual borrowers’ default risk does not depend on the composition of the entire portfolio. This characteristic feature of IRB allows smaller and less sophisticated banks to apply a modern risk management concept.

3.6 (Gupta & Srinivasan, 2005) in their article “Basel II Accord: Impact on Indian Banks” primarily focused upon the exposure and risk weight calculations for major Indian banks. The research paper takes into account the impact of three pillars under the accord and risk weighted ratings under credit, market and operational risks. Thus, the study outlines that the introduction of the second regime of Basel guidelines is likely to better the risk management systems of banks as the banks aim for adequate capitalization to meet the underlying credit risks and strengthen the overall financial system of the country. In the long run, the Indian Banks will benefit from new and better techniques for managing credit and operational risks.

3.7 (Phuskele, Preeti, 2005) in her study “Basel II and SME Financing” evaluated the potential influence of the Basel II on medium, small and micro enterprises (MSME’s). As banks are the primary source of financing the SME’s, changes in a bank’s lending practices is of great significance for businesses and economic activities of any economy. As per banks perception SME’s carry higher risk. Thus, Basel Committee for Banking Supervision (BCBS) Basel reduced the risk weights and the capital requirements on loans to SME’s under certain conditions. SME’s pledging collateral security or guarantee listed in New Accord will reduce the risk exposure of a bank. Increased use of internal ratings for pricing decisions will reduce the cost of SME financing. According to expert estimates, Capital requirement for loans to SME is lower in Basel II as compared to Basel I.

3.8 (Rime, 2005): The New Basel Accord presented a dual scheme with approaches showing sensitivity to risk especially the Internal Ratings Based Approach. This approach though initially will be used by systemically important banks in the industry while the remaining banks will continue with the standardised approach which is proven to be less risk sensitive.
These methods and approaches are expected to revolutionise the need for maintaining capital in proportion to the risk exposures.

The model developed in this study outlines the need for a dual ideology will enable large banks to focus on borrowers with less risk exposure and for the smaller banks to focus on borrowers with high risk exposures. This will encourage these two banks with varying sophistication to compete effectively in the market for lending practices. The model also indicates the intense the competition the larger will be the reallocation effects.

The study suggests a provision of concession with respect to keeping adequate capital in order to comply with the Basel norms. Implementation of the IRB approach seeks to improve the adequate capital demand of large and systemically important banks but it diminishes the quality of adequate capital to be maintained by smaller banks in the economy so as to accept their risk appetite indicated by the risk sensitivity of the approach. Systemically important banks are sophisticated and larger in organisation size and structure as compared to the unsophisticated banks in majority of the nations world wide, regulatory bodies may acknowledge the improvement in the capital requirement of large and multinational banks at the cost of deteriorating the capital requirement and demand of capital with banks which are small and not categorised as systemically important banks, therefore the result is uncertain on the financial position and security in the long run.

This study also indicates that incase the procedure for analysing the quality of the portfolio of loan highlights diminution post the implementation of the revised framework, supervisors under the second Pillar levy a capital surcharge in addition to the one existing especially on the banks employing the standardized approach.

3.9 (Deb, Satyajit, 2006) in his research “Implementation of Basel II in India: A Crucial Journey” stated that the skill development from approaches implemented for managing risk, at the bank’s stage as well as at the supervisors’ stage would be a tough task ahead. The study brought to the forefront the following challenges:

- Encouraging ratings of issuers would be a challenge.
- Historical data availability and data integrity are important issues.
- Higher risk weightage may discourage Public Sector Banks (PSB’s) to direct its credit flow to priority sector lending.
3.10 (Kupiec, Paul H, 2006) in his article reflecting financial stability and the Basel norms provides an analysis of the minimum solvency standards set under Basel II and the application to bank, corporate and sovereign credits through the Internal Ratings Based (IRB) Approach. The research work indicates several obscurities in the second Basel concordat, it can significantly progress to variations in the levels for capital which uniformly affirm in banks using the IRB approach. Basel norms do not provide clarity regarding the definitions of Loss Given Default (LGD) and Exposure at Default (EAD). The analysis also suggests that the transition of the banking assets to Advanced Internal Ratings Based Approach fails to encourage security in financial terms because banks applying Advanced Internal Ratings Based Approach face high risk of default minus net aid for safety. The acceptance and execution of revised Basel guidelines has proved incapable of promoting better risk management architecture and minimise the probability of a systemic crisis in the world economy on account of the inherent deficiencies in the AIRB approach.

3.11 (Krishna, Prasad P S, 2006) in his research “Basel II imperatives vis-a-vis Changing Trends in Customer Profile” outlines the fact that Basel II focuses on risk based categorization of customers. This enables the bank to keep healthy customers. The changing customer profile and the requirement of Basel II implementation are together driving the banking strategies in a unidirectional way and this is probably a matter of comfort for the bankers.

3.12 (Perraudin, William, 2006) in his paper “Securitization in Basel II” broadly considers the rules governing regulatory capital for structured products in the Basel II Accord. The scope of securitization is likely to be significantly increased when banks have developed the systematic approaches to measure and manage portfolio credit risk required by Basel. Banks have to reveal to the market quantitative information such as the aims of securitizations the regulatory capital treatment adopted and which rating agencies they employ to rate their securitizations. They have to publish information about their aggregate holdings of securitization exposures. These substantial disclosures will reveal a lot about what directions are being taken in securitizations by individual banks and the markets as a whole.

3.13 (Sinha, Pratap Ram, 2006) in his research paper “Risk Management of Securitisation Transaction: Implications of Basel II” said that the advent of Basel I capital adequacy
proposal led to the growth of securitization transactions by making certain assets off-balance sheet. Banks could hold less capital and this led to an increase in the concentration of credit risk in the books of financial institutions because they securitized their best quality loan portfolio and as these items turn off-balance sheet, the overall portfolio riskiness increased substantially. Thus, in order to cope with the situation, Basel II framework introduced \textit{securitization of transactions} through the Ratings Based Approach.

3.14 (Redak, Vanesa and Jager, Johannes, 2007) in their article “Austrian Banks’ lending and Loan Pricing Strategies against the Background of Basel II” analysed the implications of Basel II for Austrian lending business. The research article questions whether the change in regulators’ and banks’ remedy to risk exposures impacts the alternations to methodology for lending, terms and pricing. The research statistically evaluated the following reasons for competitors’ low pricing, differential computation methodology, increased demand for funds, lower rate of interest on capital, enhanced means for refinancing impact on condition portfolios, dumping etc. The study concludes drawing upon the conclusion that the market for lending in Austria will achieve the differential needs of the industrial segment in Austria along with priority to MSME’s irrespective of the migration to the standardised approach advocated by the second Basel doctrine. Thus the execution of the revised Basel framework requires banks to improvise on the accounting, documenting and internal MIS structure.

3.15 (Marshall, Tebbutt, Toritani, Srivastava and Hansen, 2008) in their study “Implementation of Basel II in Asia: Future Plans and progress to date” advocated the diverse strategies to be followed by banks for Basel II implementation by banks in different countries. The study recommended setting up of \textit{National Credit Bureau} for Indonesian banks which will serve as a useful building block for generating more systematic loss data. The study stated that Basel II accord is not appropriate for Chinese Banks; the China \textit{Banking Regulatory Commission} focused on more fundamental reforms intended to raise the bar for bank governance, management and supervision. The study highlights that Malaysian banks special risk rating system for their corporate and SME portfolios, while only a few had started to build scorecards and pull together loss data for their retail portfolio.

