



Relevance and Applicability of Cost Management in Banking Sector

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I. Introduction

Banking is the lifeline of the economy of the country. The health of the banking sector is closely integrated to the health of the economy. The economy is traditionally subjected to the boom and recessionary cycles at infrequent intervals. During the period of boom in the economy, the business of banking becomes relatively safer, profitable and robust. Conversely, during the period of recession, the business of banking undergoes stress with soaring impaired assets and reduced profitability. It is during the recessionary period the capital of the bank also comes under stress which may even lead to failure of banking institutions which are not adequately capitalized. Like any other business, the capital carries a cost in banking sector too. The size of capital is also an important determinant of the size of asset portfolio of the banks as the banks are required to maintain capital with a minimum specified proportion of Risk Weighted Assets of the bank.

The core business of banks is to accept the deposits for the purpose of lending. The deposits being the resources, carry a cost while the lending constitutes the assets of the banks and hence a source of income. Since the banks are commercial organisations, it is expected that their operations are profitable. To achieve this end, the lending operations should be so undertaken that the interest earned on loans and advances carries a healthy spread over the interest payable on deposits. The efficient use of funds and the efficiency of operations also significantly impact the profitability of the banks. Since money lending is a risky business, it is likely that some portion of loans and advances given by the banks to its constituents will become bad and doubtful of recovery. Such bad and doubtful assets do not earn an income for the banks and necessitate loan loss provision to be made thereby causing a dent to the profit and profitability of the banks.

Sustainability, Competitiveness, Liquidity and Profitability are the most widely employed general indicators of the performance of banks. In this background, it becomes imperative for the banks to undertake a cost-benefit analysis of their activities, people, processes, products, infrastructure etc., to help determine the areas which are profitable and the areas which are less profitable or unprofitable. Such an exercise will enable the banks to undertake eliminating the wasteful costs, discontinue the loss making business propositions and lay more focus on profitable products and services. However the concept of cost management in banking sector in India has not assumed the required level of significance for obvious reasons that the country having a large population with lower banking coverage, the focus continues to be on bringing the unbanked population to the banking fold. It led to the social banking continuing to occupy a place of prominence as the sector is predominantly owned and controlled by the Government. India being a member of G-20 has subscribed to Capital Adequacy framework prescribed by Basel Committee for Banking Supervision. The Capital Adequacy framework aims at strengthening the shock absorbing capabilities of the banks. But it also enhances the cost of capital, impacts the interest rates and acts as a check on business expansion. It would therefore be appropriate to study the concept of cost management in banking sector, more particularly in the following areas:

II. An Overview of Cost Management in Banking Sector

The concept of banking business in India over the decades, more so after 1992, has changed significantly. It's no longer merely accepting deposits and lending to the needy. With the pressure on net interest margin, banks are forced to look for earning from non interest income through commissions, brokerages, profits from investments etc to remain profitable. Also the growing competition and complexity of the changing banking situations are compelling Banks for innovating complex products, adapting new channels for such innovative product deliveries and following new business processes investing huge capital resources.

Banks earn profit when its interest and operational expenses are less than its interest and non interest income through its services and investments. Any business for that matter survives only if it earns profits. Banking is no exception. Although Banking is considered as a bloodline of economy of a nation, to provide a reasonable return for the above-cited huge capital expenditures and to remain servicing any economy, profitability of the banks is a must. To remain profitable, '**efficient and effective cost management**' of its entire operations is the need of the day for the banking sector.

We will examine briefly the applicability of the concept of all the above strategies of cost control and cost reduction in the banks and there from, we will examine the applicability of these strategies in the various business and non business lines of banks, viz., funds management, risk management, risk based internal audit, cost competitiveness in bank branches, non performing assets management, to name a few.

Cost control in banks will be more of a strategic planning exercise, whereas, cost reduction will be both strategic and tactical. The figure below gives an overview of the areas where cost reduction is usually undertaken by banks. While introducing cost control strategies, banks would be taking steps to identify their major cost centers, identify major types of cost within each cost centre and choose the costs to focus on first. It would start from their business objectives, where they would establish the 'standard costs' for achieving the objectives, establish realistic 'budgeted costs' based on actual past experiences, record the actual costs and compare them with the standard and budgeted costs and periodically review the entire process. The tentative time scale for cost controls would be:

Some of the common strategies in a retail bank would be vigorous cross and up selling of bank and financial products, redeployment of staff wherever possible, focus on process improvement, selecting innovative and cost effective ways to deliver the services to the customers, focus more on ATM's and Internet Banking facilities and reduce the number of brick and mortar branches, to name a few.

Banks financial institutions need to take a more strategic approach by viewing cost-cutting as part of a broader efficiency effort. Balancing short-term tactical cost reductions with longer-term strategic cost initiatives will leave banks much better positioned for future high performance. This approach can yield cost reductions up to 20 percent, help variabilize a high fixed-cost base.

The cost-cutting and efficiency agenda will vary among regions and from bank to bank. For institutions most affected by the crisis, particularly those in North America and the United Kingdom, tactical cost reductions are the immediate priority. On the other hand, many banks in the Asia-Pacific region are pursuing a broader efficiency agenda focused both on decreasing costs and building capabilities to support growth. To achieve high performance, banks need the right balance between short-term tactical cost decreases such as headcount reductions, and longer-term strategic cost

initiatives such as streamlining processes or outsourcing certain noncore functions such as learning, human resources or finance and accounting. Banks that pursue only traditional cost reduction programs will achieve cost benefits quickly. But in the long run, that approach will leave them unable to sustain those cost reductions, resulting in a competitive disadvantage.

Suppose Bank A consolidates multiple mortgage processing centers in an effort to quickly extract costs. Bank B, its competitor, also consolidates its processing centers and in addition, reengineers its lending processes and migrates them to a standard platform, and enters into a business process outsourcing arrangement for post-closing functions, which enables a variable cost base. When a stronger market returns, Bank B's costs will remain in check, but Bank A's are likely to rise again. By balancing short- and long-term objectives, Bank B has achieved competitive advantage over its rival and is on the path to high performance. Leading banks realize the importance of taking out costs and investing the savings in strategic programs that will help them bring products to market more quickly, interact with customers more effectively and gain competitive advantage.

Traditional Tactics	Differentiating Tactics
Cut costs	Cut the right costs
Conserve cash, and eliminate / delay discretionary spending	Direct discretionary spending to only those programs that add value
Forecast more often	Continue an accurate and meaningful forecasting process
Reduce headcount	Target headcount reductions at specific sub-organizations and / or low performers
Take advantage of the downturn	Consider adding specific headcount at lower rates than would

III. Cost of Fund Management in Banks

A study reveals that the overall cost of funds, in terms of cost of deposits, as well as borrowings for the banking industry, as a whole, has maintained a decreasing trend. High Performing Banks (HPBs) have relatively performed better than Moderately Performing Banks (MPBs) and Low Performing Banks (LPBs) in reducing both the costs. This is attributed to HPBs ability to get funds in the call money market by exploiting the opportunities of soft interest rates.

