Chapter 3: Conceptual Framework of NPA

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Soon after independence, as India needed a strong, powerful and efficient financial system to meet the multifaceted requirements of credit and development. To fulfill this objective it adopted a mixed pattern of economic development and planned a financial system to support suchlike development.

The rapid growth and development of the banking system in terms of presence as well as penetration over the two decades immediately preceding nationalization of banks in 1969 was really impressive. Even as the banking system; branch network was growing at a fast pace by the beginning of 1990s, it was realized that the efficiency of the financial system was not to be measured only by quantitative growth in terms of branch expansion and growth in deposits/advances but also to be measured by qualitative growth in terms of fulfilling the social obligations of development of the country. The Banking Industry has passed through a huge change after the very first phase of economic liberalization in 1991 and hence credit management. While the primary function of banks is to lend money to various sectors such as agriculture, small scale industry, micro credit, education loans, personal loans, housing loans etc. Providing loans to all these sectors by banks are called priority sector lending.

The economic development of a country is accelerated by the efficient flow and allocation of financial resources, from surplus units to deficit units. Indian financial system promotes the process of capital formation by providing a mechanism for transformation of saving into investments. It serves as a link between savers and investors. It mobilizes the savings of the scattered savers into productive investments. Financial system provides an efficient mechanism of payment for the exchange of services and goods.
Many financial institutions or intermediaries are necessary to shift funds for development activities. Many empirical studies have emphasized the importance of financial service sector development for the overall development of the economy (Koivu, 2002; Levine, 1997; Amaral and Quintin, 2007). Beck, T (2005), observed that financial sector development promotes economic growth and reduces poverty by widening and broadening the access to finance and allocating the society’s savings more efficiently.

3.1 Concepts of NPA

The proverb “A Man without money is like a bird without wings” postulates the importance of the money. A bank is a financial institution which deals with money. Basic functions of all the Commercial banks are accepting deposits and lending money. Banks play an important role in mobilization and allocation of capital for progress and development of an economy. The modern banking is not only confined to traditional business of the accepting deposits and lending money but have diversified their activities in providing a variety of financial services like merchant banking, lease financing, housing finance, bill discounting, hire purchase and consumer credit, insurance services, factoring, stock broking and depository services, mutual funds and venture capital. In general, commercial banks have to face many challenges in its day to day operations. The main challenge confronting by the commercial banks is the disbursement of funds in quality assets (Loans and Advances) or otherwise it becomes Non-performing assets. A bank is said to be efficient when it is able to overtake both its external and internal challenges and also keeps itself updated with the technological advancements. Every country’s economy needs a sound banking system for smooth functioning.

The main function of banking sector is to accept deposits for the purpose of lending. So, it mobilise funds and then lends this money to others
in the form of loans which becomes the assets for banks. The assets and liabilities of banks are in the form of claims unlike other forms of business. The mobilised money is lent in the form of loans and advances which is the main and primary activity of banking and composes the largest asset in the asset portfolio of the bank. The money lent are called loans or advances which helps in earning income for the bank in the form of interest and in addition to this, banks also invests a portion of money in securities/instruments (both debt and equity) and a minor portion of total funds is invested in real assets like land and building, office equipments for carrying the operations of banking.

The money is advanced in the form of loans and invested in securities in expectation of Interest income and repayment of principle amount at regular intervals as per the contractual obligations between the lender and borrower. The assets which is performing as per the contractual obligations i.e. payment of interest and repayment of principal as and when due, it is called performing asset or standard asset. The asset which fails to meet these obligations of payment of interest and repayment of principal amount within a specified date from due date is called non-performing asset or non standard asset.

According to the Reserve Bank of India, an asset becomes non-performing when it ceases to generate income for bank. In other words, an asset should be treated as NPA if interest or instalment of principal remains overdue and unpaid for a period of more than 90 days.

An NPA is defined as a loan asset, which has ceased to generate any income for a bank either in the form of interest or principal repayment. Non-Performing Assets means any asset or account of borrowers, which has been classified by a bank or any financial institution as substandard, doubtful or loss asset, in accordance with the guidelines relating to asset classification
issued by RBI. An amount due under any credit facility given by the banks is treated as "past due" when it has not been paid within 30 days from the due date. According to the Narasimham Committee Report (1991), those assets (advances, bills discounted, overdrafts, cash credit etc.) for which the interest remains due for a period of 180 days (two quarters) should be considered as NPAs. Later on, this period was reduced and from March 1995 onwards, the assets for which the interest has not paid for 90 days were considered as NPAs.

All term loans, cash credits and overdrafts (CC & OD), bills purchased and discounted are classified into performing and non-performing assets according to 90 days overdue norms.

An account is declared as NPA based on the repayment of principal and interest on loans and advances and other aspects as per RBI norms. An asset, including a leased asset, becomes nonperforming when it ceases to generate income for the bank. As per RBI guidelines, the updated norms to declare the account as NPA are as follows:-

A non performing asset (NPA) is a loan or an advance where;

(i) Interest and/ or instalment of principal remain overdue for a period of more than 90 days in respect of a term loan,

(ii) The account remains ‘out of order’ in respect of an Overdraft/Cash Credit (OD/CC), if the outstanding balance remains continuously in excess of the sanctioned limit/drawing power. In cases where the outstanding balance in the principal operating account is less than the sanctioned limit / drawing power, but there are no credits continuously for 90 days as on the date of Balance Sheet or credits are not enough to cover the interest debited during the same period, these accounts should be treated as 'out of order'.
(iii) The bill remains overdue for a period of more than 90 days in the case of bills purchased and discounted,

(iv) The instalment of principal amount or interest thereon remains overdue for two crop seasons for short duration crops,

(v) The instalment of principal amount or interest thereon remains overdue for one Crop season for long duration crops,

(vi) The amount of liquidity facility remains outstanding for more than 90 days, in respect of a securitisation transaction undertaken in terms of guidelines on securitisation dated February 1, 2006.

(vii) In respect of derivative transactions, the overdue receivables representing positive mark to market Value of a derivative contract, if these remain unpaid for a period of 90 days from the specified due date for payment.

3.2 TYPES OF NPA

Gross NPA and Net NPA:- There are two concepts related to Non-Performing assets (NPAs)- Gross and Net.

Gross NPA:

Gross NPAs are the sum total of all loan assets that are classified as NPAs as per RBI guidelines as on Balance Sheet date. Gross NPA reflects the quality of the loans made by banks. It consists of all the non-standard assets like as sub-standard, doubtful, and loss assets. It can be calculated with the help of following ratio:

$$\text{Gross NPAs Ratio} = \frac{\text{Gross NPAs}}{\text{Gross Advances}}$$

Net NPA:

Net NPAs are those type of NPAs in which the bank has deducted the provision regarding NPAs. Net NPA shows the actual burden of banks. Since in India, bank balance sheets contain a huge amount of NPAs and the process
of recovery and write off of loans is very time consuming, the provisions the banks have to make against the NPAs according to the central bank guidelines, are quite significant. That is why the difference between gross and net NPA is quite high. It can be calculated by following:

\[
\text{Net NPAs} = \frac{\text{Gross NPAs} - \text{Provisions}}{\text{Gross Advances} - \text{Provisions}}
\]

The following are deducted from gross NPA to arrive at net NPA.

A) Balance in interest suspense account, if applicable.
B) DICGE/ECGC received and held pending adjustment.
C) Part payment received and kept in suspense account.
D) Total provisions made excluding technical write-offs made at head-office.

The percentage of gross NPA to gross advances includes interest suspense account where the bank is following the accounting practices of debiting interest to the customer’s account and crediting interest suspense account.

