ASSESSMENT OF LIQUIDITY RISK MANAGEMENT: - A CASE STUDY IN BANK OF ABYSSINIA

A research proposal for partial fulfillment of the Masters of Business Administration

St. Mary's University faculty of business and economics

Submitted by: RAHEL TIBEBU

ID- SGS/0096/2008

Submitted to: ASMAMAW G. (ASSISTANT PROFESSER)

JUL, 2017

Addis Ababa, Ethiopia

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School of Graduate Studies

This is to certify that the thesis prepared by Rahel Tibebu, entitled: Determinants of Liquidity of Commercial Banks of Ethiopia and submitted in partial fulfillment of the requirements for the degree of Master of art in general management complies with the Regulations of the University and complies the accepted standards with respect to originality and Quality.

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Signed by the Examining Committee:

Internal Examiner: Name _____Signature_____Date _____

External Examiner: Name _____Signature_____Date _____

Table of Contents

CHAPTER FOUR
4. DATA PRESENTATION, ANALYSIS AND INTERPRETATION

CHAPTER FIVE
5. CONCLUSION AND RECOMMENDATION

ACRONIMS

ALCO Asset liability committee

BOA Bank of Abyssinia

BOD Board of directors

BIS Bank for International Settlements

CFP Contingency funding plan

IMF International monitory fund

NBE National bank of Ethiopia

LIST OF TABLES

List of Tables *pages*

Abstract

The main purpose of the study is to assess the liquidity risk management practice in bank Abyssinia from the year 2013-2016. There are four fundamental research question were formulated. The research examine the of source of liquidity risk in bank, Assess liquidity level or position of the bank, Examine liquidity risk contingent plan and strategies and examine the strength and weakness towards managing liquidity risk management practice. To conduct the study, descriptive method was employed. Purposive sampling technique was used in the selection of department in the bank of Abyssinia. Thus, risk and compliance department, treasury department and finance department employees who are directly related to the subject matter is selected. The total number of respondent 20 was selected from the three department working related to the subject matter. Data collected both primary data and secondary data. The primary data collected through questioner and interview and Secondary data like annual report were used. The data collected from primary source of data were organized table and percentage. The findings of the study revealed that the bank experience seasonal fluctuation in the source of funds which exposed to liquidity risk. The bank has strategies and contingency plan to meet emergency situation. ALCO committee periodically measure and report the level or position of liquidity risk of the bank continuously. So, the bank has strong side in preparing strategies and procedure. Also measurement and reporting system is a good practice. But, limited source of funds and lack of coordination between departments face the bank to unable to meet short-term obligation.

CHAPTER ONE

1. INTRODUCTION

Banks are financial intermediaries in which they distribute surplus amount of money to the deficit part of the economy in terms of short and long and short term loan. Banks facilitate the saving and capital formation in the economy. Bank for international settlements BIS (2008) defines liquidity as the ability of bank to fund increases in assets and meet obligations as they come due, without incurring unacceptable losses. Hence, liquidity risk arises from the fundamental role of banks in the maturity transformation of short-term deposits into long-term loans. Therefore, banks have to hold optimal level of liquidity that can maximize their profit and enable them to meet their obligation (Alemayehu,2016).

Banks have always been prone to liquidity risk because one of their principle social purposes is to perform maturity transformation, also known as time intermediation. In other words, they take demand deposits and other short-term funds and lend them back out at longer maturities. Therefore, banks can lend out the funds for longer periods with a fair degree of assurance that the deposits will remain available or that equivalent deposits can be obtained from others as needed, perhaps with a modest boost in deposit rates (Tsignesh, 2012).

According to basil committee on banking supervision (2008), Liquidity is the ability of a bank to fund increases in assets and meet obligations as they come due, without incurring unacceptable losses. The fundamental role of banks in the maturity transformation of short-term deposits into long-term loans makes banks inherently vulnerable to liquidity risk, both of an institution-specific nature and that which affects markets as a whole. Virtually every financial transaction or commitment has implications for a bank’s liquidity. Effective liquidity risk management helps ensure a bank's ability to meet cash flow obligations, which are uncertain as they are affected by external events and other agents' behavior. Liquidity risk management is of paramount importance because a liquidity outfall at a single institution can have system-wide repercussions. Financial market developments in the past decade have increased the complexity of liquidity risk and its management.

According to Bank Risk Management Guidelines of NBE (2010), liquidity risk as one of the major risk from bank, it arises if the cushion provided by the liquid asset is not sufficient to cover its obligation. In such a situation, bank has to fund their liquidity requirements from market. However, conditions of funding through market highly relied on liquidity in the market and borrowing institution. Accordingly, shortage of liquidity from an institution may have to undertake transaction with heavy cost resulting in a loss of earning or it could result in bankruptcy if it is unable to undertake transaction even at current market prices for the worst case. In finance, liquidity risk may not be seen as isolated since all financial risks are not mutually exclusive and liquidity risk often caused by other financial risks such as credit risk, market risk, etc. For instance, a bank increases its credit risk through assets may increase its liquidity risk as well. Similarly, a large loan default can adversely impact a bank's liquidity position.

The term liquidity risk includes two types of risk: funding liquidity risk and market liquidity risk. Funding liquidity risk is the risk that the bank will not be able to meet efficiently both expected and unexpected current and future cash flow and collateral needs without affecting either daily operations or the financial condition of the firm. Market liquidity risk is the risk that a bank cannot easily offset or eliminate a position at the market price because of inadequate market depth or market disruption (Vodova, 2011)**.**

Liquidity risk management is part of the larger risk management framework of the financial services industry, which concerns all financial institutions. Studying liquidity risk management issues is a critical but complex subject. Failure to address the matter may lead to dire consequences, including banking collapse, and by extension, the stability of the financial system. In fact, most bank failures are due to issues around managing liquidity risk. This is also the reason why regulators are very concerned with the liquidity position of financial institutions and many financial industry professionals believe that the current thinking of regulators appears to center around the strengthening of liquidity framework (Accenture, 2013).

Liquidity Risk Management framework for liquidity risk management has three aspects: measuring and managing net funding requirements, market access, and contingency planning.

Forecasting possible future events is an essential part of liquidity planning and risk management. The analysis of net funding requirements involves the construction of a maturity ladder and the calculation of the cumulative net excess or deficit of funds on selected dates. Banks should regularly estimate their expected cash flows instead of focusing only on the contractual periods during which cash may flow in or out (Taher, 2012).

This study focus on assessment of risk management of bank of Abyssinia by measuring the liquidity risk by liquidity ratio and examine current management practice towards managing banks liquidity risk.

1.2 BACKGROUND OF THE ORGANIZATION

On February 15, 1996 ninety years to the day after the now-defunct but historical Bank of Abyssinia was officially established by Emperor Menelik, the new Bank of Abyssinia (BOA),which shares nothing with the former one but its name, was established.

The new Bank of Abyssinia has established by its shareholders numbered only 131, its workforce 32 and had only one branch. Furthermore, its subscribed capital was only Birr 25 million, and its authorized capital Birr 50 million, whereas its paid-up capital was just Birr 18 million. Furthermore it had a subscribed capital of 25 million and authorized capital of 50 million, whereas its paid up capital was just birr 17.8 million.

Nowadays the bank has shown growth progress in terms of shareholders, employees, customers, and branch expansion. Currently the bank has 1,406 shareholders, 2,195 employees, and over 36,000 customers with 91 branches expanding throughout the country. The bank provides different services to its customers some of these include; saving account, youth targeted saving program, gift saving accounts, on-site services safe deposit boxes, international money transfer etc. In addition to this, its subscribed capital has grown to 630 million with an authorized capital of 630 million and with an increase in it's paid up capital of 576.4 million. Meanwhile the bank's total capital, deposit and total asset has grown to birr 842.7 million, 7.95 billion, and 9.5 billion respectively.

The vision of bank of Abyssinia is to the legacy of the pioneer bank of Ethiopia, through continuous innovation and provision of excellent banking systems. The mission of the bank is to provide a full fledged domestic and international banking service through qualified and motivated employees and utilization of modern technology. Therefore, these papers focus on the current stated and trends of liquidity and its relation to the performance of bank of Abyssinia

1.3 STATEMENT OF THE PROBLEM

Until recently, liquidity risk was not the main focus of banking regulators. The 2007-2009 crisis showed, however, how rapidly market conditions can change exposing severe liquidity risks in institutions, many times unrelated to capital levels. The market turmoil that began in mid-2007 re-emphasized the importance of liquidity to the functioning of financial markets and the banking sector. In advance of the turmoil, asset markets were buoyant and funding was readily available at low cost. The reversal in market conditions illustrated how quickly liquidity can evaporate and that illiquidity can last for an extended period of time **(**Basel committee on banking supervision, 2008).

Liquidity risk arises from the inability of a Bank to accommodate decreases in liabilities or to fund increases in assets. An illiquidity bank means that it cannot obtain sufficient funds, either by increasing liabilities or by converting assets promptly, at a reasonable cost. In periods the banks don't enjoy enough liquidity, they cannot satisfy the required resources from debt without conversion the asset into liquidity by Reasonable cost. Under critical conditions, lack of enough liquidity even Results in bank's bankruptcy. A reduction in funding liquidity then caused Significant distress (Berehanu 2015).

Achieving the optimum level of liquidity is extremely dependent on various properties such as: size, characteristics, nature and level of complexity of activities of a bank. Greuning and Bratonovic, (2004) explains the management of liquidity as the bank has to follow a decisional structure for managing liquidity risk; an appropriate strategy of funding, the exposure limits and a set of rules for arranging liquidities in case of need.

A bank has to try to reconcile the twin conflicting objectives by actually working on a good portfolio (Liquidity) management. This can be also done by analyzing the situation, studying the objectives and therefore choosing the diversified and balanced asset portfolio. But the problem with the banks these days are that they are not taking these issues that seriously as seriously it should have been taken into consideration (Berehanu 2015).