Similarly, the analysis of components of return on funds reveals that both the return on advances, as well as investments, has maintained a decreasing trend. Among the three segments, HPBs have relatively improved their performance in return on investments. The return on advances has shown a decreasing trend during the first six years (2000-2007). Interestingly, the LPBs have registered a higher return than the other segments.

The declining trend in the rate of investments and advances leads to squeezing of the spread. This thin margin between cost and return of funds can be attributed to the deregulation of interest rates as

well as the competition among the various banks. With regard to funding of operations, it is evident that the banking industry has demonstrated its preference for deposits.

Further, banks have shown consistent performance in deposit mobilization as indicated by the ratio of total deposits to total liabilities. Among the three segments, the LPBs have maintained a relatively higher ratio of deposits to total liabilities. With regard to utilization of deposits, the study reveals that more funds are put in credit business than investments. The average CD ratio and investments to deposits ratios are 55% and 45%, respectively. In the light of these findings, the banks need to mobilize funds by exploiting the opportunities of soft interest rates in the call market. Further, the excessive investments in low earnings SLR securities should be diverted toward relatively profitable loans and advances. This could enable banks to maintain the standard credit deposit ratio of 60% against their current ratio of 55%. In view of a declining spread, the banks need to explore the non-interest income generating activities.

IV. Performance of Indian Banks in terms of Operating Efficiency measured by Cost to Income Ratio

During 2011-12, operating efficiency of banks in terms of cost-to-income ratio (Calculated as operating expenses as percentage of total income) witnessed an improvement. The other efficiency indicator, NIM, dipped marginally, which implied reduction in cost of financial intermediation. Spread of banks narrowed due to increased cost of funds.

During 2011-12, both cost as well as return on funds increased for the banks. However, the spreads narrowed due to the higher increase in cost of funds. At the bank group level, cost of funds was lower in the case of foreign banks, partly because low cost CASA deposits formed a higher proportion of total deposits for foreign banks.

Bank group/year	Cost of Deposits	Cost of Borrowings	Cost of Funds	Return on Funds	Spread
PSU Banks					
2010-11	5.12	2.28	4.89	8.41	3.52
2011-12	6.36	2.81	6.06	9.52	3.46
Old Private Sector Banks					
2010-11	5.63	2.24	5.50	8.98	3.48
2011-12	7.24	4.34	7.10	10.47	3.37
New Private Sector Banks					
2010-11	4.73	2.33	4.27	8.42	4.15
2011-12	6.14	2.81	5.45	9.46	4.01
Foreign					

Banks					
2010-11	3.30	2.56	2.56	8.11	5.00
2011-12	4.34	2.60	3.83	8.91	5.08
All SCBs					
2010-11	5.01	2.33	4.73	8.42	3.69
2011-12	6.28	2.81	5.90	9.52	3.62

Notes: 1. Cost of Deposits = Interest paid on deposits/Average of current and previous year's deposits.

2. Cost of Borrowings = Interest paid on borrowings/Average of current and previous year's borrowings.

3. Cost of Funds = (Interest paid on deposits + Interest paid on borrowings)/(Average of current and previous year's deposits plus borrowings).

4. Return on Funds = (Interest earned on advances + interest earned on investments) / (Average of current and previous year's advances plus investments).

[Source: RBI Report Nov 2012]

V. Cost of Risk Based Internal Audit

What is RBIA?

The Institute of Internal Auditors defines Risk Based Internal Auditing (RBIA) as:

- a methodology that links internal auditing to an organisation's overall risk management framework
- that allows internal audit to provide assurance to the board that risk management processes are managing risk effectively, in relation to the risk appetite

Traditional Internal Audit Approach vs Risk Based Internal Audit Approach

Traditional IA Approach	Risk Based IA Approach
IA resources are spread over all business units / activities	More efficient use of IA resources by concentrating on Risky units / areas
Disagreement with the BU management on the importance of the findings raised by IA	The importance of risks is established during the Risk Assessment phase and in agreement between IA the BU management
Disagreement with the business unit management over the action plans leading to delays in implementation	Facilitate consensus with line management on the needed action plans thus improving timely and effective implementation of corrective measures

How much should RBIA cost?

As with all corporate service budgets, estimating risk based internal audit cost is often a sensitive area. However, the first important factor in which the cost of RBIA depends on the answer to the question how much RBIA is required. It depends on the regulator and the size of the business and the risk exposure of the banks. Banks working in an environment with high level of regulation, with wide geographical coverage and that conduct different businesses will require more RBIA than others with less regulation, smaller geographical coverage and lesser risk exposures. The factors which will influence the cost of RBIS in a bank will be mainly:

- Bank risk management maturity
- Productivity and RBIA efficiency
- Scope and expectation of audit committee (largely driven in India by the regulator, the Reserve Bank of India), management and other stakeholders
- Unique and specific bank risks
- Business model complexity (State Bank of India's business model is definitely more complex than Corporation bank, though both of them are PSU banks)

Such factors need to be considered before arriving at a budget for the RBIA of the bank.

The process to provide a budget for RBIA of a bank would include:

- Conduct a bank level risk assessment and evaluate the result
- Understand RBIA investment made by comparable banks
- The board and management's preferences
- Impact of past, present and likely future risk events

VI. Risk Management in Banks

Banks in the process of financial intermediation are confronted with various kinds of financial and non-financial risks viz., credit, interest rate, foreign exchange rate, liquidity, equity price, commodity price, legal, regulatory, reputational, operational, etc. These risks are highly interdependent and events that affect one area of risk can have ramifications for a range of other risk categories. Thus, top management of banks should attach considerable importance to improve the ability to identify, measure, monitor and control the overall level of risks undertaken.

Cost Implications for Setting up Risk Management System and Managing Systems

The Risk Management Systems to be set up for managing the various risks arising out banking business will involve incurring costs at various levels, viz.

(i) Setting up of Risk Management Systems for Credit, Market, Liquidity and Operational risks, which will in turn need payment of market driven compensation packages to the staff

(ii) Cost of IT systems needs to be developed for generating MIS and other reports for monitoring risks;

(iii) Cost of developing or outsourcing various risk management models and validating them on a continuous basis;

(iv) Cost of integrating the entire bank with a suitable IT system which will enable the bank to be always with the time to receive information about the various risks emanating out of the banking business;

(v) Cost of training and updating the entire work force in the Risk Management Division along with key staff at various business units of the bank; and

(vi) Cost of capital required to brought in because of following the capital adequacy norms suggested in basel norms by the Basel Committee of Banking Supervision and as agreed to the national supervisors (including the Reserve Bank of India) of the world.

The bank has also to calculate the cost reduction and risk mitigation quantum on a continuous basis which would be happening as a result of putting the risk management system in the bank in place. The cost arising out item (i) to (vi) above will need to factored out of the savings incurred due to putting the risk management system in place. In the short term the costs will outweigh the returns, however, in the long run, the returns will be much higher.

