RISK MANAGEMENT POLICY

NAVACHETANA

SHAISHAVI PROJECT CONSULTANTS

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1. PURPOSE AND SCOPE OF THE POLICY

The purpose of Risk Management Framework is to establish basic principles and general framework for the control and management of risks which may exist or arise in future. On specific risks faced by Navachetana, Specific Risk Sub-Policies have been developed which together form the Risk Management Framework.

While NAVACHETANA faces uncertainties and risks, the challenge for the board and management is to determine, as to what extent uncertainty is acceptable in order to strive to grow stakeholder value. Risk Management is essential as it is required for long-term sustainability.

More specifically, the objectives of risk management are:

- Enhance shareholders value by minimizing losses and maximizing opportunities;
- Increase knowledge and understanding of exposure to risk;
- A systematic, well-informed and thorough method of decision-making;
- Increase preparedness and reduce uncertainty;
- Minimize disruptions and impact caused;
- Better utilization of resources and capital;
- Strengthen culture of continuous improvement;
- Retain the risk profile within the approved risk appetite;
- Risks are accurately and timely reflected in risk reports.

It is management key responsibility is to provide reasonable assurance that NAVACHETANA's business is being managed sustainably. Rather than focusing on current or historical financial performance, the management focuses on its ability to identify and manage future risks; this is viewed as being the best predictor of long-term success and sustainability. Management has a firm commitment that its products and processes comply with laws and regulations, and are aligned to the best practices of risk management. Increased focus on risk management reflects a fundamental shift to better anticipate and manage risks, rather than just react to them as and when they occur.

The key to fulfilling the responsibility of providing reasonable assurance to stakeholders that NAVACHETANA's business is adequately controlled, is the development of a comprehensive system of management controls, accounting and internal controls, security procedures, and other risk controls.

2. KEY PRINCIPLES OF RISK

There are specific core principles with regard to risk management. To suit the context of NAVACHETANA and its operations, we have adopted risk management principles as defined by the International Standards Organization (ISO). The risk management principles should:

- Create value through continuous review of its process and systems
- Is an integral part of the organizational processes i.e. becoming integral part of governance framework and becomes part of its planning at both operational and strategic level.
- Factor into the overall decision-making processes and help take informed decisions, identify priorities and select the most appropriate action
- Explicitly address uncertainty by identifying risks and implementing controls
- Systematic, structured and timely so that risk management is consistent to ensure efficiency, consistency and reliability of results
- Is based on the risk management framework, factors in the risk profile, and take into consideration internal and external operating environment
- Take into account human and cultural factors
- Is transparent and all-inclusive so that it engages both internal and external stakeholders
- Is dynamic and adaptable to change to identify new risks and make allowances for those risks that no longer exist
- Is continuously monitored and improved upon for continual achievement of organizational objectives
- Is independent
- Is embedded in the corporate culture so that everyone take responsibility in managing risks

3. RISK MANAGEMENT PROCESS

Risk management is a systematic process that comprises well-defined steps:

- Identification, assessment, prioritization and mitigation of inherent risks,
- Develop strategies and tactics to manage risks,
- Implement policies and assign responsibilities,
- Test effectiveness and evaluate risks,
- Revise policies and procedures,
- Monitor and control risks

When these steps are taken in sequence, they support better decision making and enable greater insights into risks. However, the risk management process does not end with monitoring and controlling risk; it is an on- going function. Further, it is not a linear process, but rather an on-going iterative process. The steps are part of an interactive and dynamic flow of information from the field to the head office (and management) and back to the field. These steps make a continuous feedback loop that consistently questions whether the assumed risk is reasonable and appropriate, or whether it should be reassessed.

Identification, assessment, prioritization and mitigation of inherent risks,

Chief Risk Officer/Advisor plays a key role in identifying, assessing and managing the overall risks faced by the institution. These risk owners will inform about new risks pertaining to their work area and the consequences if not managed proactively, to the Chief Risk Officer.

Members of the management including heads of departments (Operations, IT, HR, Finance, Internal Audit, Legal) shall bear the primary responsibility to identify risks in functional area(s) for which they are responsible.

The front-line business/operations are responsible for assessment and control of credit risk whereas back-end control functions are responsible for locating, identifying assessment and control of operational, liquidity and market risk.

The role of the RM is to establishing internal controls by acting as observer, evaluator using data analytics across all risk dimensions and to continuously identify, assess and priorities the risk independent of the Risk Owners.

Besides reporting to the BRMC (Board Risk Management Committee) on Risk Management, he will also apprise them of the new risks identified, their severity and thus priority level. Chief Risk Officer, who is not a direct part of the operational command chain, will play a critical role at taking operational exposures by evaluating policies and procedures across different functions from the perspective of risk management.

For each new risk area, the BRMC will determine the potential negative impact if the risk is not actively managed. Further, the BRMC will determine the degree of risk that NAVACHETANA should tolerate and conduct assessments of potential impact from the identified risk, should a risk event actually materialize.

Develop Strategies to Mitigate Risk

The Board determines the risk appetite as an integral part of choosing a business strategy for NAVACHETANA. The business strategy needs to be developed and continuously brought in line with the risk appetite. Risk appetite statement indicates the maximum risk the institution is willing to take. The Board takes care of regulatory limits while determining the risk appetite including capital adequacy norms.

The risk appetite statement is reassessed regularly-at least once a year-and more often if required-in view of changes in the business environment and as measures of risks. The Board relies on the risk assessment system to identify different types of risk and obtain estimates of their levels. The Board uses quantitative as well as qualitative descriptions of risks.