Banks need to hold a reasonable amount of cash in their branches to smoothly run day to day activities. The total amount of cash holdings at a bank increase in line with the accumulation of branch numbers. The total amount of cash held by banks went up slightly, at industry level, in 2011/12, whereas the balance went down considerably at certain banks. AIB and Wegagen Bank reported a decline in cash balances of 18.63pc and 15.46pc, respectively. Average cash holdings for a branch, across banks, must have considerably declined. That is why the banks are feeling the pressure (Fortune magazine, March 3, 2013 *Vol* 13,*No* 670). It is not only the cash management problem

Studies made by Worku (2006) and Semu (2010) on the determinates of bank performance and Profitability, indicated that commercial banks in Ethiopia hold excess liquidity in their account. But currently as it stated in the above, there is high liquidity shortage problem in commercial banks which affect the day to day activity of the bank. Recent studies made by Andebet (2016) on the Performance of private commercial banks in Ethiopia, pre and post NBE bill shows that after National Bank of Ethiopia(NBE) issue a directive effective April 4,2011 that requires private commercial banks to hold 27 percent of the gross loan extension in a 5 year bill at an interest rate of 3 percent per annum. The study shows that after this proclamation, most of commercial banks including bank of Abyssinia significantly decline the performance of liquidity in the year 2009-2015. This research will examine the current status of the bank of Abyssinia liquidity management practice.

In addition to this, research made by Tsegenesh (2012) and Berehanu(2015) on Determinants of Banks Liquidity and their Impact on performance and profitability respectively shows that the study use quantitative research and examine the determinants in the bank specific factor and whole (macro level). So, it is wide in scope and use only qualitative research.

But, in this study the researcher try to assess the practice of the bank according to the international liquidity principle and standard, interims of scope it only assess bank of Abyssinia and bank specific factors (micro level) . Therefore, this study try to assesses the liquidity risk of bank of Abyssinia from the fiscal year of 2013-2016.

1.4 Objective of the study

1.4.1 General objective

This research assess the practice of bank of Abyssinia in managing the liquidity risk of the bank.

1.4.2 Specific objective

- To investigate the sources of liquidity risk in the bank
- To assess the liquidity level or position of the bank
- To examine the liquidity risk contingent plan and strategies of the bank

1.5 SCOPE OF THE STUDY

This study focus only the bank specific factor and variables affect the liquidity management of the bank and only measure the bank of Abyssinia current liquidity risk management practice and qualitative aspect of liquidity measurement of the bank .

1.6 LIMITATION OF THE STUDY

Some of the challenges that were encountered while conducting the study were Lack of cooperation from some of the subjects of the study and Shortage of time and lack of the necessary materials written with respect to the topic under study. Despite these limitations, the researcher has attempted to make the study as complete as possible.

1.7 SIGNIFICANCE OF THE STUDY

The study has great contribution to the existing knowledge in the area of Factors determining commercial banks liquidity and their impact on Profitability in the context of Ethiopia.

Furthermore, this help to study other commercial banks in Ethiopia to evaluate liquidity management practice and related to their performance. Because there is lack of research in this area.

This also helps the management level to give a proactive measure towards risk of liquidity and to analyze the trends of the bank for effective decision making.

In the other hand, it can also help other researcher for further study and explanation. And also contributes to the wellbeing of the financial sector of the economy and the society as a whole.

1.8 ORGANIZATION OF THE PAPER

This research report is organized in five chapters. Chapter one provides the general introduction about the whole report. Chapter two describes the review of related literatures. Chapter three provide detail description of the methodology employed by the research. Chapter four contains data presentation, analysis and interpretation. Finally, the last chapter concludes the total work of the research and gives relevant recommendations based on the findings.

CHAPTER TWO
2. LITERATURE REVIEW

2.1. Bank liquidity

Liquidity is the ability of a bank to fund increases in asset and meet obligation as they come due, without incurring unacceptable losses. The fundamental role of banks in the maturity transformation of short term deposit in to long loans makes the bank inherently vulnerable to liquidity risk, both of an institution specific nature and that which affects market as a whole. The market turmoil that begin in mid 2007 G.C reemphasis the importance of liquidity to the functioning of financial market and the banking. Liquidity is a financial institution capacity to meet its cash and collateral obligation without incurring unacceptable losses. Adequate liquidity is dependent upon the institutions ability to efficiently meet both expected and unexpected cash flow and collateral needs without adversely affecting either daily operation or the financial condition of the institution (Jenkinson2008).

It is also a risk not having sufficient current assets (cash and quickly saleable securities) to satisfy current obligations of depositors especially during the time of economic stress. Therefore, without required liquidity and funding to meet obligations, a bank may fail. Pandey (2010) posits that liquidity is current assets which should be managed efficiently to safeguard the firm against the risk of illiquid. Lack of liquidity in extreme situations can lead to the firm's insolvency. He further state that conflict exists between liquidity and profitability. If the firm does not invest sufficient fund in current assets, it may become illiquid which is risky. It may lose profitability if some idle current assets do not earn anything. Hence, insufficient liquidity is one of the major reasons of bank failure. Liquidity is necessary to enable banks providing funds on demand and credits needed by customers which are associated with the default risk.

2.1.1 Liquidity Risk

Liquidity risk is the possibility that over a specific time period, the bank will become unable to Settle obligations with immediacy (Drehmann and Nikolaou, 2009). It is a risk arising from a bank's inability to meet its obligations when they come due without incurring unacceptable Losses. This risk can adversely affect both bank's earnings and the capital and therefore, it Becomes the top priority of a bank's management to ensure the availability of sufficient funds to Meet future demands of providers and borrowers, at reasonable costs.

The vulnerability of banks To liquidity risk is determined by the funding risk and the market risk. Liquidity risk needs to be Monitored as part of the enterprise-wide risk management process, taking into account market Risk and credit risk to ensure stability in the balance sheet and dynamic management of liquidity Risk. A bank should only attempt this if it makes good business sense, not use it as a means to Keep afloat. Liquidity risk not only affects the performance of a bank but also its reputation (Jenkinson, 2008). A bank may lose the confidence of its depositors if funds are not timely Provided to them. The bank's reputation may become at stake in this situation.

The maturity transformation of short-term deposits into long-term loans makes banks inherently Vulnerable to liquidity risk (Basel Committee on Banking Supervision, 2008). The market Liquidity risk refers to the inability to sell assets at or near the fair value, and in the case of a Relevant sale in a small market; it can emerge as a price slump (Drehmann and Nikolaou, 2009).

The behaviour towards liquidity is affected by a firm's characteristics: a bank's liquidity position Is affected by its size, status and product type. The size affects the attitude of the bank towards Wholesale funding, including the access opportunity and the price of the Funds obtained (Kashyap ., 2002). Bank size matters because of the economy of scope and Scale; concerning liquidity, a large bank might have better access to the interbank markets Because it has a larger network of regular counterparties or a wider range of collateral. The Product type offered to the counterparties, on both the assets and liabilities sides, is able to affect The liquidity position;

banks that take on demand deposits and offer loan commitments need to Hold higher liquidity buffers that can be mitigated if an imperfect correlation holds (Kashyap ., 2002).

Generally, liquidity risk in banks affected by the following factor summarized by the following table.

Internal Banking Factors	External Banking Factors
High off-balance sheet exposures.	Very sensitive financial markets depositors.
The banks rely heavily on the short-term corporate deposits.	External and internal economic shocks.
A gap in the maturity dates of assets and liabilities.	Low/slow economic performances.
The banks' rapid asset expansions exceed the available funds on the liability side	Decreasing depositors' trust on the banking sector.
Concentration of deposits in the short term Tenor	Non-economic factors
Less allocation in the liquid government instruments.	Sudden and massive liquidity withdrawals from depositors.
Fewer placements of funds in long-term deposits.	Unplanned termination of government deposits.

Table 2.1 internal and external factor that potential to lead liquidity risk.
Source (AIMA, 2013)

There are many factors that affect banks own liquidity and in turn affect the amount of liquidity they can create. These factors have a varying degree of influence on the balance between liquidity risk and liquidity creation, or a bank's liquidity management. A bank's assets and liabilities play a central role in their balancing of liquidity risk and creation. A bank's liabilities include all the banks sources of funds. Banks have three main sources of funds: deposit accounts, borrowed funds, and long term funds. The amounts and sources of funds clearly affect how much liquidity risk a bank has and how much liquidity it can create. The easier a bank can access funds the less risk it has and the higher amount of funds it holds the more liquidity it can create, if willing to do so. Deposit accounts are made up of transaction deposits, also known as demand deposits, savings deposits, time deposits, and money market deposit accounts. The borrowed funds of a bank come from loans from other banks via the Federal Funds market, loans from the Federal Reserve Bank, repurchase agreements, and Eurodollar borrowings. The longer term sources of funds for banks are bonds that banks issue and bank capital. Therefore, these two

liabilities are major factors of a bank's liquidity risk. Demand deposit accounts give banks a larger cash base and thus are a form of liquidity. Undrawn credit lines are a liquidity risk that is off the balance sheet; companies with established credit lines can borrow from banks when they need it and thus decrease a bank's liquidity (Madura, 2007).

The second is that the banks that face the most liquidity pressures and have more cash outflow than inflow will have to sell assets. In this situation most other banks will be facing increased liquidity pressures and there will be only a few banks in the market to buy these assets. This lack of liquidity in the market can lead to fire sales of assets. This means the company looking to sell the assets will have to offer them at a large discount because it needs the cash now due to liquidity pressure. Therefore, in crisis periods banks holding more liquidity will be able to both grow in new business and take over business of other banks by buying their assets at low prices. By purchasing assets at fire sale prices banks that are the purchaser stand to make a great deal of profit (Acharya, Shin, & Yorulmazer, 2009).

2.2. Theories of bank liquidity:

The major objective of a commercial bank is to create liquidity while remaining financially sound. However, there are a number of dimensions in the way banks concretely manage their Liquidity risk. In plain words, there are competing liquidity management theories. Liquidity management theories encompass where it is exactly performed in the organization, how liquidity Is measured and monitored, and the measures that banks can take to prevent or tackle a liquidity Shortage. These competing theories include: Commercial Loan Theory, Shiftability Theory and Anticipated.