While gross NPA reflects the quality of the loans made by banks, net NPA shows the actual burden of banks. The requirements for provisions are 100% for loss assets, 100% of the unsecured portion plus 20-100% of the secured portion, depending on the period for which the account has remained in the doubtful category; and 20% general provision on the outstanding balance under the sub-standard category.

The present concept of NPA has covered a long journey to reach at this stage. It gained currency with the default sovereign’s loans made by western banks to Latin Americans nations. Eitan A.A. Aveneyou\textsuperscript{1} described non-performing assets as “…Loan for which no interest is paid for specific

\[\text{1 Aveneyou E.A Dictionary of Finance, Macmillan, New York, 1988 p. 326}\]
period… Often ones made to foreign countries”. In 1977, the Securities and Exchange Commission of united states defined non-performing loans as “Loans which are contractually past due for 60 days or more has to interest or principal payments; and loans the terms which has been renegotiated to provide reduction or deferral of interest or principal.”[2]

It was considered around the same time when banking in our country and its system of credit delivery were being viewed almost exclusively as on instrument of social change, concern surfaced in the Tandon committee (1973) about a proper quality wise grading of advance portfolio. Tandon committee recommended the slotting of borrowal account into 4 bands as (A) Excellent (B) Good (C) Average (D) Unsatisfactory/ bad and doubtful. This was followed by the chore committee (1980) which also recognized the need for the closed watch on the quality of the loans portfolio, and this concern is reflected in its emphasis on regular annual review of all borrowal account with credits limits over ₹10 lakhs. It was that such information would be of immense use to bank managements for control purposes. It was the recommendation of the Pendharkar Committee (1981) implemented in 1984 that recognized the need for classifying the advanced into different categories to index the overall quality of the asset portfolio.

A critical analysis for a comprehensive and uniform credit monitoring was introduced in 1985-86 by RBI by way of the Health Code System in banks which, inter alia, provided information regarding the health of individual advances, the quality of credit portfolio and the extent of advances causing concern in relation to total advances. Reserve Bank of India advised all commercial banks (excluding foreign banks, most of which had similar

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2 Report of the securities and Exchange Commission, USA, 1977
3 Report of the Study Group to frame guide lines for follow up of Bank credit, RBI,1975 (annexures)
coding system in their organizations) on November 7, 1985 to introduce the Health Code classification indicating the quality (or health) of individual advances in the following eight categories, with a health code assigned to each borrowal account.

1. Satisfactory - Conduct is satisfactory, all terms and conditions are complied with, all accounts are in order, and safety of the advance is not in doubt.

2. Irregular - The safety of the advance is not suspected, though there may be occasional irregularities which may be considered as a short term phenomenon

3. Sick-viable - (Advances to units which are sick but viable-under nursing and units in respect of which nursing/revival programmes are taken up)

4. Sick nonviable/sticky - (The irregularities continue to persist and there are no immediate prospects of regularization, the accounts could throw up some of the usual signs of incipient sickness)

5. Advances Recalled - (Accounts where the repayment is highly doubtful and nursing is not considered worth-while, includes where decision has been taken to recall the advance)

6. Suit filed-account - (Accounts where legal action or recovery proceedings have been initiated)

7. Decreed debts - (Where decrees have been obtained)

8. Bad and Doubtful Debts - (Where the recoverability of the bank’s dues has become doubtful on account of short-fall in value of security, difficulty in enforcing and realizing the securities; or inability/unwillingness of the borrowers to repay the bank’s dues partly or wholly)

Source: Some Aspects and Issues Relating to NPAs in Commercial Banks, RBI, (1 July 1999)

This eight-band concept of health coding of advanced accounts from health code 1 to 8 was followed in 1984 by a circular from the RBI to banks,
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specifying the need to refine the practice of charging the interest on the loans and advances by banks on new prudential criteria in line with international participates by ceasing to charge interest on non-performing advances. Accordingly, banks were advised refrain from charging interest on borrowal accounts falling in health codes 6 to 8 (suit filed, decreed, bad and doubtful and loss accounts) but to continue charging interest on accounts in health code 4 and 5 accounts of 4 selective basis.

This was modified subsequently from the accounting year 1990-91 stipulating that banks should not charge interest on accounts in health code 5 but charge interest on selective basis in the accounts falling under health code 4 depending on the availability of security of reception of banks about the individual accounts.

In sum a system of transparency and prudential norms prevalent even prior to 1992-93, specified non-reorganization of interest income in accounts which had crossed the sickness stage to the record category up to bad and doubtful category. For the band of accounts which had crossed the (health code 1) into different level of irregularity and sickness, the criteria were found to be subjective. To elaborate interest was charged though not recovered, where as provisioning also was based on bank’s perception about security and prospectus of recovery, even after recalling the advances. The health code system therefore, had non-performances hidden in it layers.

During 1992, Reserve Bank of India, decide that if the balanced sheet is the reflect, bank’s actual financial health, a proper system reorganization of income, classification of assets and provisioning for debt on a prudential basis is necessary. On the basis of Narasimham committee.\(^4\) RBI issued guideline as applicable to scheduled commercial bank regarding income reorganization, assets classification, provisioning and other related matters are clarified in

\(^4\) The committee on Financial Sector Reform, set up by RBI, 1991
different heads. K. Satyanarayana has suggested that, despite all the hiccups, income recognition and provisioning are absolutely essential steps for Indian banking system though delayed for long by the RBI perhaps is trying to compensate the delay by pushing it in haste.\textsuperscript{[5]}

3.3 **INCOME RECOGNITION**

Internationally, income from Non Performing Assets (NPAs) is not recognized on accrual basis but is taken into account as income only when it is actually received. It has been decided to adopt similar practice in our country also. Bank has been advised that they should not charge and take to income account interest on all NPAs. An asset becomes non-performing for a bank when it ceases to generate income. The basis for treating all the credit facilities as NPA is arrived at within a three-year time frame from 1992-1995 reducing 4, 3 and 2 quarters and from April 2004, this two quarters definition is reduced to one quarter. Presently, the basis for treating a credit facility as non-performing is as follows:

**3.3.1 Term Loans**

A term loans account is treated as NPA if interest or installment of principal remains ‘PAST DUE’ for any two quarters out of four, although default may not be continuously for two quarters during the year.

Past due: An amount should be considered as past due when it remains outstanding or unpaid for 30 days beyond due date.

**3.3.2 Cash Credits and Overdrafts**

A cash credit or overdraft account is treated as NPA if the account remains ‘out of order’ for a period of two quarters (not necessary continuous) during the year.

\textsuperscript{5} Satyanarayan K. “Income Recognition and provisioning in Banks, Hasty, Essential and Delayed step” Banking and Finance, November 1993 pp.3-6.
Out of order

An account may be treated as out of order if any of the following three conditions are met:

- The balance outstanding in the account remains continuously in excess of the sanctioned limit or drawing power.
- The balance outstanding is within the limit/drawing power, but there are no credits in the account continuously for a period of six months on the date of the balance sheet of the bank.
- There are some credits but the credits are not enough to cover the interest debited to the account during the same period.

3.3.3 Bills purchased and discounted

The bills purchased or discounted are treated as NPA if the bill remains overdue and unpaid for a period of two quarters. However, overdue interest should not be charged and taken to income account in respect of overdue bills unless it is realized.

3.3.4 Other Accounts

Any other credit facility is treated as NPA if any amount to be received in respect of that facility remains past due for a period of two quarters during the year. On all NPAs, interest should not be charged and taken to the income account. If interest income in respect of a borrower becomes subject to non-accrual, fees, commission and similar income in respect of the same borrower should also cease to accrue.