The Board approves policies for measurement and on-going assessment of risks and monitors NAVACHETANA's adherence to them. The management team identifies key indicators and ratios that need to be tracked and analyzed regularly to assess exposure to risk in each area. The Board sets the acceptable range for each indicator. The Board also determines the frequency with which each indicator should be monitored and analyzed, and lays down the responsibility for tracking. The Board will adopt one or more of the following strategies to manage exposure to risk:

Risk Avoidance	Risk Transfer
NAVACHETANA may choose to avoid risks which have high probability, are beyond its control and can have devastating effect on its functioning	NAVACHETANA may choose to transfer such risks which have low frequency but can be potentially devastating; examples of tools used for risk transfer are insurance and/or Hedging
Risk Acceptance	**Risk Control**
If the probability of occurrence and the impact of a particular risk are minor and manageable relative to the cost of controlling it, NAVACHETANA may choose to accept such a risk	If the likelihood of a risk is high and the impact of the risk is low to medium and the costs to manage it in house is also cost effective, NAVACHETANA may try to control such risks.

Department heads with support from the Chief Risk Officer will develop sound procedures and operational guidelines to mitigate each risk within their work area to the level defined by BRMC. Operations and field staff may be consulted on the suggested policies and procedures to ensure their feasibility and cost-effectiveness. The Chief Risk Officer/Advisor will support the management team in development of strategies and tactics to manage risks.

Implement Policies & Assign Responsibilities

Once suitable control measures are in place line managers will oversee implementation of controls and monitor risks over time. Every staff is responsible for managing and monitoring the identified risk(s) that fall into his/her work area. The Chief Risk Officer will support the management in development of cost-effective controls to manage risks and also in the implementation of policies.

Test effectiveness & Evaluate Results

The Board of NAVACHETANA through the BRMC will regularly review the operating results to assess whether the current policies and procedures produce the desired outcome(s)and at the same time adequately manage risks. Some indicators will require weekly or monthly monitoring, while others will require less frequent monitoring.

Where results may suggest a need for some changes to policies and procedures and possibly identify new risk exposures, the department heads of NAVACHETANA will suggest new risk control measures. These measures have to be approved by BRMC to come into effect, however, policy level changes will be approved by the Board of NAVACHETANA. After the new controls are implemented, Chief Risk Officer/Advisor will test their effectiveness, evaluate the results and report to BRMC.

It is the responsibility of the department heads of NAVACHETANA to determine line staff to be held accountable for implementing changes and monitoring various risks through key indicators. They must also ensure that BRMC receives relevant and useful information in the prescribed format (s) and within timelines.

Department heads, in co-ordination with the Chief Risk Officer, regularly check the operating results to assess to what extent:

- Risks are being identified and anticipated sufficiently
- Risk management strategies are indeed minimizing risks, as desired
- Operational systems are working appropriately and are having the intended outcomes
- Risks are being managed in the most efficient and cost-effective manner

It is important to note that risk identification and assessment is both the responsibility of the 'risk owner' or the business function(s). Simultaneously, it is also a function of the RM to identify the risk independent of the risk owners. Based on risk management progress reports and internal audit findings, the BRMC will review risk management policies for necessary adjustments.

Revise Policies & Procedure

Based on the summary risk reporting and internal audit findings, BRMC with the assistance of Risk Management reviews risk policies for necessary adjustments. While only significant findings are reported to the BRMC, directors should ensure that necessary revisions are quickly made to systems, policies and procedures, as well as to operational workflow to minimize potential loss.

The report may make specific recommendations on how to strengthen risk management areas. BRMC is responsible for designing specific changes, and in doing so, should seek inputs from the internal audit team and operations team including field staff. This ensures that the suggested operational changes are appropriate and will not result in unforeseen, negative consequences.

After the new controls are implemented, its effectiveness must be evaluated for any further improvements that can be brought about. The Chief Risk Officer/Advisor who helps in reporting summary findings to BRMC also suggests possible changes in policies and procedures.

In a nutshell, the risk management feedback loop is an interactive and continuous process to ensure that the management is in-tune with the actual events and that responds in a timely manner to any changes in its internal or external business environment. Even if an evaluation finds that NAVACHETANA is adequately controlling its risks, the risk management process does not end; it continues with regular, on-going evaluations. Each successive evaluation not only tests the effectiveness of new controls but also includes a review of previously tested controls.

4. ROLE OF BOARD, BRMC & DEPARTMENTAL HEADS

The Board of NAVACHETANA is responsible for all aspects of the organization. The Board is ultimately responsible for management of risk, regardless of the source of risk, by framing an appropriate Risk Management Policy and delegating the responsibility to manage risk to the Board Risk Management Committee ("BRMC").

The main role of BRMC is to ensure that risk management framework in terms of policies, procedures, reports and staff add up to adequate management of risk at NAVACHETANA and that the risk profile of NAVACHETANA remains within laid down ceilings.

BRMC is also responsible for periodic review of risk management policies and their approval while guiding the management of NAVACHETANA on the overall aspects of risk management. The review of policy, typically, will be done on annual basis and will be facilitated by the Chief Risk Officer. Any change in policy will be approved by the Board and change in indicators or limits have to be approved by the BRMC for it to come into force.

