INTRODUCTION

Banks being the financial backbone of an economy affect the country’s monetary and fiscal policies. With the advent of globalization, more and more foreign banks coming down to India and vice versa, banks are now exposed to a number of risks. Therefore, the entire banking system and its operations require close scrutiny and control. Moreover, the global financial crisis right from the Herstatt Bank failure, US sub-prime crisis, Dubai crisis as well as the recent Euro Debt crisis draw attention towards having stringent norms for the banking system world over. In order to avert such crisis in future and protect banks from various threats and risks, several guidelines have been introduced by Regulatory Authorities all over the world and one such standard is prescribed by the Basel Committee for Banking Supervision (BCBS) for maintaining capital adequacy which gaining ground in recent times all over the world.

In India, RBI being the Regulatory Authority for the banking sector has implemented Basel norms which are followed by banks all over the world. Initially in April 1992, RBI introduced a Risk asset ratio system as a capital adequacy measure in line with the capital adequacy norms prescribed by the Basel Committee (Basel I) where risk weights are assigned for balance sheet assets, non-funded items and other off balance sheet exposures and the minimum capital to be maintained as ratio to the aggregate of risk weighted assets, and other exposures as well as capital requirements in the trading book on an ongoing basis. Down the years Basel I was replaced by Basel II guidelines, where banks are required to maintain a Capital to Risk Weighted Assets Ratio (CRAR) at 9% (which remain unchanged from Basel I), the predominant reason for adopting Basel II norms was that, it recognizes both credit and operational risks apart from market risk as the primary sources of risks and directs banks to allocate adequate amounts of capital for these types of risks unlike Basel I. The Revised Framework provides a range of options for determining the capital requirements for credit risk and operational risk to allow banks and supervisors to select approaches that are most appropriate for their operations and financial markets.

The main structure of Basel II rests on ‘3 Pillars’ concept:

1. Minimum capital requirements.
2. Supervisory review of capital adequacy.
• **The First Pillar:** It deals with the maintenance of regulatory capital for three major risk components – Credit risk, Operational risk and Market risk.

• **The Second Pillar:** It provides framework for dealing with all the other risks a bank may face such as systemic risk, pension risk, concentration risk, strategic risk, reputational risk, liquidity and legal risk which the accord combines under residual risk. It gives banks a power to review their Risk Management System by encouraging banks to develop and use better risk management techniques in monitoring and managing their risks. Supervisors are expected to evaluate how well banks are assessing their capital needs relative to their risks and to intervene, where appropriate.

• **The Third Pillar:** It aims to promote greater stability in the financial system. Market discipline supplements regulation as sharing of information facilitates assessment of banks by market participants such as investors, analysts, customers, other banks and rating agencies.

**Basel I dealt with only parts of the above pillars whereas Basel 2 represents a fundamental change in how bank capital is determined for regulatory purposes.**

However, on the contrary, according to RBI Governor D Subbarao the Indian banks are not likely to be impacted by the new capital rules under Basel III. At the end of June 30, 2010, the aggregate capital to risk-weighted assets ratio of the Indian banking system stood at 13.4%, of which Tier-I capital constituted 9.3%. As such, RBI does not expect our banking system to be significantly stretched in meeting the proposed new capital rules, both in terms of the overall capital requirement and the quality of capital. There may be some negative impact arising from shifting some deductions from Tier-I and Tier-II capital to common equity.

The outcome of the research will be primarily useful to the Indian banks as well as their foreign counterparts, Non-banking Financial Companies and other market participants such as analysts, credit rating agency officials, officials in RBI and other regulatory bodies in analyzing the implication of ongoing Basel II norms on the above mentioned components of the banking system, particularly with respect to the different risks they are exposed to and safeguarding themselves from those risks in turn maintaining adequate capital and ensuring long term growth, profitability and survival in the markets, both local and global.
Suarez, Rojas Liliana (1999) in his article “Can International Standards Strengthen Banks 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 stating 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.

