

# THE JANATA CO-OPERATIVE BANK LTD.

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## RISK MANAGEMENT POLICY

The Risk Management Policy has been framed taking into consideration the guidelines/circulars issued by Reserve Bank of India from time to time, recommended by the Inspection & Audit Compliance Sub-Committee and approved by the BoM/Board of Directors in its meeting held on 20.03.2024/30.03.2024 vide Resolution No.A.1(f)(iv) as under :

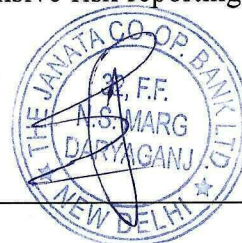
### 1. Introduction

As per RBI guidelines, Banks in India are required to implement effective Risk Management System in the area of credit, market and operational risks and provide adequate capital to meet them.

This Policy seeks to lay down the Bank's approach to the management of risk and to put in place a comprehensive framework for identification, assessment, monitoring, management and reporting of risk in a timely and efficient manner. Risk Management must necessarily operate within the framework of the Bank's corporate vision and mission, risk appetite, concomitant with prudential controls and should be in line with the regulatory compliance needs. The policy also seeks to create systems and procedures to actively mitigate Risks, optimize resources primarily to protect the Bank against the downside and at the same time provide an appropriate and reasonable return commensurate with the risk profile adopted. Bank in the process of financial intermediation are confronted with various kinds of financial and non-financial risks viz., credit, interest rate, liquidity, 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 Bank should attach considerable importance to improve the ability to identify measure, monitor and control the overall level of risks.

The broad parameters of risk management function should encompass:

- i) Organizational 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) Periodical review and evaluation.



## 2. Risk Management Structure

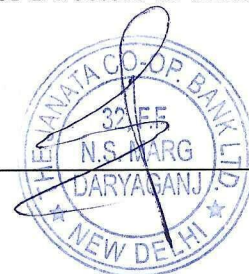
A major issue in establishing an appropriate risk management organization is choosing between a centralised and decentralised structure. The trend is towards centralizing risk management with integrated benefit from information on aggregate exposure, natural netting of exposures, economies of scale and 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 organizational level, overall risk management should be assigned to an independent Compliance consisting 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 Compliance of Committee should essentially be to identify, monitor and measure the risk profile of the bank whereas Risk Management Committee shall 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 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.

The key roles & responsibilities of the Investment Committee shall be as follows:

- i. Recommend and periodical updation of policies, strategies and frameworks for the management of risk to the Board for their review/approval.
- ii. Monitor and review of non-compliance, limit breaches, audit / regulatory findings and policy exceptions with respect to risk management.
- iii. To ensure that the procedures for identifying, measuring, monitoring and controlling risks are in place.

The Board has delegated authority to the Committee for oversight and review of the risk management in the Bank. The key responsibilities of the Committee relating to overall risk management of the Bank include:

- i. Approve the risk appetite and any revisions to it with proper reasoning.
- ii. Ensure appropriate risk organization structure with authority and responsibility clearly defined, adequate staffing, and the independence of the Risk Management function
- iii. Provide appropriate and prompt reporting to the Board of Directors in order to fulfill the oversight responsibilities.





- iv. To ensure that principles, policies, strategies, process and controls are being communicated throughout the Bank.
- v. Review reports from various departments concerning changes in the factors relevant to the Banks' projected strategy, business performance or capital adequacy.
- vi. Review reports from various departments concerning implications of new and emerging risks, legislative or regulatory initiatives and changes, organizational change and major initiatives, in order to monitor them.
- vii. Ensure adherence to the extant internal policy guidelines and also regulatory guidelines if any published time to time.
- viii. Oversee statutory / regulatory reporting requirements related to risk management.
- ix. Monitor and review capital adequacy computation with an understanding of methodology, systems and data.
- ix. Approve the stress testing results / analysis and monitor the action plans and corrective measures periodically.
- x. The committee shall be responsible for reviewing and confirming orders/decisions of identification of willful defaulters given by credit department.