The lending operations of the bank carry an interest income but the risk of the loan turning bad and unrecoverable is considered quite significant in overall management of loan portfolio. It is therefore prudent to arrive at a risk return trade off in each lending transaction. If the risk is perceived as high, the interest rate charged shall also be high and vice versa. The loss arising out of loan loss provisions charged to profit is considered as a cost of risk undertaken in lending operations. The cost of risk in bank therefore is considered to measure the proportion of bank's total loans that have been lost on account of bad and non-performing assets. The measurement of such cost of risk involved in the lending can be done as under:

$$\text{Cost of Risk} = \frac{\text{Loan loss provision charged to profit}}{\text{Average interest generating loans}^1}$$

¹ Average interest generating loans = Average of opening balance and closing balance of interest generating loans.

Interest generating loans = Customer Loans + inter-bank loans + other loans.

It implies that higher the loan loss provisions, the higher will be the cost of risk on interest generating loans. The cost of risk will be lower if the interest generating loans are higher as compared to the loan

loss provision amount charged to Profit & Loss account of the bank. The cost of risk thus has a significant bearing on profit and profitability of the bank. If a bank can control the cost of risk at a lower level, the profit earned will be higher. The cost management is therefore considered as a significant tool to improve the net profit which is essentially a function of reduction in expenditure and improvement in income. In a largely deregulated regime where the price of lending is determined by market competition, the borrowers have the freedom to choose where to place their business or switch banks. As a natural corollary, the bank that overprice their loan products are likely to lose business while those banks that under-price their loan products will succeed in garnering higher levels of business but will find it difficult to sustain their higher level of operations.

Quantitative measurement of the total cost including losses, risk control cost, risk financing cost and administrative cost is associated with the risk management functions as compared to sales, assets and number of employees. The purpose of such comparison is to determine whether the total cost of risk management was increasing, decreasing or remaining constant as a function of business economic activity. A similar comparison is required to be done with the cost of risk of the business of peer groups. The cost of risk will also facilitate the bank to focus on the areas of operations having greater long term assets on its total cost of risk management functions.

Generally speaking, the banks treat the sum of capital charge and loan loss provisions as the cost of risk which in turn is the main driver of negative value creation.

There are broadly four components of cost of risk in lending operations as under:

(1) Cost of funds:	It is determined by the bank on the basis of the period of maturity & the interest rate applicable for such maturity/term.
(2) Cost of risk:	It represents the cost of loan loss provisioning.
(3) Cost of capital:	It represents the holding cost of the capital charged to the loan account as prescribed by Basel Regulatory Framework.
(4) Cost of administration & overheads:	Costs incurred on customer mobilization, credit appraisal & investigation, sanction, documentation, disbursement, monitoring & follow-up, providing data, renewal, enhancement etc., are considered as cost of loan administration. Infrastructure cost and various other expenditures incurred constitute overhead cost.

The banks also use the rating tools and their judgment based on past experience to fix price for their loan products. It is a practical proposition to fix higher price for small value loans and lower price for high value loans as the administrative costs and overheads involved in small value loans are considerably higher than those in case of high value loans. Even during the periods of economic down-turn, the administrative costs increase mainly on account of greater degree of assessment, monitoring and follow-up required to safeguard the money of the depositors. The pricing of debt therefore is partially objective and partially subjective. Risk-reflective pricing enables the bank to undertake higher risks but still finds viable business proposition. On the other hand, the well managed firms with lower risks get the benefit of funding at low cost. Pricing the risk is considered in

business interest as even more marginal can get access to finance. If the banks in India have to be objective and realistic in determining the cost of risk in the era of greater regulatory oversight they have to evolve more sophisticated and forward looking approach to better utilize their financial resources. Introduction of Basel-III norms and other regulatory reforms are likely to add more cost and create further barriers for the banks to enhance value.

Types of Risks

The banks are required to compute the cost of following risks in their lending operations while pricing their loan products. It is seen that there is no objective and scientific method to allocate cost in respect of individual risk involved in a lending proposition. The availability of security cover and guarantee for the loans provide comfort to the lender and hence influence pricing.

- ***Credit Risk***
- ***Market Risk***
- ***Operational Risk***
- ***Regulatory Risk***
- ***Environmental Risk***
- ***Liquidity Risk***
- ***Embedded Risk***
- ***Country Risk***
- ***Foreign Exchange Risk***
- ***Exposure Risk***

The banks use different tools of credit risk management other than pricing the risk by loading extra interest. There are other tools used by the banks to mitigate the risks involved. Such tools include risk aggregation, capital allocation, reducing the duration gap, taking insurance cover, risk based supervision etc. The credit risk is also managed by observing compliance to the following:

- Regulatory/ Board prescribed exposure ceilings linked to capital funds.
- Periodical review/ renewal of credit facilities sanctioned to a borrower.
- Internal & external risk rating models.
- Linking the pricing to the probability of loss.
- Portfolio management by avoiding concentration – through diversification.
- Loan review mechanism – analysis of risk of uncertainty and inherent credit risk.
- Terms and conditions of loan sanctions.

Post US-Financial Crisis 2008, the banks have shifted the focus from share price and profitability to the risk entailed in their strategies. The reputational and operational risks have assumed greater importance and focus. The banks have also enhanced stress testing and have invested more in creating IT infrastructure and access to data. The proposed research must study these aspects and evolve a suitable model with specific costs for each of the risks involved in lending operations of the banks.

VII. Cost Implication of Basel III for Indian Banks

Risk and returns are core pillars of Financial System and Banking Industry. Due to basic business of lending & borrowing, banks have credit risk. Similarly due to treasury & investment operations, market risk is inevitable. In 1988, BCBS has introduced first International Standards Basel 1 to manage Banking Risk with the help of standardized Capital Adequacy Ratio. CRAR ensures minimum capital to cover depositors' money from risky assets.

But soon after various frauds & system failures, it was found that operational risk is also a major risk. In Basel 2, apart from inclusion of credit, market and operational risk; flexibility was introduced. Basel 2 had an array of approaches from basic standardized approaches to advanced approaches to match the risk management level of banks. In India, RBI has taken conservative approach and maintained even tougher standards than Basel Norms. To absorb changes, RBI had introduced various approaches gradually in phases. But internationally even Basel 2 could not prevent Subprime Mortgage Crises and failures like Lehman Brothers. A few of the major problems were high leverage, asset liability mismatch and liquidity crunch.

To solve these issues in 2010, Basel 3 norms were introduced with liquidity Coverage Ratio, Counter Cycle Buffer, Capital Conservation Buffer and Leverage Ratio.

Basel III guidelines were released in December 2010. The financial crisis of 2008 was the main reason behind the introduction of these norms. A need was felt to further strengthen the system as banks in the developed economies were under-capitalised, over-leveraged and had a greater reliance on short term funding. Also the quantity and quality of capital under Basel II were deemed insufficient to contain any further risk. These norms aim at making most banking activities such as their trading book activities more capital intensive. The purpose is to promote a more resilient banking system by focusing on four vital banking parameters viz. Capital, Leverage, Funding and Liquidity.

