NCC Bank

नेपाल क्रेडिट एण्ड कमर्स बैंक लि.

Nepal Credit & Commerce Bank Ltd.

Your Business Bank

Market Risk Management Policy

2019

Nepal Credit & Commerce Bank Ltd.

Bagbazar, Kathmandu

NCC Bank
नेपाल क्रेडिट एण्ड कमर्स बैंक लि.
Nepal Credit & Commerce Bank Ltd.
Your Business Bank

The Board Meeting No. 733rd

held on 2075.11.02 (14th February, 2019)

has decided to approve, the

" Market Risk Management Policy, 2019"

Kapil Gnawali
Company secretary
2075-11-02

Approval Sheet

Particulars	Name and Designation	Signature	Date
Prepared By	Saroj Bhandari Operation, Market and Liquidity Risk Management Department		
Reviewed and Supported By	Mukunda Subedi Chief Risk Officer		
Supported for Board Approval	Ramesh Raj Aryal Chief Executive Officer		
Board of Directors			

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Market Risk Management Policy, 2019

1. Introduction

Market Risk is defined as the risk resulting from movement in market prices, in particular, changes in interest rates, foreign exchange rates, credit spreads and equity & commodity prices. The Basel Committee defines the market risk as the "risk of losses in on-balance sheet and off-balance sheet positions arising from adverse movements in market prices". The risk pertaining to interest rate related instruments, foreign exchange risk throughout the bank and risk pertaining to investment in equities and commodities constitutes the market risk.

Market risks predominantly arise from the Bank's core business activities and the liquidity portfolio needed to support these activities. Due to increased foreign trade, frequent change in interest rate and market driven commodity market, bank needs to implement effective management tools for managing market risk. The development and establishment of a system for market risk management is extremely important from the viewpoint of ensuring the soundness and appropriateness of a Bank's business. Bank puts highest priority in managing market risk through development of robust systems and thorough internal control mechanisms.

Bank shall consider the following elements for managing the Market Risk:

a. Interest Rate Risk:

Interest rate risk is the probability that variations in the interest rates will have a negative influence on the quality of a financial instrument or portfolio, as well as on the Bank's overall condition. Variations in the interest rates influence the bank's incomes and change its net interest revenues and the level of other interest-sensitive earnings and operative costs. Interest rate variations also affect the basic value of the bank's assets, liabilities and off-balance instruments, because cash flows alters when interest rates change. Interest rates variations can also influence the level of credit risk and the ability to retain the attracted resources. For the effective management of interest rate risk, bank shall implement the effective assets-liabilities management policies.

b. Equity Risk

Equity Risk is the risk of loss due to an adverse change in the equity price. Bank invests in the equity of various companies as well as accept equity as collateral for loans. The change in price of the equity may leads to negative impact in financial status of the bank. This may also leads to possibility of loans becoming non-performing assets. For effective management of the equity risk, bank must diversify its investment portfolio and demand maximum margin in lending.

c. Foreign Exchange Risk

Foreign exchange risk is the risk where the fair value or future cash flows of a financial instrument fluctuate as a result from changes in the currency exchange rates. It is the potential loss due to change in value of the bank's assets or liabilities resulting from change in foreign currency exchange rate. Any adverse movement can diminish the value of the foreign currency and cause a loss to the bank.

d. Commodity Risk

The probability of loss due to change in commodity prices is commodity risk. The commodities where bank may include agricultural commodities (like wheat, livestock, and corn), industrial commodities (like iron, copper and zinc), and energy commodities (like crude oil, shale gas, and natural gas). The commodity risk that organization may be exposed is price risk, quantity risk, cost risk and political risk. The commodities' values fluctuate a great deal due to changes in demand and supply. Bank holding commodities as part of an investment is exposed to commodity risk.

e. Position Risk

Position risk is the risk of loss on debt or equity instruments held in the trading book. Position risk include both equity risk and debt risk. Debt instruments and equity instruments held by bank are exposed to position risk. Generally debt instruments are subject to interest rate risk and equity instruments are subject to equity risk. Bank shall manage position risk effectively.

f. Concentration Risk

Concentration risk is the potential for a loss in value of an investment portfolio when an individual or group exposures move together in an unfavorable direction. Concentration risk arises due to concentration and correlation factors in the market transaction. Bank shall access if there is a concentration of instruments that may react in the same manner to a specific market events. Bank shall effectively manage and pointed out that net positions may potentially conceal large gross underlying positions that can give rise to significant concentration risk.