2.2.1 Commercial Loan (Traditional) Theory and Liquidity

The commercial loan theory of credit became obsolete both because of its conceptual flaws and Its impracticality. A critical underlying assumption of the theory held that short-term commercial Loans were desirable because they would be repaid with income resulting from the commercial Transaction financed by the loan. It was realized that this assumption would certainly not hold During a general financial crisis even if bank loan portfolios did conform to theoretical standards, For in most commercial transactions the purchaser of goods sold by the original borrower had to Depend to a significant extent on bank credit.

Without continued general credit availability, therefore, even short-term loans backing transactions involving real goods would turn illiquid. Furthermore, a practical impossibility if banks were to play a role in the nation's economic development (Casu (2006)). Moreover, the practice of continually renewing short- term notes for the purpose of supporting long-term capital projects proved unacceptable. The failure or inability of banks to tailor loan arrangements to the specific conditions encountered with longer-term uses in fact contributed to the demise of the practice.

2.2.2 The Shift ability Theory of Liquidity

The Shift ability theory liquidity replaced the commercial loan theory and was supplemented by The doctrine of anticipated income. Formally developed by Harold G, Moulton in 1915, the shift ability theory held that banks could most effectively protect themselves against massive deposit withdrawals by holding, as a form of liquidity reserve, credit instruments for which there Existed a ready secondary market. Included in this liquidity reserve were commercial paper, prime bankers' acceptances and, most importantly as it turned out, Treasury bills. Under normal Conditions all these instruments met the tests of marketability and, because of their short terms to Maturity, capital certainty.

A major defect in the Shift ability theory was discovered similar to the one that led to the abandonment of the commercial loan theory of credit, namely that in times of general crisis the Effectiveness of secondary reserve assets as a source of liquidity vanishes for lack of a market (Allen and Gale (2004). The role of the central bank as lender of last resort gained new prominence,
And ultimately liquidity was perceived to rest outside the banking system. Further- more, the Soundness of the banking system came to be identified more closely with the state of health of The rest of the economy, since business conditions had a direct influence on the cash flows, and Thus the re- payment capabilities, of bank borrowers.

The shift ability theory survived these realizations under a modified form that included the idea of ultimate liquidity in bank loans resting with shift ability to the Federal Reserve Banks. Under

this institutional scheme, the liquidity concerns of banks were partially returned to the loan portfolio, where maintenance of quality assets that could meet the test of intrinsic soundness was paramount (Allen and Gale (2004).

2.2.3 Anticipated Income Theory of Liquidity

The doctrine of anticipated income, as formalized by Herbert V. Prochnow in 1949, embodied These ideas and equated intrinsic soundness of term loans, which were of growing importance, With appropriate repayment schedules adapted to the anticipated income or cash flow of the Borrower.

The credit demands of business were well accommodated under this system of banking policy, And the use of loan commitments was freely pursued. Changing economic conditions, however, Placed extra demands on the banking system that resulted in a new approach to balance sheet Management, and businesses faced new financial challenges. Under this emerging state of affairs, bank loan commitment policies would come to play a more important part in the credit Process.

2.3 Liquidity risk management

Liquidity management is a key banking function and an integral part of the asset liability management process. Most banking activity depends on a bank's ability to provide liquidity to its customers. Most financial transactions or commitments have implications for a bank's liquidity. Banks are particularly vulnerable to liquidity problems, on an institution-specific level and from a systemic/market viewpoint. The source of deposits (who supplies the funding) adds to the volatility of funds, as some creditors are more sensitive to market and credit events than others. Diversification of funding sources and maturities enables a bank to avoid the vulnerability associated with the concentration of funding from a single source (Tsegenesh,2012).

According to vodva (2011), Bank liquidity management policies should comprise a risk management (decision-making) structure, a liquidity management and funding strategy, a set of

limits to liquidity risk exposures, and a set of procedures for liquidity planning under alternative scenarios, including crisis situations.

The framework for liquidity risk management has three aspects: measuring and managing net funding requirements, market access, and contingency planning. Forecasting possible future events is an essential part of liquidity planning and risk management. The analysis of net funding requirements involves the construction of a maturity ladder and the calculation of the cumulative net excess or deficit of funds on selected dates. Banks should regularly estimate their expected cash flows instead of focusing only on the contractual periods during which cash may flow in or out. For example, cash outflows can be ranked by the date on which liabilities fall due, by the earliest date a liability holder can exercise an early repayment option, or by the earliest date that contingencies can be called. An evaluation of whether or not a bank is sufficiently liquid depends on the behavior of cash flows under different conditions.

Liquidity risk management must therefore involve various scenarios. The "going-concern" scenario has established a benchmark for balance sheet-related cash flows during the normal course of business. This scenario is ordinarily applied to the management of a bank's use of deposits. A second scenario relates to a bank's liquidity in a crisis situation when a significant part of its liabilities cannot be rolled over or replaced - implying contraction of the bank's balance sheet. This scenario relates to many existing liquidity regulations or supervisory liquidity measures. A third scenario refers to general market crises, wherein liquidity is affected in the entire banking system, or at least in a significant part of it. Liquidity management under this scenario is predicated on credit quality, with significant differences in funding access existing among banks (Diamond, and Rajan, 2001).

From the perspective of liquidity management, an implicit assumption can be made that the central bank will ensure access to funding in some form. The central bank in fact has a vested interest in studying this scenario because of the need it would create for a total liquidity buffer for the banking sector, and for a workable means of spreading the burden of liquidity problems among the major banks.

According to the Regulation and Supervision for Sound Liquidity Risk Management for Banks (2010), The basic approaches for monitoring the level of liquidity risk exposure maybe categorized into three types: the liquid assets approach, the cash flow approach, and a mixture of the two as explained as follows;

In liquid asset approach, banks will maintain liquid assets on its balance sheet that can be drawn up on when needed. Most unsecured receivables will be treated as illiquid assets. As a variation, the banks may maintain a pool of unencumbered assets such as government securities to obtain secured funding through repurchase agreements and other secured facilities. This approach is commonly used in securities sector under both normal and stress periods. It is used to a lesser extent in the banking and insurance sectors as they emphasize more on the cash flow matching approach (Principles for Sound Liquidity Risk Management and Supervision,2008).

Under the cash flow matching approach, the bank attempts to match cash outflows against contractual cash inflows of a various near-term maturity buckets. The mixed approach combines the elements of the two. Firms attempt to match cash outflows in each time bucket against a combination of contractual cash inflows, plus other inflows that can be generated through the sale of assets, repurchase agreement or other secured borrowing. Assets relatively more liquid will be matched to the earlier time buckets and vice versa. When gaps in the maturity buckets become unfavorable, firms will turn to the mixed approach to ensure all obligations are met.

To measure liquidity risk, a set of indicators has set with two different aspects: quantitative liquidity risk indicators and qualitative liquidity risk indicators. First, the following risk indicators should be considered when assessing the quantity of liquidity risk. In other word, they measure a level of liquidity risk exposure to an institution.

- Availability of funding sources
- Diversification of funding sources
- Alternative funding sources
- Capacity to augment liquidity through asset sales and/or securitization
- Volume of wholesale liabilities with embedded options
- Vulnerability of a bank to funding difficulties
- Support provided by the parent company

- Management in a bank's earnings and capital exposure from the liquidity risk profile (Regulation and Supervision for Sound Liquidity Risk Management for Banks, 2010).

Besides the quantitative liquidity risk indicators, the qualitative indicators are introduced to capture quality of liquidity risk management. The rating is classified as strong, satisfactory, and weak quality of management. According to the Regulation and Supervision for Sound Liquidity Risk Management for Banks (2010), the following indicators must be evaluated for the rating;

- Effectiveness of a board's policy approvals in responding to the designated guidelines and responsibilities for liquidity risk management.
- Effectiveness of liquidity risk management process in identifying, measuring, monitoring, and controlling liquidity risk
- Interaction of management to changing market conditions
- Development of contingency funding plans
- Information system management
- Comprehensive and effective internal audit coverage

If a board approves policies effectively corresponding to guidelines for liquidity risk management, which leads to the effective management in identifying, monitoring, measuring, and controlling liquidity risk, and the management anticipates and responds well to a change of market condition, we can say that this firm has a strong liquidity risk management.

A bank's risk management policy evaluates: the amount of demand deposits versus undrawn credit lines, the strategic decision of holding higher or lower liquidity cushions, and companies and other banks creditworthiness, especially those more exposed to a crisis. Risk managers use many models to account for the level of risk they are taking and how this affects the firm's profit and viability in various economic situations. Risk management policies can however have a spiral effect on the amount of liquidity banks are willing to provide. When a bank perceives itself as having higher risk, such as having a higher liquidity risk, it implements stricter risk management policies and will limit the amount of liquidity they provide. This means there will be less liquidity in the market. Less liquidity in the market will increase a bank's risk management policies and again lead to less liquidity provided by banks (Garleanu & Pedersen, 2007).

2.4 Liquidity measurement theory:

Liquidity measures the ability of the firm business to meet financial obligations as they become Due, without disrupting the normal, ongoing operations of the business. Liquidity can be analyzed both structurally and operationally. Structural liquidity refers to the balance sheet (assets and liabilities) and operational liquidity refers to cash flow measures (Du Rietz & Henrekson, 2000).

Two recommended measures of liquidity are the current ratio and working Capital. The current ratio measures the relationship between total current firm assets and total Current firm liabilities and is a relative measure rather than an absolute dollar measure. The Higher the ratio, the more liquid the firm is considered to be. Working capital is a measure of the Amount of funds available to purchase inputs and inventory items after the sale of current firm Assets and payment of all current firm liabilities. Working capital is expressed in absolute dollars; therefore, determining adequate working capital is related to the size of the firm operation (Du Rietz & Henrekson, 2000).