Currently, NPA is defined as an advance where interest and/or installment of principal remains overdue for a period of more than 90 days in respect of term loan; (ii) the account remains “out of order” for a period of more than 90 days in respect of an overdraft/cash credit; (iii) The bill remains overdue for a period of more than 90 days in case of bills purchased and
discounted; (iv) Interest and/or installment of principal remains overdue for
two harvest seasons for short-term and one harvest season for long term crop
loans in the case of an advances granted from agricultural purpose (from
05.04.04) and (v) any amount to be received overdue for a period of more
than 90 days in respect of other accounts (RBI, Report on Trends and
Progress of Banking in India, 2003-04, p.164)

3.4 CLASSIFICATION OF LOAN ASSETS

The banks are required to classify the loan assets into four categories in
order to arrive at the amount of the provision to be made against them:-

• Standard Assets.
• Sub-Standard Assets.
• Doubtful Assets.
• Loss Assets.

3.4.1 Standard Assets

Standard asset means an asset in respect of which, no default in
repayment of principal or payment of interest is perceived and which does not
disclose any problem nor carry more than normal risk attached to the
business. These asset is one which is not classified as Non-performing Assets.
Provision @0.40% is required to be made against them.

3.4.2 Sub-Standard Assets

Sub-standard asset means an asset, where the terms of the agreement
regarding interest and/or principal have been renegotiated or rescheduled after
commencement of operation, until the expiry of one year of satisfactory
performance. With effect from 31st March 2005, sub standard assets are those
assets which have been classified as non-performing assets for a period not
exceeding 12 months.
3.4.3 Doubtful Assets:-

With effect from 31st March 2005, doubtful assets are those which have remained non-performing assets for a period exceeding 12 months.

3.4.4 Loss Assets

Loss assets are those where loss has been identified by the bank or auditors but the amount has not been write-off. It is an asset which is adversely affected by a potential threat of non-recoverability due to either erosion in the value of security or non-availability of security or due to any fraudulent act or omission on the part of borrower.

3.5 PROVISIONING

Provisioning is a process where certain amount from profit is kept for providing a security cover to non-performing assets. After the classification of NPAs, provisions have to be made against each category of NPAs based on certain norms. The above classification is intended to provide the basis for determining provisions for loss. It also helps in supervision and follow up of advance for recovery.

Taking into account the time lag between an account becoming doubtful of recovery its recognition as such, the realization of the security and the erosion over time in the value of security charged to the bank, the bank should make provisioning against sub standard assets, doubtful assets and loss assets as belongs.

3.5.1 Loss Assets

The entire assets should be written off. If the assets are permitted to remain in the books for any reasons, 100 percent of the outstanding should be provided for.
### 3.5.2 Doubtful Assets

100 percent of the extent to which the advance is not covered by the realizable value of the security to which the bank has a valid recourse and the realizable value is estimated on a realistic basis.

In regard to the secured position, provision may be made on the following basis, at the rates ranging from 20 percent to 100 percent of the secured portion depending upon the period for which the assets has remained doubtful.

<table>
<thead>
<tr>
<th>Period for which the advance has been considered as doubtful</th>
<th>Provision requirement %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to one year</td>
<td>20</td>
</tr>
<tr>
<td>One to three years</td>
<td>30</td>
</tr>
<tr>
<td>More than three years</td>
<td>100</td>
</tr>
</tbody>
</table>

Additional Provisioning consequent upon the change in the definition of doubtful effective from MARCH 31, 2001 has to be made in phases as under.

As one March 31, 2001, 50 percent of the additional provisioning requirement on the assets which became doubtful on account of new norms of 18 months for transaction form sub-standard assets to doubtful category.

As on March 31, 2002 balance of the provision not made during the previous year in addition the provisions needed as on 3.03.2002 Banks are permitted to phase the additional provisioning consequent upon the reduction the transition period from sub-standard to doubtful assets from 18 to 12 months over a four year period commencing form the year ending March 31, 2005 with a minimum of 20 percent each year.
3.5.3 Sub-standard Assets

A general provision of 20 percent on total outstanding should be made without making any allowance for DICGC/ECGC guarantee cover and securities available.

3.5.4 Standard Assets

The banks should make a general provisioning of a minimum of 0.40 percent on standard assets on global loan portfolio basis. The provisions on standard assets should not be netted form gross advances but not shown separately.

3.5.5 For Small Advances

There is no special treatment now for small advances of Rs 25000/- and below. Banks are required to classify these small advance indifferent assts categories by March 31, 1998 But if banks are not able to classify then they are required to make provisions @ 15 % of aggregate outstanding including performing loans.

To move towards the international standards regarding provisioning norms, the Reserve Bank of India has decided to introduce the concept of ‘One quarter’ instead of two quarter for identification of NPAs by March 2004.

3.6 Identification of NPAs

Identification of NPAs is a process that whether an assets or an account is performing or not. The identification of NPA is to be done on the basis of position as on the date of balance sheet. Hence, advance which has been registered by repayment of outstanding interest and installment of principal before the balance sheet date may not be treated as NPA, even though default in the account might have persisted for two quarters. Method to indentify an asset as performing or non-performing is being shown as follows:
3.6.1 Cash Credit / Overdraft
Performing Assets – Interest due up to September 30 of year under audit, collected before March 31 of year under audit.
Non Performing Assets – Interest due up to September 30, not collected before March 31 of the year under audit.

3.6.2 Term Loan
Performing Assets – Interest due up to June 30 and installment up to August 31 of the year under audit, collected before March 31 of the year under audit.
Non –performing Assets- Interest due up to June 30, and installment due up to 31, not collected before March 31 of the year under audit.

3.6.3 Bills Purchased and Discounted
Performing Asset – interest due up to June 30 and installment up to August 31 of the year under audit collected before March 31 to the year under audit.
Non-Performing Assets – Bills due up to September 30 of the year and not collected before March 31, of the year under audit.

3.6.4 Other Accounts
Performing Assets – Interest due up to June 30 and installment up to August 31 of the year under audit, collected before March 31 to the year under audit.
Non –Performing Assets- Interest due up to June 30 and/ or installment due up to August 31, not collects before March 31 of the year under audit.

3.7 Some other Related Concept of NPAs
3.7.1 Exempted Assets
Advance against banks own term Deposits/ Recurring Deposits, National Saving certificates, Surrender value of LIC policies, Indira Vikas
Patras and Kissan Vikas Patras, are totally exempted from Assets Classification, Income recognition and provisioning and rare treated as ‘Standard Assets’. Provided the outstanding is within the value of the security even though interest debited for two quarters is not collected.

3.7.2 Downgrading of NPA

RBI had instructed banks that in respects of those accounts where there is potential threat of recovery on account of erosion in the value of security or non-availability of security or existence of other factors like, fraud committed by borrowers, such accounts should be straightway classified assets, as appropriate, irrespective of the period for which it has remained as NPA.

3.7.3 Upgradation of NPAs

Upgradation of a non-performing assets is only considered when it turns to standard asset i.e. the account becomes regularized. In other words upgradation of NPAs within the doubtful status of upgradation it form doubtful to sub-standard shall not be made to subsequent recoveries unless the account it regularized and come out of the NPA status.

3.7.4 Demand and Housing loans to staff

Staff accounts can be treated as standard assets as the monthly installments will be recovered regularly and interest charged on such accounts can be recognized as income for the year ended.

3.7.5 Borrower having several facilities

In cases where a borrower is having several facilities from on account, all the facilities granted to a borrower will have to be treated as NPAs and not the particular facility or part thereof which has become irregular.

3.7.6 Consortium Advance

When more than one bank or financial institution mutually advances a unit, it is known as consortium advances. In order to bring about uniformity in
approach regarding a borrowing unit, the members should adopt classification
adopted by the leader of the consortium. Leader bank should share the
information relating to categorization, with other banks.

