



Performance Evaluation of Co-Operative Banks of Karnataka – An Empirical Study

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Abstract:

This paper explores the risk management system practiced in Co-operative Banks of Karnataka. In this modern era, banks encounter various financial crises and challenges in its operation due to volatile market conditions, technological advancement, changing customer needs, financial sector reforms and so on. Indian banking system has a life of more than 200 years. It started its journey in 1786. The drastic change in the sector took place only after the nationalization of banks in the year 1969. The policy of the government helped this industry to grow rapidly by taking into consideration the liberalisation, privatization and globalization. Liberalization policy and economic reforms in India explored many opportunities for the banks from mere lending and buying to other financial facilities. As a result of this banks begun to experience numerous positive changes and successive growth. By this banks made a remarkable step in the Indian banking scenario. The major concern of the co-operative bank is the mounting amount of Non-performing assets (NPAs). Hence banks should adopt a systematic risk management system to manage the overall risk exposure associated with banking operation. The present study attempted to analyse the various aspects of the risk management system practiced in Co-operative Banks in India. The secondary data has been used for this study.

Keywords: Risk management; Credit risk; Liquidity risk; Interest Rate Risk; Non-performing assets.

1. INTRODUCTION

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.

The broad parameters of risk management function should encompass:

- i) organisational structure;

- ii) comprehensive risk measurement approach;
- iii) risk management policies approved by the Board which should be consistent with the broader business strategies, capital strength, management expertise and overall willingness to assume risk;
- iv) guidelines and other parameters used to govern risk taking including detailed structure of prudential limits;
- v) strong MIS for reporting, monitoring and controlling risks;
- vi) well laid out procedures, effective control and comprehensive risk reporting framework;
- vii) separate risk management framework independent of operational Departments and with clear delineation of levels of responsibility for management of risk; and
- viii) Periodical review and evaluation.

2. RISK MANAGEMENT STRUCTURE

2.1 A major issue in establishing an appropriate risk management organisation structure is choosing between a centralised and decentralised structure. The global trend is towards centralising risk management with integrated treasury management function to benefit from information on aggregate exposure, natural netting of exposures, economies of scale and easier reporting to top management. The primary responsibility of understanding the risks run by the bank and ensuring that the risks are appropriately managed should clearly be vested with the Board of Directors. The Board should set risk limits by assessing the bank's risk and risk-bearing capacity. At organisational level, overall risk management should be assigned to an independent Risk Management Committee or Executive Committee of the top Executives that reports directly to the Board of Directors. The purpose of this top level committee is to empower one group with full responsibility of evaluating overall risks faced by the bank and determining the level of risks which will be in the best interest of the bank. At the same time, the Committee should hold the line management more accountable for the risks under their control, and the performance of the bank in that area. The functions of Risk Management Committee should essentially be to identify, monitor and measure the risk profile of the bank. The Committee should also develop policies and procedures, verify the models that are used for pricing complex products, review the risk models as development takes place in the markets and also identify new risks. The risk policies should clearly spell out the quantitative prudential limits on various segments of banks' operations. Internationally, the trend is towards assigning risk limits in terms of portfolio standards or Credit at Risk (credit risk) and Earnings at Risk and Value at Risk (market risk). The Committee should design stress scenarios to measure the impact of unusual market conditions and monitor variance between the actual volatility of portfolio value and that predicted by the risk measures. The Committee should also monitor compliance of various risk parameters by operating Departments.

2.2 A prerequisite for establishment of an effective risk management system is the existence of a robust MIS, consistent in quality. The existing MIS, however, requires substantial up gradation and strengthening of the data collection machinery to ensure the integrity and reliability of data.

2.3 The risk management is a complex function and it requires specialised skills and expertise. Banks have been moving towards the use of sophisticated models for measuring and managing risks. Large banks and those operating in international markets should develop internal risk management models to be able to compete effectively with their competitors. As the domestic market integrates with the international markets, the banks should have necessary expertise and skill in managing various types of risks in a scientific manner. At a more sophisticated level, the core staff at Head Offices should be trained in risk modelling and analytical tools. It should, therefore, be the endeavour of all banks to upgrade the skills of staff.