This Policy Framework has been prepared in line with the Risk Management Guidelines of the Bank and the regulatory requirement. The document has outlined the Bank's initiative towards management of market risk so that objective of the bank can be achieved optimally. It shall be the duty of all the staff members of the Bank to make themselves acquainted with the provisions incorporated in this policy and other policies referred herein.

2. Objectives

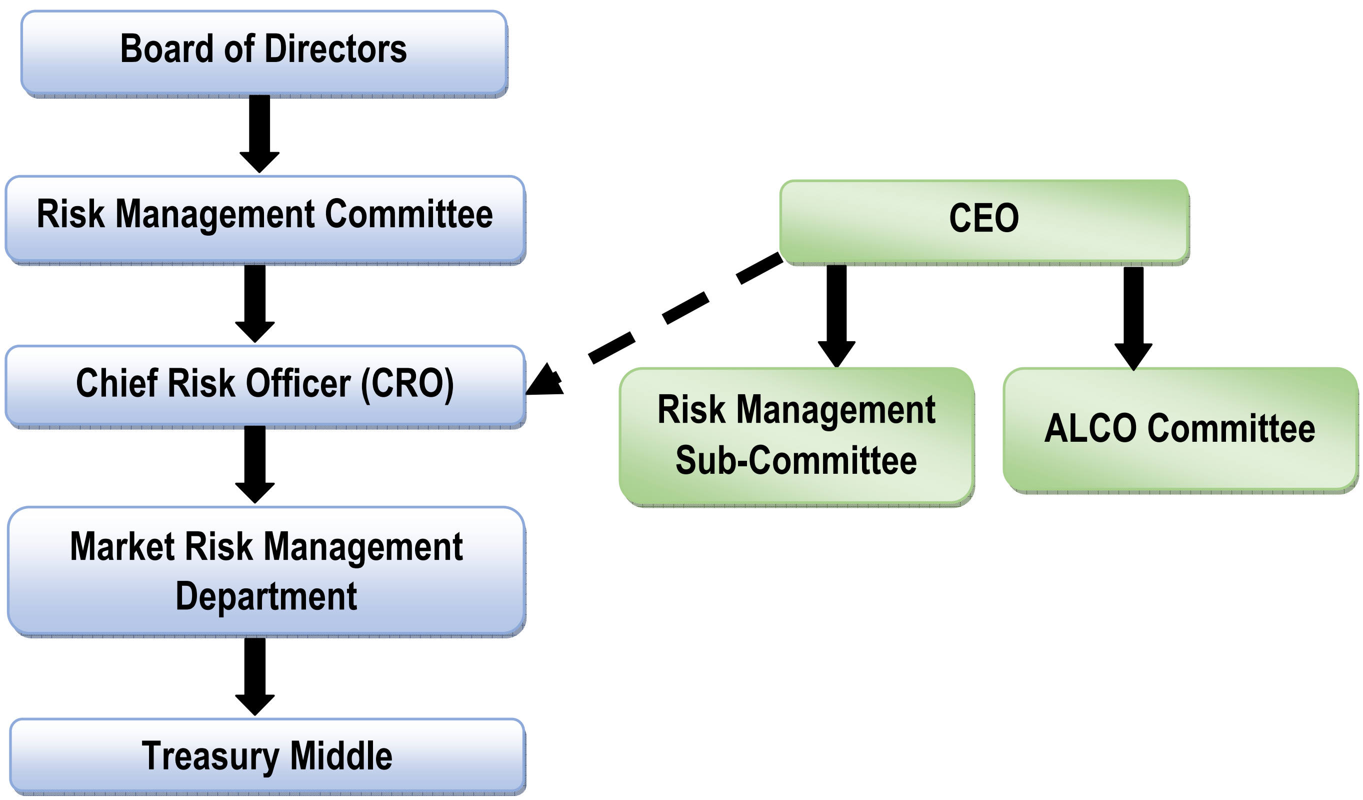
This policy has been formulated for guiding the bank to identify, access, measure, monitor, control and mitigate the market risk. Followings are the objectives behind formulation of this policy:

- To lay down a framework for achieving robust market risk management procedure in alignment with regulatory requirements, best practice and the Bank's overall risk management policy;
- To ensure that the Bank has adequate systems to identify, measure, monitor and control market risk;
- To ensure adequate, prioritized and focused attention from the board and senior management level on significant market risk exposures and measures of mitigations
- To protect the bank against unexpected losses and to contribute to income stability through independent identification, assessment and understanding of business market risk,
- To contribute to bringing the bank's functional structure and management process in line with the best international practices and to set minimum standards for market risk control,
- To create transparent, objective and consistent information system of the market risks as a base for reasonable decision-making,
- To establish an appropriate reporting and monitoring tools with regards to the market risk management; and
- To ensure that a sound and uniform risk management culture is established throughout the bank

3. Market Risk Management Structure and Framework

Board level Risk Management Committee (RMC) of the Bank shall oversee the issues of market risk and market risk management practices in the bank. There shall be a Risk Management Sub-Committee (RMSC) in management level for the overall monitoring and controlling of the market risk. Likewise, Assets-Liability Management Committee (ALCO) is also responsible for the supervision / management of Market Risk. Bank shall have a separate Market Risk Management Department to look the issues and monitor the market risk. Under Market Risk Management Department, there shall be Treasury Middle office which is responsible for review, measurement and analysis of the treasury management. The department put continuous efforts and vision for the identification, assessment, measuring, monitoring and controlling the market risk. It collects the issues from concerned business line and uses it for the overall development of market risk management practice in the bank. The department ensures the effective implementation of policies and strategies related with the market risk. The department will report to the Chief Risk Officer and shall present the market risk issue in Risk Management Sub-Committee and Board level Risk Management Committee.

The Market Risk Management structure of the Bank shall be as follows:



Every staff of the bank shall takes the responsibility of controlling risk or losses while performing their duties. Bank integrate its systems and procedures as a primary risk culture and risk mitigations.

4. Roles and Responsibilities

Roles and responsibilities of all concerned shall be to understand in identifying, assessing, monitoring, measuring and controlling market risks. Bank shall assign the following responsibilities, but not limited, to following functions:

4.1 Board of Directors

Board of Directors shall be primarily responsible for ensuring in place an effective market risk management policy at the Bank. Board of Directors is also responsible to advise and approve appropriate market risk management strategy, define Bank's overall tolerance in relation to market risk and overseeing the implementation status for proper functioning of the policy. The board shall also ensure that the policy is comprehensive for key business and support functions, and establish a method for monitoring compliance of the same.

4.2 Risk Management Committee

Risk management committee shall be responsible to review the market risk profile of the bank, monitor the nature and level of risk being taken by the bank and monitor the risk related to risk appetite and tolerance limit of the bank. Committee shall recommend the Board for the formulation of policies and strategies in line with the provision of regulator, internal limit and appropriate practices for market risk management. Committee shall also ensure that all material risks are identified, monitored and controlled. Committee shall also review the market risk appetite, adequacy of resources being assigned to mitigate risks, result of stress testing, adequacy of internal control and recommend suitable control/mitigating strategy for management. The committee periodically updates the status of risks to the Board.

4.3 CEO and Senior Level Management

CEO and senior level management is primarily responsible for implementing and ensuring effective compliance of the market risk management policy and strategy approved by board and formulate appropriate procedures, guidelines, framework for the management of market risk. CEO and Senior Management shall ensure that Bank has a strong control environment, formulated policies, process, system, internal control, risk mitigating strategy are in effective implementations and the staff members of the bank are well versed with banks market risk management strategy.

4.4 Risk Management Sub Committee

Risk Management Sub Committee shall ensure the implementation of the market risk management policy and framework at working level. The committee shall ensure the bank activities are conducted professionally and monitor the risks. The Committee shall check, review and ensure that the necessary resources are available to manage market risk. Committee also ensure the adequacy and effectiveness of risk management process in the Bank. The sub-committee shall review the market risk report submitted by department and give necessary instruction for management and mitigation of identified market risk.