3.7.7 Agricultural Advances
As per the circular dated March 4, 1998, RBI has clarified that
advances granted for agricultural purposes may be treated as NPA if interest
or installment of principal remain unpaid after it has become due for two
harvest seasons; in any case it should not exceed two half years.

3.7.8 Reschedulement of Advance
As per RBI guidelines an account, which has not become NPA,
reschedulement can be done before the commencement of production or
installment become due for payment as per original terms. In such cases, NPA
status has to be considered with reference to the rescheduled terms.

3.8 Causes for Non-Performing Assets
The high level of NPAs in banks and financial institutions has been a
matter of great concern to the public as bank credit is the catalyst to the
economic growth of the country and any bottleneck in the smooth flow of
credit, one cause for which is the mounting NPAs, is bound to create adverse
repercussions in the economy. The failure of the banking sector may have an
adverse impact on other sectors. The Indian banking system, which was
operating in a closed economy, now faces the challenges of an open economy
on one hand a protected environment ensured that banks never needed to
develop sophisticated treasury operations and Assets Liability Management
skills. On the other hand a combination of directed lending and social banking
relegated profitability and competitiveness to the background. The net result
was unsustainable NPAs and consequently a higher effective cost of banking
services. In all forums of interactions the global multilateral institutions and
rating agencies had with RBI and the Government, directed lending concept
gets quoted as an important attribute and a contributory factor for the build up of NPAs in banks in India. It is a different matter that RBI and the Government are accused of soft attitude towards banks which do not fulfill the prescribed targets for priority sector lending, particularly agriculture and small scale sector. The recovery of NPAs under priority sector advances particularly to agriculture and small-scale industries is sometimes hampered by externalities.

A lot of practical problems have been found in Indian banks, especially in public sector banks. For example, the government of India had given a massive waiver of ₹ 15,000 crores. Under the prime Ministership of Mr. V.P. Singh, for rural debt during 1989-90. This was not a unique incident in India and left a negative impression on the payer of the loan.

Poverty elevation Program like IRDP SUME, SEPUP, JRY, PMRY etc. failed on various grounds in meeting their objectives. The huge amount of loan granted under these schemes was totally unrecoverable by banks due to political manipulation, misuse of funds and non-reliability of target audience of these sections. Loans given by banks are their assets and as the repayment of several of the loans was poor, the qualities of these assets were steadily deteriorating. Credit allocation became ‘Lon Mela’ Loan proposal evaluation were slack and as a result repayment were very poor.

Factors behind the transformation of assets from performing to non-performing status have broadly classified under the following three heads.

3.8.1 Causes Attribute to Borrowers

Unwillingness of the borrowers to repay the loan Many times deliberate efforts are made by a certain category of borrowers to declare their units sick and weak to avail of pecuniary benefits from different sources. Even accretion category of prudent borrowers do not hesitate to reap undue
advantage of certain lapses on part of bankers, as they come to know during the course of experience and don’t repay deliberately, ultimately these loans turn into non-performing.

**Diversion of funds for expansion/ modernization/ setting up new projects** helping or promoting sister concern Whenever the advance is misused or diverted to other activities, the unit may not generate further income and the account becomes NPA.

**Inappropriate technology and product obsolesce** A unit cannot compete in market with products produced with outdated technology. Hence product remains unsold, blocking the funds without yielding any return or with negligible return.

**Project not completed in time-resulting time** cost overrun during the project implementation stage leading to liquidity strain, finally the unit will not be able to repay the advance.

**Lack of proper planning and mis-management** If the management take wrong decisions too ambitious project, excess capacities created on non-economic costs, unwanted expenses then it will enhance the NPA.

**Dispute between the co-borrower or death of any one of them** after availing the advance from the bank leads to the account turning into NPA, since in that case production activity may not continue properly to generate sufficient income.

**In-ability of the corporate to rise capital through the issue of equity or other debt instrument from capital markets.** This creates liquidity problem or lack of funds, restricting productivity activities. The ultimate outcome is the turning of such loans into NPAs.
Problem faced by exporter due to adverse exchange fluctuations, over dues in other countries, recession in other countries, externalization problems adverse exchange rates etc. It make imports of material costly and low demand so units don’t increase at appropriate level because they have to compete in international market with greater efficiency.

Shortage of raw material, raw material/ input price escalation and depressed capital markets. This discourages the productive activities by not yielding sufficient return.

3.8.2 Causes Attributable to banks

Faulty Lending Process There are three cardinal principles of bank lending that have been followed by the commercial banks since long.

i. Principle of safety
ii. Principle of liquidity
iii. Principle of profitability

Incompatible Technology Due to inappropriate technology and management information system, market driven decisions on real time basis cannot be taken. Proper MIS and financial accounting system is not implemented in the banks, which leads to poor credit collection, thus NPAs. All the branches of the bank should be computerized.

Inappropriate SWOT Analysis The improper strength, weakness, opportunity and threat analysis is another reason for rise in NPAs. While providing unsecured advances the banks depend more on the honesty, integrity, and financial soundness and credit worthiness of the borrower.

Inadequate Credit Appraisal System Poor credit appraisal is another factor for the rise in NPAs. Due to poor credit appraisal the bank gives
advances to those who are not able to repay it back. They should use good credit appraisal to decrease the NPAs.

**Managerial Inefficiency** The banker should always select the borrower very carefully and should take tangible assets as security to safeguard its interests. When accepting securities banks should consider the following variables:
1. Marketability
2. Acceptability
3. Safety
4. Transferability.

**Wrong selection of the borrower** Improper assessment of the experience of the borrower or his capacity to pursue the activity proposed to be undertaken, thus inuring a very basic principle of lending. There is a very high possibility of the misuse of the fund if the market report, creditability and family background of the borrower is not adequately investigated.

**Improper repayment schedule** Fixing up the repayment schedule and gestation period irrespective of the operational and marketing seasons in the operational area of the brands, particularly, in agricultural advances is also a factor for an asset turning into NPA.

**Improper evolution of the credit requirement of the borrowers** Due to non availability of reliable market and industry data on demand and supply bank may not properly evaluate the credit requirements of the borrower which may result in under financing or over financing and may affect the cost revenue structure of the activity thereby making the activity unviable.
Improper assessment about the project location, location disadvantages and advantages, forward and backward linkages upon which the viability of the project to be pursued depends to a larger extent.

Coverage of large area Injudicious and sporadic advances With large coverage of area with inadequate means of transport and shortage of staff and in the process remaining unable to ensure effective control over the advances.

Delay in sanction or disbursement of credit facilities units don’t get benefits of opportunities due to delayed section and delayed disbursement of credit.

Faulty documentation and disbursement of loans before compliance of terms and conditions of section may lead to possibilities of frauds or default in loan repayment.

Lack of supervision and poor follow up on the park of the hank branches for various reasons An effective monitoring system aims at two objectives as to ensure the end use of credit and to identify the problems for the entrepreneurs in the execution of the project absence of such a system will adversely affect the performance of loan assets If warning signal are not detected easy and suitable remedial measures are not applied timely, then ultimately, these loans will be turns in to NPAs.

Unavailability of required data relating to the indebtedness of the borrower to other institutions and individuals etc. affecting his capacity to meet all his repayment commitment credit Information department doesn’t compile comprehensive information about borrower for the bank as a whole and update them regularly. The defaulting borrower takes advantage of this
lacuna and raise funds from one branch of the same bank, leaving apart the branch of the other bank.

**Non availability of sufficient powers for enforcing securities** (Possession and sale) that banks are shying away form risks by investing a greater than required proportion of their assets in the form of sovereign debt papers.