2.4 Given the diversity of balance sheet profile, it is difficult to adopt a uniform framework for management of risks in India. The design of risk management functions should be bank specific, dictated by the size, complexity of functions, the level of technical expertise and the quality of MIS. The proposed guidelines only provide broad parameters and each bank may evolve their own systems compatible to their risk management architecture and expertise.

2.5 Internationally, a committee approach to risk management is being adopted. While the Asset - Liability Management Committee (ALCO) deal with different types of market risk, the Credit Policy Committee (CPC) oversees the credit /counterparty risk and country risk. Thus, market and credit risks are managed in a parallel two-track approach in banks. Banks could also set-up a single Committee for integrated management of credit and market risks. Generally, the policies and procedures for market risk are articulated in the ALM policies and credit risk is addressed in Loan Policies and Procedures.

2.6 Currently, while market variables are held constant for quantifying credit risk, credit variables are held constant in estimating market risk. The economic crises in some of the countries have revealed a strong correlation between unhedged market risk and credit risk. Forex exposures, assumed by corporates who have no natural hedges, will increase the credit risk which banks run vis-à-vis their counterparties. The volatility in the prices of collateral also significantly affects the quality of the loan book. Thus, there is a need for integration of the activities of both the ALCO and the CPC and consultation process should be established to evaluate the impact of market and credit risks on the financial strength of banks. Banks may also consider integrating market risk elements into their credit risk assessment process.

3. OBJECTIVES OF THE STUDY

This study has the following objectives:

- a. To explore the overview of Risk Management System in India
- b. To explore the various kinds of risk management system adopted in Co-operative Banks in India in general and particularly in Karnataka.

4. METHODOLOGY USED IN THE STUDY

The data used for the research has been extracted from reports generated from official website of RBI and Ministry of Finance. For fulfillment of objectives, the researcher had a review of various published papers to assess and explore the risk management system in Co-operative Banks in India.

5. RISK MANAGEMENT SYSTEM PRACTICED IN CO-OPERATIVE BANKS

5.1 CREDIT RISK MANAGEMENT

5.1.1 Lending involves a number of risks. In addition to the risks related to creditworthiness of the counterparty, the banks are also exposed to interest rate, forex and country risks.

5.1.2 Credit risk or default risk involves inability or unwillingness of a customer or counterparty to meet commitments in relation to lending, trading, hedging, settlement and other financial transactions. The Credit Risk is generally made up of transaction risk or default risk and portfolio risk. The portfolio risk in turn comprises intrinsic and concentration risk. The credit risk of a bank's portfolio depends on both external and internal factors. The external factors are the state of the economy, wide swings in commodity/equity prices, foreign exchange rates and interest rates, trade restrictions, economic sanctions, Government policies, etc. The internal factors are deficiencies in loan policies/administration, absence of prudential credit concentration limits, inadequately defined lending limits for Loan Officers/Credit Committees, deficiencies in appraisal of borrowers' financial position, excessive dependence on collaterals and inadequate risk pricing, absence of loan review mechanism and post sanction surveillance, etc.

5.1.3 Another variant of credit risk is counterparty risk. The counterparty risk arises from non-performance of the trading partners. The non-performance may arise from counterparty's refusal/inability to perform due to adverse price movements or from external constraints that were not anticipated by the principal. The counterparty risk is generally viewed as a transient financial risk associated with trading rather than standard credit risk.

5.1.4 The management of credit risk should receive the top management's attention and the process should encompass:

- a) Measurement of risk through credit rating/scoring;
- b) Quantifying the risk through estimating expected loan losses i.e. the amount of loan losses that bank would experience over a chosen time horizon (through tracking portfolio behaviour over 5 or more years) and unexpected loan losses i.e. the amount by which actual losses exceed the expected loss (through standard deviation of losses or the difference between expected loan losses and some selected target credit loss quantile);
- c) Risk pricing on a scientific basis; and
- d) Controlling the risk through effective Loan Review Mechanism and portfolio management.

5.2 INSTRUMENTS OF CREDIT RISK MANAGEMENT

Credit Risk Management encompasses a host of management techniques, which help the banks in mitigating the adverse impacts of credit risk.