Solvency measures the amount of borrowed capital used by the business relative to the amount Of owner's equity capital invested in the business. In other words, solvency measures provide an Indication of the business' ability to repay all indebtedness if all of the assets were sold. Solvency measures also provide an indication of the business' ability to withstand risks by providing information about the firm's ability to continue operating after a major financial adversity (Hammes, 2003). Unlike liquidity, solvency is concerned with long-term as well as short-term assets and liabilities.

Three widely used financial ratios to measure solvency are the debt-to-asset ratio, the equity-to-asset ratio and the debt-to-equity ratio. These three solvency ratios provide equivalent information, so the best choice is strictly a matter of personal preference. The debt-to-asset ratio expresses total firm liabilities as a proportion of total firm assets and the higher the ratio, the greater the risk exposure of the firm. The equity-to-asset ratio expresses the proportion of total assets financed by the owner's equity. The debt-to-equity ratio reflects the capital structure of the firm and the extent to which firm debt capital is being combined with firm equity capital. It is a measure of the degree to which a firm is leveraging its equity.

2.5 PRINCIPLE OF LIQUIDITY RISK MANAGEMEN

Supervisors have national responsibilities to ensure that banks hold appropriate levels of liquidity insurance. In addition, the supervisory regimes must recognize that the interests of individual banks are closely aligned with the interests of their shareholders. According to Basil committee for bank supervision (2008), Fundamentally the national regime combines six important elements;

1. Liquidity policies: Frequently, liquidity policies are expected to set out for an internal strategy for managing liquidity risk. Firms' liquidity risk policies are set out to measure, monitor, and control liquidity risk as for internal management process.

2. Stress tests and scenario analyses: Stress tests and scenario analyses are important for liquidity supervision. They aim to identify weakness or vulnerabilities in a firm's liquidity position. All supervisors require firms to undertake stress testing or scenario analyses for supervisory and monitoring purposes. A variety of stress testing and scenarios will help firms or banks to estimate the behavior of future cash flow and to be prepared for potential liquidity crisis.

3. Contingency funding plans (CFPs): CFPs are developed to prepare banks' strategies for dealing with stress scenarios. They should identify potential sources of liquidity to cover shortfalls that may rise in stressed conditions. Basically, explicit guidance should be given on the relationship between stress tests and CFPs, the need for early warning indicators, the communication strategy (both internal and external), and the need to ensure operational readiness to execute plans.

4. Setting of limits: The internal limits or targets need to be set in order to constrain the amount of liquidity risk that a bank may take. At the same time, these limits can help to ensure that banks are well prepared for stressed conditions, or at least, for setting early warning indicators of stress. The limits may include target holding of liquid asset, minimum liquid asset (MLA), limits on maturing mismatches, and limits on the reliance on a particular funding source.

5. Reporting requirements: All banks are required to produce their report on a liquidity positions. Information in the report is collected for various reasons. It allows supervisors to identify the liquidity risks, and also, sources of liquidity. Furthermore, the information metrics can help comparing liquidity report across industries.

6. Public disclosure: Public information disclosure is in need to keep market participants informed and make appropriate judgment about the soundness of liquidity risk management framework and liquidity position.

Together with the above mentioned elements, the Basel Committee on Banking Supervision (BCBS) categorizes the principles for the management and supervision of liquidity risk in the Principles for Sound Liquidity Risk Management and Supervision (2008) as shown in Table 2.1.

Table 2.1.***The Principles for the Management and Supervision of Liquidity Risk***

MANAGEMENT ISSUE	**PRINCIPLE**
Fundamental principle for the management and supervision of liquidity risk	Principle 1: A bank is responsible for the sound management of liquidity risk. At the same time, supervisors should assess the adequacy of both a bank's liquidity risk management framework and its liquidity position.
Governance of liquidity risk management	Principle 2: A bank should clearly articulate a liquidity risk tolerance. Principle 3: Senior management should develop strategies, policies, and practices to manage liquidity risk in accordance with the risk tolerance. Principle 4: A bank should incorporate liquidity costs, benefits, and risks in the product pricing.

Measurement and management of liquidity risk	Principle 5: A sound process for identifying, measuring, monitoring, and controlling liquidity risk is needed as well as a comprehensive projecting of cash flows. In-balance-sheet and off-balance-sheet items must be included, in the liquidity risk management framework. Principle 6: A bank should actively manage liquidity risk exposures and funding needs, within and across legal entities, business lines, and currencies. Principle 7: A funding strategy with diversification in sources and tenor of funding is necessary.
	Principle 8: Intraday liquidity position must be provided along with risk management on banks' payment and settlement obligations. Principle 9: Management on collateral positions must be established. Principle 10: A bank should conduct stress tests on a regular basis for a variety of institution-specific and market-wide stress scenarios. Principle11: A formal CFP should be set out. Principle 12: A bank should maintain a cushion of unencumbered, high quality liquid assets to be held as insurance.
Public disclosure	Principle 13: A public information disclosure should be organized.

Role of supervisors	Principle 14: Supervisors should perform comprehensive assessment of a bank's overall liquidity risk management framework and liquidity position. Principle 15: Supplements of internal reports, prudential reports, and market information should be provided by supervisors. Principle 16: Intervention for effective and timely remedial action by a bank is necessary for addressing deficiencies in its liquidity risk management processes. Principle 17: Supervisors should communicate to other supervisors to facilitate effective cooperation regarding the supervision and oversight of liquidity risk management.

Source: BCBS, June 2008 Regulation

According to AIMA Journal of Management & Research, May 2013, Volume 7,from the above major principle, Thus, a sound liquidity risk management system would envisage that:

- A bank should establish a robust liquidity risk management framework.

The Board of Directors (BOD) of a bank should be responsible for management of liquidity risk and should clearly articulate a liquidity risk tolerance appropriate for its business strategy and its role in the financial system. The BOD should develop strategy, policies and practices to manage liquidity risk in accordance with the risk tolerance and ensure that the bank maintains sufficient liquidity. The BOD should review the strategy, policies and practices at least annually. Top management/ALCO should continuously review information on bank's liquidity developments and report to the BOD on a regular basis. A bank should have a sound process for identifying, measuring, monitoring and controlling liquidity risk, including a robust framework

for comprehensively projecting cash flows arising from assets, liabilities and off-balance sheet items over an appropriate time horizon.

- A bank's liquidity management process should be sufficient to meet its funding needs and cover both expected and unexpected deviations from normal operations.

- A bank should incorporate liquidity costs, benefits and risks in internal pricing, Performance measurement and new product approval process for all significant Business activities.
- A bank should actively monitor and manage liquidity risk exposure and funding needs within and across legal entities, business lines and currencies, taking into account legal, regulatory and operational limitations to transferability of liquidity.

- A bank should establish a funding strategy that provides effective diversification in the source and tenor of funding, and maintain ongoing presence in its chosen funding markets and counterparties, and address inhibiting factors in this regard. Senior management should ensure that market access is being actively managed, monitored, and tested by the appropriate staff.

- A bank should identify alternate sources of funding that strengthen its capacity to withstand a variety of severe bank specific and market-wide liquidity shocks.
- A bank should actively manage its intra-day liquidity positions and risks.
- A bank should actively manage its collateral positions.
- A bank should conduct stress tests on a regular basis for short-term and protracted institution-specific and market-wide stress scenarios and use stress test outcomes to adjust its liquidity risk management strategies, policies and position and develop effective contingency plans. Senior management of banks should monitor for potential liquidity stress events by using early warning indicators and event triggers. Early warning signals may include, but are not limited to, negative publicity concerning an asset class owned by the bank, increased potential for deterioration in the bank's financial condition, widening debt or credit default swap spreads, and increased

concerns over the funding of off- balance sheet items. To mitigate the potential for reputation contagion, a bank should have a system of effective communication with counterparties, credit rating agencies, and other stakeholders when liquidity problems arise.

- A bank should have a formal contingency funding plan (CFP) that clearly sets out the strategies for addressing liquidity shortfalls in emergency situations. A CFP should delineate policies to manage a range of stress environments, establish clear lines of responsibility, and articulate clear implementation and escalation procedures.
- A bank should maintain a cushion of unencumbered, high quality liquid assets to be held as insurance against a range of liquidity stress scenarios.

A bank should publicly disclose its liquidity information on a regular basis that enables market participants to make an informed judgment about the soundness of its liquidity risk management framework and liquidity position.

2.6. Role of Commercial Banks in Creating Liquidity

According to the modern theory of financial intermediation, an important role of banks in the economy is to create liquidity by funding illiquid loans with liquid demand deposits. (Diamond, 1984, Ramakrishnan and Thakor, 1984). More generally, banks create liquidity on the balance sheet by transforming less liquid assets into more liquid liabilities. Also, (Kashyrap, Rajan and Stein ,2002) have suggested that banks may also create significant liquidity off the balance sheet through loan commitments and similar claims to liquid funds.

Aside from managing their own liquidity, banks play another role with regards to liquidity by creating liquidity for the market. Due to the growth of the commercial paper, equity, and bonds markets in recent decades, the role of banks as the sole provider of capital to large companies has diminished. This results from companies looking for the type of financing that best suits their specific needs. Banks still play a largely influential role in financing. They are a primary issuer of capital to companies who seek loans to fulfill a portion of their financing needs. Many times they act as the fall-back crutch on which companies support themselves in times of difficult financing. Companies can do so by establishing credit lines with banks to secure funding that

ensures liquidity when it is needed most Aside from managing their own liquidity, banks play another role with regards to liquidity by creating liquidity for the market. Due to the growth of the commercial paper, equity, and bonds markets in recent decades, the role of banks as the sole provider of capital to large companies has diminished. This results from companies looking for the type of financing that best suits their specific needs. Banks still play a largely influential role in financing. They are a primary issuer of capital to companies who seek loans to fulfill a portion of their financing needs. Many times they act as the fall-back crutch on which companies support themselves in times of difficult financing. Companies can do so by establishing credit lines with banks to secure funding that ensures liquidity when it is needed most (Vossen,2010).