**Manipulation by the debtors using political influence.** A major portion of NPA arose out of lending to the priority sector, at the dictates of politicians and bureaucrats. If only banks had monitored there loan effectively, the NPA problem could have been contained, if not eliminated. The top management of the banks was forced by politicians and bureaucrats to throw good money after bad in the case of unscrupulous borrowers. The absence of proper bankruptcy laws and the dilatory legal procedures in enforcing security rights are the root cause of NPAs.

### 3.8.3 Other Causes

**Natural Disaster**

This is the measure factor, which is creating alarming rise in NPAs of the PSBs. every now and then India is hit by major natural calamities thus making the borrowers unable to pay back there loans. Thus the bank has to make large amount of provisions in order to compensate those loans, hence end up the fiscal with a reduced profit.

**Industrial Unsoundness**

Improper project handling, ineffective management, lack of adequate resources, lack of advance technology, day to day changing govt. policies give birth to industrial sickness. Hence the banks that finance those industries ultimately end up with a low recovery of their loans reducing their profit and liquidity.
Inadequate Demand

Entrepreneurs in India could not foresee their product demand and starts production which ultimately piles up their product thus making them unable to pay back the money they borrow to operate these activities. The banks recover the amount by selling of their assets, which covers a minimum label. Thus the banks record the non recovered part as NPAs and has to make provision for it.

Changing Government Policies

With every new govt. banking sector gets new policies for its operation. Thus it has to cope with the changing principles and policies for the regulation of the rising of NPAs.

3.9 Impact of NPAs on profitability of the Banks

1. Reduces earning capacity of the assets: NPAs reduced the earning capacity of the assets and as a result of this return on assets get affected.

2. Blocks capital: NPA"s carry risk weight of 100% (to the extent it is uncovered). Therefore they block capital for maintaining Capital adequacy. As NPAs do not earn any income, they are adversely affecting “Capital Adequacy Ratio” of the bank.

3. Incurrence of additional cost: Carrying of NPAs require incurrence of ‘Cost of Capital Adequacy’, ‘Cost of funds in NPAs’ and ‘Operating cost for monitoring and recovering NPAs’.

4. Reduces EVA: While calculating Economic Value Added (EVA =Net operating profit after tax minus cost of capital) for measuring performance towards shareholders value creation, cumulative loan loss provisions on NPAs considered as capital. Hence, it increases cost of capital and reduces EVA.
5. **Low yield on advances:** Due to NPAs, yield on advances shows a lower figure than actual yield on “standard Advances”. The reasons that yield are calculated on weekly average total advances including NPAs.

6. **Affect on Return on Assets:** NPAs reduce earning capacity of the assets and as a result of this, ROA gets affected.

### 3.10 Regulation of Bank Finance

Banks in India have been providing finance to industry and trade on the basis of security. To ensure its equitable distribution in the right channels bank credit has been a subject matter of regulation and control by the government. Since November 1965, a **Credit Authorisation Scheme** has been in operation as part of the Reserve Bank of India’s credit policy. (As was adopted by the Reserve Bank of India to regulate the end use of bank credit) Under this scheme, all scheduled commercial banks are required to obtain prior authorization of the Reserve Bank before sanctioning any fresh credit limits of ₹ One crore or more to any single party or any limit that would enable the party avail ₹ One crore or more from the entire banking system on secured or unsecured basis. The limit of ₹ One crore was subsequently raised to ₹ Five crores.

To regulate and control bank finance, the Reserve Bank of India has been issuing directives and guidelines to the banks from time to time on the recommendations of certain specially constituted committees entrusted with the task of examining various aspects of bank finance to industry. We have discussed below the important findings and recommendations of the following committees.

1. Dehejia committee
2. Tandon Committee
3. Chore Committee
4. Marathe Committee
5. Chakravarty Committee
6. Kannan Committee Report

1. Dehejia Committee Report

National Credit Council constituted a committee under the chairmanship of Shri V. T. Dehejia in 1968 to “determine the extent to which credit needs of industry and trade are likely to be inflated and how such trends could be checked” and to go into establishing some norms for lending operations by commercial banks. The committee was of the opinion that there was also a tendency to divert short-term credit for long-term assets. Although committee was of the opinion that it was difficult to evolve norms for lending to industrial concerns, the committee recommended that the banks should finance industry on the basis of a study of borrower’s total operations rather than security basis alone. The committee further recommended that the total credit requirements of the borrower should be segregated into “Hard Core” and “short – term” component. The “hard core” component which should represent the minimum level of inventories which the industry was required to hold for maintaining a given level of production should be put on a formal term loan basis and subject to repayment schedule. The committee was also of the opinion that generally a customer should be required to confine his dealings to one bank only.

2. Tandon Committee Report

Reserve Bank of India set up a committee under the chairmanship of Shri P. L. Tandon in July 1974. The terms of reference of the committee were:
• To suggest guidelines for commercial banks to follow up and supervise credit from the point of view of ensuring proper end use of funds and keeping a watch on the safety of advances;
• To suggest the type of operational data and other information that may be obtained by banks periodically from the borrowers and by the Reserve Bank of India from the leading banks;

• To make suggestions for prescribing inventory norms for the different industry, both in private and public sectors and indicate the broad criteria for deviating from these norms;

• To make recommendations regarding resources for financing the minimum working capital requirements;

• To suggest criteria regarding satisfactory capital structure and sound financial basis in relation to borrowings;

• To make recommendations as to whether the existing pattern of financing working capital requirements by cash credit/overdraft system etc., requires to be modified, if so, to suggest suitable modifications.

The committee was of the opinion that (i) bank credit is extended on the amount of security available and not according to the level of operations of the customer, (ii) bank credit instead of being taken as a supplementary to other sources of finance is treated as the first source of finance. Although the committee recommended the continuation of the existing cash credit system, it suggested certain modifications so as to control the bank finance. The banks should get the information regarding the operational plans of the customer in advance so as to carry a realistic appraisal of such plans and the banks should also know the end-use of bank credit so that the finances are used only for purposes for which they are lent.

The recommendations of the committee regarding lending norms have been suggested under three alternatives. According to the first method, the borrower will have to contribute a minimum of 25% of the working capital gap from long-terms funds, i.e., owned funds and term borrowing; this will give a minimum current ratio of 1:17:1. Under the second method the
borrower will have to provide a minimum of 25% of the total current assets from long-term funds; this will give a minimum current ratio of 1:33:1. In the third method, the borrower’s contribution from long-term funds will be to extent core current assets and a minimum of 25% of the balance current assets, thus strengthening the current ratio further.

3. **Chore Committee Report**

The Reserve Bank of India in March, 1979 appointed another committee under the chairmanship of Shri K.B. Chore to review the working of cash credit system in recent years with particular reference to the gap between sanctioned limits and the extent of their utilization and also to suggest alternative type of credit facilities which should ensure greater credit discipline. The important recommendations of the committee are as follows:

- The banks should obtain quarterly statements in the prescribed format from all borrowers having working capital credit limits of ₹ 50 lacs and above.
- The banks should undertake a periodical review of limits of ₹ 10 lacs and above.
- The banks should not bifurcate cash credit accounts into demand loan and cash credit components.
- If a borrower does not submit the quarterly returns in time the banks may charge penal interest of one per cent on the total amount outstanding for the period of default.
- Banks should discourage sanction of temporary limits by charging additional one percent interest over the normal rate on these limits.
- The banks should fix separate credit limits for peak level and non-peak level, wherever possible.
- Banks should take steps to convert cash credit limits into bills limits for financing sales.
4. Marathe Committee Report

The Reserve Bank of India, in 1982, appointed a committee under the chairmanship of Marathe to review the working of Credit Authorisation Scheme (CAS) and suggest measures for giving meaningful directions to the credit management function of the Reserve Bank. The recommendations of the committee have been accepted by the Reserve Bank of India with minor modifications. The principal recommendations of the Marathe Committee include:

• The committee has declared the Third Method of Lending as suggested by the Tandon Committee to be dropped. Hence, in future, the banks would provide credit for working capital according to the Second Method of Lending.