5.2.1 Credit Approving Authority

Each bank should have a carefully formulated scheme of delegation of powers. The banks should also evolve multi-tier credit approving system where the loan proposals are approved by an 'Approval Grid' or a 'Committee'. The credit facilities above a specified limit may be approved by the 'Grid' or 'Committee', comprising at least 3 or 4 officers and invariably one officer should represent the CRMD, who has no volume and profit targets. Banks can also consider credit approving committees at various operating levels i.e. large branches (where considered necessary),

The banks should also evolve suitable framework for reporting and evaluating the quality of credit decisions taken by various functional groups. The quality of credit decisions should be evaluated within a reasonable time, say 3 – 6 months, through a well-defined Loan Review Mechanism.

5.2.2 PRUDENTIAL LIMITS

In order to limit the magnitude of credit risk, prudential limits should be laid down on various aspects of credit:

- a) Stipulate benchmark current/debt equity and profitability ratios, debt service coverage ratio or other ratios, with flexibility for deviations. The conditions subject to which deviations are permitted and the authority therefor should also be clearly spelt out in the Loan Policy;
- b) single/group borrower limits, which may be lower than the limits prescribed by Reserve Bank to provide a filtering mechanism;
- c) Substantial exposure limit i.e. sum total of exposures assumed in respect of those single borrowers enjoying credit facilities in excess of a threshold limit, say 10% or 15% of capital funds. The substantial exposure limit may be fixed at **600% or 800%** of capital funds, depending upon the degree of concentration risk the bank is exposed;
- d) Maximum exposure limits to industry, sector, etc. should be set up. There must also be systems in place to evaluate the exposures at reasonable intervals and the limits should be adjusted especially when a particular sector or industry faces slowdown or other sector/industry specific problems. The exposure limits to sensitive sectors, such as, advances against equity shares, real estate, etc., which are subject to a high degree of asset price volatility and to specific industries, which are subject to frequent business cycles, may necessarily be restricted. Similarly, high-risk industries, as perceived by the bank, should also be placed under lower portfolio limit. Any excess exposure should be fully backed by adequate collaterals or strategic considerations; and
- e) Banks may consider maturity profile of the loan book, keeping in view the market risks inherent in the balance sheet, risk evaluation capability, liquidity, etc.

5.2.3 RISK RATING

Banks should have a comprehensive risk scoring / rating system that serves as a single point indicator of diverse risk factors of a counterparty and for taking credit decisions in a consistent manner. To facilitate this, a substantial degree of standardization is required in ratings across borrowers. The risk rating system should be designed to reveal the overall risk of lending, critical input for setting pricing and non-price terms of loans as also present meaningful information for review and management of loan portfolio. The risk rating, in short, should reflect the underlying credit risk of the loan book. The rating exercise should also facilitate the credit granting authorities some comfort in its knowledge of loan quality at any moment of time.

5.2.4 RISK PRICING

Risk-return pricing is a fundamental tenet of risk management. In a risk-return setting, borrowers with weak financial position and hence placed in high credit risk category should be priced high. Thus, banks should evolve scientific systems to price the credit risk, which should have a bearing on the expected probability of default. The pricing of loans normally should be linked to risk rating or credit quality. The probability of default could be derived from the past behaviour of the loan portfolio, which is the function of loan loss provision/charge offs for the last five years or so. There is, however, a need for comparing the prices quoted by competitors for borrowers perched on the same rating /quality. Thus, any attempt at price-cutting for market share would result in mispricing of risk and 'Adverse Selection'.

5.2.5 PORTFOLIO MANAGEMENT

The existing framework of tracking the Non-Performing Loans around the balance sheet date does not signal the quality of the entire Loan Book. Banks should evolve proper systems for identification of credit weaknesses well in advance. Most of international banks have adopted various portfolio management techniques for gauging asset quality. The CRMD, set up at Head Office should be assigned the responsibility of periodic monitoring of the portfolio. The portfolio quality could be evaluated by tracking the migration (upward or downward) of borrowers from one rating scale to another. This process would be meaningful only if the borrower-wise ratings are updated at quarterly / half-yearly intervals. Data on movements within grading categories provide a useful insight into the nature and composition of loan book.