(i) Increased Capital Requirement and Costs thereof: Reserve Bank's estimates project an additional capital requirement of INR5 trillion, of which non-equity capital will be of the order of INR3.25 trillion while equity capital will be of the order of INR1.75 trillion. Though this capital is required to be brought in will be in the next five years culminating in March 2018, yet holding additional capital and common equity will rob the bank of necessary resources from which they would have been able to earn.

(ii) Increased Liquidity Ratios (LCR and NSFR): Both these ratios envisage that banks will be required to hold liquid assets of greater quantity than previously. Liquid assets always lower return compare to medium term and long terms assets. Banks, therefore, have to calculate the loss in opportunity to earn more by holding a higher level of liquid assets than before.

(iii) Investment in improved Systems: Basel III would require banks to invest substantially in IT infrastructure and systems to take care of the increased sophistication required under Basel III.

(iv) Cost of training and retraining the staff at various levels to cope with the challenges of understanding and implementing the Basel III proposals efficiently and effectively.

The cost arising out item (i) to (iv) above will need to be factored out of the savings incurred due to putting the risk management system in place. In the short term the costs will outweigh the returns, however, in the long run, the returns will be much higher compared to the costs incurred.

VIII. Cost implication of NPAs and its Management in Banks

Other than the impact on its profitability and liquidity, bank incurs huge cost on manpower, system and loss of opportunity of using the manpower for earning for the bank. Costing analysis should factor in to the followings:

1. Direct manpower cost involved in creating MIS as well as involved in recovery of the NPAs;
2. Legal cost in filing suits to recover NPAs;
3. Generation of numerous reports as designed by the regulator for effective monitoring and controlling the NPAs; and
4. Opportunity cost of not being able to recover or redeploy the NPA amount profitably.

Impact of paying Quarterly Interest within the next 90 days in Economic Downturn

In a growing economic scenario, it is relatively easier for borrowers to pay their interest on time and also easier for banks to recover the interest due as borrowers have sufficient and regular cash flows to repay their dues. The problem arises in economic downturn, which the Indian Economy currently facing where its GDP has been showing a downtrend for the last 14 quarters and in almost all sections of the economy, borrowers are facing cash flow crunch and are crying for help.

In a negative growth scenario, like above, if the Reserve Bank of India sticks to its prudential guidelines of declaring a borrowing account as non-performing, as the borrower is finding it difficult to pay the required quarterly interest within the next 90 days, thereby burdening him and also the bank, who has to bring in additional provisions for such new NPA accounts from its declining profits. In the process, both, the borrower and the bank, are being forced in to avoidable stress situations.

In economic downturn, borrowers will naturally seek for concessions from the Central Bank of the country, which is supposed to help them to come out of these difficult times. Similarly, the Indian banking system, would also be looking at its regulator to facilitate them in overcoming the negative fall out of the downturn i.e., increased NPAs and additional provisions in a declining profit scenario. There is, therefore, an imperative need, for the Reserve Bank of India to come forward and help, both, the borrowers and the Indian Banking System, to avoid the avoidable stress situations, in which they find themselves because of such prudential guidelines,

Stressing both the supply and demand side of the economy (the lenders and the borrowers) in economic downturn scenario, will help in continuing the downturn longer and signs of economic recovery will be further remote. What is needed is a helping hand from the Reserve Bank to ward off such negatively impacted scenarios.

Relevance of Two Sets of Prudential Guidelines in Two different Economic Scenarios

A pragmatic Reserve Bank should, therefore, have two sets of prudential guidelines. One, when the going is good, i.e., when the economy is doing relatively well (2001-2010) and another, when the economy is not doing well over a relatively longer period (2011-2013 and further). Having similar prudential guidelines for two opposite economic situations, as seen above, is not appearing to be actually a very prudent decision. It is hurtling, both, the borrowers and the banks, into avoidable stress situations.

Reserve Bank should immediately come out with fresh guidelines, where the 90 days limit of paying the quarterly interest is increased to relatively longer periods to give borrowers more elbow room and flexibility to repay the dues. The increased period of repayment may vary for different economic sectors depending on the gravity of the impact of the downturn on these sectors. It is time to remove this one-size fits all method of asset classification (the manufacturing sector is one of the most affected sector) and bring in more pragmatic and reality oriented prudential guidelines. It is not that the Reserve Bank of India has not thought differently for other perennially affected sector like agriculture, where they already have a different set of prudential guidelines as regards to payment of interest by agricultural borrowers. Time has come to show such flexibility for different affected sectors too.

Such flexibility and moving away from the 'one size fits all' guidelines to more sector oriented guidelines will help the banks too, who are also reeling under the impact of this downturn (there NPAs are rising, profits are falling, negative credit demand from the business sector, drop in CRAR, to name a few). There are examples, other than from its own, wherefrom the Reserve Bank can take lessons. When the Basel Committee for Banking Supervision (BCBS), in which the Reserve Bank has been an active member for most of the time in the last decade), can move from Basel I to Basel II proposals, by altering its one-size fits all standardized approach for calculating the minimum capital requirement for credit risk in banks, by replacing it with a more broad based approach, where it takes into cognizance the efficiency and efficacy of both borrowers and the banks.

The Reserve Bank can also come out with a need and situation based guidelines giving relief to genuine borrowers are facing actual cash flow crunch because of falling economic demand. It will also give relief to the banks from providing additional provisions in a falling profit situations and thereby avoiding a avoidable stress situation.

IX. Cost Competitiveness of Bank Branches

The bank branch is the first physical contact point for a customer. It is the most important delivery channel even in today's modern banking context. The bank branch for an average population of 12000 in India still needs improvement to take the banking facilities to the doorstep of unbanked population which constitutes more than 40% of the total population. The engagement of Business Correspondents/ Facilitators and establishment of Ultra Small Branches (USBs) in unbanked villages is a major initiative towards Financial Inclusion. The recent move to upgrade USBs into regular branches will significantly enhance the level of Financial Inclusion and also the coverage of unbanked population. Other channels of delivery of banking service including internet banking, mobile

banking, tele-banking, ATMs, PoS, Debit/Credit cards etc., are gaining popularity but still we have a long way to go to treat such channels as substitutes for physical brick & mortar bank branches. There is need to align facility management and spending with business goals of the bank primarily aiming at the following:

- ❖ Supporting customer acquisition and retention
- ❖ Increasing employee retention and productivity
- ❖ Reducing short & long term operational costs through efficiency enhancement

➤ ***Operating cost to total assets***

One of the popular ratio to evaluate cost competitiveness has been the ratio, ***operating cost to total assets***. This ratio indicates the amount of operating costs expended per unit of assets. All efforts by a bank to cut cost by rationalising its labour force and branches and back office operations should get reflected in this ratio. Larger the ratio, the lower is the productivity. This ratio is also used to represent the intermediation cost.