• The committee has suggested the introduction of the “Fast Track Scheme” to improve the quality of credit appraisal in banks. It recommended that commercial banks can release without prior approval of the Reserve Bank 50% of the additional credit required by the borrowers (75% in case of export oriented manufacturing units) where the following requirements are fulfilled:

  ➢ The estimates/projections in regard to production, sales, chargeable current assets, other current assets, current liabilities other than bank borrowings, and net working capital are reasonable in terms of the past trends and assumptions regarding most likely trends during the future projected period.

  ➢ The classification of assets and liabilities as “current” and “non-current” is in conformity with the guidelines issued by the Reserve Bank of India.

  ➢ The projected current ratio is not below 1:33:1.

  ➢ The Borrower has been submitting quarterly information and operating statement (Form I, II and III) for the past six months
Conceptual Framework of NPA

within the prescribed time and undertakes to do the same in future also.

➢ The borrower undertakes to submit to the bank his annual account regularly and promptly. Further, the bank is required to review the borrower’s facilities at least once in a year even if the borrower does not need enhancement in credit facilities.

5. **Chakravarty Committee Report**

The Reserve Bank of India appointed another committee under the chairmanship of Sukhamoy Chakravarty to review the working of the monetary system of India. The committee submitted its report in April, 1985. The committee made two major recommendations in regard to the working capital finance:

- **Penal Interest for Delayed Payments.** The committee has suggested that the government must insist that all public sector units, large private sector units and government departments must include penal interest payment clause in their contracts for payments delayed a specified period. The penal interest may be fixed at 2 percent higher than the minimum lending rate of the supplier’s bank.

- **Classification of Credit Limit Under Three Different Heads.** The committee further suggested that the total credit limit to be sanctioned to a borrower should be considered under three different heads: (1) Cash Credit I to include supplies to government, (2) Cash Credit II to cover special circumstances, and (3) Normal Working Capital Limit to cover the balance credit facilities. The interest rates proposed for the three heads are also different. Basic lending rate of the bank should be charged to Cash Credit II, and the Normal Working Capital Limit be charged as below:

  (a) For Cash Credit Portion: Maximum prevailing lending rate of the bank.
(b) For Bill Finance Portion: 2% below the basis lending rate of
the bank.
(c) For Loan Portion: The rate may vary between the minimum
and maximum lending rate of the bank.

6. Kannan Committee Report

In view of the ongoing liberalization in the financial sector, the Indian
Banks Association (IBA) constituted a committee headed by Shri K. Kannon,
Chairman and Managing Director of Bank of Baroda to examine all the
aspects of working capital finance including assessment of maximum
permissible bank finance (MPBF). The Committee submitted its report on
25th February, 1997. It recommended that the arithmetical rigidities imposed
by Tandon Committee (and reinforced by Chore Committee) in the form of
MPBF computation so far been in regard to evolving its own system of
working capital finance for a faster credit delivery so as to serve various
borrowers more effectively. It also suggested that line of credit system (LCS),
as prevalent in many advanced countries, should replace the existing system
of assessment/fixation of sub-limits within total working capital requirements.
The committee proposed to shift emphasis from the Liquidity Level Lending
(Security Based Lending) to the Cash Deficit Lending called Desirable Bank
Finance (DBF). Some of the recommendations of the committee have already
been accepted by the Reserve Bank of India with suitable modifications. The
important measures adopted by RBI in this respect are given below:

- Assessment of working capital finance based on the concept of MPBF,
as recommended by Tandon Committee has been withdrawn. The
banks have been given full freedom to evolve an appropriate system
for assessing working capital needs of the borrowers within the
guidelines and norms already prescribed by Reserve Bank of India.

- The turnover method may continue to be used as a tool to assess the
requirements of small borrowers. For small scale and tiny industries,
this method of assessment has been extended up to total credit limits of rupees 2 crore as against existing limit of 1 crore.

- Banks may now adopt Cash Budgeting System for assessing the working capital finance in respect of large borrowers.
- The banks have also been allowed to retain the present method of MPBF with necessary modification or any other system as they deem fit.
- Banks should lay down transparent policy and guidelines for credit dispensation in respect of each broad category of economic activity.
- The RBI’s instructions relating to directed, credit, quantitative limits on lending and prohibitions of credit shall continue to be in force. The present reporting system to RBI under the Credit Monitoring Arrangement (CMA) shall also continue in force.

**Narasimham Committee**

In modern era, the process of globalization has imparted its huge influence on the Indian banking industry. In the post liberalization period, there was an ardent need to bring about structural changes in the Indian banking system so as to make it economically viable and competitively strong. Therefore, the Government of India set up a High Level Committee with Mr. M. Narasimham, a former Governor of RBI, as chairman to examine all respects relating to the structure, organization, functions and procedures of the financial system. Based on the recommendations of the Narasimham Committee, the first phase of Financial Sector Reforms was initiated in 1991. The second phase of Banking Sector Reforms was initiated in 1998. The major reform measures are given below:

(i) Progressive reduction in Cash Reserve Ratio and Statutory Liquidity Ratio.
(ii) Phasing out concessional rate of interest to priority sectors.
(iii) Deregulation of interest rates.
(iv) Introduction of prudential norms relating to capital adequacy, asset qualification, provisioning and income recognition.

(v) Setting up of new private sector banks with a view to inducing greater competition and for improving operational efficiency of the banking system.

(vi) Entry of foreign banks to open offices in India either as branches or as subsidiaries.

(vii) Setting up of Lok Adalats, Debt Recovery Tribunals, Asset Reconstruction Companies, Settlement Advisory Committee, Corporate Debt Restructuring Mechanism etc. for quicker recovery / restructuring. Promulgation of Securitization and Reconstruction of Financial Assets and Enforcement of Securities Interest (SARFAESI) Act and its subsequent amendment to ensure creditor rights.

(viii) Establishment of the Board for Financial Supervision as the apex supervising authority for commercial banks, financial institutions and non-banking financial companies.

(ix) Introduction of CAMELS supervisory rating system, move towards risk-based supervision, consolidated supervision of financial conglomerates, strengthening of off-site surveillance through control returns.

(x) Recasting of the role of statutory auditors, increased internal control through strengthening of internal audit.

(xi) Setting up of INFINET as the communication backbone for the financial sector, introduction of Negotiated Dealing System (NDS) for screen-based trading in government securities and Real Time Gross Settlement (RTGS) System etc.

3.11 Capital Adequacy Ratio (CAR)

Capital adequacy ratio is the ratio which protects banks against excess leverage, insolvency and keeps them out of difficulty. It is defined as the ratio of banks capital in relation to its current liabilities and risk weighted assets.
Risk weighted assets is a measure of amount of banks assets, adjusted for risks. An appropriate level of capital adequacy ensures that the bank has sufficient capital to expand its business, while at the same time its net worth is enough to absorb any financial downturns without becoming insolvent. It is the ratio which determines banks capacity to meet the time liabilities and other risks such as credit risk, market risk, operational risk etc. As per RBI norms, Indian SCBs should have a CAR of 9% i.e., 1% more than stipulated Basel norms while public sector banks are emphasized to keep this ratio at 12%. Capital adequacy ratio is defined as:

\[
\text{CAR} = \frac{\text{Tier I + Tier II + Tier III capital (capital funds)}}{\text{Risk Weighted Assets (RWA)}}
\]

Capital adequacy ratio is the ratio which determines the bank's capacity to meet the time liabilities and other risks such as credit risk, operational risk etc. In the most simple formulation, a bank's capital is the "cushion" for potential losses, and protects the bank's depositors and other lenders. Banking regulators in most countries define and monitor CAR to protect depositors, thereby maintaining confidence in the banking system.\(^6\)

CAR is similar to leverage; in the most basic formulation, it is comparable to the inverse of debt-to-equity leverage formulations (although CAR uses equity over assets instead of debt-to-equity; since assets are by definition equal to debt plus equity, a transformation is required). Unlike traditional leverage, however, CAR recognizes that assets can have different levels of risk.