5.2.6 LOAN REVIEW MECHANISM (LRM)

LRM is an effective tool for constantly evaluating the quality of loan book and to bring about qualitative improvements in credit administration. Banks should, therefore, put in place proper Loan Review Mechanism for large value accounts with responsibilities assigned in various areas such as, evaluating the effectiveness of loan administration, maintaining the integrity of credit grading process, assessing the loan loss provision, portfolio quality, etc. The complexity and scope of LRM normally vary based on banks' size, type of operations and management practices. It may be independent of the CRMD or even separate Department in large banks.

6. CREDIT RISK AND INVESTMENT BANKING

Significant magnitude of credit risk, in addition to market risk, is inherent in investment banking. The proposals for investments should also be subjected to the same degree of credit risk analysis, as any loan proposals. The proposals should be subjected to detail appraisal and rating framework that factors in financial and non-financial parameters of issuers, sensitivity to external developments, etc. The maximum exposure to a customer should be bank-wide and include all exposures assumed by the Credit and Treasury Departments.

7. CREDIT RISK IN OFF-BALANCE SHEET EXPOSURE

Banks should evolve adequate framework for managing their exposure in off-balance sheet products like forex forward contracts, swaps, options, etc. as a part of overall credit to individual customer relationship and subject to the same credit appraisal, limits and monitoring procedures. Banks should classify their off-balance sheet exposures into three broad categories - full risk (credit substitutes) - standby letters of credit, money guarantees, etc, medium risk (not direct credit substitutes, which do not support existing financial obligations) - bid bonds, letters of credit, indemnities and warranties and low risk - reverse repos, currency swaps, options, futures, etc.

8. INTER-BANK EXPOSURE AND COUNTRY RISK

A suitable framework should be evolved to provide a centralised overview on the aggregate exposure on other banks. Bank-wise exposure limits could be set on the basis of assessment of financial performance, operating efficiency, management quality, past experience, etc. Like corporate clients, banks should also be rated and placed in range of 1-5, 1-8, as the case may be, on the basis of their credit quality. The limits so arrived at should be allocated to various operating centres and followed up and half-yearly/annual reviews undertaken at a single point. Regarding exposure on overseas banks, banks can use the country ratings of international rating agencies and classify the countries into low risk, moderate risk and high risk. Banks should endeavour for developing an internal matrix that reckons the counterparty and country risks. The maximum exposure should be subjected to adherence of country and bank exposure limits already in place. While the exposure should at least be monitored on a weekly basis till the banks are equipped to monitor exposures on a real time basis, all exposures to problem countries should be evaluated on a real time basis.

9. MARKET RISK

Traditionally, credit risk management was the primary challenge for banks. With progressive deregulation, market risk arising from adverse changes in market variables, such as interest rate, foreign exchange rate, equity price and commodity price has become relatively more important. Even a small change in market variables causes substantial changes in income and economic value of banks. Market risk takes the form of:

- 1) Liquidity Risk
- 2) Interest Rate Risk
- 3) Foreign Exchange Rate (Forex) Risk
- 4) Commodity Price Risk and

5) Equity Price Risk

10. MARKET RISK MANAGEMENT

Management of market risk should be the major concern of top management of banks. The Boards should clearly articulate market risk management policies, procedures, prudential risk limits, review mechanisms and reporting and auditing systems. The policies should address the bank's exposure on a consolidated basis and clearly articulate the risk measurement systems that capture all material sources of market risk and assess the effects on the bank. The operating prudential limits and the accountability of the line management should also be clearly defined. The Asset-Liability Management Committee (ALCO) should function as the top operational unit for managing the balance sheet within the performance/risk parameters laid down by the Board. The banks should also set up an independent **Middle Office** to track the magnitude of market risk on a real time basis. The Middle Office should comprise of experts in market risk management, economists, statisticians and general bankers and may be functionally placed directly under the ALCO. The Middle Office should also be separated from Treasury Department and should not be involved in the day to day management of Treasury. The Middle Office should apprise the top management / ALCO / Treasury about adherence to prudential / risk parameters and also aggregate the total market risk exposures assumed by the bank at any point of time.