3.16 (Marshall, Tebbutt, Toritani, Srivastava and Hansen, 2008) in their study “Overview of Basel II and its Implications for Asia”. This research article was compiled and published by Fitch Rating. In Fitch’s view, Basel II will likely reduce the appetite of banks to hold subordinated securitization tranches given the penal treatment of such positions. A key pre-
requisite for estimating Loss Given Defaults (LGD) is an efficient and predictable legal framework which enables creditors to reasonably anticipate the amount they will recover upon default. This system is not in place in many of the Asian countries and thus has given rise to large number of Non-Performing Loans (NPL’s) to be dealt with. The study recommends the Stress – Testing mechanism for banks to allocate sufficient capital over the economic cycle, particularly to weather potential market distress. Further, Interest rate risk in the banking book is not addressed in Pillar I ratios and therefore an important area for supervisors to monitor.

3.17 (Suresh N, Kumar, Anil and Gowda, D M, 2008) conducted a study of credit risk management with special reference to State Bank’s group with the opinion of a expectation of a deliberate technique for managing credit risk posed to banks operating in India due to increasing NPA’s in comparison with the global benchmark. The study presented an informal charter for qualification of presentations of all kinds of credit advances for different stages of NPA particularly for privately run banks. Measurement of exposure to credit risks is undertaken by indices highlighting concentration of credit risk exposures across various segments viz. Industry, agriculture, service, infrastructure development, retail banking, finance and trade generating NPA’s. The inferences drawn from the study supported the hypothesis ‘The credit advances towards portfolio of occupations influences the NPA’s of banks group for the State Bank group’. The findings highlight the ‘under penetration ‘of the retail market and considerable growth potential for banks. Therefore, diversification of portfolios in order to accomplish an improved portfolio for maintaining credit equilibrium is a must for banks. Early Warning Systems combined with competitive intelligence; strategic planning and course of action of management should be developed by banks. In order to manage risk ‘Risk Based Capital Approach’ was recommended by the Basel Committee. RBI made provisions for supervisory oversight based on risk exposures on the basis of revised Basel II framework. Banks can compete effectively in an internationally complicated business atmosphere since banks are complying with the Basel norms.

3.18 (Bodla & Verma, 2009): The authority for approval of credit risk vests with Board of Directors to the extent of 94.4% - Nationalised Banks and 62.5% of Banks privately managed. The authority in the remaining banks is however with the ‘Credit Policy Committee’. Basel I had put strong and weak borrowers at par and did not provide for difference between regulatory risk and banks actual risk. However, Basel II defines credit
risk elaborately and risk weights have been scientifically determined for strong and weak borrowers.

**Tracey and Carey** examined the **credit risk rating mechanism** at banks in US. They concluded that banks internal rating system helps in managing the credit risk, profitability analysis and product pricing.

**Duffee and Zhou** advocated on the use of **credit default swaps – popular derivatives for managing credit risk**. They concluded that the introduction of a credit derivatives market is not desirable because it can cause other markets for loan provisioning to breakdown.

**Ferguson** concluded that proper risk modeling provides a formal systematic and disciplined way for firms to measure changes in the riskiness of their portfolio and helps them in designing proper strategic framework for managing changes in their risk.

**Bagchi** concluded that proper risk architecture, policies and framework of credit risk management, credit rating system, monitoring and control contributes in success of managing credit risk.

**CRM takes into account a platter of managerial approaches such as credit approving authority, prudential limits, risk ratings, risk pricing, portfolio management and loan review mechanism.** As per RBI guidelines, each bank should delegate powers on the basis of a have a carefully formulated scheme. A Multi-tier Credit Approving System wherein the proposals of loan all vetted by a Committee comprising of atleast 3 or 4 officers should be evolved by banks.

Majorly banks use risk rating technique of managing credit risk. **Prudential limits, Credit Approval Committee and Loan Review Policy** is used for CRM. Banks also use Risk Pricing/ RAROC, Portfolio Management, Collateral, Credit Audit and Problem Loan Management as tools for CRM.

The magnitude of credit risk can be limited through prudent ceilings on different issues relating to credit, such as **borrower limits, exposure limits, benchmark for ratios, maturity profile of loan book etc.**

**Strategic Reasons, Portfolio quality, Industry Exposure, Value of Collateral, Future Business Potential, Market Forces, Portfolio, Perceived Value of Accounts** are the various factors considered for pricing credit risk in banks.
Banks are using Altman’s Z-score Model, Merton Model, KMV Credit Monitor Model, Credit Metrics, Credit Risk+, McKinsey Credit Portfolio View etc. are popular credit risk models for evaluating their credit portfolio. Some of the banks are also making use of the other models internally developed and developed by CRISIL.

The study of operating efficiency, financial performance, quality of management, bank rating on credit quality, past experience, country risk and internal matrix for studying counterparty are considered for evaluating Inter-bank exposures.

Direct Lending Activities cause maximum level of exposures of credit in both private and nationalised banks.

The study outlined that Credit Risk Management framework in India is on the right track and it is fully based on RBI guidelines. The risk managers opined that there exists lack of understanding of methodologies/instruments. Therefore, RBI should take initiatives to organize high training programmes on risk management.

3.19 (Satish, Y M and Ujalambkar, Jalauk M, 2009) – A credit derivative transfers the credit risk contained in a loan, interbank transaction or bond from one party to another. The study entirely focuses on credit risk management through credit default swaps. A vital feature of credit derivative is that they allow for trading and diversification of risk. Credit derivatives allow traders to package the risk inherent in a loan into tradable components. Thus, the interest rate is isolated via interest rate swaps, the credit risk via credit derivatives and any exchange risk if present is mitigated via foreign exchange derivatives.

3.20 (Arora, Anju, 2010) – The purpose of her research was to report the state of current Credit Risk Management practices in Indian commercial banks, thereby taking into account bank size, ownership and geographical spread, level of expertise, complexity of functions, and Management Information System (MIS). The research showcased ‘Loan Review Mechanism’ as an effective tool for bringing about qualitative improvements in credit administration. Credit Risk Management can be used to form organizational hierarchy. An important contribution made by the study has brought to the forefront various deficiencies in managing credit risk exposures in banks commercially operating in India, thereby encouraging them to plan out to meet the shortcomings.

3.21 (Babashetti, Vaijaanath 2010) suggested that aligning risk management to banks organizational structure and business strategy has become integral in banking business. Banks
and other lending institutions must constantly balance risks and rewards. **Credit risk is a combination of exposure and default risk.** Credit risk has two components – Solvency aspects of the borrower and liquidity aspects of the risk that arise due to delay in the repayment. Banks need to focus on three issues involved in credit risk management evaluating credit worthiness, risk measurement and management. Use of derivative techniques such as Netting, Collateralization, Total return swaps, Downgrade triggers, Credit default swaps judiciously and responsibly prove to be great help in solving the problem of credit risk.

3.22 (Hugar, B S, 2010) studied the **credit risk management policies** as well as the **credit risk identification mechanism.** Effective and prudent portfolio monitoring and control can be carried out through categorization of the credit portfolio by credit characteristic, risk rating and regular review of individual and groups of credits within the portfolio, and independent internal credit inspections or audits. An effective tool for monitoring the level and the trends in the quality of individual credits and the credit portfolio by highlighting credits and segments of the portfolio is internal credit ratings. The variation in the type and sophistication of credits in the portfolio can arise due to nature, complexity and the degree of analysis and the quantity of credits re-evaluated under a credit review process. The research concludes that a comprehensive business plan is required for credit risk management.

3.23 (Agarwal, Pradeep, Nagar, Dr. Shruti and Kumar, Dr. Sunil, 2010): Under the revised Basel framework, the determination of capital fulfilling regulatory requirements is done through agencies anointed for **credit ratings.** The primary considerations are the low credit rating penetration, unsatisfactory performance of the Indian credit rating industry and increased costs of credit rating for MSME’s. Moreover, high cost of implementation, the escalated requirement of tier I capital and need of wide database and software for smooth execution threaten the transitional acceptance of Basel II guidelines in India. The industry for credit rating agencies is optimistic for expansion in business due to introduction of new and revised charter of Basel norms. Blueprint for achieving strategic aims of functioning independently, transparency, objectivity, public disclosure, allocation of resources and delegation of authority should be clearly laid out. Though they argued that scheme of independent ratings is an implement in achieving strategic aims.