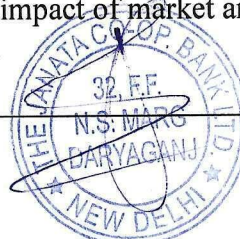
A prerequisite for establishment of an effective risk management system is the existence of a robust MIS, consistent in quality. The existing MIS, however, requires substantial upgradation and strengthening of the data collection machinery to ensure the integrity and reliability of data.

The risk management is a complex function and it requires specialized skills and expertise. Bank should use sophisticated models for measuring and managing risks. As the domestic market integrates with the international markets, the Bank should have necessary expertise and skill in managing various types of risks in a scientific manner. It should, therefore, be the endeavor of Bank to upgrade the skills of staff.

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 Bank has put in place own systems compatible to the risk management architecture and expertise.

A committee approach to risk management is being adopted. While the Asset - Liability Committee (ALCO) deal with different types of market risk, the credit/ counterparty risk and country risk. Thus, market and credit risks are managed in a parallel two-track approach in bank.

Currently, while market variables are held constant for quantifying credit risk, credit variables are held constant in estimating market risk. The volatility in the prices of collateral also significantly affects the quality of the loan portfolio. Thus, there is a need for integration of the activities of both the ALCO and the Loan Committee and consultation process should be established to evaluate the impact of market and credit



risks on the financial strength of Bank. Therefore Bank has considered integrating market risk elements into their credit risk assessment process by having a common member in ALCO and Loan Committees.

### 3. Risk Culture

The Bank seeks to promote a strong risk culture throughout the organization. A strong risk culture is designed to help reinforce the Bank's efforts by encouraging a holistic approach to the management of risk and return throughout the organization as well as the effective management of the Bank's risk, capital and reputation. The Bank shall be involved in risks in connection with its businesses and the following principles underpin risk culture within the organization:

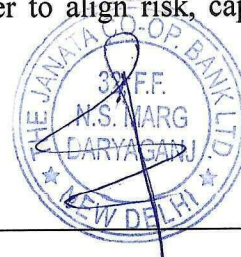
- i. Every risk taken needs to be approved or within the risk management framework.
- ii. Risk is taken within a defined risk appetite.
- iii. Risk should be continuously monitored and managed.
- iv. Each business vertical is responsible for the development and execution of business plans that are aligned with the company risk's management and are accountable for the risks they incur.
- v. Management team ensures that the inherent risks in each business vertical are comprehensively evaluated, mitigating controls built into the underwriting process and remedial measures put in place.
- vi. Documented policies and procedures along with regular training programs and reviews ensures that these are uniformly understood by all employees across the organization.

Employees at all levels are responsible for the management and escalation of risks. Bank expects employees to exhibit behaviours that support a strong culture to mitigate risk. To promote this, it will strive towards incorporating risk management culture across all levels in the organisation.

### 4. Risk Governance

The Bank has set up a robust risk governance framework based on the following key principles:

- i. While the Board of Directors will be responsible for overall governance and oversight of core risk management activities, execution strategy will be delegated to the Inspection & Audit Compliance Sub-Committee which will be approved by the board.
- ii. Risk strategy is approved by the Board and reviewed on an annual basis and is defined based on the Bank's risk appetite in order to align risk, capital and performance targets.





- iii. All major risk classes are managed through focused and specific risk management processes; these risks include credit risk, market risk, operational risk and liquidity risk. As the Bank gains sophistication in risk management, it shall put in place advanced risk management models to commensurate with the size, scale and complexity of its business.
- iv. Policies, processes and systems shall be put in place to enable the risk management capability.
- v. The Risk function shall have appropriate representation on management committees of the Bank and its respective businesses to ensure risk view is taken in to consideration in business decisions.
- vi. Risk monitoring, stress testing tools and escalation processes shall be established to monitor the performance against approved risk appetite.