THE ROLE OF THE BOARD

- The board will approve and oversee implementation of the Risk Management framework of NAVACHETANA and approve risk management polices
- Define risk appetite statement (RAS) for the institution
- Ensure that resources allocated for risk management are adequate given the size, nature and volume of NAVACHETANA's business
- Approve NAVACHETANA's contingency and business continuity plans
- Require comprehensive and independent internal audit by well trained, competent auditors, who are independent of the risk management function, and who are responsible for periodically validating adherence to internal controls

THE ROLE OF BRMC

- To assist the Board in setting risk strategy policies in liaison with management and in discharge of its duties relating to corporate accountability and associated risk in terms of management assurance and reporting.
- To review and assess the quality, integrity and effectiveness of the risk management systems and ensure that the risk policies and strategies are effectively managed;
- To review and assess the nature, role, responsibility and authority of the risk management function within the Company and outline the scope of risk management work
- To review processes and procedures to ensure the effectiveness of internal systems of control

so that decision-making capability and accuracy of reporting and financial results are always maintained at an optimal level;

- To monitor external developments relating to the practice of corporate accountability and the reporting of specifically associated risk, including emerging and prospective impacts;
- To provide an independent and objective oversight and view of the information presented by management on corporate accountability and specifically associated risk, also taking account of reports by the Audit Committee to the Board on all categories of identified risks
- To review the risk bearing capacity of the Company in light of its reserves, insurance coverage, guarantee funds or other such financial structures.
- The Chairman of the RMC shall report to the Board of Directors regularly on the deliberations of the Committee.
- To carry out any other function as may be specified from time to time as per the regulatory amendments/ requirements.

ROLE OF MANAGEMENT (OWNERS OF RISKS)

Management that comprises Departmental/ Functional Heads, has the collective responsibility of implementing the business strategies approved by NAVACHETANA's Board of Directors and developing policies and procedures for effective management of risks. The management team at NAVACHETANA shall ensure the following:

- Develop written procedures including responsibilities of the various functions for executing internal controls
- Ensure compliance with internal exposure limits, prudential limits and regulatory requirements
- Ensure that risk management policies, procedures, indicators and thresholds are communicated throughout NAVACHETANA and implemented, monitored and revised periodically to address changes in environment and/or operating procedures
- Ensuring NAVACHETANA has robust management information systems for risk reporting
- Adequate research is undertaken, and a systematic product development and pilot testing procedure followed, for any new product(s) or activities to ensure risks are appropriately identified and managed.

ROLE OF CHIEF RISK OFFICER

- Identification, assessment and prioritization of risk independently as well as in co-ordination with department heads in RAS workshop
- Development and update the NAVACHETANA's Risk Management policies and procedures. Though final approval on the policies will be by the Board and final approval on the procedures

will be by BRMC.

- Ensure compliance with the rules/ processes set in the risk manual and independent reporting in case of any deviation to the BRMC
- Independent reporting to BRMC of the risk reports as per the defined frequency
- Ensure that NAVACHETANA has clear, comprehensive and well documented policies and procedural guidelines relating to risk management and the relevant staff fully understand those policies
- Coordinate risk management training programmes for NAVACHETANA staff
- Monitoring positions against approved risk tolerance limits and initiate responses in case of warnings
- Initiate specific risk reviews as requested by the BRMC
- Identification of stress situations and preparation of contingency plans
- Oversee risk analysis for new product development
- Annually update the RAS of NAVACHETANA
- Prepare annual risk plans and budgets
- Collate and scrutinise functional line risk reports and submit the appropriate periodic(quarterly) reports to BRMC
- Advise Risk Owners on all matters pertaining to Risk Management

ROLE OF INTERNAL AUDIT

The Internal audit unit and the internal audit committee of the Board will be responsible for the following:

- Review adherence to Board's policies and procedures
- Provide assurance regarding control systems and risk management process
- Evaluate risk management measures for their appropriateness in relation to exposures
- Test all aspects of risk activities and positions
- Ensure effective management controls over positions, thresholds and actions when thresholds are exceeded. The Chair of Audit committee of the Board shall also be a member of the Risk Committee of the Board

ROLE OF FINANCIAL ADVISORY & ASSETS AND LIABILITY MANAGEMENT COMMITTEE

- To review and monitor Company's borrowings from existing or new lenders, including External Commercial Borrowings transactions.
- To review and approve the Company's Business Correspondent, securitization and direct assignment transactions.
- To explore the options available from banks & financial institutions for borrowing, compare

the earnings, approve the borrowings after considering the market scenario and other terms and conditions of the borrowings.

- To negotiate the terms and condition of lending with lenders and finally approve the same.
- To continuously review the fund requirement of Company on monthly and quarterly basis in accordance with the ongoing business plan (projections etc).
- To review the cash management and optimum utilisation of the funds available to the company at frequent intervals
- To review the interest rate charge by the Company on quarterly basis in order to comply with the directions of Reserve Bank of India
- To review the fund position of the Company and to analyse the ALM returns before submitting to the Regulatory authorities.
- To consider and approve the opening of Bank account of the Company, delegation and alteration of the authorized signatories and closing of bank accounts.
- To report to the Board of directors on quarterly basis.

5. TYPES OF RISKS

As a microfinance institution, NAVACHETANA faces different types of risks. The risk management policy covers broad categories of risks:

CREDIT RISK

Credit risk is the most important risk category, it refers to the possibility of its borrowers or another contractual counterparty not being able to honour their loan obligations. It includes risk arising from borrower's late repayment or non-repayment of the loan obligations. In case of NAVACHETANA, apart from borrowers, contractual parties may also be lending institutions where NAVACHETANA subscribes to access funds for on-lending purpose (business correspondent/co lending model). Such defaults lead to loss of income for the institutions as they fail to collect interest and outright losses in case the principal amount given as a loan is not repaid.