Diamond and Rajan (1998) have argued that both investors and borrowers are typically concerned about liquidity. These authors pointed out that investors desired liquidity because they are uncertain about when they will want to eliminate their holdings of a financial asset. Borrowers are concerned about liquidity either because they are uncertain about their ability to raise funds when needed unexpectedly, or because they are uncertain about their ability to continue to retain funding in the future. These liquidity problems can be resolved through financial intermediation by commercial banks, which seem right at the center of meeting these needs for the customers.

Diamond and Rajan (1998) have also indicated that depositors get better access to their funds than they would if they invested directly and earned the same expected return: this is liquidity creation by banks. Borrowing firms too can find the bank to be a more reliable source of funding than another firm or individuals: banks insure borrowers against the liquidity risk that funding will be cut off prematurely.

The role of banks to create liquidity is also shown by Diamond and Dybvig (1983). In the models developed by these scholars, they argued that the timing of the cash flows from physical assets makes them illiquid: they do not deliver adequate cash flows in the short run Moreover, investors obtain only a low re-sale price for the physical asset, because there is a short-term aggregate shortage of liquidity. The role of banks is then to offer liabilities that have higher short-run returns than would be obtained by direct investment in the asset.

The arguments by Diamond and Rajan (1998) are however, different; financial assets are illiquid because of the specific talents of the lender, rather than because of an aggregate shortage of liquidity. The role of banks here is that: the bank can make loans against illiquid real assets, develop specific talents, and yet avoid the costs of illiquidity of the financial assets (the loans) if it can raise cash through other means. Clearly, it obtains some cash from loan repayments, which can be used to meet some liquidity demands. It can also maintain sufficient liquid assets to fund the withdrawals. But most importantly, if it can commit to passing through all inflows on loans to depositors, it can attract new depositors who are willing to make a deposit that offsets the withdrawals. This allows the bank to maintain continuity and facilitates the need to transfer illiquid financial assets to others.

In summary, the bank creates liquidity. The bank's ability to pledge all of the value of loans, including the portion that requires bank-specific skills to collect, means that it can promise depositors more than the market value of the loans it has made (the value that an unskilled loan buyer would pay for the loans). At the same time, the bank buffers borrowing firms from the liquidity demand of investors without introducing an additional layer of agency costs (Tirualem, 2009)

2.7 Empirical study related to liquidity risk in banks

The study made by Bordeleau and Graham (2010), presented empirical evidence regarding the relationship between liquid asset holdings and profitability for a panel of Canadian and U.S. banks over the period of 1997 to 2009. In short, results suggested that a nonlinear relationship exists, whereby profitability was improved for banks that hold some liquid assets, however, there was a point beyond which holding further liquid assets diminishes a banks‟ profitability, all else equal. Conceptually, this result is consistent with the idea that funding markets reward a bank, to some extent, for holding liquid assets, thereby reducing its liquidity risk. However this benefit is can eventually be outweighed by the opportunity cost of holding such comparatively low yielding liquid assets on the balance sheet. At the same time, estimation results provide some evidence that the relationship between liquid assets and profitability depends on the bank's business model and the risk of funding market difficulties. The researchers recommended that adopting a more traditional i.e., deposit and loan based business model allows a bank to optimize profits with a lower level of liquid assets.

Also P.Vodova (2011), try to identify determinants of liquidity of commercial banks in the Czech Republic using the panel data regression analysis for four liquidity ratios. The study considered four firm specific and eight macroeconomic independent variables which affect banks liquidity. The expected impact of the independent variables on bank liquidity were: capital adequacy, inflation rate and interest rate on interbank transaction/money market interest rate were positive and for the share of non-performing loans on total volume of loans, bank profitability, GDP growth, interest rate on loans, interest rate margin, monetary policy interest rate/repo rate, unemployment rate and dummy variable of financial crisis for the year 2009 were negative whereas, the expected sign for bank size was ambiguous (+/-). The results of models showed that, Bank liquidity increased with higher capital adequacy, higher interest rates on loans, higher share of non-performing loans and higher interest rate on interbank transaction. In contrast, financial crisis, higher inflation rate and growth rate of gross domestic product have been negative impacted on bank liquidity. The relation between the size of the bank and its liquidity was ambiguous. It could be useful to divide banks into groups according to their size and to estimate determinants of liquidity separately for small, medium sized and large banks. The study also found that unemployment, interest margin, bank profitability and monetary policy interest rate had no statistically significant effect on the liquidity of Czech commercial banks.

Maaka (2013), Towards this end, the research sought to establish the relationship between liquidity risk and financial performance of commercial banks in Kenya. The study adopted correlation research design where data was retrieved from the balance sheets, income statements and notes of 33 Kenyan banks during 2008-2012. Multiple regressions was applied to assess the impact of liquidity risk on banks' profitability. The findings of the study were that profitability of the commercial bank in Kenya is negatively affected due to increase in the liquidity gap and leverage. With a significant liquidity gap, the banks may have to borrow from the repo market even at a higher rate thereby pushing up the cost of banks. The level of customer deposit was also found to positively affect the bank's profitability and it will therefore be encouraged for banks to open more branches in the country. The period studied in this paper is 2008-2012, due to availability of the data. However, the sample period does not impair the findings since the sample includes 14 banks, which constitute the main part of the Kenyan banking system. Only

profitability was considered in the study and there is need to consider other variables such as the economic condition prevailing in a given period.

Tirualem (2009), stress on the impact of liquidity on performance of banks, the existence of standardized liquidity risk management strategy(practice) and the impact of the directives of NBE on the performance of commercial banks in Ethiopia. To conduct the study, descriptive method was employed. Purposive sampling was used in the selection of each bank and the respondents from the respective bank. Thus a total of 30 respondents participated to the sources of primary data for the study. Data were collected through questionnaire, interview and annual reports of each commercial bank. The data collected from primary and secondary sources were organized using tables and graphs ad interpretation was made on the data using quantitative and qualitative methods. The findings of the study revealed that there is no uniform (standardized) liquidity risk management policy and procedure in the banking industry which is for all commercial banks in Ethiopia. Finally, recommendations were forwarded based on the major findings so as to improve the liquidity risk management practice of commercial banks in Ethiopia.

According to Tsegenesh (2012), there is positive relationship between liquidity of commercial banks and their financial performance. In the other word, banks holding more capital and had large size had more liquid assets benefit from a superior perception in funding markets, reducing their financing costs and increasing profitability. Base on her study, she concluded that the impact of bank liquidity on financial performance was non-linear (i.e. positive and negative). This result indicate that there is some level of liquidity up to which liquidity enhances financial performance and beyond that point it hinders financial performance.

According to worku (2015), the purpose of this study is to investigate the impact of liquidity on performance of banks in Ethiopia by using data of eight private commercial banks from year 2009/10 to 2013/14. The study used quantitative research approach and secondary financial data which is analyzed by using multilevel linear regressions models for the three bank performance measures; Return on Asset (ROA), Return on Equity (ROE), and Net Interest Margin (NIM). The random effect multilevel regression model was applied to investigate the impact of liquidity

measures; loan to deposit ratio (LDR), loan to asset ratio(LAR), and liquid asset to deposit ratio(LADR) on major bank performance measures i.e., (ROA), (ROE), and (NIM) separately. Eight private banks are randomly selected and considered in the sample out of sixteen private banks representing 50% in number. The study used trend analysis using graphs for each of the variables in the study to observe the trend on them throughout the observation period. The empirical results show that the performance (profitability) measure, NIM, has significant relationship with liquidity measures of LDR, LAR and LADR. The other performance measure, ROE has positive and significant relationship with LADR; but ROA has positive and significant relationship with LADR. Hence, the impact of liquidity on financial performance of private commercial banks in Ethiopia is both positively & negatively related and the significant relationship varies from measure to measure. Finally, there has to be further research apart from bank specific measures considered in this study on the relationship between liquidity and performance of private commercial banks in Ethiopia by incorporating regulatory factors and other bank specific and macroeconomic factors.

Alemayehu (2016), research is to identify the factors significant to explain Ethiopian commercial Banks liquidity. This study has categorized the independent factors into bank specific factors and macroeconomic factors. The bank specific factors include Bank Size, Capital Adequacy, Profitability, Non-Performing Loans, and Loan Growth while the macroeconomic factors include Gross Domestic Product, General Inflation and National bank Bill. The panel data was used for the sample of eight commercial banks in Ethiopia from 2002 to 2013 year and estimated using Fixed Effect Model(FEM), data was present by using descriptive statistics and the balanced correlation and regression analysis for liquidity ratios was conducted. The findings of the study show that capital strength and profitability had statistically significant and positive relationship with banks' liquidity. On the other hand, loan growth and national bank bill had a negative and statistically significant relationship with banks' liquidity. However, the relationship for inflation, non-performing loans, bank size and gross domestic product were found to be statistically insignificant. The study suggests banks must have increase their outreach to tens of millions of people by openings up more and more branches every year through country, and have significantly improve their banking service by introducing new product and services like Agent banking, Mobile banking and Internet Banking through the application of modern technology.

Andebet (2016), This study aimed at comparing the performance of Private commercial banks in Ethiopia during pre and post Bill Periods. i.e 2008-2011 and 2012-2015 years. The study used quantitative research approach and secondary financial ratio analysis for six private commercial banks. Profitability performance, liquidity performance and asset quality performance of the banks were assessed to compare pre and post bill periods performance of the private banks. Purposive sampling was used to select samples from the total population. The study used trend analysis using graphs for each of the variables in the study to observe the trend on them throughout the observation period. A paired t- test is employed to test the hypothesis that the means of the two periods are same on the eight variables. As a result of hypothesis test it was found there is statistically significant difference between the two periods in respect to profitability measures of Return of Equity (ROE), Cost to Income(C/I) ratio, and Net interest margin (NIM). In addition statistically significant difference between the two periods is observed in the Liquidity measure of Liquid asset to deposit (LAD) ratio and asset quality measure of loan reserve to total loan (LRTL) ratio. The study reveal statistically insignificant difference between the two periods in respect to Return on Asset(ROA) and liquidity measure of Loan to Deposit(LD) ratio and Loan to total asset(LTA) ratios. Finally, the study had recommended on further research in bank performance and regulatory requirements in private banking business.