Andersen, Lene (2004) in his study “Basel II: The Path to Promoting Financial Stability in Asian and Pacific Region” assumed that there might be an effect on private capital flows to developing countries owing to the transparency implied in the extensive use of ratings. The requirements of Pillar 2 and 3 call for regional cooperation among supervisory authorities, in order to ensure a level playing field and minimize distortions for banks operating in several markets. The increased capital requirements will safeguard the interests of depositors and reduce the probability of calling on public resources in the event of a crisis. Further, higher capital requirements can improve the external ratings of individual banks if the additional capital buffer is perceived as strengthening a bank’s ability to manage risks.

Asian Banker’s Association, the members of the association had expressed dubiousness about the suitability of using gross income to quantify operational risk. The new accord contains incentives for banks to adopt Advanced Measurement Approach (AMA) including the recognition of the risk mitigating impact of insurance. The AMA remains too complex and expensive for most banks in developing economies to adopt in view of the quantitative and qualitative requirements for the use of sophisticated regulatory capital options.

Banerjee, Arindam (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.

**Institute of International Bankers (IIB)** states that under cross border implementation of Basel II, it particularly speaks about complexity of Basel II advanced approaches to credit and operational risk, combined with its reliance on supervisory discretion. It also advocates achieving an appropriate balance between home and host country roles in the supervision of internationally active bank’s capital adequacy. Consistent with the Basel accord, the institute urges the committee to clarify the banking institutions home country supervisor’s responsibility for oversight of matters relating to the institutions capital adequacy under Basel II norms so long as the home country supervisor oversees the operations of the institution on a consolidated basis in accordance with International standards established by the committee.

**Reserve Bank of India (RBI)** comments on the convergence of Basel norms in the Indian Banking sector, the fact that risk weighting of banks should be de-linked from the credit rating of sovereigns in which they are incorporated and the preferential risk weights should be assigned on the basis of underlying strength and creditworthiness. RBI opines that there is a strong case for revisiting the risk weights assigned to sovereign exposures when the exposures are aggregated as a portfolio, which enjoy the benefits of diversification similar to the approach adopted for retail exposures. RBI concludes the study by stating that the use of supervisory oversight with market discipline would reinforce the supervisory framework and ensure financial stability.

**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 amount of capital requirement for banks employing the Internal Ratings Based(IRB) Approach 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.
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 modeling 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.

Gupta, Vineet and Srinivasan, Karthik (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 study outlines that the implementation of Basel II is likely to improve 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 would derive benefits from improved operational and credit risk management practices.

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, banks should evaluate their capital needs in accordance with their risk appetite and strategize accordingly.

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 spread 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.

Phuskele, Preeti (2005) in her study “Basel II and SME Financing” evaluated the impact of the New Basel Accord on small and medium sized enterprises (SME’s). As per banks perception SME’s carry higher risk. 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.

Petrou, Karen Shaw (2005) in his research article “Basel II Regulation: US Market and Competitiveness Implications” 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 II Accord and its impact on the capital structure of US banks and the economy.

Seshaiah Venkata S, Ravinder Arora and Kharbanda Rohit (2005) in their article “Relevance of Basel II Norms: An Indian Perspective” 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 2 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.

Deb, Satyajit (2006) in his research “Implementation of Basel II in India: A Crucial Journey”. 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.

Kupiec, Paul H (2006) in his article reflecting financial stability and the Basel norms. The research paper highlights important ambiguities in the Basel II framework and these ambiguities may lead to significant variation in the capital standards that apply across IRB banks. Basel norms are unnecessarily vague regarding the definitions of Exposure at Default (EAD) and Loss Given Default (LGD). The analysis also suggests that AIRB banks potentially carry higher default risk absent safety net support, the migration of banking system assets toward AIRB regulatory capital treatment is unlikely to enhance financial stability. Given the prudential weakness associated with the AIRB approach, the adoption of Basel II in its current form need
not promote better risk management practices in banks or reduce systemic risk in the international banking system.

**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.

**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 securitisations 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.

**Randall, Wray** (2006) in his research article “Can Basel II Enhance Financial Stability? A Pessimistic View” 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. 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.