This signifies the need for a sound and effective and credit risk management policy for long-term sustainability. Credit risk management is the responsibility of Chief Risk Officer and CEO/COO. The credit risk framework is prepared with stakeholder inputs and recommended by the Chief Risk Officer for approval by the Board of Directors. The credit risk management requires sound practices for the management of credit risk and applies to all lending and related activities that may lead to credit risk.

NAVACHETANA's credit risk management process is designed to cover the entire credit cycle starting from the origination of the credit in the books to the point the credit is paid off and cleared from the books, providing for sound practices in:

- Client selection
- Credit processing/appraisal,
- Credit approval/sanction
- Credit documentation
- Credit administration
- Disbursement
- Collections
- Monitoring the overall credit portfolio
- Credit classification and

Most of the elements of credit risk policy are related to policies and procedures mentioned in the operations manual. It is necessary that the team responsible for making changes in the credit risk management policy must closely work with the team responsible for tracking and managing operational policies and procedures.

DELINQUENCY MANAGEMENT

The management of NAVACHETANA will establish policies and procedures for loan repayment supporting a robust delinquency management process to reduce potential losses from delinquent loans. Monitoring and reporting of delinquent loans should ensure that loan accounts are classified based on the age of the delinquency.

Delinquency ratios and trends will be monitored relative to approved tolerance levels and should be reported to the management team and to the Board Risk Management Committee. In the operations manual, written collection processes and procedures are developed to assist management of delinquent loans.

ROLE OF CHIEF RISK OFFICER/ ADVISOR SPECIFIC TO CREDIT RISK

- Chief Risk Officer/Advisor will ensure that product features offered by NAVACHETANA are in line with regulatory requirements and guidelines issued by RBI.
- The Chief Risk Officer/Advisor will ensure that pricing of a loan product is in line with the company's credit pricing policy, as amended from time to time.
- Ensure lending standards are sufficiently prudent to allow NAVACHETANA to meet the RAS requirements. In doing so all changes to the Ops Manual have to be vetted by Risk Management as well.
- The Chief Risk Officer/Advisor will assess eligibility conditions specified for borrowers on regular basis. Chief Risk Officer/Advisor will have to closely monitor regulatory and RBI guidelines to ensure that eligibility criteria of NAVACHETANA is consistent with regulatory requirement as well as it is appropriately defined considering objectives of risk appetite statement.
- Chief Risk Officer/Advisor will provide recommendations during monthly management team meetings if there are any changes to be made in the eligibility criteria to ensure effective risk management.
- Chief Risk Officer/Advisor will independently assess loan origination, credit bureau check, appraisal, sanction & disbursement related policies and procedures from the perspective of risk management. If there are any changes required in policies and process the same should be highlighted in reports produced by Chief Risk Officer and discussed in regular management team meetings.
- Chief Risk Officer/Advisor will independently assess if loan approval matrix is followed diligently and if it needs any revision.

LOAN PORTFOLIO AUDIT

Loan portfolio across group lending and individual lending is the main asset for NAVACHETANA. NAVACHETANA has well- established risk identification and measurement systems for individual loans as outlined in the above section. However, it is equally important that overall loan portfolio of the institution is analyzed separately from the perspective of risk management and decision-making. Portfolio credit quality is measured by focusing on following indicators:

PORTFOLIO AT RISK

PAR is one of the most important benchmarks in the industry for tracking portfolio quality. PAR is defined as the total balance outstanding under any loan account with past due for a day or more. PAR highlights the gross amount of the exposure, which is at risk of not being collected (because of past dues, which have begun to emerge on certain loans). NAVACHETANA tracks following sub-indicators under PAR with the help of its automated management information system.

PAR statistics will be analyzed in various segmentations at NAVACHETANA such as by branch, by loan product, by loan officer, and by region. When PAR is analyzed in segmentations, it is quite helpful in detecting risk and default concentrations in certain parts of the portfolio. It can also explain to some extent the underlying risk factors driving the arrears behavior.

VINTAGE ANALYSIS

Vintage analysis is an important arrears-based portfolio statistic that can provide early indications of default trends across the entire portfolio or certain segments of the portfolio by product, region, or business units. It is a visual representation of defaulted balances by time elapsed since loan disbursement.

The default rate in this calculation is defined as principal balance of outstanding loans, which are in arrears category of 30/60/90 days or more divided by the original amount disbursed under this portfolio. Typically, the portfolio is clustered by month of origination (a vintage) such that each origination month becomes a distinct segment of the portfolio and a separate line in the vintage curve graph. Chief Risk Officer at NAVACHETANA is responsible for periodic vintage analysis of the portfolio, which is in arrears category of 30/60/90 days or more.

Calculation and Data Requirements

In order to calculate vintage curves, the following essential data elements are required from the MIS are required:

- Loan ID

- Observation Date
- Disbursement Date
- Disbursed Amount
- Outstanding Principal on Observation Date
- Arrears Status on Observation Date (Good/Bad or arrears in days)
- Counter: number of months between Observation Date and Disbursement Date

LOAN PROVISIONING

To cover the losses due to deterioration in loan portfolio quality, NAVACHETANA creates a reserve through loan loss provision. Navachetana has adopted Indian Accounting Standard (Ind-AS) and will follow expected credit loss (ECL) model to determine the loan loss provisioning. ECL model is designed in consultation with experts and it is in line with industry practice.

PORTFOLIO CONCENTRATION

Concentration risk is the risk posed to a financial institution by any single or group of exposures that have the potential to produce losses large enough to threaten the ability of the institution to continue operating as a going concern. For example, concentration of loans in a certain geographic area. If that area experiences an economic downturn, an unexpected volume of defaults might occur, which could result in significant losses or failure of the institution.