Mekebub (2016), The main objective of this study was to identify the determinants of liquidity of private commercial banks in Ethiopia. In order to achieve the research objectives, data was collected from a sample of six private commercial banks in Ethiopia over the period from 2000 to 2015. Bank specific and macroeconomic variables were analyzed by using the balanced panel fixed effect regression model. Bank's liquidity is measured in three ratios: liquid asset to deposit, liquid asset to total asset and loan to deposit ratios. The findings of the study revealed that, bank size and loan growth has negative and statistically significant impact on liquidity; while non-performing loans, profitability and inflation have positive and statistically significant impact on liquidity of Ethiopian private commercial banks. However, capital adequacy, interest rate margin, real GDP growth rate , interest rate on loans and short term interest rate have no statistically significant effect on the liquidly of Ethiopian private commercial banks.

2.8. Summary and Knowledge Gap:

Most of the empirical study shown above has been made so far using the liquidity and its impact on profitability and performance measurement and identify determinants of liquidity. Studies cited above suggest that commercial banks‟ liquidity is determined both by bank specific factors (such as size of the bank, profitability, capital adequacy and factors describing risk position of the bank), macroeconomic factors (such as different types of interest rates and indicators of economic environment) as well as the central bank decisions. There are also very limited number of studies appears to include factors that determine Commercial Bank liquidity as an explanatory variable for bank profitability which is traditional measured by ROA and ROE, this relationship is not the focus of those papers.

All the research stated used quantitative technique to study and some of them use both quantitative and qualitative technique in the study. But this study try to fill the gap that to show the practice of the bank by using qualitative technique and give explanation about the liquidity risk management of the bank comparing with the international standard of liquidity risk management principle.

In addition to this, Tiruamlak (2009), study shows that there is excess liquidity in commercial banks. in the other hand, Andebet (2016), the study aimed at comparing the performance of Private commercial banks in Ethiopia during pre and post Bill Periods. i.e 2008-2011 and 2012-2015 years shows that the performance of commercial bank liquidity decline during the post bill period i.e 2012-2015. So that, this research show the internal management practice towards liquidity.

Furthermore, all the study focus on macro variable and mixed between bank specific factor and macro variables. But, this research try to show only what the bank specific factor and depth study of one commercial bank that is bank of Abyssinia. This will help each and every bank should assess the liquidity management practice towards monitoring and maintain adequate level liquidity by avoiding the risk of excess or deficiency of the bank .

Chapter 3

3. Research Design and Methodology

This section describes the research design, the sources of data and sampling technique, and discusses data collection instruments and procedures. It also deals with the methods of data analysis used in carrying out the research project.

3.1 Research Design

The study attempted to investigate the liquidity risk management practices of bank of Abyssinia. Descriptive study is chosen as it enabled the researcher to describe the current liquidity risk management practice, liquidity position and performance the bank considered in this study.

3.2 Population, Sample size

To gather appropriate information that is relevant to the study the researcher took the employee of BOA as population. From the total population, by using judgmental sampling techniques the researcher took three departments that are directly related to the subject matter. From the risk and compliance department, all the expert working in that department are 7, from the finance department, cheque clearance officers, which are the total number working there is 6 and the rest 7 experts working in treasury department selected purposively. Therefore, the total 20 employee selected to the sample size. In addition to this, risk and compliant department director and finance manager is conducted through interview.

3.3 Types of Data collected

Primary source of data were used and both close ended and open ended questions were prepared. The interview will prepared for the manager of risk department and finance and accounting department as well as treasury department manager.

3.4 Sources of Data and Sampling Technique the Source of Data

The sources of data were the finance /treasury/, risk and compliant management departments of the bank of Abyssinia bank and the banking supervision department of NBE. Moreover, annual reports of the commercial banks and directives issued by the NBE were used.

The sample used in this study was 20 which were selected using purposive sampling technique. Respondents were selected from the departments considered as better sources of data for the topic under study with the assumption that they could have better information and experience.

3.5 Method of Data Collection

The researcher used both quantitative and qualitative data. Quantitative data is used through closed ended questions in the questionnaires. Qualitative data collected through interview and open-ended questions in the questionnaires.

The quantitative data that is collected through questionnaires is analyzed through descriptive data analysis techniques. The data summarized through tabulation and percentage. The response is obtained through interview and open-ended questions in the questionnaires were narrated.

3.4. Instruments and Procedures of Data Collection

3.4.1 Instruments

To accomplish the objectives of this study, the researcher collected data from both primary and secondary sources. In order to collect data from primary sources through questionnaires, both close ended and open ended questions were prepared and used in English. The questionnaires for the respective respondents were administered by the researcher, assuming that they can get more assistance by the time they fill the questionnaire in case they needed.

The questionnaires distributed to commercial bank had two sections. The first part of the questionnaire is intended to gather background information of the respondents. The second part consists of questions that were designed to examine the liquidity risk management policy and

procedure framework. Personal interview was conducted on some issues (points) that need more clarification and which are difficult to be collected through questionnaires

3.4.2 Procedures of Data Collection

The researcher adopted three main steps in collecting data for the study. First, relevant literature was reviewed to get adequate information and ideas on the topic. Second objectives and research questions were formulated to show the direction of the study. Third, on the basis of the objectives of the study, the researcher designed the instruments to collect the relevant data. The data gathered through the various instruments were organized, analyzed, interpreted and discussed.

3.4. Data Analysis

After collecting the relevant data through the data gathering methods used in this study, the researcher categorized the data appropriately for interpretation. Both qualitative and quantitative dada analysis techniques were employed in this study.

To analyze and interpret the data gained from questionnaires, a quantitative technique involving percentages was used. The data obtained from interview was analyzed descriptively.

Moreover, the data obtained from annual reports of the bank considered in this study was analyzed using percentages, ratios, graphs and interpreted quantitatively. Finally, based on the findings of the study, conclusions and recommendations were made.

CHAPTER FOUR

4. Data Presentation, Analysis, and interpretation

The preceding two chapters deal with literatures related to the topic and research methodology. In this chapter, detail analyses about the descriptive statistics result have been made. The analysis is presented based on the response gathered from employee of the bank of Abyssinia that directly related to the study i.e. Treasury department, finance department and risk and compliance department. In addition to this, the researcher interviewed the manager of risk and compliant department director and finance department manager. The researcher couldn't get manager of treasury department because of annual leave.

From those department selected 20 questioner distributed according to the number of employees related to the study. Out of 20 questioners 18 are filed and returned. So, the analysis is presented according to the data gathered from the employee of bank of Abyssinia which they are working in different level of management and expert level.

The row data find from the questioner is computed in percentage, and presented in a tabularized form followed by detailed explanation, and critical interpretations of the data that was made to show implication of the major findings. Also open ended question and interview question is narrated.

4.1 General Characteristics of Respondents

Table below describes the general personal profile of respondent

Table 4.1.1 personal profile

No	Question	Frequency	Percentage (%)
1	Gender		
	Male	14	78
	Female	4	22
	Total	18	100

2	Educational background		
	A. First degree	13	72
	B. First degree and professional qualification such as ACCA	2	11
	C. Second degree in finance and related field	3	17
	Total	18	100

The personal profile of the respondents indicated from the above table 78% of the respondent are male and the rest 22% are female. Furthermore, 72% are holder of first degree, 11% are first degree and professional qualification such as ACCA and 17% have second degree in finance and related field. From this, most of the respondents are male and more than half of the respondent are degree holders and remain are second degree and other professional qualification.

4.2. Analysis of the Major Findings

The following emphasizes on the responses obtained from the customers and international banking department director. The questions are essential for the analysis of the stated problems in order to articulate their respective interpretation.

4.2.1 To investigate the sources of liquidity risk in the bank

Table 4.2.1 Assessments of source of liquidity risk in the bank

Item no	**Question**	**Frequency**	**Percentage(%)**
1.	Is there any liquidity risk problem in the bank?		
	Yes	13	72
	no	5	28
	Total	18	100
2.	If your answer is yes for the above question what are the causes for the liquidity problem?		
	Lack of professional	-	
	weak interbank system	3	23

	inadequate assistance from NBE	2	15
	information gap between the management and regulatory body	4	32
	both weak payment system and interbank system	2	15
	other	2	15
	Total	13	100
3	Funding concentrated in relatively few sources		
	strongly agree	1	6
	Agree	13	72
	Natural	2	11
	Disagree	2	11
	Strongly disagree	-	-
	Total	18	100
4.	The bank experience significant seasonal fluctuation in its funding source		
	strongly agree	2	11
	agree	6	45
	Natural	4	22
	Disagree	4	22
	strongly disagree	-	-
	Total	18	100

In the basic research question the first question is there any liquidity risk problem in bank of Abyssinia. From the total respondent,72% of the respondent said that there is liquidity risk problem and the rest 28% said that there is no such risk in this bank.

From the respondent which says there is liquidity problem in the bank ,23% of the respondent said that it is because of weak interbank system, 15% are inadequate assistance from national bank of Ethiopia, 32% respond that information gap between the management and regulatory body and 15% believed that it is because both weak interbank system and weak payment system.

The rest 15% of respondent state different cause of the liquidity risk faced by the bank are National bank of Ethiopia enforce all commercial bank to purchase 27% of loan disbursement for purchasing of NBE bill in every month with 3% annual interest rate and There is also unexpected withdrawal of depositor because of unable to satisfy the demand of foreign currency demand for customer. Commercial bank of Ethiopia give foreign currency highly compare to other private banks so customer withdraw their money demanding foreign currency.

From the data result presented in the above, we can generalize that the bank have some liquidity problem. The reason for this is, High loan demand for customer and management granted credit in order to maximize profit affect the liquidity performance of the bank. With related to this, information gap between the management body who grant loan and risk and other regulatory department create excess loan grant to customer and unable to meet current obligation which will result dalliance of payment settlement. Also unexpected withdrawal of the depositor to get foreign currency from commercial bank of Ethiopia is the other reason. In addition, the commitment to all private banks to purchase NBE bill monthly add pressure to meet liquidity demand of the customers.