**Risk weighting**

Since different types of assets have different risk profiles, CAR primarily adjusts for assets that are less risky by allowing banks to "discount" lower risk assets. The specifics of CAR calculation vary from country to

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country, but general approaches tend to be similar for countries that apply the Basel Accords. In the most basic application, government debt is allowed a 0% "risk weighting" that is, they are subtracted from total assets for purposes of calculating the CAR.

**Risk Weighted Assets**

Risk weighted assets mean fund based assets such as cash, loans, investments and other assets. Degrees of credit risk expressed as percentage weights have been assigned by the national regulator to each such assets. Capital Adequacy Ratio is calculated based on the assets of the bank. The values of bank's assets are not taken according to the book value but according to the risk factor involved. The value of each asset is assigned with a risk factor in percentage terms.

**Components of Capital**

**Tier I Capital**: The elements of Tier I capital includes paid-up capital (ordinary shares), statutory reserves, disclosed free reserves, Perpetual Non-cumulative Preference Shares (PNCPs) subject to laws in force from time to time, Innovative Perpetual Debt Instruments (IPDI) and capital reserves representing surplus arising out of sale proceeds of asset. It is generally referred as the core capital which absorbs losses without a bank required to cease trading and thus provides more of protection to its depositors.

**Tier II Capital**: The elements of Tier II capital include undisclosed reserves, revaluation reserves, general provisions and loss reserves, hybrid capital instruments, subordinated debt and investment reserve account. It is the supplementary capital which absorbs losses in the event of winding up and thus provides lesser degree of protection to its depositors. Tier II items qualify as regulatory capital to the extent that they absorb losses arising from bank’s activities.
Tier III Capital: This is arranged to meet part of market risk, viz. changes in interest rate, exchange rate, equity prices, commodity prices, etc. To quantify as Tier III capital, assets must be limited to 250% of a bank’s Tier I capital, be unsecured subordinated and have a minimum maturity of 2 years.

The Need for Minimum Capital Requirement

The capital which banks hold with themselves as required by financial regulator is known as minimum capital requirement. Banks exposed to various types of risks while granting loans and advances to various sectors. In order to absorb any losses which banks face from its business, it is imperative that banks should have sufficient capital. If banks have adequate capital, then it can protect its depositors from unforeseen contingencies as well promotes the stability and efficiency of financial systems.

BASEL COMMITTEE

The Basel Committee on Banking Supervision (BCBS) is a committee of banking supervisory authorities which published the Basel Accords i.e., rules regarding capital requirements. BCBS is a comprehensive set of reform measures to strengthen the regulation, supervision and risk management of the banking sector. In 1988, BCBS introduced the capital measurement system commonly referred to as Basel I. In 2004, BCBS published Basel II guidelines which were the refined, reformed and more complex version of Basel I. While Basel I focus only on credit risk, Basel II includes market and operational risks besides credit risks. Basel III released in December, 2010 which lay more focus on quality, consistency and transparency of the capital base. India adopted Basel I guidelines in 1999 while Basel II guidelines were implemented in phases by 2009. The Basel III capital regulation has been implemented in India from April 1, 2013 in phases and will be fully implemented as on March 31, 2018.
BASEL I

A set of international banking regulations put forth by the Basel Committee on Bank Supervision, which set out the minimum capital requirements of financial institutions with the goal of minimizing credit risk. Banks with an international presence are required to hold capital equal to 8% of their riskweighted assets (RWA)- At least, 4% in Tier I Capital (Equity Capital + retained earnings) and more than 8% in Tier I and Tier II Capital.

The first accord was the Basel I. It was issued in 1988 and focused mainly on credit risk by creating a bank asset classification system. This classification system grouped a bank's assets into five risk categories:

0%  - Cash, Central bank and Government debt and any OECD Government debt
0%, 10%, 20% or 50% - public sector debt
20%  - Development bank debt, OECD bank debt, OECD securities firm debt, non-OECD bank debt (under one year maturity) and non-OECD public sector debt, cash in collection
50%  - Residential Mortgages
100% - Private Sector debt, Non-OECD bank debt (maturity over a year), real estate, plant and equipment, capital instruments issued at other banks

The bank must maintain capital (Tier 1 and Tier 2) equal to at least 8% of its risk-weighted assets. For example, if a bank has risk-weighted assets of ₹100 crore, it is required to maintain capital of at least ₹ 8 crore.

The Purpose of Basel I

In 1988, the Basel I Capital Accord was created. The general purpose was to:
1. Strengthen the stability of international banking system.
2. Set up a fair and a consistent international banking system in order to decrease competitive inequality among international banks.
The basic achievement of Basel I has been to define bank capital and the so-called bank capital ratio. In order to set up a minimum risk-based capital adequacy applying to all banks and governments in the world, a general definition of capital was required. Indeed, before this international agreement, there was no single definition of bank capital. The first step of the agreement was thus to define it.

Basel I defines capital based on two tiers:

1. **Tier 1 (Core Capital):** Tier 1 capital includes stock issues (or shareholders equity) and declared reserves, such as loan loss reserves set aside to cushion future losses or for smoothing out income variations.

2. **Tier 2 (Supplementary Capital):** Tier 2 capital includes all other capital such as gains on investment assets, long-term debt with maturity greater than five years and hidden reserves (i.e. excess allowance for losses on loans and leases). However, short-term unsecured debts (or debts without guarantees), are not included in the definition of capital.

Credit Risk is defined as the risk weighted asset (RWA) of the bank, which are banks assets weighted in relation to their relative credit risk levels. According to Basel I, the total capital should represent at least 8% of the bank's credit risk (RWA). In addition, the Basel agreement identifies three types of credit risks:

- The on-balance sheet risk
- The trading off-balance sheet risk. These are derivatives, namely interest rates, foreign exchange, equity derivatives and commodities.
- The non-trading off-balance sheet risk. These include general guarantees, such as forward purchase of assets or transaction-related debt assets.
Pitfalls of Basel I

Basel I Capital Accord has been criticized on several grounds. The main criticisms include the following:

**Limited differentiation of credit risk**: There are four broad risk weightings (0%, 20%, 50% and 100%), based on an 8% minimum capital ratio.

**Static measure of default risk**: The assumption that a minimum 8% capital ratio is sufficient to protect banks from failure does not take into account the changing nature of default risk.

**No recognition of term-structure of credit risk**: The capital charges are set at the same level regardless of the maturity of a credit exposure.

**Simplified calculation of potential future counterparty risk**: The current capital requirements ignore the different level of risks associated with different currencies and macroeconomic risk. In other words, it assumes a common market to all actors, which is not true in reality.

**Lack of recognition of portfolio diversification effects**: In reality, the sum of individual risk exposures is not the same as the risk reduction through portfolio diversification. Therefore, summing all risks might provide incorrect judgment of risk. A remedy would be to create an internal credit risk model – for example, one similar to the model as developed by the bank to calculate market risk. This remark is also valid for all other weaknesses.