## **5. Scope of policy**

### **A. Credit Risk**

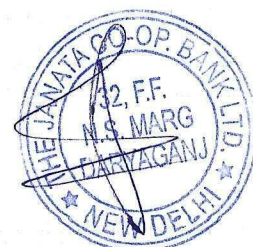
#### **Lending involves a number of risks**

In addition to the risks related to creditworthiness of the borrower, the Bank is also exposed to interest rate, Credit risk or default risk involves inability or unwillingness of a borrower/customer 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 and post sanction surveillance, etc.

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

- i. Measurement of risk through credit rating/scoring;



- ii. 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 behavior 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 quintile);
- iii. Risk pricing on a scientific basis
- iv. Controlling the risk through effective Loan Review and portfolio management.

## **I. 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.

### **a) Credit Approving Authority :**

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 a 'Committee'. The credit facilities above a specified limit may be approved by the 'Committee', comprising at least 3 or 4 members of the board and other officers and invariably one officer should represent the committee, who has no volume and profit targets. The spirit of the credit approving system may be that no credit proposals should be approved or recommended to higher authorities, if majority members of the 'Committee' do not agree on the creditworthiness of the borrower. In case of disagreement, the specific views of the dissenting member/s should be recorded.

The Committee will be headed by the Chairman. The Committee will, inter alia, formulate clear policies on standards for presentation of credit proposals, financial covenants, rating standards and benchmarks, delegation of credit approving powers, prudential limits on large credit exposures, asset concentrations, standards for loan collateral, portfolio management, loan review mechanism, risk concentrations, risk monitoring and evaluation, pricing of loans, provisioning, regulatory/legal compliance, etc. Bank to lay down risk assessment systems, monitor quality of loan portfolio, identify problems and correct deficiencies, develop MIS and undertake loan review/audit. The Department should undertake portfolio evaluations and conduct comprehensive studies on the environment to test the resilience of the loan portfolio.

### **b) Prudential Limits :**

In order to limit the magnitude of credit risk, prudential limits laid down on loan policy:





- i) 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 therefore should also be clearly spelt out in the Loan Policy;
- ii) For Single borrower and Group of borrowers limits, which may be lower than the limits prescribed by Reserve Bank to provide a filtering mechanism;
- iii) Banks may consider maturity profile of the loan portfolio, keeping in view the market risks inherent in the balance sheet, risk evaluation capability, liquidity, etc.

**c) Risk Rating :**

Bank should have a comprehensive risk scoring / rating system that serves as a single point indicator of diverse risk factors of 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 is to 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 portfolio. The rating exercise should also facilitate the credit granting authorities some comfort in its knowledge of loan quality at any moment of time.

The risk rating system should be drawn up in a structured manner, incorporating, inter alia, financial analysis, projections and sensitivity, industrial and management risks. The Bank may use any number of financial ratios and operational parameters and collaterals as also qualitative aspects of management and industry characteristics that have bearings on the creditworthiness of borrowers. Bank can also weigh the ratios on the basis of the years to which they represent for giving importance to near term developments. Within the rating framework, Bank can also prescribe certain level of standards or critical parameters, beyond which no proposals should be entertained. Bank may also consider separate rating framework for large corporate / small borrowers, traders, etc. that exhibit varying nature and degree of risk. The overall score for risk is to be placed on a numerical scale ranging between 1- 10 on the basis of credit quality. For each numerical category, a quantitative definition of the borrower, the loan's underlying quality, and an analytic representation of the underlying financials of the borrower should be presented. Further, as a prudent risk management policy, Bank should prescribe the minimum rating below which no exposures would be undertaken. Any flexibility in the minimum standards and conditions for relaxation and authority therefore should be clearly articulated in the Bank's Loan Policy.