➤ ***Cost to Income Ratio***

The cost to income ratio indicates how profitably the funds have been deployed by the banks. The ratio reflects the ability of a bank to generate revenue from its expenditure. It captures the impact of off-balance sheet operations and is, thus, a better measure of efficiency than the cost to assets ratio.

➤ ***Labour Cost per Unit of Earning Assets***

Banking, by nature is an information and human capital intensive industry, notwithstanding the increased reliance on technology solutions for improving productivity. Hence, labour cost plays an important role in determining the profitability of banks.

➤ ***Non-Labour Cost per unit of Earning Asset***

With increased emphasis on technological solutions for quicker processing of data and routine tasks, and for providing more “customer friendly” services, the non-labour costs of banks, in absolute terms, have been on the rise. Non-labour cost for Indian banks at around 2 per cent was somewhat on the higher side as compared with the advanced countries and some emerging market economies such as Korea, Malaysia and China.

➤ ***Intermediation cost***

The most commonly used definition of intermediation cost is the spread between cost of deposits and return on loan assets. It reflects the efficiency with which financial resources are intermediated by the banks from savers to investors. The intermediation costs are expected to decline with the increase in productivity of the banking system.

➤ ***Net Interest Margin (NIM) or Spread***

Net interest margin is defined as the difference between the total interest earned (including from such items as investments) and total interest expended (including on such items as inter-bank borrowings), normalised by assets. This ratio indicates as to how effectively the banks deploy all their funds (both deposit and borrowings) to generate income from credit and investment operations. Lower the ratio, the more efficient is the banking system.

➤ ***Business per Employee***

To understand the trend in labour productivity devoid of the influence of various other aspects such as pricing of services rendered by the bank could be undertaken by using ratios such as business per employee and business per branch.

➤ ***Business per Branch***

Business per branch, similar to the ratio of business per employee, has risen steadily for the banking industry. This may be attributed to expansion of new business, rationalisation of branches by some banks, and evolution of new business strategies like sharing of ATMs so as to economise on cost and capitalise on technology.

➤ ***Return on Assets***

Return on Assets (RoA) gives an indication as to how much profit a bank is able to generate per unit of its assets. Higher value of this ratio is indicative of higher profitability, and hence, productivity. As per Basel –II norms, the ROA should be more than one per cent.

➤ ***Return on Equity (RoE)***

The return on equity, defined as the ratio of net profits after tax to total equity capital, is, therefore, used as an alternative measure of profitability. The disadvantage of this measure, however, is that equity may vary significantly across the banks, even though their asset size may be identical. The RoE indicates the amount of profits a business unit is generating for its equity investors.

➤ ***Labour Productivity: Per Employee Indicators***

1. Deposit per employee
2. Advances per employee
3. Business per employee
4. Total cost/ expenditure per employee
5. Total income per employee
6. Spread per employee
7. Net profit per employee
8. Burden per employee

➤ ***Branch Productivity: Per Branch Indicators***

1. Deposits per branch
2. Advances per branch
3. Business per branch
4. Total income per branch
5. Total cost/ expenditure per branch
6. Burden per branch
7. Net profit per branch
8. Spread per branch

Banks usually use some or all of the above ratios to find out the cost competitiveness of its branches vis-a-vis its own branches as well as with competitors in locations where its branches are competing with other bank branches.

X. Pre-emptive Investments

➤ CRR

Section 42 of Reserve Bank of India Act provides for the banks to maintain cash balance (Cash Reserve Ratio-CRR) with Reserve Bank of India (RBI) as a given percentage of the bank's Net Demand and Time Liabilities (NDTL). The current rate of CRR is 4% of NDTL. The RBI does not pay any interest to the banks for the money impounded in the form of CRR even though the banks have to honour their commitments to the depositors by paying interest even on this CRR component at the contracted rate. The banks are thus not able to deploy 4% of their NDTL into any productive avenue. It is therefore a cost to the bank for observing compliance with the regulator requirement.

➤ SLR

Section 24 of the Banking Regulations Act empowers RBI to stipulate that the amount equal to certain percentage of NDTL is required to be invested in approved securities by the banks. The present rate of SLR is 23% of NDTL. The banks earn considerably lower rate of return on investments made in SLR securities.

The investment in CRR & SLR being the regulatory requirement is considered as liquidity and stability tools. Hence the holding cost of CRR & SLR remains uncompensated thereby affecting the profits and profitability of the banks.

➤ Lending to Priority Sector

India is a developing country which casts the responsibility on the Government to implement such policies which will result in balanced and equitable growth of the economy of the country. With this view in mind, the Government/RBI has been prescribing targets for the neglected sector of the economy in the form of priority sector lending targets as under:

- Overall priority sector target : 40%
- - of which agricultural credit : 16%
- And Differential Interest Rate Loans : 1%

These percentages are computed in relation to Net bank Credit outstanding at the close of previous year. The interest rate in India have been largely deregulated but RBI continues to prescribe interest rates for agricultural credit, export credit at rates lower than the Base Rate and at the rate of 4% on Differential Interest Rate loans. Even after factoring the interest subsidy/ subvention given to banks, the banks can barely recover the cost of funds and related overheads in servicing such accounts. The NPA component out of such priority sector lending is an extra burden on the banks. But the banks undertake such transactions as a part of social responsibility – more particularly - the Public Sector Banks. In the context of cost management in banking sector, this area offers a scope for deeper

penetration to help banks recover adequate amount from Government/RBI as a cost of social banking.

XI. Assets & Liabilities Products

After the onset of globalization, the banks in India are fairly deregulated. The banks enjoy freedom to design their products both on assets & liabilities side and launch such products in the market. It has been seen in the recent years that the new products so launched by the banks are largely such of those that were in the domestic or international market offered by international banks for quite some time. The Indian banks have been designing such products with the features of the products marketed by international banks but often offering it to the target groups which are economically and socially quite different from the target groups of international banks. There is hardly any evidence of the Indian banks undertaking any cost-benefit study of such products or arriving at break- even estimates which makes it difficult to determine the loss or gain on launching and marketing of such products. The amount involved in printing & stationary, advertising & publicity, training to employees, providing requisite software etc., in many cases far exceeds the revenue. Marketing of para banking products as corporate agents of other non banking entities is another example of deploying huge human resources without evaluating the cost-risk-return matrix.

There is an urgent need to study such business models before embarking on their launch. Ideally every product launched must earn profit for the bank. The periodical review and evaluation against the pre-launch break even estimate will help the banks to weed out unprofitable products and maintain self sustaining basket of products. It is one area where the banks in India need to invest money in conducting a detailed study to improve their profits.