**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 I. 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.

**Sharma, Manoranjan** (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** from **balance sheet to off-balance sheet**
intermediation, move from **capital adequacy** to **capital efficiency** and transition 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.

**Sinha, Pratap Ram** (2006) in his research paper “Risk Management of Securitization 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 **securitization of transactions** through the Ratings Based Approach.

**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”. The Centre for European Policy Studies had carried out a survey on the practical implications of Basel II Accord for the European Financial System. As per the survey, the SME’s agreed that implementing Basel 2 would require the heavy costs as the treatment methods needed large IT infrastructure and data treatment.

**Jovic, Dean and Soeteber, Scot** (2007) in their research “Basel II Implementation in Asia: Who’s Ahead?” The research highlights that **Austrian** and **Singapore’s** banking sector are leading the **Asia Pacific region** in terms of **Basel II implementation**. 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.

**Redak, Vanesa and Jager, Johannes** (2007) in their article “Austrian Banks’ lending and Loan Pricing Strategies against the Background of Basel II”. This paper investigates whether the change in banks’ and supervisors’ treatment of risk may affect changes in lending procedures, terms and pricing. The study concludes drawing upon the conclusion that the Austrian loan market would continue to meet the heterogeneous demands of the Austrian business community with its predominance of SME’s despite the trend toward standardization supported by Basel 2.
Thus the implementation of Basel II will require them to improve the provision of documentation and information to their banks.

Salmon, John and Robertson, Struan (2007) in their article “Basel II: An Introduction to the Capital Adequacy Accord and the Capital Requirements Directive”. Their research highlights in the European Union, the new capital requirements framework is being implemented through the Capital Requirements Directive (CRD). The framework under CRD reflects the flexible structure and the major components of Basel II. CRD reflects that firms should have sound, effective and complex strategies and processes on an ongoing basis the amounts, types and distribution of internal capital that they consider adequate to cover the nature and level of the risks to which they are or might be exposed to.

Bagchi, S.K. (2008) in his study “Basel Principles of Interest Rates Risk Management: Implications for Indian Banking”. The article discusses the sources of interest rate risk, effects of interest rate risks 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.

Deloitte (2008) in their research paper “From Framework to Execution- Effective Planning and Implementation of Basel II Accord in Asia - Pacific”. 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.

Marshall David, Tebbutt, Peter, Toritani Reiko, Srivastava Ambreesh and Hansen Martin Kim (2008) in their study “Implementation of Basel II in Asia: Future Plans and progress to date”. The study recommended setting up of 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 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.

Marshall David, Tebbutt, Peter, Toritani Reiko, Srivastava Ambreesh and Hansen Martin Kim (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. Fu

Suresh N, Kumar, Anil and Gowda, D M (2008) conducted a study of credit risk management to present a general framework for qualification of contributions of credit advances towards all NPA levels of private banks. The measurement of credit risk was done through concentration index of credit advances towards portfolios of occupations viz. agriculture, industry, transport, professional and other services, personal loans, trade and finance which lead to NPA’s. The findings of the study supported the hypothesis ‘The credit advances towards portfolio of occupations influences the NPA’s of banks group for the State Bank group’. Banks need to diversify their portfolios to achieve a better credit portfolio equilibrium. Banks must develop a competitive Early Warning System which combines strategic planning,
competitive intelligence and management action. Basel Committee has suggested a ‘Risk Based Capital Approach’ for managing risk. RBI had provided risk based supervision reforms based on Basel II accord.

**Cannata, Francesco and Quagliariello, Mario** (2009) in their research paper “Role of Basel II in Subprime Crisis: Guilty or Not Guilty?” describe 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 1 rules for structured products, treatment of credit lines to off-balance vehicles, the prudential framework for trading book-assets, a stricter regulatory regime for rating agencies. The research suggests that if Basel II does not serve the purpose, the authorities should not advance forward to Basel III but the remedy is going back to Basel I.