The credit risk assessment exercise should be repeated biannually (or even at shorter intervals for low quality customers) and should be delinked invariably from the regular renewal exercise. The updating of the credit ratings should be undertaken at least half-yearly intervals, in order to gauge the quality of the portfolio at periodic intervals. Variations in the ratings of borrowers over time indicate changes in credit quality and expected loan losses from the credit portfolio. Thus, if the rating system is to be meaningful, the credit quality reports should signal changes in expected loan losses. In order to ensure the consistency and accuracy of internal ratings, the responsibility for setting or confirming such ratings should vest with the Loan Review function and examined by Loan Committees. The Banks should undertake comprehensive study on migration (upward - lower to higher and downward - higher to lower) of borrowers in the ratings to add accuracy in expected loan loss calculations.

**d) Risk Pricing :**

Risk-return pricing is a fundamental tenet of risk management. In a riskreturn setting, borrowers with weak financial position and hence placed in high credit risk category should be priced high. Thus, Bank has framed Risk Based Pricing Model, 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 behavior of the loan portfolio, which is the function of loan loss provision/charge offs for the last five years or so. Bank should build historical database on the portfolio quality and provisioning / charge off to equip themselves to price the risk. But value of collateral, market forces, perceived value of accounts, future business potential, portfolio/industry exposure and strategic reasons may also play important role in pricing. Flexibility should also be made for revising the price due to changes in rating / value of collaterals over time. There is, however, a need for comparing the prices quoted by competitors for borrowers perched on the same rating /quality. Thus, any attempt at pricecutting for market share would result in mispricing of risk and 'Adverse Selection'. So, it shall be taken up only selectively.

**e) 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 portfolio. Bank should evolve proper systems for identification of credit weaknesses well in advance. The Loan department, 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. Data on movements within grading categories provide a useful insight into the nature and composition of loan portfolio.





**f) Loan Review Process and Monitoring :**

The Bank has in place comprehensive postsanction processes aimed at enabling efficient and effective credit management. Review of Advances is an effective tool for constantly evaluating the quality of loan portfolio and to bring about qualitative improvements in credit administration. Quarterly review of High value advances by the Loan committee is placed before the BOM / BOD.

The main objectives of Loan Review Process could be :

- i. To identify promptly loans which develop credit weaknesses and initiate timely corrective action
- ii. To evaluate portfolio quality and isolate potential problem areas
- iii. To provide information for determining adequacy of loan loss provision
- iv. To assess the adequacy of and adherence to, loan policies and procedures, and to monitor compliance with relevant laws and regulations; and
- v. To provide top management with information on credit administration, including credit sanction process, risk evaluation and post-sanction follow-up.
- vi. Comparing the account outstanding to the assets level on a continuing basis.
- vii. Compliance with all internal and external reporting requirements for credit discipline.

Accurate and timely credit grading is one of the basic components of an effective monitoring. Credit grading involves assessment of credit quality, identification of problem loans, and assignment of risk ratings. A proper Credit Grading System should support evaluating the portfolio quality and establishing loan loss provisions. Given the importance and subjective nature of credit rating, the credit ratings awarded by Loan Department should be subjected to review.

The loan reviews should focus on:

- i. Approval process
- ii. Accuracy and timeliness of credit ratings assigned by loan officers
- iii. Adherence to internal policies and procedures, and applicable laws / regulations
- iv. Compliance with loan covenants



- v. Post-sanction follow-up
- vi. Sufficiency of loan documentation
- vii. Portfolio quality
- viii. Recommendations for improving portfolio quality

The findings of Reviews should be discussed at appropriate level and the corrective actions should be elicited for all deficiencies. Deficiencies that remain unresolved should be reported to BOM / BOD.

## **II. 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 Loan & Investment Departments. The Bank should exercise due caution, particularly in investment proposals, which are not rated and should ensure comprehensive risk evaluation. There should be greater interaction between Loan and Investment Departments and the portfolio analysis should also cover the total exposures, including investments. The rating migration of the issuers and the consequent diminution in the portfolio quality should also be tracked at periodic intervals. As a matter of prudence, bank should invest as per Investment Policy of the bank.