3.24 (Guruprasad, 2011) in his research “**Indian Banking Industry – Basics to Basel**” has brought out a comparative analysis between Basel I and II, further thereby attempting to
understand the overview, evolution and challenges of Basel II and III and their impact on the Indian Banking sector. The study highlighted that Basel I defaulted on applying mitigants for credit risk through securitizations, collaterals and credit derivatives. The study highlights that due to Basel II the rating agencies may face more competition as the market for them will expand and deepen, which will be a driver for them to be more transparent in their rating process. Good quality rated corporates will prefer capital markets to banks for their funding. Securitization and credit derivatives will increasingly be used as credit risk hedging tools.

3.25 (Mahanta, Monoshree and Kakati, Munindra, 2011) studied the effectiveness of Internal Ratings Based Systems in Public Sector Banks which has been introduced by BCBS to assess the credit risk through various credit rating models designed for different situations viz. nature of accounts, type of borrower activity, size of the accounts and the type of facility. The research highlighted that the presence of weakness in the existing credit appraisal is a major cause of accounts turning into bad loans (NPA’s) which arose on account of either poor selection of proposal at the initial stage or lack of monitoring the same thereafter.

3.26 (Jindal & Kumar, 2012): The study suggests that the repayment history of the borrowers is a significant factor of credit analysis. Thus there is positive impact of effective analysis of the income and the repayment history of the borrowers. Status of previous credit record is a major concern to assess credit worthiness of the borrowers. Thus Credit analysis is positively correlated with the effectiveness of analysis of expected future income and repayment history of applicant borrower.

3.27 (Das, 2012)– his research analyses the insolvency risk of Indian commercial banks for the period 1998 – 2007. Using ‘Z-score’ measure of insolvency risk and panel data econometrics, it is found that the Indian private banks are most risky whereas their foreign counterparts are least risky for their capital cushion. Various studies conducted in the past use ‘Non-performing assets’ as a measure of bank risk but this study advocates ‘Return on Assets’ as the most widely accepted measure of bank’s overall performance. The ‘Z-score’ is expressed in units as a ratio of Return on Assets to the standard deviation. It gauges the thickness of capital cushion to absorb accounting losses, a higher z-score implies a safer bank and a lower z-score implies a riskier bank.

Probability of insolvency is inversely related to z-score.
Previous studies have also advocated capital regulation may not be the solution for risk mitigation may not be the solution due to its countervailing effect.

The research incorporates competition, diversification, ownership, regulation and banks size as the control variable in risk analysis framework. The analysis represents that competition has a risk-inducing effect as the coefficients of 1st two measures of competition - the Threrbank concentration ratio and adjusted Herfindahl index are positive and significant in both the specifications. The capital adequacy ratio, the variable capturing regulation, which is a ratio capital to risk weighted assets to tier I & II, is having positive and significant effect on risk index. This implies that to be less risky, banks also need to maintain capital adequacy ratio even much higher than the regulatory minimum.

Higher competition tends to induce risk, whereas diversification to newer activities is found to have a risk mitigating effect.

Thus, in the deregulated environment, the banking regulations have got to adequately assess the banks risk and discourage risky innovations in order to create a healthy banking system. The disparities observed in the conduct, performance and risk parameters need to be harmonized across banks in order to arrive at a healthy banking system, which will be conducive for higher economic growth.

3.28 (Selvarajan, Vadivalagan, & Chandrasekar, 2012): the study has analysed the following impacts on the bank and its functioning due to rising NPAs:

- Reduced Return on Equity and Return on Assets.
- Low credit rating of the bank.
- Reduction in investor’s confidence due to poor performance disclosure.
- Uneconomical process of raising capital.
- Prudent provisioning is required for NPAs as fail to generate revenue.
- NPAs seal the recovery of borrowing costs.
- Non recycling of funds leads to opportunity loss.
- CRAR emphasizes risk weights to the extent of 100% on net NPAs.
- NPAs block funds also the capital in circulation may fail to yield adequate revenue for sustaining the funds blocked in NPAs.
- Government recapitalisation which is highly inadequate and conditional.
- Costs in the form of administrative, legal and recovery cost of NPAs is an added burden.

The authors advocate with Indian Bank as their object under study that fresh inflow of NPAs should be arrested. Only genuine projects should be accepted, projects with inherited weakness should be rejected at the first instance. Credit appraisal skills should be upgraded. Evaluation of technical feasibility, economic viability, managerial quality and borrower’s appraisal of financial status should be done. Objective evaluation of appraisals of creditworthiness conducted before and after sanctioning credit should be taken up regularly. Regular surveillance of plant and factory visits, accounts of borrowers, field study etc. is required. Enterprises which have turned sick need to be rehabilitated through turnaround strategies. Borrower units should be provided with consultancy and technical services wherever necessary.

The following legal measures have been initiated by RBI incase for recovering NPAs
- Corporate Debt Restructuring (CDR)
- Credit Information Bureau (CIB)
- Asset Reconstruction Company India Ltd. (ARCIL)
- Lok Adalats
- Debt Recovery Tribunals (DRT)

3.29 (Lang, William; Mester, Loretta and Vermilyea, Todd, 2005): The research outlines that banks face strict regulations especially under Basel II in comparison with Basel I. Basel I and Basel II norms have differential guidelines for treating reserves and profit on sale of securitised assets. This study particularly focuses on prospective zealous influences of second Basel doctrine norms for lending practices particularly credit card market in U.S. As per Basel II banks need to manage credit risk by implementing the Advanced Internal Rating Based Approach (A-IRB) and for operational risk management - Advanced Measurement Approach (AMA). However, majority of the banks based in United States continue to operate under Basel I norms even post the implementation of Basel II. The researchers observed that
these norms do not differ in terms of maintaining minimum required capital for risk specifically for credit card exposures regardless of its credit quality. The difference arises only in terms of risk sensitivity as Basel II is more sensitive in comparison to Basel I. The risk sensitivity of Basel II is showcased in relation to estimates of exposure at default (EAD), probability of default (PD) and loss given default (LGD) at banks. The study concluded that banks operating Basel I would be subjected to stricter supervisory vigilance for maintain minimum capital under each risk category. Banks having large proportion of credit card concentration in their portfolio will face several difficulties in complying with the revised Basel norms. Securitisation of credit card receivables will appreciate under Basel II as it is constrained to keeping risk sensitive capital. Banks will be under pressure to increase their capital base for the underlying credit risk posed through credit card exposures. Increased capital requirements will be met by raising cheaper source of finance – subordinated debt.

3.30 (Kashyap, Anil and Stein, Jeremy, 2004): As per Basel II approach the application of the IRB approach calls for keeping capital against anticipated credit risk. Estimated credit risk can be taken as a function of the following four parameters: exposure at default (EAD), loss given default (LGD), probability of default (PD) and maturity (M). Systemically important banks which implemented the Advanced IRB approach will be required to present data under all four parameters using models internally developed. Banks still applying the Standardised approach for managing risk of credit will only present the probability of default parameter. The major concern raised by several researchers is regarding the business cycle fluctuations which will be exacerbated through the imposition of the Basel capital standards. The findings of the research indicate additional cyclicality in capital charges is minimal though economically significant but dependant on banking customer mix internal credit risk models. The researchers advocate ‘risk – curves’ to study the optimality of risk based regulations imposed under Basel II. In periods of downturns it is advisable to derive a family of risk curves which can tolerate probability of default when bank’s capital is relatively restricted lending. Though several studies carried out for deriving a unique formula to set up a transparent environment taking into account adverse economic scenarios. For instance, regulatory authorities can reduce the CRAR from 8% to 6% when there is decline in the threshold of GDP in the economy. An unique solution put up through this study is creating a market for regulatory capital relief. In this market the regulator auctions tradeable certificates whenever the banking and financial institutions fall below the benchmark of 8% CRAR. By increasing the supply of certificates in periods of downturns it would be possible to meet the
increased requirement of CRAR. The research concludes through the possible solution of setting up a system for correlating the economic conditions to the capital regulations.