XII. Vendor Management/ outsourcing

Engagement of vendors is relatively a new concept for Indian banks, save some new generation private banks. The other banks in India thought it fashionable to imitate similar models of vendor engagement without acquiring the skills required for the job. Here again, the jobs are contracted/outsourced for a cost charged to the profit without periodically evaluating the cost incurred, expenses saved, revenue earned, reputational risk undertaken, financial risk suffered, brand value eroded and so on. There are even instances where the banks follow due diligence and CVC guidelines while engaging a vendor but had no control over the vendor sub-contracting the job to other business entities which were later found deficient in the required skills, technology, competence etc., causing in the process a huge dent to the image and reputation of the banks.

The perils of outsourcing the jobs by the banks to third parties are illustratively but not exhaustively listed hereunder:

- ❖ Loss of control
- ❖ Higher exit barriers
- ❖ Exposure to vendor risks, including –

- Financial strength
 - Loss of commitment to outsourcing
 - Slow implementation
 - Promised features not available
 - Lack of responsiveness
 - Poor daily quality
-
- ❖ Become hostage to “extra usage” charge
 - ❖ Difficulties in quantifying economies
 - ❖ Cost of conversion
 - ❖ difficulties of supervision
 - ❖ supply restrictions
 - ❖ possibility of using defective technology
 - ❖ concerns with long term flexibility and meeting the changing business requirements on a timely basis
 - ❖ concerns regarding the continuing cost-benefit of outsourcing
 - ❖ damage to corporate image
 - ❖ potential liability claims
 - ❖ lack of clarity of ownership, reporting and control
 - ❖ concerns regarding industry acceptance
 - ❖ inadequate technical service quality

Since the banking institutions deal with public money it is imprudent to undertake such serious risks by engaging vendors / outsourcing. If the banks have to guard against the perils of vendor engagement and outsourcing, the concern raised need to be given adequate attention and cost thereof evaluated against the potential risks.

XIII. Government Business

The banks – both in Public & Private Sector – undertake Government business of varied nature. Apart from deposits and loans, which are subjected to similar treatment as to the other customers of given volumes, the banks also undertake the following businesses on behalf of Government.

- Collection of Income Tax
- Collection of Service Tax
- Collection of Trade Tax
- Collection of Sales Tax
- Collection of Excise Duty
- Payment of Government Pension
- Disbursement of old age pension
- Direct Benefit Transfers (DBT)
- Disbursement of various subsidies

It is beyond comprehension that the Government pays Rs.5 per transaction on taxes collected by the banks on its behalf. The transaction cost far exceeds the fee received by the banks. The amount of float funds available to banks collecting taxes does not always compensate adequately. Another area which involves high cost to the banks in collection of Government taxes is when the Government/RBI directs the banks to remain open on Sundays and other holidays to facilitate payment of taxes by the not-so disciplined tax payers. The amount of tax so collected and enjoyed as a float by the banks coupled with the fee paid to the bank at the rate of Rs.5/- per challan do not even meet the cost of overtime paid to the employees at the designated branches, leave alone recovering the overheads and earning profits. A detailed study in this field may throw some startling facts which may help the banks to become cost conscious in dealing with Government transactions.

XIV. Personnel / HR issues

Personal and HR issues are important aspects of cost management study in banking sector. The very fact that staff cost constitutes about 70% of total expenditure of the banks in India makes it a vital component of proposed study – “Relevance and Applicability of Cost Management in Banking Sector”. It is also necessary to understand that the cost to income ratio in the banking sector is close to 47%. A study by Khandelwal Committee on HR in Banks revealed that the staff cost in PSBs has marginally exceeded the staff cost in private sector banks. The difference in salary & perquisites whether standalone or on cost to company basis, speaks differently in this respect affords good reasons to carry out an in-depth study. There are certain aberrations which if not factored, may give rise to such misleading ratios about staff cost. A few of such aberrations are listed below:

- Ban on recruitment for over two decades in PSBs in midst of growth and expansion forced PSBs to have 100% intake into officers' cadre internally unmindful of quality deterioration impacting performance outcomes.
- Computerization of transactions caused migration of many clerical jobs to supervisory menu thereby resulting into high cost HR resource performing routine low value output jobs.
- Unmindful reverse delegation of work vitiating work culture
- Legacy issues like restricted transferability of employees creating manpower imbalance, entailing adverse costs at both the ends.
- Rigid Accountability Policy enhancing risk-aversion tendencies amongst those who are responsible for taking decisions and lowering the morale
- The staff cost of large number of outsourced employees by new-gen private sector banks not reckoned while computing staff cost
- Inadequacy of trainings at lower and middle levels have impacted the skill levels and the resultant performance outcome

The above aspects involve cost and also impact the performance and hence deserve to be studied dispassionately and objectively.

XV. Scope for CMAs in Banking Industry

➤ ***New Product Pricing***

This is an important issue regarding any financial Institution nowadays. Customized financial products, derivatives or otherwise, are the requirements of the day. Customers can be big corporate or small net worth individual. The key issue is what the financial Institution will charge from the customer for this particular product, which includes services also. CMAs should play important role in striking the right price of the product with due consideration being given to the risk / reward / resource allocation aspects. No product or as a matter of fact, no institution can last long if there is a defect in pricing of the products.

➤ ***Better Cost Allocation***

This is basically for the existing products. In a light competitive environment, accurate pricing of the product will make all the difference between success and failure of a product. Crucial aspects of pricing are identification, quantification and allocation of cost to the product. I think cost accountants are best suited to do this job. It has to be kept in mind that cost allocation / pricing is not a one off exercise, it is a continuous process, which should continue throughout the life of the product to keep it competitive.

➤ ***Product Discontinuation***

When you have to cut off dead wood, which branch you will take out? Continuous evaluation of profitability, suitability of all the products is of high importance nowadays. No financial institution can afford to continue with the products, which are not giving net positive return. Moreover, considering the resource constraint, ranking of the net positive revenue generating products is also important. Cost accountants will be of great help regarding this.

➤ ***Control of Key Areas***

Cost accountants can be of great help in controlling/monitoring the key areas e.g. treasury operations, product evaluation, work process analysis, customer service etc. for any financial institutions. Moreover, as part of research team, a cost accountant can help in evaluating the health of a financial institution through stress testing, scenario analysis etc. MIS in these areas are of critical importance for the top level management for exercising better control and for giving directions, especially regarding liquidity and solvency issues.

➤ ***Profit Projections***

Revenue/profit/income projections require lot of skills and in depth understanding of the pricing process as well as market evaluation. This is basically a summation of the processes mentioned above along with market intelligence. As we are going into the era of merger/ de-merger/ reverse merger etc. the viability of an organization/institution itself has to be justified. As we have already discussed above, cost accountants can play a crucial role in this MIS exercise. We can think about zero based budgeting concepts while justifying a particular product line.

➤ ***Risk Management – at the Macro level***

It is a huge area. It is not possible to list the areas where cost accountants can be useful. But I feel that in case of financial institutions, identification and monitoring of key risk parameters are of high importance for any risk manager. Especially for a bank, the estimation of Probability of Default is a challenging task. As we all know, the techniques which are related to these processes are cost accountants' forte. The area is basically open ended and ever changing because of emergence of new challenges in the financial market.