By the very nature of microfinance, some degree of concentration risk is inherent in the methodology; geographically, within their customer/member base, and by the products they specialize in and offer. The smaller the geographic area served, the more limited the customer base, and the fewer the number of products offered all this adds up to increased concentration risk. Concentration risk can also manifest in asset categories or within asset categories.

Chief Risk Officer will develop credit concentration limits duly approved by Board. Concentration limits include geographic exposure, line of business/product exposure and sector exposure (loan purpose). Concentration reporting will be provided to the management team and to the Board Risk Management Committee on regular intervals.

CREDIT RISK REPORTING & MONITORING

Quarterly reporting to the Board Risk Management Committee will include quantitative data on key risk indicators and concentration limits relative to stated risk tolerances as well as qualitative information, including corrective action, where appropriate. These reports will include the performance of NAVACHETANA on defined indicators vis-à-vis risk tolerance and concentration statistics and benchmarks. NAVACHETANA uses the following reports to manage credit risk:

REPORT TYPE/REPORT CONTENT	FREQUENCY	AUDIENCE	RESPONSIBLE PERSON	SOURCE OF DATA
Details on Portfolio: • Portfolio details • No of branches • PAR>0/30/60/90 • Vintage analysis using an excel tool (quarterly frequency)	Weekly & Quarterly	• MD, CEO/COO, Chief Risk Officer (Weekly) • BRMC (Monthly)	Chief Risk Officer	MIS
Distribution of loans across branches, industries/sectors, and other factors which present concentration risk	Monthly & Quarterly	• MD, CEO/COO, Chief Risk Officer (Monthly) • BRMC (Quarterly)	Chief Risk Officer & IT MIS Team	MIS and Manual Consolidation
Top 10 lists: Largest cases in PAR 30, PAR60 and PAR90	Monthly & Quarterly	• MD, CEO/COO, Chief Risk Officer (Monthly) • BRMC (Quarterly)	Chief Risk Officer	MIS
Compare exposures to defined limits for both concentration and key risk indicators using an excel dashboard	Monthly & Quarterly	• MD, CEO/COO, Chief Risk Officer (Monthly) • BRMC (Quarterly)	Chief Risk Officer & IT MIS Team	MIS and Manual Consolidation

LIQUIDITY RISK MANAGEMENT

DEFINITION OF LIQUIDITY RISK MANAGEMENT

Liquidity risk is the risk that NAVACHETANA may not be able to fund increases in assets (primarily loans) or meet obligations as they fall due, without incurring unacceptable losses. This may be caused by NAVACHETANA's inability to liquidate assets or to obtain funding to meet its liquidity needs.

SCOPE OF LIQUIDITY RISK MANAGEMENT POLICY

The liquidity risk management policy details the asset and liability risks, daily strategy and long-term plans to identify and measure risks, strategies to effectively control risks, report and monitor risks and contingency plan.

LIQUIDITY RISK IDENTIFICATION & MEASUREMENT

Measuring liquidity risk involves matching the maturities of assets and liabilities to see what funding gaps exist and then using that analysis to adjust maturities of assets and liabilities as necessary, plan for finance needs, and plan for adequate liquidity reserves or cushions in case of emergency.

When measuring liquidity risk, assets are potential sources of funds to meet maturing liabilities. Liquidity risk is measured using gap analysis and liquidity ratios, and it is further managed with contingency funding plans. For effective liquidity management both static and dynamic measures need to be applied.

Static measures are based on a certain published balance sheet date, it provides a simple, point in time liquidity index, which is based on a static balance sheet condition. The dynamic measures are based on a more detailed breakdown of inflows and outflows based on projected business. In this type of analysis, the respective paths of in- and outflows of assets and liabilities are being considered per time period.

Dynamic measures need to be used in addition to static measures for high level planning and for formulating simple operating rules or positioning limits. Static measures can give a quick indication of the overall liquidity position based on a balance sheet date to investors, funders and regulators but dynamic measures give an insight into future liquidity needs given projected business (i.e. funding plan)

STATIC LIQUIDITY MANAGEMENT BASED ON THE BALANCE SHEET

The conventional place to start in measuring liquidity is on the balance sheet, by looking at certain ratios between liquid or illiquid assets and liabilities, and at the contractual maturity structure of the balance sheet in the form of a maturity gap report.

CONTRACTUAL MATURITY GAP REPORT

A contractual maturity gap report highlights the gaps between the contractual inflows and outflows of liquidity for defined time bands. These maturity gaps indicate how much liquidity a financial institution would potentially need to raise in each of these time bands if all outflows occurred at the earliest possible date.8

The gap report is simply a stratification of the entire balance sheet into time bands by contractual maturity. This means that the carrying values of individual asset or liability items are classified into the time band during which they will become available or payable contractually. The time intervals are counted forward from the balance sheet date.

Amortizing assets or liabilities must be decomposed into their principal flows with their respective contractual maturity, instead of showing the full amount of the carrying value in the time band when the last principal instalment is paid. The Maturity Gaps at the bottom of figure 1 are simply the sum of all the assets minus the liabilities becoming due during that particular time interval. If period gaps up from left to right are added, the cumulative maturity gap is derived. By definition, the total cumulative gap must add up to zero, because total assets should be equal to total liabilities and equity.

DYNAMIC LIQUIDITY MANAGEMENT BASED ON CASH FLOWS

Objectives of Cash Flow Planning

Cash flow planning is essential for liquidity management as balance sheet ratios can only give a quick sense of the liquidity risk of an institution but assurance that NAVACHETANA will always be able to meet its payment obligations can only come from a detailed forecast of expected future business and its attendant cash flows. Ideally, 20% Liquid Assets Ratios (LARs) should be maintained after covering the forecasted net cash flows as a buffer for unexpected flows, sudden stress events and business growth.