4.5 Assets-Liability Management Committee (ALCO)

ALCO shall be responsible for the supervision/management of Market Risk. The committee shall monitor maturity mismatch, gap identification, market risk inherent to new products, structure and composition of the Banks' assets. The overall responsibilities of the ALCO committee for the management of market risk shall be as defined in the Bank's Asset & Liability Management Guidelines and Investment Policy.

4.6 Chief Risk Officer (CRO)

Chief Risk Officer (CRO) shall be responsible for overall monitoring of the market risk activities of the Bank. CRO shall ensure the establishment of early warning or trigger system for breaches of the bank's risk and risk appetite or limits of various sectors. CRO shall ensure the market risk-taking activities and market risk exposures are in line with the board-approved risk appetite, risk limit and capital planning. CRO shall report to the Risk Management Committee and shall update to CEO on market risk profile of the bank and all market risk-mitigating activities of the Bank.

4.7 Market Risk Management Department

Bank shall have an independent Market Risk Management Department which is independent from risk taking unit. Primary responsibility of the Market Risk Management Department is to disseminate and implement the market risk management policies, strategy, procedures, guidelines and framework in the bank. Followings are the major responsibilities of the department:

- Disseminate and implement the market risk management policies, strategy, procedures, guidelines and framework of the bank.
- Report all issues and status of the market risk profile of the bank to the CRO.

- Prepare and provide agenda and report for the Risk Management Committee and Sub-Committee.
- Identify, access, measure, monitor and report the market risk.
- Review the market risk issues ensuring that the Bank's investment portfolio remains healthy and any early warning signals in the investment portfolio is timely tracked and well managed.
- Review the existing system, procedures required changes/improvements of a particular business segment and recommend to the management for any improvements.
- Track/monitor the regulatory changes and macro/micro economic events which has potential to increase risk or risk profile
- Establish and prepare early warning or trigger signals for breaches of the Bank's risk appetite and tolerance limit,
- Review industry and portfolio on regular basis and recommend concerned authority for the diversification / narrow down the exposure on certain investment portfolio.
- Review of report of treasury department, finance department, identify the probable market risk area and give constructive feedbacks for management of such risk area.

4.8 Treasury Middle

There shall be a treasury middle office under the market risk management department which shall be primarily responsible to identify, monitor, measure and analyze risk inherent to market operations and prepare the report on the market risk management. Treasury Middle office shall ensure the accurate and timely confirmation, booking and settlement of money market, foreign currency and derivatives instruments such as NDF, Forward contract. Middle office shall also review the function of treasury department, investment portfolio, foreign-currency management, review the risk-return relationship of the investment portfolio, review and research market scenario and suggest the management for investment in profitable/growing market portfolio. Office shall also proactively identify market opportunity and support new initiatives.

4.9 Departments / Branches

Departments and Branches are responsible to ensure the implementation of risk parameters and principles as per the product, policies and procedures. Departments and Branches shall report the issues and incidents to the risk management department. Departments and Branches shall maintain zero level of non-compliance and ensure the prudent / ethical banking on the day to day functionality maintaining the well practice of risk culture and risk understanding.

5. Interest Rate Risk Management

Interest rate risk is the risk of negative effects on the financial result and capital of the bank caused by changes in interest rate. Changes in interest rates affect a bank's earning by changing its net interest income and the level of other interest-sensitive income and operating expenses. Accepting this risk is a normal part of banking and can be an important source of profitability. However, excessive interest rate risk taking can pose a significant threat to the bank's earnings and capital base. Effective risk management process that maintains interest rate risk within prudent levels is essential to the safety and soundness of the bank.

Bank shall consider followings as a source of interest rate risk:

5.1 Re-pricing Risk

The risk arises from the timing differences in the maturity and re-pricing of the bank assets, liabilities and off-balance sheet positions. Re-pricing risk reflects the possibility that assets and liabilities will be re-priced at different times or amounts and affect Bank's earnings, capital, or general financial condition in a negative way. Bank shall review gap analysis regularly to manage the re-pricing risk.