➤ ***Overall Presence***

Cost accountants can contribute both from inside the organization and outside. As insiders the cost accountants can be important members of the risk management team having responsibility of managing risk for the institution as a whole. As an outsider, they can be auditors having specific agenda for evaluating risks involved in specified areas. Risk based internal and external audit will be the key supervisory areas for the management as well as regulator. The existence of a sound risk management mechanism will enhance the reputation of a financial institution manifold, especially for those institutions which have global presence.

➤ ***Cost Audit Report - A tool for Credit Appraisal for Banks and Financial institution***

The Banks and Financial Institutions have a systematic credit appraisal methodology, which is being constantly reviewed in the light of the experiences gained from time to time. However, the basic standards for working capital facilities, both fund based and non-fund based, and term facilities are well understood. Certain basic parameters have evolved the years.

Appraisal of Credit for Project Financing involves analysis of the following risks and mitigation thereof: Environment Risk; Country Risk; Industry Risk; Company Risk; Competition Risk; Market Risk; Project Risk; Product Risk; Supply Risk; Funding Risk; Interest Rate Risk; Currency Risk

Analysis of basic financial parameters may be considered as one of the strong pillars for mitigation of Credit Risk while appraising credit proposal.

The basic financial parameters, which form the foundation of the Bank's credit appraisal, are as follows: Capital Gearing; Liquidity; Net Working Capita; Non-current assets; Turnover; Profitability; Cash Accrual.

XVI. Role of CMAs in Risk Based Internal Audit in Banks

The expertise of the Cost & Management Accountants in Risk Based Supervision Consulting Process includes:

- Design and development of appropriate organizational structure
- Advisory services to document systems and procedures for undertaking business in alignment with the requirements of risk based supervision.
- To identify gaps in management information systems and suggest remedial measures

- To review and strengthen reporting and control system
- To design and develop appropriate risk focused internal audit model
- To assist bank in setting up compliance units

CMA's specialized Professional & consulting service ensure compliance of internal audit with the International Standards on Auditing (ISA), relevant banking regulations and other legal requirements, ensuring the adequate professionalism and conformity with the ethic principles.

CMA's specialized Professional & consulting and recommendations will enable the bank to strengthen the maintenance of subjectivity, impartiality and independence of auditing and prevent unqualified or biased audits. Our consulting services will enable creation of an additional source of reliable information on the banks' operations and financial position and transfer of some bank risk control functions from the operations to highly-qualified and professional internal auditors, thus ensuring that professional internal audits prevent risks of the banks' bankruptcy or deterioration of their financial positions and results of operations.

The Cost and Management Accountants with their specialized professional skill and expert knowledge and analytical capabilities can provide an in-depth service in Risk based audit in Banks and the services inter-alia includes the following functional areas:

- Risk Management including Credit Risk, Operational and Market Risk Management
- Risk Profiling and SWOT Analysis
- Risk Assessment for Project Evaluation
- Bank Supervision/Audit Mechanism and Adoption of Risk Focused Internal Audit
- Credit Risk Management and Credit Portfolio Evaluation
- Customer Due Diligence and Compliance with Know Your Customer Procedures
- Project Techno-economic Feasibility Studies and Project Monitoring
- Borrower Credit Appraisal and Working Capital Assessment
- Borrower Security Evaluation and Stock Audits
- Asset and Liability Management System and Management Information System
- NPA Management Advisory Services
- Business Valuations and Asset Valuations
- Information Systems / EDP Audit, Software Evaluation
- Bank Staff Training
- Preparation of Instruction Manuals for Credit, Audit and other bank functions

Appendix-I

Performance Appraisal under Cost Audit vis-s-vis Banks

Performance Appraisal under Cost Audit	Performance Appraisal by Bank
1. Capacity Utilization Analysis	Capital Adequacy ratio
2. Productivity/Efficiency Analysis	<ul style="list-style-type: none">▪ Earning Assets to Total Assets Ratio▪ Cash Ratio▪ Loans to Deposit Ratio▪ Loans to Assets Ratio▪ Arrears collection rate▪ Operating income to total asset▪ Credit to Deposit Ratio▪ Return on assets▪ Return on equity▪ NPA Ratio▪ Tax exempt position
3. Key-Costs & Contribution Analysis	<ul style="list-style-type: none">▪ Interest spread▪ Net interest margin▪ Intermediation margin
4. Manpower Analysis	<ul style="list-style-type: none">▪ Net income per staff▪ Net income to staff costs
5. Product/Service Profitability Analysis	<ul style="list-style-type: none">▪ Loan Loss Provisions to Total Loans Ratio▪ Net interest margin▪ Risk Analysis▪ Liquidity Analysis▪ Return on Loans
6. Market/Customer Profitability Analysis	ABC Analysis and customer relationships Management
7. Application of Management Accounting Tools	Banks use various Management accounting tools for the following reason: <ul style="list-style-type: none">▪ Analyse bank performance and establish profitability and risks▪ Manage interest rate risk▪ Manage the cost of funds, bank

	<p>capital and liquidity</p> <ul style="list-style-type: none"> ▪ Managing credit policy ▪ Managing the Investment Portfolio <p>Some Cost Management tools used by Banks these are:</p> <ul style="list-style-type: none"> ▪ Activity Based Costing ▪ Target costing and Kaizen costing ▪ Lifecycle Costing
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Appendix-II

Commonly used Ratios in Banks

I. Profitability

Profits are the lifeblood of commercial enterprises. It is profits that attract and retain capital. They are necessary for growth, development and the very survival of institutions. They are also a measure of the competence and ability of management.

➤ **Return on Assets**

The *return on assets* is a major measure of profitability and enables an analyst to determine whether

- The return earned is comparable to that earned by other similar banks; and
- The assets of the bank are efficiently utilized.

➤ **Return on Equity**

The *return on equity* shows the return earned on stockholders' investment in a bank. It enables to determine whether the return made is, in a given situation, the best available.

➤ **Net Interest Margin**

The *net interest margin ratio* measures the spread (interest income, less interest expense) earned on interest-bearing assets.

➤ **Gross Interest Margin**

The *gross interest margin* is used to examine the spread earned on income. This is a very useful measure in determining the profitability of transactions.

➤ **Gross Earnings Asset Yield**

Interest rates fluctuate widely between assets, customers and so on and it is therefore not possible to state easily the normal return on earning assets. However, this ratio would help to determine, by

comparing with other similar banks, whether a bank is charging (earning) comparable or reasonable interest rates.

➤ **Loan Yield**

The *loan yield ratio* shows the yield the bank earns on its loan portfolio and as loans is a bank's most important asset; this is a very important ratio.

➤ **Breakeven Yield**

The *breakeven yield* is the return the bank must get in order to meet its interest expense cost. In order for the bank to earn adequate income to meet its fixed and variable administration and other costs and make a profit, the return earned should be in excess of the breakeven yield. The breakeven yield is arrived at by expressing interest expense as a percentage of average gross earning assets.