4. Pillar I risk - Market

4.1 (Verma, Dippi and Supatha, 2010) highlighted in their research the utility of Value at Risk (VaR) as a tool for measurement and control of Market Risk in the banking sector. ‘Value at Risk’ has been called the “New Science of Risk Management”, it calculates the maximum loss expected on an investment, over a given period of time and given a specified degree of confidence. There are methods of calculating VaR: Historical method, variance-covariance method, Monte Carlo Simulation. It was found that among the above methods, Historical simulation is more reliable than the variance-covariance method. For calculating VaR we can take different confidence levels like 95%, 99% but it cannot be 100%. Calculation of VaR with historical simulation, the limitation is that it gives equal weights to each past day; there is no trend in variation. Calculation can be done using Stress-Testing. The research concludes that Indian commercial banks follow a better technique of forecasting Value-at-Risk.

4.2 (Lucas, 2000): Mitigation of moral hazard problems and application of models developed internally require a back testing procedure to test these models.

Kupiec argues that detection of fraud at an early stage is not possible on account of inability to develop good statistical back-testing procedures even if the information is regularly available to supervisory institutions. The measure VaR used for reporting refers to a one day period and the VaR used for computing capital requirements refers to a ten day period. Independent and identical distribution is assumed for computation of financial day-to-day returns. In a fixed portfolio a ten day VaR is simply a fixed multiple of one day VaR. Poor monetary penalties do not stimulate designing of internal risk sensitive models of management that make provision for estimation of their true VaR.

Banks find it beneficial to conceal their original quantum of market risk. The demand for capital as per market risk is higher than the legal requirement the overall impact is minimised. Non reliance on the demand for capital as per market risk to be binding is a sound practise, if no concrete evidence is obtained from empirical research. In any case, present research showcases even if the demand or need for capital based on market risk is binding, the current
back-testing framework fails to provide for efficacy in aligning incentives for VaR reporting with those of the regulator.

4.3 (Munstermann, Beate and Jacob, David, 2005) in their article “Basel II and Banks: Key Aspects and likely Market Impact” have tried to identify the potential implications for bank bonds, sovereign debt and covered bonds because with different portfolio mixes, the ratios would be changed due to the impact of Basel norms.

4.4 (Matsakh, Altintas, & Callender, 2010): External and internal prospects for maintaining adequate capital require banks to carefully stabilise and harmonise the capital management process. These perspectives vary on the need of capital to be maintained and the composition of the capital structure, the capital structure mix and the participants for review. **External perspective are: views by credit rating and regulatory bodies.** Regulatory capital needs are more closely related to stress test requirements. (for example: liquidity risk)

The top management and the board apply stress tests in the determination of the risk exposure for banks and strategise in plans for managing business activities, supervisory dialogues, relations with investors and planning for adequate capital in the context of severe crisis (contingency planning).

The authors recommend development of a governance structure with delegation of responsibilities to the internal team. Application of stress tests requires definition of objectives and timing its requirement.

**Stress testing proves to be an essential tool for managing risk and planning capital applied in banks for identifying worse but reasonable market and business scenarios for the assessment of the influence on the financial status and capital adequacy of banks.**

4.5 (Raju, Thiripal and Acharya, Rajesh, 2010) conducted a research which examined the **cost of equity** for major banks in India in the wake of financial crisis, as the rise in the cost of equity is mainly associated with the rise in the risk free rate and partly due to increase in the sensitivity of bank stock returns to market risk. The research studied 19 bank stocks listed on BSE, both public and private. The research derives a conclusion that the cost of equity for Indian banks, both public and private based on a single factor **Capital Asset Pricing Model (CAPM).** The major contribution for rise in the cost of equity came from increase in risk free rate and marginally by rising CAPM Beta.
4.6 (III, 2010): The author advocated the supervisory overview for capital adequacy of banks can be effectively carried out through stress tests. The white paper presented by Federal Reserve indicates that designing of certain tests for the assessment of required capital for the following three reasons: Ample quantum of funds to provide liquidity for at least two consecutive years, to provide buffer against higher losses, ability for providing loans to borrowers with high creditworthiness along with actualization of losses. Defining countercyclical elements in the charter for Basel norms and minimization of procyclicality of capital as per the legal doctrine and accountancy framework regimes should be considered. A liberally operative non-banking financial sector which poses a threat to financial safety and security should not be permitted. A simple non-risk based leverage constraint is applicable to banking firms. Use and application of a leverage ratio is external to the purview of revised Basel concordat, thereto changes in Basel II for global application of a leverage constraint is not essential. Greater emphasis should be put on better grade of capital in the regulatory capital framework. The financial firmness in the banking system and the liquidity of banking companies should be protected through capital requirements.

4.7 (Singh, Manmeet and Vyas, R.K, 2011) conducted a research on private and public sector banks and international banks operating in India evaluating the impact of portfolio risk on performance of the banks under study. The research derived the conclusion that portfolio risk plays an important role in earning higher returns to banks on the basis of a comparative study of the above banks in turn analyzing the degree of risk, particularly portfolio risk, capital adequacy ratio and return on assets. Profitability of banks can be improved by Capital Adequacy as it reduces the cost of funding to banks.

5. Pillar I risk - Operational

5.1 (E&Y Report, 2011) pointed out that Business Environment and Internal Control Factors (BEICFs), Scenario Analysis and Key Risk Indicators (KRIs) experienced severe issues in terms of stability and transparency especially during 2008-09 which triggered regulatory sanctions. These models failed to predict and protect the firms against catastrophe. The organisation failed to imbibe the warning signals and alerts from the output of these models which lead to global meltdown in the backbone of the financial system. On the other hand, BCBS recommended a more transparent and a traceable calibration process and a better
approach for the integration of Risk Control Areas (RCAs) / BEICFs into the model. The review of literature in this research advocates and negates the use of alternative modelling practices for operational risk such as Risk and Control Self Assessment, Key Risk Indicators (KRIs), Scorecards, Incident Reporting, Dashboards, Scenario Analysis, BEICFs.

5.2 (Saidenberg & Schuermann, 2003): The study highlights the risk adjustment of assets in Basel II. A closely related concern to Basel norms is that risk adjustments of assets are static and not easily adaptable to new developments in banking activities and risk management techniques. Some banks may be hesitant to invest in better risk management techniques on account of heavy expenditure required in setting risk management architecture in the banking business.

Basel Committee has articulated four principles consistent with the objectives:

1. Measurement of adequate internal capital in light of its exposure for risk.
2. Feedback and review by supervisors of internal capital assessments.
3. Maintenance of minimum regulatory capital.
4. Intervention by supervisors if any deficiency is noticed.

On account of lack of agreed methodology and limited historical data, developing a requirement for capital for operational risk is a challenging task.

5.3 (Seshaiah, Arora and Kharbanda, 2005) in their article “Relevance of Basel II Norms: An Indian Perspective” focused on the relevance of the norms in the context of consolidation in the Indian Banking Sector. Consolidation is advocated for maximizing shareholders value by increasing their efficiency, gaining through power and gains due to market diversification etc. RBI pointed out that the provisions of new Capital Accord are applicable only to scheduled commercial banks. This may have an undesirable outcome since the institutions under the new accord may charge customers a higher price to cover additional cost of operational risk capital. As a result customers may opt for institutions charging lower rates but riskier in transactions. Pillar II of Basel II accord i.e. Supervisory Review Process is the most important factor to improve the risk management practices of banks but it has only a cursory mention in RBI’s document.
5.4 (Bodla & Verma, Operational Risk Management Framework at Banks in India, 2008): Basel Committee believes that a rigorous risk mitigation and control environment, appropriate risk measurement and pricing techniques, sound internal controls, audit assurance and disclosure would be the factors for effective ORM in banks.