## **III. Credit Risk in Off-balance Sheet Exposure**

The current and potential credit exposures may be measured on a daily basis to evaluate the impact of potential changes in market conditions on the value of counterparty positions. The potential exposures also may be quantified by subjecting the position to market movements involving normal and abnormal movements in interest rates, liquidity conditions, etc. As we do not have any off-balance sheet exposure except Bank Guarantee, Bank may implement risk mitigating factors for the same.

### **B. Market Risk :**

Market risk signifies the adverse movement in the market value of trading portfolio during the period required to liquidate the transaction. This risk results from adverse movements in the level or volatility of the market prices of interest rate instruments, equities, commodities and currencies. It is also referred to as Price risk. Controlling market risk means the variations in the value of portfolio should be kept within the approved boundary/ tolerance limits.





## **I. Non- Financial Risks:**

Non- financial risks to which Banks are exposed to are the Business Risk or Reputation Risk and Strategic Risk.

### **a) Business Risk :**

It pertains to the product market in which the Bank operates and includes technological innovations, marketing and product decisions. Superfluous marketing techniques could prove very costly and cause negative public opinion causing reputational risk which may also result in financial loss or decline in customer base. A Bank with pulse on the market and driven by technology as well as high degree of customer focus, could be relatively protected against this risk.

### **b) Strategic Risk :**

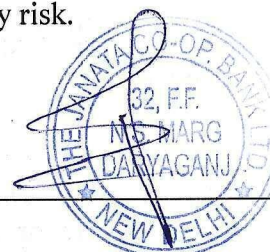
It is the risk arising from adverse business decisions, improper implementation of decisions or lack of responsiveness to industry changes. In order to avoid the risk, the Bank has to redesign policies suiting to changed environments, increase market image, do proper budgeting and by way of creating necessary awareness among staff by imparting training, succession planning etc.,

## **C. Liquidity Risk :**

Liquidity risk arises when the Bank is unable to meet a financial commitment arising out of a variety of situations.

- a) Funding Risk: Funding liquidity risk is defined as the inability to obtain funds to meet cash flow obligations. This arises with the need to replace net outflows due to unanticipated withdrawal/ non- renewal of deposits.
- b) Time Risk: Time risk arises from the need to compensate for non- receipt of expected inflow of funds i.e. performing assets turning into non-performing assets.
- c) Call Risk: Call risk arises due to crystallization of contingent liabilities i.e. the Bank being unable to undertake profitable business opportunities when they arise.
- d) Investing liquidity Risk: Not able to exit on investment either on account of credit risk, price risk etc. or absence of market. ill managed liquidity could cost in terms of losing a good customer or loss due to sale of good investments or raising high cost resources. Such a situation may invite wrath of regulators as also penalties.

Liquidity risk management can be effectively done either through policy or through well defined norms. Forming strategies, Liquidity planning, prudential norms, review etc. shall be key ingredients of managing liquidity risk.



The difference between cash inflows and outflows in each time period, the excess or deficit of funds becomes a starting point for a measure of a bank's future liquidity surplus or deficit, at a series of points of time. The Bank should also consider putting in place certain prudential limits to avoid liquidity crisis :

- i. Cap on inter-bank borrowings, especially call borrowings;
- ii. Purchased funds vis-à-vis liquid assets;
- iii. Core deposits vis-à-vis Core Assets i.e. Cash Reserve Ratio, Liquidity Reserve Ratio and Loans;
- iv. Duration of liabilities and investment portfolio;
- v. Maximum Cumulative Outflows. Banks should fix cumulative mismatches across all time bands;
- vi. Commitment Ratio – track the total commitments given to corporates/banks and other financial institutions to limit the off-balance sheet exposure;

Bank should also evolve a system for monitoring high value deposits (other than inter- Bank deposits) say Rs.1 crore or more to track the volatile liabilities. Further the cash flows arising out of contingent liabilities in normal situation and the scope for an increase in cash flows during periods of stress should also be estimated. It is quite possible that market crisis can trigger substantial increase in the amount of drawdown from cash credit/overdraft accounts, contingent liabilities.