From table 4.2.1 question no 3, Funding concentrated in relatively few sources, 6% strongly agree with the statement,72% agree ,11% neutral and 11% disagree with the statement. Therefore more than 50% of the respondent believed that the bank concentrate its funding in few sources. so, the bank should diversified the concentration of funding.

The next question is the bank experience significant seasonal fluctuation in its funding source, 11% is strongly agree, 45% agree, 22% neutral and 22% disagree with the above statement. From the result more than half of the respondents agree that Abyssinia bank experience significant seasonal fluctuation in its funding sources. Therefore, it needs proper assessment of this risk and give remedy for the problem.

From the result stated above, in bank of Abyssinia funding are concentrated in relatively few sources. Also the bank experience significant fluctuation in its funding sources. According to Madura (2007) , The amounts and sources of funds clearly affect how much liquidity risk a bank has

and how much liquidity it can create. The easier a bank can access funds the less risk it has and the higher amount of funds it holds the more liquidity it can create, if willing to do so. Deposit accounts are made up of transaction deposits, also known as demand deposits, savings deposits, time deposits, and money market deposit accounts. The borrowed funds of a bank come from loans from other banks via the Federal Funds market, loans from the Federal Reserve Bank, repurchase agreements, and Eurodollar borrowings. Therefore, the bank should diversify the sources of funds and work to increase the amount of funds to sustain seasonal fluctuation in its funding source.

Interview- *How liquidity risk identified in the bank and what are the major sources?*

From risk and compliance department says bank of Abyssinia periodically identifies its liquidity risk in a continuous manner using different acceptable techniques. In order to keep optimal asset liability structure, we adhere to regulation of the land; the bank adopts liquidity risk management system that is governed by adequate oversight, early warning system and proper implementation of risk management process.

The process include the use of liquidity risk measurement tools, setting limits, establish strong management information system and controlling mechanisms that ensures adherence to documental requirements. There are some early warning indicators that may not necessarily always lead to liquidity problem to the bank but have the potential to ignite such a problem. They are, Negative trend in significantly increased risk in any area or product Concentration on either assets or liability such as Deterioration in quality of credit portfolio, A decline in earnings performance or projection, Rapid asset growth funded by volatile large deposit, A large size of off balance sheet exposure and Customs trend of withdrawal and a manner of account operation.

The manager of finance department also says that liquidity risk in the general funding activities of the bank and the management of positions. It includes the risk of being unable to fund assets at appropriate maturities and the risk of being unable to liquidate an asset at a reasonable price and in appropriate time frame. Funds are mainly raised from customer deposit.

From the interview we can see that in addition to diversify and increasing the sources of funds the bank should also review the quality of credit portfolio and carefully analysis method. Since,

funds mainly rose from customer deposit the bank should attract potential depositor and maintain the existing customer.

4.2.2 To assess the liquidity level or position of the bank

Table 4.2.2 Assessment of liquidity level or position of the bank

Item no	Question	Frequency	Percentage(%)
1.	A bank has a sound process for identifying, measuring, monitoring and controlling liquidity risk		
	Strongly agree	6	33
	Agree	9	50
	Natural	2	11
	Disagree	1	6
	Strongly disagree	-	
	Total	18	100
2.	Bank cash inflows against its outflow and the liquidity value of its asset to identify the potential for future net funding shortfalls		
	Strongly agree	6	33
	Agree	9	50
	Natural	2	11
	Disagree	1	6
	Strongly disagree		
	Total	18	100
3.	A bank liquidity measurement is adequate		
	Strongly agree	7	39
	Agree	8	44
	Natural	2	11
	Disagree	1	6
	Strongly disagree		

	Total	18	18
4.	Policy clearly establish the methodology for measuring liquidity appropriate risk limit been established		
	Strongly agree	7	39
	Agree	8	44
	Natural	2	11
	Disagree	1	6
	Strongly disagree		
	Total	18	100
5.	There is appropriate level of risk tolerance in the bank		
	Strongly agree	5	28
	Agree	10	56
	Natural	3	18
	Disagree		
	Strongly disagree		
	Total	18	100
6.	The bank set limit to control its liquidity risk exposure and vulnerabilities		
	Strongly agree	5	28
	Agree	11	60
	Natural	1	6
	Disagree	1	6
	Strongly disagree		
	Total	18	100

The above table shows that question asked to assess the liquidity level or position of the bank. The first question says a bank has a sound process for identifying, measuring, monitoring and controlling liquidity risk, 33% strongly agree, 50% agree, 11% natural and 6% disagree with the statement. From this we can conclude that the bank has sound process of identifying, measuring ,and monitoring liquidity risk.

The second question is the bank cash inflows against its outflow and the liquidity value of its asset to identify the potential for future net funding shortfalls. And the result 33% strongly agree, 50% agree, 11% natural and 6% disagree with the statement. More than 50% of the respondent agreed so, the bank should keep it up and continuously improved it.

when we look to the next question, a bank liquidity measurement is adequate, 39% strongly agree, 44% agree, 11% is neutral and 6 % disagree. With this result we can conclude that the bank liquidity measurement tools are adequate.

From the above table the 4th question the statement that Policy clearly establish the methodology for measuring liquidity appropriate risk limit been established, 39% strongly agree, 44% agree, 11% neutral and 6% disagree. Therefore, the bank of Abyssinia Policy clearly establish the methodology for measuring liquidity appropriate risk limit been established

As shown in the above table, question no 5 says, There is appropriate level of risk tolerance in the bank. With this statement 28% strongly agree, 56% agree and 18% neutral. So, the bank is good in maintaining the appropriate risk tolerance .

Similar question asked in question no 6 that says The bank set limit to control its liquidity risk exposure and vulnerabilities. By this statement 28% strongly agree, 60% agree, 6% neutral and 6% is disagree with the statement. As a result, we can conclude that the bank set limit to control this risk.

Interview *what are the tools used by the bank to measure liquidity position?*

The risk and compliant manager said that, liquidity measurement of the bank will be conducted through programmed review of liquidity status to ensure the presence of acceptable procedure by the concerned risk management and compliance department/ ALCO. The indicator that a bank should utilize at a minimum, to measure its liquidity position. Those are:-

A. Supervisory requirement

- Reserve requirement

- Liquidity requirement

B. Liquidity concentration ratio and limits

- Deposit structure by type
- Percentage of core deposit to total deposit
- Percentage of foreign deposit to liquid asset

C. Liquidity risk indicator

- Loan to deposit percentage
- Liquid asset to total asset
- Loans and advances includes bills to deposit

D. Maturity gap analysis

E. Stress testing

Interview *what is the role of asset and liability committee (ALCO) in liquidity risk management?*

The finance department manager said that ALCO responsibility is as follows:- Assess the current balance sheet position of the bank, Develop asset and liability management strategies, Assess the financial indicators, like return on equity(ROE) and return on asset (ROA), Analyze off balance sheet commitments, Review the appropriateness of the existing strategies, Review the profit performance etc

In addition to this, the risk and compliance department manager said that ALCO responsible for Review the liquidity and market risk strategies of the bank and submit to the executive management for approval and Provide management oversight for the implementation of policies related to liquidity, foreign currency and interest rate risk.

Interview *Is there any liquidity controlling mechanism for liquidity risk in the bank? What are they?*

The finance department manager said that there are different mechanism for controlling liquidity risk in the bank. such as, ratios and scenarios , continuously reviewing the maturity of asset and liability and mobilizing deposit.

the risk and compliance department manager also said that contingency funding planning is used for controlling liquidity risk in the bank during liquidity crisis to enable the bank to survive. A contingency funding plan is a plan for a fund of money that kept in reserve for use in times when other funding sources run out.

Generally, bank of Abyssinia measure and set limit to control liquidity risk. According Basil committee on bank supervision (2008), A bank should have a sound process for identifying, measuring, monitoring and controlling liquidity risk. This process should include a robust framework for comprehensively projecting cash flows arising from assets, liabilities and off-balance sheet items over an appropriate set of time horizons. Furthermore, A bank should actively manage its intraday liquidity positions and risks to meet payment and settlement obligations on a timely basis under both normal and stressed conditions and thus contribute to the smooth functioning of payment and settlement systems. From the result found from interview and questionnaire the bank continuously measure the liquidity position and there is asset liability committee for maintaining liquidity and other related risk.

4.2.3 To examine the liquidity risk contingent plan and strategies of the bank

Table 4.3.3.1 Examine the liquidity risk contingent plan and strategies of the bank

Item no	Question	Frequency	Percentage
1.	Does the bank have liquidity risk management policy and procedure?		
	Yes	18	100
	No	-	
	Total	18	100
2.	If yes your answer for the above questions how often the strategy revised		
	6 month	1	6
	1 year	6	33
	2 year	2	11

	other 4-5 year	3	16
	Never	1	6
	When it is needed	5	28
	Total	18	100
3.	Which body involved in the liquidity risk management of the bank		
	BOD	-	-
	Senior management	4	22
	Risk and control department	4	22
	In all management level	5	28
	Other both BOD, senior management and risk and control department	3	16
	Both senior management and risk and control department	2	12
	Total	18	100
4.	What does the strategy cover ?		
	Normal course of action	2	11
	Crises situation		
	Both situation	16	89
	Total	18	100
5.	Does the strategy include regular liquidity monitoring and management?		
	Yes	17	94
	No	1	6
	Total	18	100
6.	If yes state the periodicity of monitoring and reporting		
	Daily	7	41
	Weekly	8	47

	Monthly	2	12
	Other		
	Total	17	100
7.	Does your bank use stress tests on liquidity?		
	Yes	11	61
	No	7	39
	Total	18	100
8.	If yes what type of scenarios are used?		
9.	Has your bank set warning signal for possible liquidity crisis		
	Yes	7	39
	No	11	61
	Total	18	100
10.	What are the event you consider as warning of such crisis and their contingency plan?		
11.	The policy clearly established the purpose objective and goal of liquidity management are action to control liquidity in a timely manner		
	Strongly agree	8	44
	Agree	8	44
	Natural	2	12
	Disagree		
	Strongly disagree		
	Total	18	100
12.	The risk tolerance should be articulated in such a way that all level of management clearly understand the tradeoff between risk and profit		
	Strongly agree	2	11
	Agree	6	34
	Natural	2	11
	Disagree	8	44
	Strongly disagree		
	Total	18	100

13	There is adequate alternative plans for emergency occur in shortage of liquidity		
	Strongly agree	4	22
	Agree	9	50
	Natural	3	17
	Disagree	2	11
	Strongly disagree		
	Total	18	100

To assess the bank policy and strategy towards managing the liquidity, the first question is Does the bank have liquidity risk management policy and procedure? all the respondents said yes. Therefore, the bank has liquidity risk management policy and procedure.