5.2 Yield Curve Risk

The yield curve risk is the risk of experiencing an adverse shift in market interest rates associated with investing in a fixed income instrument. The change in the yields curve will impact the price of a fixed-income instruments. The yield curve is the graphical plots of yields of similar-quality bonds against their maturities. The bank shall minimize the yield curve by investing in diverse portfolio having different maturities and yield.

5.3 Basis Risk

Basis risk arises from the changing rate relationships among different yield curves effecting bank activities. It arises from hedging exposure to one interest rate with exposure to a rate which reprises under slightly different condition. When interest rates change, these differences can give rise to unexpected changes in the cash flows and earnings spread between assets, liabilities and off-balance sheet instruments of similar maturities or re-pricing frequencies. Bank shall adopt different hedging strategy to minimize and manage the basis risk.

5.4 Optionality Risk

Option risk is the risk that cash flows will change due to embedded options may in bank's assets & liabilities portfolios. Option provides the holder the right, but not the obligation, to buy, sell, or in some manner alter the cash flow of an instrument or financial contract. Options may be stand-alone instruments such as exchange-traded options and over-the-counter (OTC) contracts, or they may be embedded within otherwise standard instruments. While banks use exchange traded and OTC options in both trading and non-trading accounts, instruments with embedded options are generally more important in non- trading activities. Bank shall manage the optionality risk through diversification and position sizing.

5.5 Basic consideration on managing Interest Rate Risk

Bank shall ensure the following measures in place for managing the interest rate risk:

- Risk Management strategy and tolerance levels shall be determined regularly for the interest rate risk.
- There will be a clear lines of authority and responsibility for managing and controlling the interest rate risk.
- There will be quantitative parameters that define the acceptable level of interest rate risk. There shall be operating limits and other practices that maintain exposures within internal risk appetite levels.
- There will be a comprehensive interest rate risk reporting and interest rate risk management review. Interest rate risk reports to senior management provide aggregate information as well as sufficient supporting detail to enable management assesses the sensitivity of the institution to change in market conditions and other important risk factors.
- There will be an appropriate interest rate risk measurement systems which consider all material sources of interest rate risk and that assess the effect of interest rate changes consistent with the scopes of their activities.

- There will be timely and regular updates of market information and trend of interest movement in the industry. Based upon market information, senior management takes appropriate decision into consideration of bank projected interest movements, risk tolerance level and profitability.
- Risk management activities related to interest rate risk are conducted by competent staff with technical knowledge and experience consistent with the nature and scope of the banking business. There will be sufficient depth in staff resources to manage the activities.

6. Foreign Exchange Rate Risk Management

Foreign exchange rate risk arises when bank holds foreign currency or commit to settle the transaction in foreign currency. Bank shall ensure the following measures in place for managing the foreign exchange rate risk:

- Risk management strategy and tolerance levels shall be determined regularly for the foreign exchange.
- Foreign exchange operations in the bank will be in compliance with foreign exchange control regulations and NRB Directives.
- There will be effective risk management systems and internal controls in place. Bank continues the monitoring of significant foreign exchange exposures.
- Bank periodically reviews the policies, procedures and currency limits regularly in line with changes in the economic environment.
- Foreign exchange operations are supported by adequate management information systems which complement the risk management strategy.

7. Market Risk Identification and Assessment

Risk identification is paramount for subsequent development of a possible market risk monitoring and control system. Effective risk identification considers both internal factors (such as: bank's structure, nature of activities, quality of human resources, organizational changes and employee turnover) and external factors (such as: changes in the industry and technological advances) that could adversely affect the achievement of the bank's objectives. For the identification and assessment of the market risk, bank shall use following techniques:

- Interest sensitive assets and liabilities will be plotted in various maturity buckets for the identification of the interest rate risk and shall identify the gap

- For securities, bank shall categorize investments under three category namely held for trading, available for sale and held to maturity so that appropriate market risk in each category can be identified and assessed.

- Fixed interest bearing investment such as investment in treasury bills, government bond, certificate of deposit etc. are separately categorized for the identification and assessment of the interest rate risk.

- Net open position of the foreign currency shall also be closely monitored to identify and assess the foreign exchange risk associated with such currency.

- Forward contract, Non-Deliverable Forward (NDF), trading gain / loss, revaluation gain / loss shall be closely monitored to identify the probable market risk.