The liquidity profile of the Bank could be analyzed on a static basis, wherein the assets and liabilities and off-balance sheet items are pegged on a particular day and the behavioral pattern and the sensitivity of these items to changes in market interest rates and environment are duly accounted for. The Banks can also estimate the liquidity profile on a dynamic way by giving due importance to:

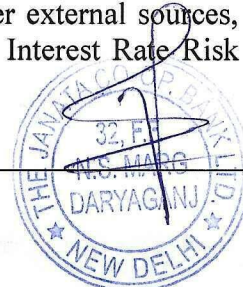
- i. Seasonal pattern of deposits/loans;
- ii. Potential liquidity needs for meeting new loan demands, unavailed credit limits, loan policy, potential deposit losses, investment obligations, statutory obligations, etc.

### **I. Alternative Scenarios**

The liquidity profile of Bank depends on the market conditions, which influence the cash flow behavior. Thus, Bank should evaluate liquidity profile under different conditions, viz. normal situation, Bank specific crisis and market crisis scenario. The Bank should establish benchmark for normal situation; cash flow profile of on / off balance sheet items and manage net funding requirements.

### **II. Contingency Plan**

Availability of back-up liquidity support in the form of committed lines of credit, reciprocal arrangements, liquidity support from other external sources, liquidity of assets, etc. should also be clearly established. Interest Rate Risk





(IRR) The management of Interest Rate Risk should be one of the critical components of market risk management in banks. Deregulation of interest rates has, however, exposed Bank to the adverse impacts of interest rate risk. The Net Interest Income (NII) or Net Interest Margin (NIM) of Bank 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. Interest Rate Risk (IRR) refers to potential impact on NII or NIM or Market Value of Equity (MVE), caused by unexpected changes in market interest rates. Interest Rate Risk can take different forms:

### **III. Types of Interest Rate Risk**

- i. Gap or Mismatch Risk
- ii. Basis Risk
- iii. Embedded Option Risk
- iv. Yield Curve Risk
- v. Reinvestment Risk:
- vi. Net Interest Position Risk :

### **IV. Measuring Interest Rate Risk**

Before interest rate risk could be managed; they should be identified and quantified. Unless the quantum of IRR inherent in the balance sheet is identified, it is impossible to measure the degree of risks to which Bank is exposed. It is also equally impossible to develop effective risk management strategies/hedging techniques without being able to understand the correct risk position of bank. The IRR measurement system should address all material sources of interest rate risk including gap or mismatch, basis, embedded option, yield curve, price, reinvestment and net interest position risks exposures. The IRR measurement system should also take into account the specific characteristics of each individual interest rate sensitive position and should capture in detail the full range of potential movements in interest rates. There are different techniques for measurement of interest rate risk, e.g. the traditional Maturity Gap Analysis (to measure the interest rate sensitivity of earnings), Duration (to measure interest rate sensitivity of capital), Simulation and Value at Risk. Our Bank may adopt any suitable method out of above to measure IRR. Generally, the approach towards measurement and hedging of IRR varies with the segmentation of the balance sheet. In a well-functioning risk management system, Banks broadly position their balance sheet into Trading and Investment or Banking Books. While the assets in the trading book are held primarily for generating profit on short-term differences in prices/yields, the banking book comprises assets and liabilities, which are contracted basically on account of relationship or for steady income and statutory obligations and are generally held till maturity. Thus, while the price risk shall be the prime concern of Bank in trading book, the earnings or economic value changes will be the main focus of banking book.



**a) Trading Book:**

The Banks should lay down policies with regard to volume, maximum maturity, holding period, duration, stop loss, defeasance period, rating standards, etc. for classifying securities in the trading book. While the securities held in the trading book should ideally be marked to market as per RBI guidelines. The stress tests provide management a view on the potential impact of large size market movements and also attempt to estimate the size of potential losses due to stress events, which occur in the 'tails' of the loss distribution. In an environment like us where Value at Risk (VaR) is difficult to estimate for lack of data, Bank can use non-statistical concepts such as stop loss and gross/net positions can be used.