These listed criticisms have led to the creation of a new Basel Capital Accord, known as Basel II, which added operational risk and also defined new calculations of credit risk. Operational risk is the risk of loss arising from human error or management failure. Basel II Capital Accord was implemented in 2007.
BASEL II

Basel II is the second of the Basel Accords, (now extended and partially superseded by Basel III), which are recommendations on banking laws and regulations issued by the Basel Committee on Banking Supervision. Basel II, initially published in June 2004[7], was intended to amend international standards that controlled how much capital banks need to hold to guard against the financial and operational risks banks face. These rules sought to ensure that the greater the risk to which a bank is exposed, the greater the amount of capital the bank needs to hold to safeguard its solvency and economic stability. Basel II attempted to accomplish this by establishing risk and capital management requirements to ensure that a bank has adequate capital for the risk the bank exposes itself to through its lending, investment and trading activities. One focus was to maintain sufficient consistency of regulations so to limit competitive inequality amongst internationally active banks.

Basel II was implemented in the years prior to 2008, and was only to be implemented in early 2008 in most major economies; that year's Financial crisis intervened before Basel II could become fully effective. As Basel III was negotiated, the crisis was top of mind and accordingly more stringent standards were contemplated and quickly adopted in some key countries including in Europe and the USA.

Objective
The final version aims at:

1. Ensuring that capital allocation is more risk sensitive.
2. Enhance disclosure requirements which would allow market participants to assess the capital adequacy of an institution.

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3. Ensuring that credit risk, operational risk and market risk are quantified based on data and formal techniques.
4. Attempting to align economic and regulatory capital more closely to reduce the scope for regulatory arbitrage.

While the final accord has at large addressed the regulatory arbitrage issue, there are still areas where regulatory capital requirements will diverge from the economic capital.

**The accord in operation: Three pillars**

Basel II uses a "three pillars" concept –

1. Minimum capital requirements (addressing risk),
2. Supervisory review and

**The First Pillar: Minimum capital requirements**

The first pillar deals with maintenance of regulatory capital calculated for three major components of risk that a bank faces: credit risk, operational risk, and market risk. Other risks are not considered fully quantifiable at this stage.

1. The credit risk component can be calculated in three different ways of varying degree of sophistication, namely standardized approach, Foundation IRB, Advanced IRB and General IB2 Restriction. IRB stands for "Internal Rating Based Approach".
2. For operational risk, there are three different approaches – basic indicator approach or BIA, standardized approach or TSA, and the internal measurement approach (an advanced form of which is the advanced measurement approach or AMA).
3. For market risk the preferred approach is VaR (value at risk).
As the Basel II recommendations are phased in by the banking industry it will move from standardised requirements to more refined and specific requirements that have been developed for each risk category by each individual bank.

The Second Pillar: Supervisory review

This is a regulatory response to the first pillar, giving regulators better 'tools' over those previously available. It also provides a framework for dealing with systemic risk, pension risk, concentration risk, strategic risk, reputational risk, liquidity risk and legal risk, which the accord combines under the title of residual risk. Banks can review their risk management system. The Internal Capital Adequacy Assessment Process (ICAAP) is a result of Pillar 2 of Basel II accords.

The Third Pillar: The Market Discipline

This pillar aims to complement the minimum capital requirements and supervisory review process by developing a set of disclosure requirements which will allow the market participants to gauge the capital adequacy of an institution. Market discipline supplements regulation as sharing of information facilitates assessment of the bank by others, including investors, analysts, customers, other banks, and rating agencies, which leads to good corporate governance. The aim of Pillar 3 is to allow market discipline to operate by requiring institutions to disclose details on the scope of application, capital, risk exposures, risk assessment processes, and the capital adequacy of the institution. It must be consistent with how the senior management, including the board, assess and manage the risks of the institution.

Basel II and the global financial crisis

The role of Basel II, both before and after the global financial crisis, has been discussed widely. While some argue that the crisis demonstrated
weaknesses in the framework, others have criticized it for actually increasing the effect of the crisis. In response to the financial crisis, the Basel Committee on Banking Supervision published revised global standards, popularly known as Basel III. The Committee claimed that the new standards would lead to a better quality of capital, increased coverage of risk for capital market activities and better liquidity standards among other benefits.

**BASEL III**

Basel III (or the Third Basel Accord) is a global, voluntary regulatory framework on bank capital adequacy, stress testing and market liquidity risk. It was agreed upon by the members of the Basel Committee on Banking Supervision in 2010–11, and was scheduled to be introduced from 2013 until 2015; However, changes from 1 April 2013 extended implementation until 31 March 2018 and again extended to 31 March 2019. The third installment of the Basel Accords (see Basel I, Basel II) was developed in response to the deficiencies in financial regulation revealed by the financial crisis of 2007–08. Basel III was supposed to strengthen bank capital requirements by increasing bank liquidity and decreasing bank leverage. Unlike Basel I and Basel II, which focus primarily on the level of bank loss reserves that banks are required to hold, Basel III focuses primarily on the risk of a run on the bank by requiring differing levels of reserves for different forms of bank deposits and other borrowings. Therefore Basel III does not, for the most part, supersede the guidelines known as Basel I and Basel II; rather, it will work alongside them.

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9 "How New Banking Rules Could Deepen the U.S Crisis" (http://www.businessweek.com/magazine/content/08_17/b4081083014665.htm). Bloomberg.com.
Key principles:

Capital requirements

The original Basel III rule from 2010 required banks to hold 4.5% of common equity (up from 2% in Basel II) of risk weighted assets (RWAs). Since 2015, a minimum Common Equity Tier 1 (CET1) ratio of 4.5% must be maintained at all times by the bank.\textsuperscript{[12]} The minimum Tier 1 capital increases from 4% in Basel II to 6%, applicable in 2015, over RWAs.\textsuperscript{[13]} This 6% is composed of 4.5% of CET1, plus an extra 1.5% of Additional Tier 1 (AT1).

Furthermore, Basel III introduced two additional capital buffers:

- A mandatory "capital conservation buffer", equivalent to 2.5% of riskweighted assets. Considering the 4.5% CET1 capital ratio required, banks have to hold a total of 7% CET1 capital, from 2019 onwards.

- A "discretionary countercyclical buffer", allowing national regulators to require up to an additional 2.5% of capital during periods of high credit growth. The level of this buffer ranges between 0% and 2.5% of RWA and must be met by CET1 capital.

Leverage ratio

Basel III introduced a minimum "leverage ratio". This is a non-risk based leverage ratio and is calculated by dividing Tier 1 capital by the bank's average total consolidated assets (sum of the exposures of all assets and non balance sheet items).\textsuperscript{[14]} The banks are expected to maintain a leverage ratio in excess of 3% under Basel III. In July 2013, the U.S. Federal Reserve announced that the minimum Basel III leverage ratio would be 6% for 8 Systemically important financial institution (SIFI) banks and 5% for their insured bank holding companies.\textsuperscript{[15]}

\textsuperscript{[12]} http://www.bis.org/bcbs/basel3/basel3_phase_in_arrangements.pdf  
\textsuperscript{[14]} http://www.allbanking-solutions.com/banking-tutor/basel-iii-accord-basel-3-norms.shtml  
Liquidity requirements
Basel III introduced two required liquidity ratios.\textsuperscript{[16]}

- The "Liquidity Coverage Ratio" was supposed to require a bank to hold sufficient high quality liquid assets to cover its total net cash outflows over 30 days.

The Net Stable Funding Ratio was to require the available amount of stable funding to exceed the required amount of stable funding over a one year period of extended stress.

\textsuperscript{16} http://www.bis.org/publ/bcbs189.pdf