Cash flow forecasting tool covers a forward period of twelve months and it is granular. The Treasury Head will plan daily increments for the next month and update the plan based on actual materialized flows at least weekly, preferably daily.

Treasury Head will follow a two- step process while doing cash flow planning:

- Forecast the net funding requirement to understand how cash will be generated or absorbed by client driven transactions and other operating expenses and revenues.

- Apply appropriate liquidity management actions i.e. either invest excess cash or procure additional liquidity to cover shortfalls based on or triggered by this forecast.

Net Funding Requirements Forecast

When forecasting the net funding requirements, Treasury Head must first develop detailed projections of loan portfolio balances as it is the most important portion of NAVACHETANA's operations. Trend and seasonality elements shall be incorporated into these forecasts to ensure realistic projections. However, for NAVACHETANA - specific strategic changes should be prioritized when developing these kinds of forecasts. Once loan estimates are made, other flows such as interest payments, interest on short –term investments, and other cash operating expenses and revenues can be derived.

The focus of this forecast must be on the net liquidity effects of the transactions. Projections of outstanding loan portfolio should be aggregated after having totaled expected new disbursements against planned repayments of old loans. A net increase of the outstanding loan portfolio represents a cash outflow, while a reduction of the outstanding amount leads to a net cash inflow.

Once all the individual cash flows are estimated, they are then consolidated and the net periodic change in cash and the cumulative cash position, i.e. the net funding requirements are calculated.

After forecasting the net funding requirements, Treasury Head must review the results in detail and analyses whether any liquidity management actions are necessary. In the case outlined above, the Treasury Head must procure additional cash to prevent the predicted negative Liquid Assets and Liquid Assets balances below the limit of 10 % of total assets at any point of time. The projected cash flows from these activities will in turn be added to the Net Funding Requirements. It is only after this final step that the Liquid Assets balances must strictly be positive and, moreover, must meet the minimum requirements of 10% of total assets set by management.

Scenario analysis and Liquidity Stress testing

Liquidity stress testing plays a critical role in assessing the potential impact of a range of low probability and high impact severity circumstances on NAVACHETANA's liquidity risk profile.

Liquidity stress test is designed to:

- Capture the impact of exceptional but plausible events, including the change in behaviour of borrowers and the impact on NAVACHETANA's balance sheet and Liquidity Report under stress conditions,

- Understand NAVACHETANA's liquidity risk profile and potential action plans that could be implemented even if the Disaster Recovery Plan had to be invoked,
- Confirm the adequacy of risk limits and risk appetite, and
- Evaluate strategic risk that may be sensitive to liquidity risk.

The results of the scenario are expressed in terms of the residual cash assets over the 90-day stress period after taking account of the scenario outflows and the cash-generating or cash-preserving effects of the mitigating measures included in the scenario.

A liquidity stress scenario for NAVACHETANA is specified as follows:

- The liquidity crisis starts with a trigger event on a particular balance sheet date and runs for 90 days.
- The stress test is routinely applied at the most recent monthly account closing as well as at certain forward monthly closing dates using forecast balance sheet data as instructed by the Asset Liability Management Committee (ALCO)
- As of the trigger date and for the full 90-day stress period, there will be no additional long-term borrowing, even planned drawdowns under existing and committed facilities will be disallowed or delayed by the lender.
- Undrawn overdraft limits and other short-term funding opportunities in the local market will be cancelled within the first 30 days such that no further short-term funding will be available thereafter.
- Overdraft utilizations outstanding 30 days after the trigger date must be repaid within the remaining 60 days stress period.
- Any available liquidity standby facility made available or guaranteed by shareholders or sponsors of NAVACHETANA will be drawn immediately to the full extent.
- Time deposit placements and other available-for-sale investments are sold over the 90-day period to generate maximum cash for meeting outflows.
- The collection ratio on all loan portfolios drops by 15% percentage points within 90 days
- New loan disbursements are limited to previously identified strategic regions and client segments leading to a reduction of the gross loan portfolio of 2% per month.
- Any capital spending is deferred.
- Cash operating expenses are maintained at or slightly below the budgeted level throughout the stress period.
- Bullet repayment of NCD within the first 30 days
- One of the key lenders calls off the loan within the first 60 days

INTEREST RATE RISK

DEFINITION AND SCOPE

NAVACHETANA defines Interest Rate Risk as the current and prospective risk to earnings or capital arising from adverse movements in interest rates. The immediate impact of changes in interest rates is on the Net Interest Income (NII). A long-term impact of changing interest rates is on the net worth since the economic value of assets, liabilities and off-balance sheet positions get affected due to variation in market interest rates.

For NAVACHETANA, the interest rate risk results from the fact that loan portfolio, provided on a fixed-rate basis, is funded through a floating rate liability/term loan. If interest rates rise, the cost of funds increases more rapidly than the yield on assets/loan portfolio, thereby reducing net income. The exposure to interest rate risk is limited for NAVACHETANA as most of the borrowing for NAVACHETANA takes place on a fixed rate basis.

Maturity gap analysis, a widely accepted approach for interest rate risk management will be used. This measurement system helps assess the effect of interest rate changes in ways that are consistent with the scope of institution’s activities.

Gap analysis is conducted by constructing a maturity/re-pricing schedule that distributes interest rate sensitive assets, liabilities and off-balance sheet positions according to their re-pricing buckets (if those are attached with the fixed rate) or time remaining to their next re-pricing (if floating rate is used).