**Satish, Y M and Ujalambkar, Jalauk M** (2009), their 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.

**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, complexity of functions, level of expertise and quality of Management Information System (MIS). The research showcased ‘Loan Review Mechanism’ as an effective tool for bringing about qualitative improvements in credit administration. An important contribution made by the study has brought to the forefront various deficiencies in Credit Risk Management framework in Indian commercial banks, thereby encouraging them to plan out to meet the shortcomings.

**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. Use of derivative techniques such as Netting, Collateralization, Total return swaps, Downgrade triggers, Credit default swaps used judiciously and responsibly prove to be great help in solving the problem of credit risk.
Hugar, B S (2010) studied the credit risk management policies as well as the credit risk identification mechanism. Internal credit ratings provide 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 that warrant special attention. The research concludes that credit risk management must be conducted within the context of a comprehensive business plan.

Sitheswaran, K and Pradeep, Raj S (2010) their 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 for successful implementation of Basel II. 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.

Guruprasad (2011) in his research “Indian Banking Industry – Basics to Basel” highlighted that Basel I lacked proper recognition of credit risk mitigants such as credit derivatives, securitization and collaterals. 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.

Mahanta, Monoshree and Kakati, Munindra (2011) 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.

Singh, Manmeet and Vyas, R.K. (2011) evaluated the impact of portfolio risk on the performance of scheduled commercial banks thereby concluding that portfolio risk plays an important role in earning higher returns to banks.
RESEARCH GAP

The extensive literature survey has brought to the forefront that Basel norms were primarily introduced to mitigate risks and safeguard banks against the credit and the market risk thereby strengthening their financial position leading to financial stability in the economy not only local but global. The innumerable researches conducted by far have made comparative analysis between Basel I and Basel II and the various criticisms for as to why Basel I was revised. Research done in respect of Basel II indicates the impact of the norms on the risk assessment and mitigation of banks in India and world over. Researchers have analyzed the Basic, Standard and Advanced Approaches laid down by Basel II and its impact, risk testing mechanism, challenges or difficulties put forward by them on the banks implementing these approaches phase by phase. Several researches have been undertaken in this regard whether Basel norms are the solution to these global meltdowns and if not, then what are the loopholes in these norms which have continued to lead to crisis in the international markets despite its implementation. In view of these crises, a researcher has strongly advocated the revision of Basel I Accord instead of moving ahead to implementing Basel III norms which would be further more complex and prove to be uneconomical in the long run if it fails to provide the desired results caused by the underlying detrimental factors which are pushed ahead from the first accord without any revision.

The present study aims to primarily study the impact of Basel II norms on the Indian banks operating in the home country as well as overseas and to understand their current risk assessment, risk mitigation, the compositions of their capitals, investment strategies, asset liability management systems, disclosures, mechanisms of operating in the home and host country with a core idea of evaluating whether these banks are strongly following the norms and strengthening their financial position to withstand the various risks they are exposed to. The findings of this research will lead to an important conclusion that whether these norms are suitable for Indian banks and whether they serve the whole purpose of protecting the banks with its sophisticated approaches which will in turn protect them and the economy from a major collapse. Thus, the research will bridge the gap by providing substantiate evidence to whether these norms will be successful in being the shield for the banking sector and the risks faced by them worldwide along with the identification of the underlying ambiguities involved in it which prove to be the ultimate challenge which has to be taken under consideration for successful implementation and risk aversion for meltdown, leading to financial stability.
OBJECTIVES

1. To understand the composition of Tier 1 capital structure of Banks.

2. To understand the composition of Tier 2 capital structure of Banks.

3. To understand and analyze the credit policies for Advances as well as the portfolio granted by Banks namely in terms of cash credits, packing credits and post shipment credits, short term credits, short term loans and long term loans (secured & unsecured), overdrafts, foreign currency loans and other advances.

4. To understand the Investment Strategy of banks into the following segments:
   a. Transactions in Money market
   b. Dealing in Government securities, Treasury Bills, Government Bonds
   c. Securitization of assets and pass through certificates issued by Securitization Companies
   d. Investments in Joint venture and subsidiary investments.