- Finding observed by audit (internal, statutory, NRB or special audit) and compliance review reports shall also be used by the bank as indicator of market risk.

8. Market Risk Measurement

Risk Management process include risk measurement of the identified risk associated with material products, activities, processes and systems. Bank shall follow the steps outlined below for measuring market risk.

- Interest rate risk shall be measured using Re-pricing Risk Management Model as well as Stress Testing

- Foreign exchange risk shall be measured using Net-Open Position Model as well as Stress Testing

8.1 Re-Pricing Risk Management Model

Re-Pricing Risk Management Model shall be designed and developed to measure adverse impact if interest rate changes by certain percentage so as to allow management plan and maintain/grow its profitability. Risk Management Committee can take necessary steps to make sure the change won't harm the bank's profitability and net worth.

For the purpose of minimizing the interest rate risk, cumulative gap of each time interval shall also be measured. All interest sensitive assets and liabilities shall be classified according to their maturities in different time bucket and impact of interest rate change shall be determined:

Particulars	1-90 days	91-180 days	181-270 days	271-364 days	Over 1 year	Total
Interest Sensitive Assets (A)						
Interest Sensitive Liabilities (B)						
Gap (A-B)						
Cumulative Gap (D)						
Change in interest rate by certain % p.a (E) {Volatility Rate}	1/4th of change	1/4th of change	1/4th of change	1/4th of change	Total % change	
Impact on NII (D*E)						

The ALCO shall determine the volatility rate with the recommendation of Treasury Department. The impacts of adverse movement of the interest rate to the capital adequacy of the bank shall also be analyzed in order to ensure that capital adequacy remains above the margin required by regulator.

8.2 Net Open Position Model

The net open foreign currency position is the difference between the total open long (receivable) and the total open short (payable) position in a given currency held by the Bank. The net open position is the uncovered volume of asset or liability which is exposed to the changes in the exchange rates of currencies. The net open position approach has been devised to measure the capital requirement for market risk. This module measure the risk of loss arising out of adverse movements in exchange rates.

The net open position of foreign exchange and capital requirement shall be measured as follows:

Currency	Net Open Position (FCY)	Open Position (NPR)	Relevant Open Position
INR			
USD			
GBP			
EURO			
THB			
CHF			

Total Open Position (a)			

Currency	Net Open Position (FCY)	Open Position (NPR)	Relevant Open Position
Fixed Percentage (b)			5%
Capital Charge for Market Risk (a*b)			
Risk Weight (reciprocal 10%)			
Equivalent Risk Weight Exposure for Market Risk			

Finance department shall calculate the net open position and capital requirement in co-ordination with Treasury department. ALCO committee, Risk Management Committee shall review the report on regular basis.

8.3 Stress Testing and Scenario Analysis

Stress and scenario testing is a risk management technique used to evaluate the potential effects on the institution's financial condition within the set of specified changes in risk factors corresponding to exceptional and plausible events. Bank shall examine future capital resources and capital requirements under various scenarios and shocks.

Bank shall use stress testing tool to measure and manage interest rate risk as well as foreign exchange risk. Under stress testing, various scenarios are developed and the potential shocks on capital adequacy are measured.

<u>Interest Rate Shocks</u>

Interest rate shock occurs when there are fluctuations in the interest rates. Following scenarios are considered to measure impact of the potential interest rate shocks:

Scenario	Pre Shock CAR (%)	Post Shock CAR (%)	Impact in Profit	Add. Capital Required
Deposits interest rate change (+,-) by 1% on an average.				
Deposits interest rate change (+,-) by 1.5% on an average.				
Deposits interest rate change (+,-) by 2% on an average.				
Loan interest rate change (+,-) by -1% on an average.				
Loan interest rate change (+,-) by -1.5% on an average.				
Loan interest rate change (+,-) by -2% on an				

Scenario	Pre Shock CAR (%)	Post Shock CAR (%)	Impact in Profit	Add. Capital Required
average.				

For developing different scenarios for stress testing, the ALCO will be responsible for deciding the percentage change in the market risk factors with the recommendation of Treasury department.