Interest rate sensitive liabilities in each time band are subtracted from the corresponding interest rate sensitive assets to produce a re-pricing "gap" for that time band. This gap can be multiplied by an assumed change in interest rates to yield an approximation of the change in net interest income that would take place from such an interest rate movement. The size of the interest rate movement used in the analysis can be based on a variety of factors, including historical experience, macro-economic conditions, central bank’s policy, simulation of potential future interest rate movements, and the judgment of management.

The embedded tool will be updated by Treasury Head. Chief Risk Officer will report interest rate risk exposure to the Board on Quarterly/Half Yearly basis. The reporting will also focus on current exposure (against defined thresholds) to following risk indicators:

- **Net** interest **income**: Projected net interest income over the next 12 months may not be reduced by over 10% given a change in interest rates of up to (+/-) 1%,
- **Gap Limit**: The one-year cumulative Gap may not exceed 10% as a percentage of assets.

ROLE OF SENIOR MANAGEMENT IN LIQUIDITY RISK MANAGEMENT

PERSON/COMMITTEE	FUNCTIONS
Financial Advisory and Asset and Liability Management Committee (FA&ALM)	Provides strategic direction and primary oversight to the treasury function in the area of liquidity risk management. Its responsibilities include: • To review and monitor Company's borrowings from existing or new lenders, including External Commercial Borrowings transactions. • To review and approve the Company's Business Correspondent, securitization and direct assignment transactions. • To explore the options available from banks & financial institutions for borrowing, compare the earnings, approve the borrowings after considering the market scenario and other terms and conditions of the borrowings. • To negotiate the terms and condition of lending with lenders and finally approve the same. • To continuously review the fund requirement of Company on monthly and quarterly basis in accordance with the ongoing business plan (projections etc). • To review the cash management and optimum utilization of the funds available to the company at frequent intervals • To review the interest rate charge by the Company on quarterly basis in order to comply with the directions of Reserve Bank of India • To review the fund position of the Company and to analyse the ALM returns before submitting with the Regulatory authorities. • To consider and approve the opening of Bank account of the Company, delegation and alteration of the authorized signatories and closing of bank accounts. • To report to the Board of directors on quarterly basis.

Managing Director	• Managing Director ("MD") is the Chairman of FA& ALM Committee • Take Approval from FA& ALM Committee for excesses to Liquidity Risk limits • Active involvement in contingency liquidity risk management (Liquidity Contingency Plan, stress testing and contingency liquid assets management)
Chief Financial Officer	• Chief Financial Officer is a member of FA& ALM Committee. • Acts as the primary liaison with regulators and rating agencies with respect to liquidity management • Supports liquidity risk identification for new products and initiatives • Proposes and reviews various liquidity risk measurement methodologies, providing input on assumptions and reviewing liquidity procedures and policies • Recommends the Contingency Liquidity Plan • Finance functions under his control are responsible for: • Preparation of the financial statement at monthly, quarterly, six monthly and annual basis. • Responsible for execution of short-term, tactical liquidity management within approved limits • Responsible for regulatory reporting for liquidity risk • Reporting, monitoring and oversight role for internal liquidity metrics
Treasury Head	• Treasury Head has day-to-day responsibility for liquidity management including, compliance with escalating policy, limit and oversight and reporting to the management team • Develops and implements cash management procedures and internal controls in order to conform with this Liquidity Risk Framework and Policy • Operate liquidity management to, prepares weekly Liquidity Reports and quarterly Stressed Liquidity Reports • Monitors and reports market developments, including Reserve Bank actions, to assess the potential for changes in liquidity management policy

Chief Risk Officer/Advisor	• Responsible for reviewing internal liquidity stress tests • Re-engineering of internal liquidity stress tests (where required) • Oversight of the stress testing required for regulatory purposes, including documentation of the stress test methodology and presentation to the business, as required • Maintaining the business requirements documentation for the in-house liquidity system • Responsible for any new product within the liquidity stress testing framework Keeping abreast with developments within the microfinance environment specifically within liquidity and regulatory developments and with best practice for liquidity stress testing • Ensuring that liquidity risk methodology is fully documented and reported • Contribute by documenting the Liquidity Risk Framework and providing analysis of the stress test results • Contribute, where necessary, to the liquidity escalation process • Extensive liaison with Treasury, FA& ALM Committee, and Finance head

LIQUIDITY RISK REPORTING & MONITORING

REPORT TYPE/REPORT CONTENT	FREQUENCY	AUDIENCE	RESPONSIBLE PERSON	SOURCE OF DATA
Static balance sheet measures of liquidity	Monthly/Hay early	MD, CFO, Treasury Head, Finance Head, Chief. BRMC (Half yearly)	CFO/CRO	Accounts/Finance and MIS
Maturity Gap Report	Quarterly/ Half Yearly	MD, CFO, Treasury Head, CRO (Quarterly) Board Risk Management Committee (Half yearly)	CRO/Treasury Head	Accounts/Finance and MIS
Gap Analysis-Repricing Schedule (Interest Rate	Quarterly/ Half Yearly	MD, Group Lending Head, CRO	CFO & Treasury Head	Accounts/Finance and MIS

Risk Management)		(Quarterly) BRMC (Half yearly)		
Compare exposures to defined limits for both concentrations and key risk indicators using an excel dashboard	Monthly & Half Yearly	MD, CEO, CFO, CRO (Monthly) BRMC (Half yearly)	Chief Risk Officer	Accounts/Finance and MIS

LIQUIDITY CONTINGENCY PLAN

The Liquidity Contingency Plan ("LCP") describes the requirements for managing liquidity in situations where it becomes difficult to meet its commitments as they fall due. The LCP also outlines the approaches used to pro-actively assess the potential impact of a range of low probability-high impact events and uses this information to assess and enhance appropriate action plans for such incidents and to confirm the appropriateness of risk limits.