**b) Banking Book :**

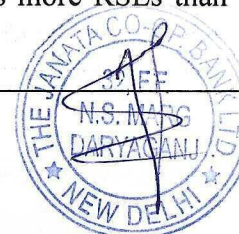
The changes in market interest rates have earnings and economic value impacts on the banks' banking book. Thus, given the complexity and range of balance sheet products, Bank should have IRR measurement systems that assess the effects of the rate changes on both earnings and economic value.

**c) Maturity Gap Analysis:**

The simplest analytical techniques for calculation of IRR exposure begins with maturity Gap analysis that distributes interest rate sensitive assets, liabilities and off-balance sheet positions into a certain number of pre-defined time-bands according to their maturity (fixed rate) or time remaining for their next repricing (floating rate). Those assets and liabilities lacking definite repricing intervals (savings bank, cash credit, overdraft, loans) or actual maturities vary from contractual maturities (embedded option in bonds with put/call options, loans, cash credit/overdraft, time deposits, etc.) are assigned time-bands according to the judgment, empirical studies and past experiences of bank.

A number of time bands can be used while constructing a gap report. Generally, most of the Bank focus their attention on near-term periods, viz. monthly, quarterly, half-yearly or one year. It is very difficult to take a view on interest rate movements beyond a year. Bank's short-term should test the sensitivity of their assets and liabilities even at shorter intervals like overnight, 1-7 days, 8-14 days, etc. Bank, we may focus on half year to one year period as our exposures in both assets and liabilities are more in that time band only.

In order to evaluate the earnings exposure, interest Rate Sensitive Assets (RSAs) in each time band are netted with the interest Rate Sensitive Liabilities (RSLs) to produce a repricing 'Gap' for that time band. The positive Gap indicates that Bank has more RSAs than RSLs. A positive or asset sensitive Gap means that an increase in market interest rates could cause an increase in NII. Conversely, a negative or liability sensitive Gap implies that the banks' NII could decline as a result of increase in market interest rates. The negative gap indicates that Bank has more RSLs than



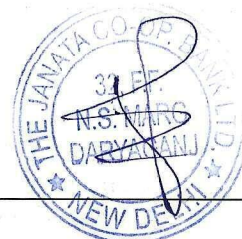


RSAs. The Gap is used as a measure of interest rate sensitivity. The Positive or Negative Gap is multiplied by the assumed interest rate changes to derive the Earnings at Risk (EaR). The EaR method facilitates to estimate how much the earnings might be impacted by an adverse movement in interest rates. The changes in interest rate could be estimated on the basis of past trends, forecasting of interest rates, etc. The Bank should fix EaR which could be based on last/current year's income and a trigger point at which the line management should adopt on-or off-balance sheet hedging strategies may be clearly defined.

The Gap calculations can be augmented by information on the average coupon on assets and liabilities in each time band and the same could be used to calculate estimates of the level of NII from positions maturing or due for repricing within a given time-band, which would then provide a scale to assess the changes in income implied by the gap analysis. In case Bank could realistically estimate the magnitude of changes in market interest rates of various assets and liabilities (basis risk) and their past behavioral pattern (embedded option risk), they could standardize the gap by multiplying the individual assets and liabilities by how much they will change for a given change in interest rate. Thus, one or several assumptions of standardized gap seem more consistent with real world than the simple gap method. With the Adjusted Gap, Banks could realistically estimate the EaR.