Survival of the organization, Efficiency in operations, Identifying and achieving acceptable level of worry, earning stability, uninterrupted operations, continued growth, preservation of reputation are various objectives of Risk Management Policy.

For the success of risk management policy, RBI directed banks to prepare their accounting books in consonance with US GAAP due to increasing global operations of banks.

The following committees are set up for managing and measuring risk – Risk Management Committees, Credit Policy Committee, Asset Liability Committee, Investment Committee, System & Procedure Committee, CRM Committee, ALCO / Operational risk management support group, ORM Committee, Independent loan review group, Mid office.

BOD, ORM Committee, RMC are mainly responsible for ORM apart from operational risk manager, support group. The size of the bank or the sector seems to have no effect on the choice of authority for managing operational risk. According to the study ‘experience’ and ‘regulatory requirements’ were considered the most important factors for recognizing risk events followed by ‘judgment’ and ‘linked events’.

Operational information and internal financial data are considered most important constituents of operational risk report followed by Compliance Data and External Market Information.

Corporate Finance, Commercial Banking, Payment & Settlement have been set up by large size banks, whereas trading and sales, retail banking, agency services have been set up too by large banks but a few of them followed by Asset Management and Retail brokerage.

Disaster Recovery plans and Business Continuity plans both serve as plans for addressing internal and external interruptions.
Majorly banks use ‘scorecards’ followed by ‘risk matrix’ for assessing operational risk, apart from scenario analysis, scorecard-self risk assessment, risk mapping, statistics or risk matrix.

Court opinions and regulations followed by new statute are important causes of legal risk in public sector banks apart from tax legislations, activities of institutions, management and employees.

Private sector assigns higher importance to various factors causing legal risk than public sector banks.

5.5 (Mehra, 2011): her study evaluates the present status of risk management approaches, human resource and outsourcing policies and hurdles in transition to advanced approaches amongst private and public sector banks.

Factor analysis has been used to extract the key determining variables followed by hierarchical clustering leading to formation of three homogeneous clusters:

1. Potential Bluechips (this cluster includes all types of banks except foreign banks)
2. The Outperformer (this cluster all foreign banks)
3. The Laggards (this cluster includes public sector and old private banks)

Cluster analysis is a multivariate procedure which leads to formation of clusters. Cluster analysis has been performed to identify the group of banks which do not have a well developed ORM framework so that appropriate steps can be taken to improve and uplift their ORM practices.

The study focuses on collection of external loss data, efficacy of operational risk framework and strong controls set internally, responsiveness of business to operational risk.

Basel II recommended three approaches for calculating capital charge for operational risk

1. Basic Indicator Approach (BIA)
2. The Standardised Approach (TSA)
3. Advanced Measurement Approach (AMA)
 Amongst these AMA is the most complicated approach as this approach uses both quantitative and qualitative data where the regulatory capital requirement equals the risk provision promoted through operational risk measurement system set up in banks. The main focus in operational risk management approaches has been excessive reliance on different financial models.

5.6 (Chapelle, Ariane; Crama, Yves; Hubner, Georges and Peters, Jean-Philippe, 2004): The research presents a methodology to analyse the Advanced Measurement Approach and its impact over banks for assessing operational risk. The authors have explained the difference between the three approaches laid down by Basel II for measuring and managing operational risk. The operational risk is defined by simple Basic Indicator Approach (BIA) as 15% of the bank’s gross income. Wherein gross income is the total of the net interest margin, the fee income and other revenues earned by the bank. However multinational banks are recommended not to adopt this approach. The Standardised approach it takes the operational risk capital on the basis of gross income spilt per business. The percentage of the gross income differs as per the risk in the business: 12% for least risky business, 18% for most risky business and 15% of the gross income for other categories. Under the Approach for Advanced Measurement (AMA) banks have the liberty to for developing their model internally to measure the required amount of capital for operational risk with a confidence interval of 99.9%. Multinational banks should adopt and fully comply with the AMA with respect to quantitative data collection, statistical validation for use of a proprietary model and theoretical modeling of risk exposure. The research focuses on the cost involved in shifting from the basic indicator approach to advanced measurement approach as well as the cost upgrading all systems and processes to fully comply with the advanced measurement approach. The authors infer the advanced measurement approach is highly conservative for the basic assumption of the additional charges for capital. The difference in the capital requirement between the advanced measurement approach and the standardised approach is significantly dependant on the risk weights assigned to the business lines. Unlike market, credit and operational risk is an internal factor of each bank therefore the standardised approach may be well suited to certain banks and the advanced measurement approach to certain others depending upon the complexity and the size of the banking operations. The concept of RAROC is to be adopted in relation to the costs associated with a particular action for a specific business line.
6. Pillar II – Supervisory Review Process

6.1 (Keefe, David, 2005): in his research paper “Banks fear Basel II Effects on Developing Countries” focuses on the impact (fear) of developing countries regarding Basel II adaptation as it would greatly reduce the incentive for them to get involved in emerging market economies and the world’s poorer countries. The study highlighted the need to converge with Basel norms with strict vigil and supervision in assessing the quality of banks’ risk management. On the contrary, evaluation of capital requirements should be undertaken by banks in accordance with their risk appetite and strategize accordingly.

6.2 (Elizalde, Abel, 2007): This paper presents a dynamic model of banking supervision for the analysis of each pillar of Basel II on the bank’s risk taking abilities. The study draws an inference that the risk sensitivity of the capital rule – Pillar I and the principles underlying Pillar II & III with stricter examination, control and exposure to the market for banks with lower ratings will reduce bank’s risk taking initiatives. Regular audits needs to be conducted by the supervisors to ensure that banks maintain sufficient capital as per norms. Higher the risk sensitivity contained in the norms and the frequency of carrying out audits by the supervisor lower is the risk taking initiative of the bank. The research recommends a rating based audit frequency and rating based dividend restrictions policy similar to the Prompt Corrective Action (PCA) provisions introduced by US banking authorities in 1991 through the FDIC Improvement Act. The author suggests three types of ratings for the banks – undercapitalised, low rated and high rated. These ratings are allotted depending upon the capital levels and risk potential of the bank. Low rated banks in comparison to banks with higher ratings will be subject to stricter audits and restrictions on outflows of dividend in order to capitalise. The research clearly proves that a rating based audit frequency is more economical and effective in comparison to a regular audit in reducing banks risk taking initiatives. Imposition of dividend restrictions to a lower rated bank leads to reduction in the risk levels of the bank.

6.3 (Rochet, Jean- Charles, 2003): Through the research paper Jean has established a model of banking regulations to determine and analyse the relations between three pillars laid defined by Basel II. The researcher points out through his paper that the BCBS has strongly focussed on balancing Pillar I whereas the committee should formulate and define methodology for implementation of Pillar II and Pillar III. The revised accord defines its III pillar approach as follows: Pillar I – capital adequacy ratio, Pillar II – supervisory review process and pillar III – market discipline. Though researchers globally have severely
criticised capital adequacy ratio for encouraging regulatory arbitrage. The author has indicated through his paper that there is a lack of a model which simultaneously analyses the impact of three pillars of Basel II on commercial banks. Most importantly, Jean has advised that banks can reduce its emphasis on the capital adequacy ratio by regularly capitalising their Tier II capitals through subordinated debt. Supervisory authorities can utilise market information over and above the information collected through regular audits carried out by the regulatory authorities. This market information can result saving scarce resources which would be required for helping banks during stressed time periods. Jean concludes that Pillar II and Pillar III are complementary to each other and not substitutes of each other. Working on Pillar III will help banks to partially cut down on capital adequacy ratio. The author claims that complex regulations or scenarios will be avoided by banks and therefore the regulatory authorities/central banks world over require harmonising their practices. The priority of the Basel Committee should be in complete elimination of political influence on the banking operations as well as regulatory forbearance.