10.1 LIQUIDITY RISK

Liquidity Planning is an important facet of risk management framework in banks. Liquidity is the ability to efficiently accommodate deposit and other liability decreases, as well as, fund loan portfolio growth and the possible funding of off-balance sheet claims. A bank has adequate liquidity when sufficient funds can be raised, either by increasing liabilities or converting assets, promptly and at a reasonable cost. It encompasses the potential sale of liquid assets and borrowings from money, capital and Forex markets. Thus, liquidity should be considered as a defence mechanism from losses on fire sale of assets. The liquidity risk in banks manifest in different dimensions:

- i) **Funding Risk** – need to replace net outflows due to unanticipated withdrawal/non- renewal of deposits (wholesale and retail);
- ii) **Time Risk** - need to compensate for non-receipt of expected inflows of funds, i.e. performing assets turning into non-performing assets; and
- iii) **Call Risk** - due to crystallisation of contingent liabilities and unable to undertake profitable business opportunities when desirable.

The first step towards liquidity management is to put in place an effective liquidity management policy, which, *inter alia*, should spell out the funding strategies, liquidity planning under alternative scenarios, prudential limits, liquidity reporting / reviewing, etc.

Liquidity measurement is quite a difficult task and can be measured through stock or cash flow approaches. The key ratios, adopted across the banking system are:

- i) **Loans to Total Assets**
- ii) **Loans to Core Deposits**
- iii) **Large Liabilities (minus) Temporary Investments to Earning Assets (minus) Temporary Investments**, where large liabilities represent wholesale deposits which are market sensitive and temporary Investments are those maturing within one year and those investments which are held in the trading book and are readily sold in the market;
- iv) **Purchased Funds to Total Assets**, where purchased funds include the entire inter-bank and other money market borrowings, including Certificate of Deposits and institutional deposits; and
- v) **Loan Losses/Net Loans.**

11. INTEREST RATE RISK (IRR)

The management of Interest Rate Risk should be one of the critical components of market risk management in banks. The regulatory restrictions in the past had greatly reduced many of the risks in the banking system. Deregulation of interest rates has, however, exposed them to the adverse impacts of interest rate risk. The Net Interest Income (NII) or Net Interest Margin (NIM) of banks is dependent on the movements of interest rates. Any mismatches in the cash flows (fixed assets or liabilities) or repricing dates (floating assets or liabilities), expose banks' NII or NIM to variations. The earning of assets and the cost of liabilities are now closely related to market interest rate volatility.

Gap or Mismatch Risk:

A gap or mismatch risk arises from holding assets and liabilities and off-balance sheet items with different principal amounts, maturity dates or repricing dates, thereby creating exposure to unexpected changes in the level of market interest rates.

Basis Risk

Market interest rates of various instruments seldom change by the same degree during a given period of time. The risk that the interest rate of different assets, liabilities and off-balance sheet items may change in different magnitude is termed as basis risk. The degree of basis risk is fairly high in respect of banks that create composite assets out of composite liabilities.

Embedded Option Risk

Significant changes in market interest rates create another source of risk to banks' profitability by encouraging prepayment of cash credit/demand loans/term loans and exercise of call/put options on bonds/debentures and/or premature withdrawal of term deposits before their stated maturities. The embedded option risk is becoming a reality in India and is experienced in volatile situations.

Yield Curve Risk

In a floating interest rate scenario, banks may price their assets and liabilities based on different benchmarks, i.e. TBs yields, fixed deposit rates, call money rates, MIBOR, etc. In case the banks use two different instruments maturing at different time horizon for pricing their assets and liabilities, any non-parallel movements in yield curves would affect the NII.

Price Risk

Price risk occurs when assets are sold before their stated maturities. In the financial market, bond prices and yields are inversely related. The price risk is closely associated with the trading book, which is created for making profit out of short-term movements in interest rates.