Foreign Exchange Rate Shocks

Exchange rate shocks occurs when there are fluctuations in foreign currency. Following scenarios are considered to measure impact of potential foreign exchange rate shocks:

Exchange Rate Shocks	Open Position (NPR)	Post Shock Open Position (NPR)	Pre-shock Risk Weight Exposure	Post-shock Risk Weight Exposure	Pre-CAR	Post-CAR
Currency appreciate by 20%						
Currency depreciate by 20%						

For developing different scenarios for stress testing, the ALCO will be responsible for deciding the percentage change in the market risk factors with the recommendation of Treasury department.

9. Risk Monitoring, Control and Mitigation

Bank shall have the appropriate monitoring and reporting mechanism in place at the Board, Senior Management and business line levels to support the proactive management of market risk. Once market risk is identified, assessed and measured, and the Bank decides to take the risks, these risks shall be controlled with a strong control environment in place through policies, processes, systems, internal controls, risk mitigations and / or transfer activities. Bank shall periodically review the risk limitation and control strategies and adjust the market risk profiles accordingly using appropriate strategies, in light of the overall risk appetite and profile. Those risks that cannot be controlled, bank decides whether to accept these risks, reduce the level of business activity involved or withdraw from this activity completely.

Bank shall use following monitoring, control and mitigation tools to manage the market risk:

9.1 Culture and organizational structure

Bank shall have prudent risk culture along with well-defined values, beliefs, practices and management's attitudes. Bank shall have the culture of regularly reviewing investment portfolios with bank's risk appetite and investment policy. Bank shall have the culture of reward and penalty for the staff involved in investment process for their vigilance and negligence.

Bank shall have market risk management function independent of the risk-taking unit. There shall be segregation of duties regarding investment function. Bank shall have well defined organization structure for market risk management.

9.2 Policies, Procedures, Strategies, Guidelines, Manuals, Framework and Product Paper

Bank shall have Asset & Liability Management Guidelines and Investment Policy to regulate and guide the overall functioning related with the investment and market risk handling. The policy clearly define the Bank's policy on assets and liability management, interest rate management, treasury instrument management, foreign exchange management, investment management, limit and authority for investment and many more.

Bank shall have a well-defined Risk Appetite and Tolerance Limit Policy which shall clearly define the maximum limit for investment in share, debenture, mutual fund, maximum limit risk weighted exposure for market risk, daily net open position exposure in foreign currency, maximum placement in foreign currency etc.

9.3 Limit Structure

Bank shall have well defined limit structure based on the portfolio, type of activity, product and strategy of the Bank. There shall have well defined procedures for activity and approved limit for all risk-takers personnel. There shall be the limit structure for all investment portfolio according to their nature and maturity period. Limit for Investment portfolio such as government bonds/ treasury bills, inter-bank placement/lending, foreign placement, investment in corporate debenture, investment in shares, mutual funds, underwriting of public share / debenture issues, maximum limit for daily open position etc. shall be well defined. The personnel and their authority level shall also be defined so as to minimize the probable market risk.

9.4 Early Warning Signals (EWS) / Key-Risk Indicator

Bank shall develop market risk indicators for identifying the Early Warning Signals (EWS) / Key-Risk Indicator (KRI). Bank shall list out the possible early warning signals, review it and prepare report on periodical basis. Market movement, movement in equity price, trend of fluctuation in foreign exchange rate, fluctuation in interest rate, etc. shall be used as the basis of determining indicators for market risk identification. Bank shall periodically review the possible early warning signals.

9.5 Portfolio Administration

Bank shall have effective market risk administration function for maintaining the safety and soundness investment activities in the bank. Front and Back Treasury along with Middle treasury shall ensure that the investment and all positions are properly maintained. Middle treasury function shall ensure the accurate and timely confirmation, booking and settlement of money market, foreign currency and derivatives instruments such as NDF, Forward contract. Middle office as a portfolio administrator shall also review the function of treasury department, investment portfolio, foreign-currency management, review the risk-return relationship of the investment portfolio, review and research market scenario, ensure timely booking of return from investment and suggest the management for investment in profitable/growing market portfolio. Office shall also proactively identify market opportunity and support new initiatives.