6.4 (Pelizzon, Loriana and Schaefer, Stephon, 2007): The study conducted by these authors tends to point out that Pillar II is complementary to Pillar I and not a substitute for Pillar I under Basel II accord. Pillar II has more potential influence on Pillar I when it boils down to risk taking particularly when Pillar I cannot effectively enforced. A permanent imposition of risk based capital regulation can even lead to the removal of keeping a Federal Deposit Insurance Scheme. The paper investigates the relationship of Pillar I against Pillar II especially when banks engage in risk management and use the laid down norms to cheat in capital based regulations. The authors have constructed a model specifically for the purpose of studying when banks impose capital regulations how do they maximise returns to shareholders? There are many constraints in imposing these capital based regulations one with respect to decisions for closure and the other for frequent recapitalisation in compliance with Basel norms therefore how do banks strategise to find a way to through these constraints and operate smoothly? The option of dynamic portfolio management allows banks to resort to capital regulations to a certain limit permitting a room where they can cheat the guidelines. Thus the study include a causal and effect hypotheses stating where banks closely comply with the defined regulations at all times and in the second case the banks the implementation of these norms is not full fledged in the system and permits limited cheating. The analysis of the authors also considers a trade-off between costs and gains against the implementation of the regulatory framework. These costs can arise on account of the compliance with the Basel
norms and moreover these costs are fixed. The paper addresses the effect of the capital based regulations on these fixed compliance costs. The model constructed leads the research to a conclusion that the costs and benefits on account of capital based regulation will accommodate the behavioural responses of banks in terms of portfolio strategy and capital structure decisions. The authors leave open the room for future research based on studying the issues with compliance rather than the design of the norms.

6.5 (Mishkin, Frederic, 2000): The paper written by Mishkin at The National Bureau of Economic Research highlights the need of well defined prudential supervision framework. A prudential supervision framework involves regulations of the government and building up a sound and safe banking environment. The asymmetric information presented in the paper reflects the adverse selection and the problem of moral hazard which has an important influence on the financial system. The analysis of the asymmetric information is extremely beneficial in understanding the need of prudential supervision in the arena of banking. A government safety net can solve the issue related to moral hazard through the protection of the interest of the bank depositors and preventing panic situation in case of bank collapse. Banks protected through a safety net by the government have greater risk taking ability. There are nine forms of prudential supervision viz. a) asset holding and activities restrictions, b) disintegration of banking and other financial segments securities, real estate and insurance, c) restrictions on competition, d) requirements for capital based regulations, e) risk based deposit insurance premiums, f) requirements for disclosure, g) bank chartering, h) bank examination and i) supervisory v/s regulatory approach. Prudential supervision generally lays down a restriction on banking activities by disallowing to hold certain category of assets and even engage in certain business activities. The security of the financial system can be enhanced by allowing banks to enter the universal banking arena. The author raises the issue that can abide by the capital requirements bring in adequate capital to deal with the exposure of credit inherent in the banking products? In certain countries the role of prudential supervision is undertaken by the government agencies whereas in certain others it is undertaken by the central bank. The study highlights the dire need of prudential supervision in our economies for maintaining healthy financial and banking systems. The above issues should be effectively taken up or dealt with either government agencies or the regulatory authority whosoever is accountable for the implementation of cautious supervision in the system.
6.6 (Fan, Sandra, 2003): the strategic objective identified by the Sandra is the main role of Basel II is to enable banks world over to set up uniform and modern risk management systems being consistent with the regulatory capital in relation to the risks ceded. These guidelines require a strong IT infrastructure at banks in order to provide a database of historical loss data. Basel II has lead banks to set up risk modelling systems which were completely absent in the past. Business activities need to be streamlined and most importantly correlated with risk to return and risk to the requirement of capital. Basel II also enforces banks to adopt strong corporate governance practices outlining a critical role of the top management and Board of Directors in defining the culture, values and ethics of the organisation. Although banking customers will benefit from the large amount of information available but they may have to bear higher borrowing costs as banks resort advanced IT systems, credit ratings, advanced approaches for mitigating risks etc.

The Hong Kong Monetary Authority (HKMA) is entrusted the responsibility of stabilising the financial system and ensure smooth functioning of banks in Hong Kong. The HKMA applies a risk based supervisory approach using the CAMEL approach for risk management. HKMA is totally flexible and open in leaving the space open to banks in adopting approaches for mitigating risks as per their organisational pros and cons.

The Monetary Authority of Singapore (MAS) is entrusted the responsibility of promoting monetary stability, credit and exchange policies conducive to growth. MAS has constructed a supervisory framework which includes maintaining high prudential and supervisory standards focussing on surveillance and implementing a risk focussed approach as well as risk examination approach for banks.

On the path to recovery from Asian economic crisis exacerbated by the Baht devaluation, which strongly affected the banking industry in Thailand. The Thai central bank and Bank of Thailand has laid down prudential reporting requirements to match its banking industry to international standards. The Bank of Thailand has an agreement with the principles of Basel II to implement the Basel principles in phases in the banking sector. A banking bill, the Financial Institutions Businesses Act has empowered Bank of Thailand to regulate and supervise over banks so that they comply with the Basel standards.

The China Banking Regulatory Commission (CRBC) – risk based supervision, improvement in supervisory skills and methodologies and improvement of supervisory transparency in order to be at par with the international standards. CRBC though continued
regulations under Basel I for certain number of years even post the implementation of Basel II. For improving capital regulations with the inclusion of Pillar II and Pillar III along with an adoption of Internal Ratings Based Approach for banks to improve their sophistication in the philosophy in risk management.

It can be observed that the regulatory authorities in Hong Kong, Singapore, Thailand and China have taken up the required measures for the adoption and due implementation of Basel II norms. This will help achieve the objective of BCBS to foster economic and financial development worldwide.

6.7 (Financial Services Authority, 2007): Pillar II supervisory review process embeds the Internal Capital Adequacy Assessment Process (ICAAP). The capital management warrants the application of capital modelling, scenario analysis and stress testing depending upon the nature, level and complexity of business. ICAAP of any bank would definitely disclose the risk appetite of the bank along with the approaches adopted and the risk mitigating methodology. The senior management and the Board of directors are accountable for defining the ICAAP philosophy ensuring consistency in the principles and approaches followed year on year. These ICAAP disclosures will be presented by through the audits conducted by internal and external auditors which will broadly indicate the areas of risk in the organisation, its mitigating measures, advancement to approaches, risk weights, organisational structure etc. Though the pillar II imposes the ICAAP but its actual implementation comes by the quarterly disclosure as ordained by RBI in India. Most important the ICAAP should showcase the CRAR as maintained by the bank under Tier I and the total CRAR each quarter.

7. Pillar III – Market Discipline

7.1 (Bagchi, S.K, 2008) in his study “Basel Principles of Interest Rates Risk Management: Implications for Indian Banking” focuses on the implications of deregulations of interest rates for Indian Banking. The article discusses the sources and the implications of interest rate risk and fifteen principles of interest rate risk management.

The article highlights the origin of interest rate risk from the following items:

- Repricing risk
- Yield Curve risk
Basis risk

Optionality

The study reflects the fact that RBI, as a regulatory authority, may also have to relook their procedure of banking supervision especially in respect of interest rate risk management.

7.2 (Vauhkonen, Jukka, 2009): The paper truly supports the fact that each bank’s safety and security relies on quality of managing and measuring risk. The financial crisis of 2007 revealed that the risk management systems of financial institutions and their balance sheet and off balance sheet exposures need to be improvised. This gap is filled by Pillar III – Market Discipline under Basel II. The research focuses on a key area that initially bank’s capital is privately held by its investors but in compliance with the norms banks have to raise capital from the external market which leads to a dispute between internal stakeholders and external investors. Banks with higher transparency find it easy to raise capital from external sources – public and sovereign wealth funds. The researcher developed a model deriving a correlation amongst the price of the bank’s equity in the market and market discipline (disclosures).