**d) Duration Gap Analysis:**

Matching the duration of assets and liabilities, instead of matching the maturity or repricing dates is the most effective way to protect the economic values of Banks from exposure to IRR than the simple gap model. Duration gap model focuses on managing economic value of Banks by recognizing the change in the market value of assets, liabilities and off-balance sheet (OBS) items. When weighted assets and liabilities and OBS duration are matched, market interest rate movements would have almost same impact on assets, liabilities and OBS, thereby protecting the bank's total equity or net worth. Duration is a measure of the percentage change in the economic value of a position that will occur given a small change in the level of interest rates. Measuring the duration gap is more complex than the simple gap model. For approximation of duration of assets and liabilities, the simple gap schedule can be used by applying weights to each time-band. The weights are based on estimates of the duration of assets and liabilities and OBS that fall into each time band. The weighted duration of assets and liabilities and OBS provide a rough estimation of the changes in banks' economic value to a given change in market interest rates. It is also possible to give different weights and interest rates to assets, liabilities and OBS in different time buckets to capture differences in coupons and maturities and volatilities in interest rates along the yield curve.



**e) Capital for Market Risk :**

The Basel Committee on Banking Supervision (BCBS) had issued comprehensive guidelines to provide an explicit capital cushion for the price risks to which Bank is exposed, particularly those arising from their trading activities. The Bank has been given flexibility to use in-house models based on VaR for measuring market risk as an alternative to a standardized measurement framework suggested by Basel Committee. The internal models should, however, comply with quantitative and qualitative criteria prescribed by Basel Committee.

The Basel Committee on Banking Supervision has proposed to develop capital charge for interest rate risk in the banking book as well for Bank where the interest rate risks are significantly above average.

**V. Control of Operational Risk**

Internal controls and the internal audit are used as the primary means to mitigate operational risk. Bank 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 familiarizing the complex operations at all levels of staff can also reduce operational risk. Bank shall strive to educate the staff at all levels and increase awareness of systems and risks. Risk Focused Internal Audit (RFIA) shall take care of all the aspects of operational risk.

**VI. Internal Control**

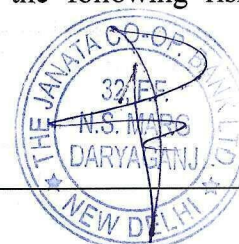
One of the major tools for managing operational risk is the well-established internal control system, which includes segregation of duties, clear management reporting lines and adequate operating procedures. Most of the operational risk events are associated with weak links in internal control systems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

The ideal method of identifying problem spots is the technique of self-assessment of internal control environment. The self-assessment could be used to evaluate operational risk along with internal/external audit reports/ratings or RBI inspection findings. Bank should endeavor for detection of operational problem spots rather than their being pointed out by supervisors/internal or external auditors.

Along with activating internal audit systems, the Audit Committees should play greater role to ensure independent financial and internal control functions.

**6. Risk Mitigation**

All the identified risks shall be mitigated by using any of the following risk mitigation plans :





- a) Risk avoidance: By not performing an activity that could carry risk. However, such avoidance can result into losing out on the potential gain that accepting (retaining) the risk may have allowed.
- b) Risk transfer: Mitigation by having another party to accept the risk, either partial or total, typically by contract or by hedging / insurance.
- c) Risk reduction: Employing methods/solutions that reduce the severity of the loss.
- d) Risk retention: Accepting the loss when it occurs. Risk retention is a viable strategy for small risks where the cost of insuring against the risk would be greater than the total losses sustained. All risks that are not avoided or transferred are retained by default.
- e) Risk Awareness: Raising awareness about managing risks across the organisation.

## 7. Responsibility

Members of ALM committee shall be primarily responsible for identifying and mitigating the risks in their respective domains and the overall implementation of this policy in the Bank.

## 8. Conclusion.

This policy will be taken up for review as and when there are major changes in the environment arising out of changes in the policy by Reserve Bank of India on Risk Management. However, in the absence of any such changes in the economic and banking scenario, this policy will continue to be in force. The changes made by the RBI and Government of India must be complied with and the Policy shall be revised, rectified and amended accordingly. This policy has been framed and shall be valid till it is revised.

For The Janata Co-operative Bank Ltd.

(P.S. Pathania)  
Managing Director