Reinvestment Risk

Uncertainty with regard to interest rate at which the future cash flows could be reinvested is called reinvestment risk. Any mismatches in cash flows would expose the banks to variations in NII as the market interest rates move in different directions.

Net Interest Position Risk

The size of nonpaying liabilities is one of the significant factors contributing towards profitability of banks. When banks have more earning assets than paying liabilities, interest rate risk arises when the market interest rates adjust downwards.

12. FOREIGN EXCHANGE (FOREX) RISK

The risk inherent in running open foreign exchange positions have been heightened in recent years by the pronounced volatility in forex rates, thereby adding a new dimension to the risk profile of banks' balance sheets. Forex risk is the risk that a bank may suffer losses as a result of adverse exchange rate movements during a period in which it has an open position, either spot or forward, or a combination of the two, in an individual foreign currency. The banks are also exposed to interest rate risk, which arises from the maturity mismatching of foreign currency positions. Even in cases where spot and forward positions in individual currencies are balanced, the maturity pattern of forward transactions may produce mismatches. As a result, banks may suffer losses as a result of changes in premia/discounts of the currencies concerned.

Forex Risk Management Measures

The top management should also adopt the VaR approach to measure the risk associated with exposures. Reserve Bank of India has recently introduced two statements viz. Maturity and Position (MAP) and Interest Rate Sensitivity (SIR) for measurement of forex risk exposures. Banks should use these statements for periodical monitoring of forex risk exposures.

Capital for Market Risk

The Basle Committee on Banking Supervision (BCBS) had issued comprehensive guidelines to provide an explicit capital cushion for the price risks to which banks are exposed, particularly those arising from their trading activities. The banks have been given flexibility to use in-house models based on VaR for measuring market risk as an alternative to a standardised measurement framework suggested by Basle Committee.

Operational Risk

Managing operational risk is becoming an important feature of sound risk management practices in modern financial markets in the wake of phenomenal increase in the volume of transactions, high degree of

structural changes and complex support systems. The most important type of operational risk involves breakdowns in internal controls and corporate governance. Such breakdowns can lead to financial loss through error, fraud, or failure to perform in a timely manner or cause the interest of the bank to be compromised.

Measurement

There is no uniformity of approach in measurement of operational risk in the banking system. Besides, the existing methods are relatively simple and experimental, although some of the international banks have made considerable progress in developing more advanced techniques for allocating capital with regard to operational risk.

Measuring operational risk requires both estimating the probability of an operational loss event and the potential size of the loss. It relies on risk factor that provides some indication of the likelihood of an operational loss event occurring. The process of operational risk assessment needs to address the likelihood (or frequency) of a particular operational risk occurring, the magnitude (or severity) of the effect of the operational risk on business objectives and the options available to manage and initiate actions to reduce/ mitigate operational risk.

Risk Monitoring

The operational risk monitoring system focuses, *inter alia*, on operational performance measures such as volume, turnover, settlement facts, delays and errors. It could also be incumbent to monitor operational loss directly with an analysis of each occurrence and description of the nature and causes of the loss.

Control of Operational Risk

Internal controls and the internal audit are used as the primary means to mitigate operational risk. Banks could also explore setting up operational risk limits, based on the measures of operational risk. The contingent processing capabilities could also be used as a means to limit the adverse impacts of operational risk. Insurance is also an important mitigator of some forms of operational risk. Risk education for familiarising the complex operations at all levels of staff can also reduce operational risk.

Internal Control

One of the major tools for managing operational risk is the well-established internal control system, which includes segregation of duties, clear management reporting lines and adequate operating procedures. Most of the operational risk events are associated with weak links in internal control systems or laxity in complying with the existing internal control procedures.

Risk Aggregation and Capital Allocation

Most of internally active banks have developed internal processes and techniques to assess and evaluate their own capital needs in the light of their risk profiles and business plans. Such banks take into account both qualitative and quantitative factors to assess economic capital. The Basle Committee now recognises that capital adequacy in relation to economic risk is a necessary condition for the long-term soundness of banks. Thus, in

addition to complying with the established minimum regulatory capital requirements, banks should critically assess their internal capital adequacy and future capital needs on the basis of risks assumed by individual.

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