7.3 (Levine, Ross, 2005): The author finds through research that lack of harmony between capital regulations and bank performance is a common issue with respect to Basel guidelines. These guidelines lack proof of its efficacy in implementing the norms in the banking sector and the future gains in the financial stability of the sector. The research observations indicate that developed nations largely benefit with the inclusion of these norms in their banking segment whereas countries on the part of development which include these norms tend to show signs of corruption and instability. The research advocates strongly the third pillar – market discipline which leads to creation of a transparent and a sound banking environment. The author is of the opinion that countries more liberal in imposing regulations seem to enjoy more transparent, competitive and less restricted atmosphere for banking activities. This tends to encourage growth of existing banks as well as entry of new banks in the market with healthy competition. On the contrary countries with closed and autocratic regulatory supervisors tend to generate an isolated, uncompetitive environment giving government banks a major role to play in the industry. There are several areas which need to be researched on in depth keeping in view enhanced banking operations, scope for future growth and a stable environment and define strategies accordingly. These strategies should
not only enhance the functioning of the banking segment in each country but also provide for social welfare and economic development.

8. Asset Liability Management

8.1 (Bodla & Verma, 2008): orient the establishment Asset Liability Management Committee along with various other board level committees managing operational risk, credit risk, investments, loan review etc. ALCO should work in coordination with all other committees under risk management department for effective risk management.

8.2 (Talwar, 2011): states that many banks have adopted a Committee Based Approach to manage various risks for example: Credit policy Committee, Asset Liability Committee these can work under the supervision of a centralised committee accountable for managing overall risk in the bank.

The author recommends the following course of action:

- Risk avoidance
- Risk transfer
- Risk reduction
- Risk acceptance.

8.3 (Dash, Mihir; Venkatesh, K.A and Bhargava, B.D, 2011): Asset liability management (ALM) leads to efficient allocation of capital, formulation and decision making of critical business policies, designing of products with appropriate pricing strategies. ALM aims at profitability through price matching while solvency is maintained by matching maturity. Classifying assets or liabilities on the basis of their profiles of maturities is required under ALM. Price matching should be coupled or combined with proper matching of maturity. Though price matching and combining the same with maturity matching though is not an easy task but however a trade off between profitability and liquidity has to be maintained at all times. In the course of managing interest rate risk banks generally aim to eliminate liquidity risk. On the contrary, removal of liquidity risk and interest rate risk failed to prove profitable neither beneficial for long run survival. A very effective technique of ALM is to manage mix, volume, sensitivity, maturity, liquidity and quality of liabilities and assets to achieve a pre-determined risk-reward ratio. The main objective of ALM is quantification of
risk associated with the liabilities and assets, the enhancement of the quality of assets, management of assets and liabilities for the stabilisation of the short – run profits also long run survival and wealth accumulation of the banks. The present study seeks to analyse based on the assets and liabilities of various banks based on maturity profiling in order to determine the liquidity position of these banks. The study has conducted a primary research on commercial banks in India except regional rural banks by grouping them on the basis of their ownership structure i.e. private, public and foreign banks. The main objective of this research is to compare the maturity gaps in the private, public and foreign banks in the banking industry in India. For the purpose of computation, the maturity gap was computed by deducting the total outflows from total inflows thereby giving the maturity mismatch in the outflow as well as the inflow in a particular time bucket. Time buckets ranging from 1-14 days, 15-28 days are generally the reflectors of the liquidity in the short run of the banks under study.

The results of this research indicated the public sector banks under study had excess liquidity in the time frame of 1-14 days time bucket while some of the other public sector banks have excess liquidity between the time frame of 15-28 days. Majority of the public sector banks showed liquidity deficiency in the 6-12 months time frame whereas majority of the foreign banks had excess liquidity between the time bucket of 15-28 days. The prime objective of banks is maximisation of their earnings despite their risk exposure in the market. Maturity-gap analysis is the tool widely used by the banking industry for planning not merely as a situational gap analysis tool. The study reflects that public sector banks are very conservative in their approach for liquidity risk management. There is immense scope for public sector banks to maximise profits through the reduction in their short run liquidity position. Private sector banks are good managers of their liquidity position as compared to their government counterparts. Though the foreign banks do not enjoy a good liquidity position as their primarily focussed on corporate lending with tenure of 1-5 years. Foreign banks should also work on improving their profitability through improvement in their liquidity.

8.4 (Singh, Anurag and Tandon, Priyanka 2012): the net income of banks in India is very much under pressure on account of the rising risks in the market viz. market risk, economic and political risk, regulatory risk, business risk etc. This research paper highlights the specific requirements of banks for managing their asset liability position also setting up a strong IT infrastructure for effectively using historical data for asset liability management. As banks in India are moving closer to the concept of Universal Banking they are exposed to higher
number of risks thereby only ALM is a successful tool for managing these risks. Banks are also venturing into various off-balance sheet exposures such guarantees, letter of credits, derivative contracts etc. ALM becomes an essential tool in order to curb risks and maximise earnings. Mismatch between assets and liabilities severely impacts the operations of the banks particularly their financial viability.

The concept of ALM has originated in India and it is primarily concerned with managing risks by providing a strong framework for the measurement, monitoring and management of interest rate, foreign currency, commodities and liquidity exposure via derivatives etc. These risk exposures need to be closely integrated with the objectives and the strategies of business. ALM is the premier step in the long run strategic planning for the banks performance and survival. It broadly includes direction, control of various organisational levels and mix of assets, liabilities as well as the capital. Asset liability management is an essential tool for risk management and banks have to work with ALM with proper planning and care so as to ensure risk management and profit maximisation for banks in the Indian banking industry.

9. Corporate Governance

9.1 (Cadiou & Mars, 2013): PriceWaterhouse Coopers identified the challenge for Pillar III disclosures are to establish an effective governance structure around the disclosure process. Chief Financial Officer sponsors several methodologies to be implemented for corporate governance under the third pillar. These methodologies involve a hierarchy of the following departments with proper delegation of responsibility:

1. **Board of directors** – approval of policy for a formal disclosure and transparency.
2. **Department for finance and accounting** - are assigned the responsible for reporting on legal and financial aspects.
3. **Department for managing risk** accountable for disclosing data/information required under the third Pillar.
4. **IT Department** – is entrusted with the task of designing and maintaining resolutions for collecting data.
5. **Auditors** – internal and external auditors would be assigned the task of scrutinizing the information represented in the financial statements.
6. **Relationship with shareholders** – consistently reporting to the investors regarding the risk management practices and a strong communication strategy for reporting all aspects of prudential measures adopted.

9.2 (*BIS, 2010*): The BCBS principles targeted the following key issues of corporate governance:

- The bank’s strategy should be framed with appropriate approval from the board of directors;
- Deputation of power and responsibility throughout the organisation;
- Bank’s goals in the long run should be set in consonance with compensation policies; and
- Adequate management of risks generated by operations that lack transparency.

The paper highlights that bank failures can arise on account of poor corporate governance, posing significant charge and outcomes on account of the prospective influence on eligible scheme for deposit insurance with the probability of significant impacts of macroeconomic scenarios through contagion risk and influence on mechanism governing payments. The financial crisis which began in mid 2007 has illustrated the above impact. In addition, loss of confidence can occur in the capability of banks in asset liability management, leading to a bank collapse or systemic crisis due to poor corporate governance. Banks are answerable to their shareholders as well as to their deposit holders and several other stakeholders associated with the banking company. The responsibilities of a bank to its investors, deposit holders and various relevant associates in a country is determined by the legal system governing the bank.