5. To understand the Off-Balance sheet Credit, Market and Interest rate risk sensitive exposures for:
   a. Foreign exchange contracts including Forward Rate Agreements
   b. Interest rate swaps and Cross Currency swaps
   c. Guarantees, Letter of Credit, Buyer’s credit
   d. Options.

6. To understand the composition and the risks assigned to assets other than investments and advances also taking into account the Asset- Liability Management System of banks which thereby states analyzing the banks Stress- testing mechanism majorly enabling the banks to maintain the Capital to Risk Weighted Ratio @ 9%
HYPOTHESIS

H₀₁: The banks are not maintaining their CRAR at 9% despite following Basel norms.
H₀₂: The banks will not turn sick or collapse despite following Basel norms and maintaining adequate capital in relation to the risks they are exposed to.
RESEARCH METHODOLOGY

I. Data Collection
   1. Primary Data:
      This is will be done using survey/ interview method with the help of different sets of
      structured questionnaire.
   2. Secondary Data:
      This shall be gathered from books & publications, magazines, newspapers, internet,
      journals & periodicals etc.

II. Research Design
    Descriptive research is the exploration of the existing phenomena therefore, the present
    research applies a descriptive quantitative research design as it aims to evaluate the
    impact of the existing Basel norms on various aspects of banks such as its risk assessment
    and risk mitigation mechanisms, capital requirements, asset liability management system,
    investment strategies etc.

III. Sampling Type:
    The data will be collected from the existing and the market participants through
    Stratified Random Sampling as they can be divided into strata, homogenous subgroups
    representing key attributes. Further, data can be collected from these strata or samples
    through systematic or cluster sampling.

IV. Sampling Frame
    • Existing Participants:
      1. Banks
         a. Scheduled Commercial Banks - 30
         b. Nationalized Banks - 30
         c. Foreign Banks - 20
         d. Regional Rural Banks - 10
         e. Co-operative banks – 20
      2. Non-Banking Financial Companies- 10
    • New Entrants to the Industry – 20
• **Market Participants**
  1. Analysts – 50
  2. Credit Rating agency officials – 10
  3. Retail Investors – 200
  4. Corporates including Foreign Institutional Investors – 50
  5. RBI and other regulatory officials – 10

  Total sampling units: 460.

V. **Analysis of Data:**

The data will be collected from the Finance and Risk managers of the sampling units of banks and Non-Banking Financial Companies. The sampling unit of the new entrants to the industry will comprise of those Industries and Institutions who have applied for banking license to RBI to carry out Banking Business in India. They are a part of the primary research in order to study and analyze the different strategies they will follow with respect to Basel II norms.

VI. **Research Area:**

The primary research will be conducted across branches of banks located in different states in India with special reference to banks located in the city of Mumbai.

VII. **Hypothesis Testing**

The hypotheses will be tested by the following techniques:

1. Parametric:
   - Z test
   - ANOVA

SCOPE OF THE STUDY

The study will focus on analyzing different parameters for maintaining capital adequacy which are taken into account by banks with respect to the ongoing Basel II norms implemented all over the country.

The above study will be based on the primary research conducted on the following banks:

1. Scheduled Commercial Banks
2. Nationalized banks
3. Foreign banks
4. Regional Rural banks
5. Co-operative Banks.
LIMITATIONS OF THE STUDY

1. The primary research data is collected by various modes (E-mail, telephonic conversation and face-face) and hence the responses are subject to the clarity, time availability and the seriousness shown by the respondents.

2. There is a possibility that the primary research conducted could include biased opinion of the respondents.
The outcome of the research would comprise of the impact of Basel norms on each and every aspect of banking operations in India and the world thereby achieving all the research objectives.

The recommendations based on the findings of the study will help modern day banks in acquiring the knowledge on how their counterparts are mitigating risks and maintaining adequate capital as per norms. The research hypothesis will lead the study to a conclusion “Whether Basel guidelines are the ultimate solution for protecting the booming banking industry?” Or “Whether the regulatory bodies world over need to look beyond Basel standards for forming norms more stringent and effective to build stabilized economies resilient to global financial shocks?”