Therefore, the LCP is an action plan that addresses the funding and liquidity issues arising from liquidity stress testing. The plan includes, but is not be limited to, the following:

- Back-up sources of liquidity are clearly set out, including access to funding (overdraft facility, line of credit etc.) from key lenders,
- Arranging cash by liquidating fixed deposits, contingency liquid assets, calling repayments from the branch and raising short term loan.
- Slowing client loan disbursement, etc., are detailed and responsibilities assigned.
- A list of actions and names or roles of individuals responsible.

Elements of Contingency Plan

AREAS	ACTION
Crisis Preparedness	• NAVACHETANA will strive to establish confirmed overdraft or credit lines with several lending institutions. • NAVACHETANA will establish relationship with NBFCs, private and public sector bank for short term borrowings
Monitoring and Crisis Detection	• The Chief Risk Officer should regularly review the economic environment as well as signals from wholesale funders for early signs of a deterioration of confidence that could lead to liquidity stress. Particular attention is paid to reputational events such as publicized loan portfolio problems, major fraud, a

	lawsuit or other negative press that could escalate into a public concern about the creditworthiness. The RM declares watch event or a full crisis, informs the BRMC and triggers the implementation of the liquidity contingency plan.
Communication with SRO (Self-Regulatory Organization), investors & lenders	• The Managing Director assume exclusive responsibility for communicating with the investors and lenders about the emerging situation at the institution. The issue at hand (loss, fraud, legal problem) is never denied but fully disclosed and put into perspective with the overall size of the operation and the financial resources of the institution. MD along with the management team communicates proactively about • the situation and seeks the explicit backing of the major financial institutions and stakeholders about the solvency.
Meet all Wholesale Placement	• Even under liquidity stress, Navechetna will continue to meet any wholesale settlement obligations without delay.
Draw available lines of credit	• NAVACHETANA will try to quickly draw all of overdraft lines of credit, before potential limit reductions and cancellations might take effect.
Limit discretionary expenditure	• Management will implement an immediate capital spending freeze, delay accounts payable settlement for supplier invoices by several weeks on average and consider paying only a partial payroll to employees with executives accepting the largest deferral of salary.
Customer triage	• In order to conserve cash, fresh loan disbursements will be made only to strategically important clients and customer segments according to a previously established client classification. However, utilizations under confirmed lines of credit and previously communicated customer limits must always be honoured. NAVACHETANA will never renege on contractual commitments, even under liquidity stress.

OPERATIONAL RISK

DEFINITION OF OPERATIONAL RISK MANAGEMENT

Operational Risk is defined as the possibility of "losses resulting from inadequate or failed internal processes, people and systems or from external events. This definition includes legal risk, but excludes strategic and reputational risk.

Legal risks include, but is not limited to, exposure to fines, penalties, or punitive damages resulting from supervisory actions, as well as private settlements.

Reputational risk could arise since NAVACHETANA deals with vulnerable, financially inexperienced clients', with high expectations on social responsibility towards clients When internal controls and codes of conduct fail, the damage to the reputation of a responsible microfinance provider like NAVACHETANA can be substantial. Hence, for the purposes of this operational risk policy, reputational risk has been considered as a part of operational risk.

TYPE OF OPERATIONAL RISK EVENTS RELEVANT

There are several types of operational risk (OR) events which NAVACHETANA could face. Any OR incident/must be classified into one of the top-level categories as defined in Basel II norms.

Operational Risks	Examples
Internal fraud	Intentional misreporting of positions, employee theft, ghost loans to non-existing clients siphoned off by business executives
External fraud	Robbery, forgery, cheque kiting, damage through computer hacking, clients misrepresenting their situation and obtaining a loan that they have no intention of paying back.
Employment practices and workplace safety	Staff compensation claims, violation of employee health and safety rules, discrimination and sexual harassment claims and general liability for damages incurred by staff.
Clients, products and business practices	Misuse of confidential customer information, marketing of unauthorised or inappropriate products, omission or incorrect disclosure of effective rates, abusive collection practices
Damage due to physical activities	Fires, floods, vandalism, earthquakes, terrorism

Business Disruption and System Failures	Hardware and software failure, utility failures, telecommunication problems, massive staff absence due to epidemic or political unrest.
Execution, Delivery and Process Management	Data entry errors, collateral management failures, incomplete legal documentation, unapproved access granted to client accounts and vendor disputes.
IT platform and procedure related risk	Disaster Recovery & business continuity plan failure, AMC deficiency, software upgrade, user credential reset , IS audit compliance etc.

SOURCES OF OPERATIONAL RISKS

Operational Risk Category	Operational Risks
People and Business Processes	• Staff fraud • Key man risk • High staff turnover • Multiple lending to same client • Low capability of staff • Inadequate functionality – supporting software • High client dropout rate
IT/Systems	• Version archiving system not in place • Inadequate systems for data security • System breakdown • IT infrastructure not aligned to business needs • Inadequate systems and processes for vendor management • IT policy not updated • Insufficient/ untested business continuity processes • Outsourcing risk • Inadequate systems for backup of data

External Events	Third party provider failure – other Natural disaster Power outage War and social unrest External theft or fraud Competition Regulatory changes