9.6 Exception Monitoring

Bank shall have exception monitoring system which is the key measures on identifying and controlling the market risk. Treasury Department, Finance & Planning Department and Middle treasury shall review the exception report on daily basis. Such exception shall be obtained from CBS, utility software or from other regular reporting. Exception shall be view as trading loss, foreign exchange loss, uncovered position, loss bearing portfolio etc.

9.7 Stress Testing

Bank shall conduct the stress testing on regular basis to monitor the interest rate risk trend, foreign exchange risk trend and indication. The stress tests for exchange rate risk assess the impact of changes in exchange rates on the profitability and economic value of the bank’s equity. The effects of significant exchange rate movements, including sharp reductions in liquidity of individual currencies shall be considered when setting stress scenarios. NRB provisions and methodologies given for stress testing shall be applied for regulatory requirements and internal uses. Test results shall be incorporated in the review of business strategies, policies and limits on foreign exchange risk.

9.8 Management Information System

Bank shall have Management Information System Guidelines which clearly defines the scope and information that shall be reported and reviewed by the management. The quality of management information system is a determinant of the effective risk management. This will enable the board and all levels of management to fulfill their respective roles. The adequacy and scope of information shall be reviewed on a periodic basis at least annually by business line managers, risk management function, senior management and the board to ensure that it is sufficient to the complexity of the business. Treasury department shall perform the risk review function in relation to day-to-day activities. The office shall prepare the reports and submit to senior management as well as ALCO. The MIS guidelines of the bank shall specify the reports, their preparation frequency and reporting channel.

9.9 Hedging

Management of currency & commodity risk shall also be done by hedging. Hedging is a risk management strategy used in limiting or offsetting probability of loss from fluctuations in the prices of commodities and currencies. All forward contract (deliverable as well as non-deliverable), future contracts, swaps, options and other derivatives shall be effectively hedged to manage the market risk associated with these instruments.

10 Market Risk Management Model

The bank shall follow below mentioned three line of defense approach as a market risk management model:

Line of Defense	Responsible Unit
First Line	Business / Functional units
Second Line	Compliance/ Risk Function
Third Line	Internal Audit

First Line: The first line of defense is the Bank's Treasury Department and Business Unit. This include front-line employees who are responsible for dealing with other counter party, fixing deal, investing in various market instruments and more. Employee at first line of defense have primary responsibility for all market risk management. They are also responsible for implementing corrective actions to address process and control deficiencies.

Second Line: The second line of defense is the Bank's Compliance and Risk Functions that provide independent oversight of the risk management activities of the first line of defense. The responsibilities of second-line defense include reviewing risk reports and validating compliance according to the requirements of risk management framework. Second line of defense is responsible for establishing policy and process for risk management, provide guidance and coordination among all functions, liaison between third line of defense and first line of defense, oversight over risk areas and bank's objectives.

Third Line: The third line of defense is audit function of the Bank who report independently to the senior management charged with the role of representing the Bank's stakeholders relative to risk issues. The audit function regularly review the first and second line of defense activities and results, including the risk governance functions, to ensure that the risk management arrangements and structures of the Bank are appropriate and are discharging their roles and responsibilities completely and accurately. The results of reviews of these audit functions need to be effectively communicated to executive management and board of directors in order to take appropriate action to maintain and enhance the risk management culture of the Bank.

11 Disclosure Requirement

Annual report of the bank shall make a full disclosure of approaches followed by the bank for identification, assessing, monitoring, measuring and controlling market risks. Disclosure shall include methods applied by bank to determine market risk, measurement method used for market risk and other relevant information.

12 Implementation, Review and Updates

This Policy will be effective upon the approval of BoD. This Market Risk Management Policy shall be reviewed at least annually. The review shall include identification of current risk exposure, emerging risk trends, control measurements and response to changes on organizational environment, business circumstances, legal conditions or technical environment.

Board of Directors:

S.N.	Name	Position	Signature
1.	Mr. Upendra Keshari Neupane	Chairman	
2.	Mr. Iman Singh Lama	Director	
3.	Mr. Chandra Prasad Bastola	Director	
4.	Mr. Madhav Prasad Bhatta	Director	
5.	Mr. Krishna Shrestha	Director	
6.	Dr. Kailash Patendra Amatya	Director	