9.3 (*Chiu, Yung Ho, Chen Chuan-Yu and Hung Han Yu, 2009*): Their study indicates (1) The efficiency factor is influential in evaluating bankruptcy. (2) If certain pre-requisites on capital adequacy are imposed on each bank, then it results in lower risk to the bank and this reduces bankruptcy. (3) Corporate governance plays an important role in bankruptcy. They advocated that **efficiency index** plays an important issue in estimating bankruptcy. However, the coefficients of efficiency and financial ratio are statistically insignificant with bank bankruptcy. Thus the study concluded proving that corporate governance is not considered while evaluating bank bankruptcy.
9.4 (Singh & Chaudhary, 2011): Their study concluded that **banking reforms** have indeed transformed Indian banks into strong, stable and prosperous entities. Indian banking system can now claim that their NPA levels are of international standards, with prudential provisioning, classification and an adequate capital base. But effective cost management, recovery management, technological intensity of banking, governance and risk management, financial inclusion are the areas, which will influence the capability of banks in India to compete and encourage financial stability. In this paradigm, harmonising with the global perspective with a view to serve the society’s need, improvisation skeleton of guidelines, legal charter, prospective from the market participants and majorly ethical and issues for corporate governance need to be on the list for priority.

9.5 (**Institute of International Bankers, IIB**) states that under cross border implementation of Basel II, IIB speaks about latest techniques for managing operational and credit risk under Basel II, combined with its reliance on supervisory overview. Internationally active banks and its capital adequacy can be achieved as an appropriate balance between home and host country roles in monitoring of capital adequacy norms. In accordance with Basel norms, the institute urges the committee to clarify home country supervisor’s responsibility for overview of matters relating to the capital adequacy under Basel II norms. As long as the home country regulator monitors the operations of the institution on a consolidated basis in accordance with International standards established by BCBS the overall objective of crisis resistant economies internationally can be easily achieved.

9.6 (**Jones, Stephany, 2007**): Several issues have been raised with respect to Basel norms especially that these norms are unsuitable for developing nations. The study lays down BCBS has been very poor in terms of financial governance as it is the only committee wherein developing nations have not been duly represented. Several negative aspects of the norms have also been pointed out in the study with respect to Basel norms as follows:

1. Key areas with respect to vulnerability in the banking segment have clearly identified viz. currency mismatches but no mitigating measures for the same have been prescribed.

2. Basel II can lower down bank credit levels which can have adverse impact on developing economies and its evidence is clearly seen in the norms as it can lead to declining growth, poor investment and poor industrial growth.
3. Basel II encourages pro-cyclicality in bank lending which will increase the risk of systemic crisis in the economy.

4. Basel II can also lead to reduction in lending to growth intensive segments in emerging economies viz. MSME’s, agriculture etc.

5. Basel II can also lead to competitive advantage to foreign banks over domestic banks in a particular country.

Though Basel III implementation is in process but the question still remains whether it will capture the above negatives and turn them into positives. Basel III should also ensure that growth and employment intensive segments in a particular country should receive due support for credit assistance from banks which will lead to growth of the emerging and developing nations. The researcher had highlighted the above negative facts regarding Basel II and would collect data based on empirical analysis from BCBS and its officials, central banks and regulatory supervisors, IMF, financial institutions and banks. The analysis of this data would reveal the competencies of Basel II accord and also provide a feedback identifying the gap areas which need to be filled by norms viz. tighter monetary and fiscal policies within a country, forward looking provisions, limiting the entry of foreign banks etc. The results generated from the above analysis can help to build a strong governance framework enhancing the existing Basel guidelines and providing opportunities for growth and development in the countries through the channels of banking and financial markets.

9.7 (PriceWaterhouse Coopers, 2009): As per Basel guidelines relating to corporate governance it influences the following:

   a. Objectives of the organisation
   b. Day-day functioning of the business
   c. Stakeholder’s interest in the organisation
   d. Protection of depositors interest

**Principles of Basel Committee for Corporate Governance** requires the BOD to play an important role in the banking organisation. BOD is required to look into the strategic objectives laid down by the bank, define accountability within the structure of the organisation, create a healthy and transparent working environment, regular supervision by senior management to ensure consistency with the policies laid down by the BOD and effectively utilise the results of internal and external audits. During the global financial crisis
of 2007 The Senior Supervisors Group identified several gaps in the course of corporate governance as follows:

1. The strategy set by the senior management for mitigating risks arising in business as well as for the smooth functioning of business,

2. The role played by the senior management in the identification of risks as well as minimise excessive risks,

3. Setting up of an effective organisation structure which can withstand several adversities of business as well as retain a strong MIS in the organisation,

4. Discussions at different levels for effective communication of risks.

Over and above these directives banks should also establish proper risk management with effective returns over a long span of time. Centralisation of risk management in the hands of Chief Risk Officer (CRO) for taking independent decisions for effective management of risks along with optimum allocation of resources for achievement of objectives of the organisation.

9.8 (Protiviti, 2006): an upgraded version “Enhanced Corporate Governance for Banking Supervision” was released by BCBS in 2006. These guidelines defined ‘tone at the top’ which means the top management will define the culture of the organisation and keep the objectives consistent with it with continuous monitoring, re-evaluation and reinforcement.

Eight key principles have been defined in this charter which is enlisted as follows:

1. BOD should consist of well qualified members who will regularly conduct audits in the organisation, use sound judgement, communicate openly and will not be hesitant to review their own performance in order to provide a strong corporate governance outlook.

2. Supervisory oversight should be exercised by the BOD over the corporate culture, values and ethics of the organisation with a supportive organisation structure for accountability and responsibility of each and every employee in the organisation.
3. Enforcement of the defined lines of responsibility in the organisation, pointing out the accountability in the banking firm cannot be enforced on outsourced service providers.

4. To ensure that the senior management carries out its duties consistent with the laid down policies of the Board.

5. Effective utilisation of the audit work carried out by internal and external auditors, independent control functions etc.

6. To ensure that bank’s practices and policies for remuneration are in consonance with the business environment, values and control environment of the banking firm.

7. To ensure the interest of the stakeholders is protected by providing regular, accurate and adequate information regarding the performance of the banking company.

8. To be cautious regarding risks which would arise while the business is operating within a particular jurisdiction, in a non-transparent scenarios or through complex business activities?

Though the above principles broadly cover the major role to be played by the senior management and the BOD for supervisory overview. However, the systemic crisis in several parts of the world indicates lapses in the implementation of this framework.

9.9 (BCBS, 1999): In order to improve the framework for corporate governance, BCBS had published this paper to improve the implementation of the OECD principles for corporate governance. Banking supervision will be a total failure if the framework for corporate governance is non-existent. Principles for effective administration can lead to a healthy working atmosphere between the managerial department of the bank and the bank regulatory supervisors. These norms also call for a well laid down organisational structure comprising of top management and the board of directors. Since banks are crucial to any economy for financial and economic development, corporate governance for the banking segment is absolutely essential. Corporate governance principles explained though remain uniform throughout the world but there are no universally correct answers to what kind of corporate governance structures can be set up universally in each and every bank worldwide.
This paper lays down four forms of oversight which be construed in any corporate governance structure viz.

1. Supervision through the board or the regulatory members,
2. Supervision by personnel not responsible for routine operations,
3. Surveillance on the banking activities by various business segments,
4. Functions of managing risk independently and carrying out the audit.

In several countries corporate governance structures include various committees which are explained as follows:

1. Risk management committee looking into Pillar I and Pillar II risks to which the bank is exposed.
2. Audit committee comprising of internal and external auditors who will keep a check on non-compliance with the guidelines laid down by the Basel norms.
3. A Compensation committee keeping a check on the compensation/remuneration of senior management consistent with culture, policies, values and ethos of the banking organisation.
4. A nomination committee to review the performance of the top management and the Board of Directors carrying out the task for official administration in the banks.

Transparency in the banking working environment is a must for efficacy in implementing the corporate governance framework. Regular public disclosures are required for maintaining transparency in the banking environment. Sound corporate governance principles require disclosures at regular intervals to the stakeholders. Banks should incorporate practices in such way that they never harm the interest of their depositors.
REFERENCES