➤ **Interest Rate Sensitivity**

All banks and financial institutions are sensitive to changes in interest rates and it is important while analyzing such enterprises to examine and determine the extent of their sensitivity to changes in interest rates.

➤ **Interest Rate Sensitivity**

The *interest rate sensitivity ratio* is measured by relating the change in interest rates earned on earning assets to the change in interest rate suffered on interest-bearing liabilities.

➤ **Overhead**

The *overhead ratio* indicates the overheads in proportion to net financial revenue. Net financial revenue is made up of net interest income, commission, fees and other income, excluding income from security gains and losses. Overheads include all recurring costs, but exclude interest expenses and provisions for loan losses.

➤ **Loan Loss Provision**

Loan losses are a major expense for banks and the provision or lack of it help an analyst to determine the quality of the portfolio and the profitability of the bank. Most banks provide for loan losses as a percentage of its loan portfolio. They also provide for loans that are likely to be irrecoverable. The *loan loss provision ratio* to examine this can be computed by dividing the net losses written off by the provision for loan losses.

➤ **Dividend Payout**

The *dividend payout ratio* states as a percentage the amount of income paid out to stockholders as dividend. This ratio is useful in assessing the return earned on investments made and allows a stockholder to compare this with dividends earned on other investments.

II. Liquidity

Liquidity is a very important requirement for a bank because it addresses the speed at which its assets can be converted into cash.

Liquidity is important for -

- depositor and creditor confidence
- adhering to rules of the central bank on statutory reserves;
- meeting operating needs; and
- countering contingencies such as a run

➤ **Liquidity**

The *liquidity ratio* aims to determine the cash or readily convertible assets available to meet demand liabilities. This is similar to the asset test done on companies. The ratio is derived by dividing cash and investments by total liabilities less stockholders' equity and long-term debt. The purpose is to check whether there will be enough liquid assets to meet the need should there be a run on deposits.

➤ **Loans to Deposits**

The *loans to deposits ratio* is the basic measure of liquidity. It indicates the extent deposits support loans. It will reveal how difficult or easy it would be to repay deposits should the need arise.

➤ **Funding Ratio**

In recent years, banks are becoming more dependent on borrowings. The *funding ratio* –

- indicates the extent a bank is dependent on financing loans and other assets with borrowings; and
- measures the extent to which risk assets are funded by short-term borrowings and purchased liabilities.

It is assumed that borrowings are invested in both low and high risk assets. Should borrowings exceed low-risk assets, the assumption is that the excess funds risk assets. Should low-risk assets exceed borrowings, it is assumed that risk assets are funded by some other source such as demand and savings deposits. The more dependent a bank is on borrowing to support risk assets, the more it is exposed if borrowings are not available.

III. Asset Quality

The major cause of a bank failing or a crisis in a bank is poor asset quality. The single most important reason for the collapse of banks is bad loans. Foreign exchange, deposits, maturity mismatches and open positions may cause worry and sleepless nights, but they do not normally lead to the closure of a bank. That is done by poor asset quality.

In short, asset quality essentially relates to the possibility of fluctuations in value and the effect it can have on the bank. The quality can also be assured through the record of a bank's losses: the greater the losses, the poorer the quality of the assets.

➤ **Loans Loss**

Poor asset quality is reflected in the loans written off or *loans loss ratio*. This ratio shows the loan loss experience of the bank in an attempt to give an analyst an idea of the quality of the assets of the

bank. If this ratio is low, it suggests that a bank has a reasonably sound portfolio and is able to recover its losses.

➤ ***Non-performing Loans to Total Loans***

The *non-performing loans to total loans ratio* helps determine the quantum of non-performing loans in the total loans portfolio. (A non-performing loan is an interest-free loan). It also gives an idea of the quality of the loan portfolio and an indication of possible loan losses in the future.

➤ ***Recoveries***

The *recoveries ratio* is used to determine how conservative or prudent a bank is in its policy of loan write offs. It examines whether the bank has an adequate policy in regard to write offs.

➤ ***Adequacy of Loan Loss Reserve***

The ratio is derived to check whether the bank, in comparison with other similar banks, is making adequate provision for loan losses. If reserves deteriorate as a result of large write offs, perhaps in excess of the provision for loan losses made in the year, then the quality of the assets will be suspect.

➤ ***Earnings Coverage***

The *earnings coverage ratio* is very important. It measures the level of earnings and the charge to income against the actual net charge offs and provides a measurement of the bank's earning cover to actual loan losses. It is prudent, therefore, when the earnings coverage is equal to or below three times, to examine and determine the reason.

IV. Capital Adequacy

Capital adequacy ratios help the analyst to determine whether the capital of the bank is adequate. The major factor to remember is that the capital should be adequate to absorb business risks and sustain temporary losses. This is what the capital adequacy ratios attempt to do.

➤ ***Capital Formation***

The *capital formation ratio* is the basic measure of capital adequacy. It allows the analyst to check whether the shareholders are increasing their stake in the bank.

➤ ***Capital to Asset Growth***

The *capital to asset growth ratio* is similar to the capital formation ratio, in that it examines capital formation, but it goes further. It compares it to the increase in risk assets to examine whether the increase in risk assets is cushioned by an equal increase in capital formation.

➤ ***Gross Capital to Average Assets Plus Reserves***

The *gross capital to average assets ratio* is calculated to determine the extent of permanent or semi-permanent capital in the bank, as this would cushion a deterioration in the assets of the bank.

➤ ***Primary Capital to Total Assets***

Primary capital is made up of stockholders' ordinary shares, preferred stock, capital reserves and loan loss reserves. The *primary capital to total assets ratio* shows how much of a deterioration in assets

can be borne by the bank. It serves as a quick check to determine whether a bank is under-capitalized. The higher the ratio, the lesser is the risk for general creditors and vice versa.

➤ ***Primary Capital to Risk Assets***

The *primary capital to risk ratio* aims to identify the degree of comfort a bank has on account of its capital should there be deterioration in the value of its risk assets.

➤ ***Primary Capital to Non-performing Loans***

This ratio is examined by the analyst to determine whether primary capital is adequate to bear the loss that could result in non-performing loans becoming bad. Primary capital is, as in the previous ratio, defined as stockholders' common equity, preferred stock, capital reserves and loan loss reserves.

➤ ***Primary Capital to Risk Assets and Guarantees***

This ratio is an extension of the primary assets to risk assets ratio. It includes, in addition to risk assets, guarantees (standby letters of credit) which are contingent liabilities. Thus, this ratio examines the total possible risks a bank has and the support that primary capital can give.

➤ ***Secondary Capital to Total Assets***

The *secondary capital to total assets ratio*, if used along with the primary capital to total assets ratio, shows how much debt there is within the capital structure of a bank and how much comfort creditors can derive from this. Secondary capital is defined as primary capital, plus subordinated debt and preferred stock. The higher the ratio, the lower is the risk for creditors.