In addition to this, the strategy revised with in 6 month is 6%, 1year 33%, 2 year 11%,4-5 years 16%, never 6% and it revised when it is necessary is 28%. With this result the bank liquidity policy and strategy 4-5 years and revised when it is necessary. So, we can generalized that there is no specific period to revised it according to the current situation.

As shown in the above table, the third question says which body involved in the liquidity risk management of the bank. 16% senior management, 22% risk and control manaent,22% BOD, senior and risk mangent,12% senior management and risk department manager. Related to this question, the next question says What does the strategy cover. 11% says it cover only normal course action and 86% respond it cover both normal course of action and crisis situation.

From question no 5, 94% of the respondent says the strategy include regular liquidity monitoring and management and 6% disagree. The next question state the periodicity of monitoring and reporting, 41% report daily, 47 weekly and 12% monthly. Generally, the bank has timely reporting and monitoring of liquidity risk.

The question asked that does your bank use stress tests on liquidity. 39% say yes and 39% no and among the type of scenarios are used, here are some

Scenario 1 huge amount of withdrawal from the top 10 depositors of the bank

Scenario 2 sudden decline of deposit by 10%

Scenario 3 over draft facility stretched by some amount of percentage

From question 10, what are the event you consider as warning of such crisis and their contingency plan? The respondent mention the

- Deterioration in quality of credit portfolio
- Concentration in either asset liability
- A negative trend significantly increase risk in any area of product line
- Decline of deposit
- When false transaction is occurred
- When high cash outflow than inflow

The statement stated in 11 question that The policy clearly established the purpose objective and goal of liquidity management are action to control liquidity in a timely manner, 44% strongly agree and agreed and 12% is neutral. so, it is not vague to apply in daily operation.

In the other hand, The risk tolerance should be articulated in such a way that all level of management clearly understand the tradeoff between risk and profit is 11% strongly agree, 34% agree, 11% neutral and 44% disagree. From this we can concluded that all management did not understand the tradeoff between risk and profit . So, it can has a great potential to expose liquidity risk to the bank.

The last question states that There is adequate alternative plans for emergency occur in shortage of liquidity,22% strongly agree, agree 50%, 17% neutral and 11% disagree. This shows that there is an alternative plan when uncertainty occurs.

Interview *Is there any contingency plan when uncertainty or crisis occur ? What are they ?*

Ato Yohannes said that there is contingency plan during crisis some of the primary sources are

Cash in vault, due from other local banks, due from NBE held from trading (HFT) government securities t- bill. secondary sources are interbank call loan, negotiated certificate of deposit and borrowing from the central bank as a last resort.

Therefore, the bank has its own liquidity risk management policy and procedure. It is essential for supervisors to address liquidity risk as thoroughly as other major risks. From the data obtained the bank has timely reporting and monitoring of liquidity risk. Furthermore, the strategy cover both normal course action and crisis situation. The aim of liquidity supervision and regulation is to reduce the frequency and severity of banks' liquidity problems, in order to lower their potential impact on the financial system. But, there is no specific period to revised it according to the current situation. though there is policy and procedure to monitor the liquidity risk the bank should timely and periodically review in order to be competitive with the current situation.

The open ended question in the questionnaire, respondents mention the strength of bank of Abyssinia liquidity risk management practice strong in The quality of the liquidity risk management evaluated in terms of the developed framework and periodically manage liquidity risk exposure e.g ALCO engagement. The bank has also good policy and strategy towards managing liquidity.

The weakness that the bank should work on it is, The total deposit of the bank relatively concentrated in few depositors and fund sources. Also there is weak Interdependent and coordination between department that create information gap and lack of synergy. This lead to excess grant of loan to the customer and unable to meet the obligation.

CHAPTER FIVE

5. CONCLUSION AND RECOMMENDATION

5.1 Conclusions

In this session, the researcher summarized, conclude and recommend the major findings obtained from the questioner from Bank of Abyssinia employees working in risk and compliant department, finance and treasury department and interview made from finance manager ands risk and compliant department director.

- Bank of Abyssinia experience liquidity problem because of different reason, unexpected withdrawal of depositor because of unable to satisfy the demand of foreign currency demand for customer. commercial bank of Ethiopia give foreign currency highly compare to other private banks so customer withdraw there money demanding foreign currency, High loan demand for customer and management granted credit in order to maximize profit affect the liquidity performance of the bank.

- Abyssinia bank experience significant seasonal fluctuation in its funding sources. Therefore, it needs proper assessment of this risk and give remedy for the problem.

- There is strategy and procedure towards managing and measuring the liquidity risk of the bank. But the periodicity and revision is not within a specific period. so, there should be periodically revised and upgrade with the current situation.

- There is also contingency plan when there is unexpected situation happens and also have stress test assuming different scenarios.

- Policy and procedure which is approved by the Board of Directors of each bank. Other bodies (units) are also involved in executing the liquidity risk management policy and procedure which include senior (top) management, Asset and Liability committee (ALCO) or Resource Mobilization committee risk management unit (department) and risk control department. These bodies do have their own responsibilities in the liquidity risk management process.

5.2 Recommendations

- The bank faces different problems to manage liquidity risk. These are no well developed payment system and management information system (MIS) and there is no interdependence and flow of information in different department. Therefore, all departments should clear knowledge and information to minimize the bank liquidity problem and work as synergy.

- Diversification of the uses and sources of funds is also an important issue in the banking industry. Banks have limited types of fund sources, mainly deposits and there is no market for raising fund. Therefore the NBE has to facilitate the establishment of secondary markets.

- Absence of management information system is the other problem in the bank using which appropriate personnel can be provided with timely information on the liquidity position of the bank. Thus appropriate management information system should be designed by bank to determine the day-to-day liquidity position of the bank and to check the compliance with the bank's established policies, procedures and limits and the requirements of NBE.

- The NBE should also revise its liquidity risk management parameters, strengthen its staff capacity and introduce modern day supervisory tools such as risk-based supervisory approach.
- Concepts of financial management and familiarity of best practices do not exist. So bank officials should open their mind and give due consideration towards the understanding of banking business as the business is vulnerable to liquidity risk.

- Due to limited studies done in Ethiopia, more researchers are encouraged to conduct research on liquidity issues faced by banks. This would actually benefit both the bank and the policy makers to setup a better and new workable policy.

Appendix

Questioners

Dear Respondent:

This is an endeavor to collect information about the liquidity risk management practice in bank of Abyssinia. I intend to look into the liquidity risk management in general and our own case in particular. Such exercise is believed to have positive contribution to both academic delivery and the practical world.

Hence, I kindly request you to share with me part of your valuable time by completing this questionnaire. I would like to thank you in advance for your cooperation to fill in and Complete the questionnaire.

Part I Please use a thick mark (✓) to show your choice (response) in the corresponding box

Personal profile

1. Sex

Male ☐ Female ☐

2. Education/professional qualification

First degree ☐

First degree and professional qualification such as ACCA ☐

Second degree in finance or related field ☐

Second degree in Non-finance field ☐

Other advanced education or professional qualification-please specify_____

Basic research question

1. Is there any liquidity risk problem in the bank?

Yes ☐ No ☐

2. If your answer for question no.2 is yes, what were the causes for the liquidity problem?

A. Lack of professionals ☐

B. Weak interbank system ☐

C. Inadequate assistance from NBE ☐

D. Information gap between the management and regulatory body ☐

E. Weak payment system ☐

Others, please specify_____

_____

3. Does the bank have liquidity risk management policy and procedure?

Yes ☐ No ☐

4. If yes, is this strategy revised?

Yes ☐ No ☐

5. If yes, how often do you revise it? Please tick in the respective box.

A. 6 months ☐
B. 1 year ☐
C. 2 years ☐
D. Other (please specify)_____

6. Which bodies are involved in the liquidity risk management of the bank?

A. Board of directors ☐
B. Senior management ☐
C. Risk control department ☐
D. In all management level ☐
E. Others, please specify _____

_____

_____

7. What does the strategy cover?

A. Normal course of business ☐
B. Crisis situations ☐
C. both situation ☐

6. Does the strategy include regular liquidity monitoring and management?

Yes ☐ No ☐

8. If yes, please state the periodicity of monitoring and reporting

A. Daily ☐
B. Weekly ☐
C. Monthly ☐
D. Other (please specify) ☐

9. Does your bank use *stress tests* on liquidity? Please tick in the respective box.

Yes ☐ No ☐

10. If yes, what types of scenarios are in use? Please list below_____

_____

_____

11. Has your bank set *warning signals* for possible liquidity crises?

Yes ☐ No ☐

12. What are the events you consider as warning of such crises and their contingency plan?

1.

2.

13. What are the strength and weakness of the bank towards managing liquidity risk?

_____

_____

_____

14. What is the current status of the bank in meeting the requirements of NBE regarding liquidity?

A. As expected ☐
B. Over liquid ☐
C. Deficient ☐
D. Others, please specify_____

_____

15. Any comment and suggestion in the management of liquidity risk management of the bank

_____

_____

_____

_____

Part II Please respond to the following statement indicating your agreement/disagreement by using a thick mark (✓) with each statement listed below by checking the appropriate box to the right of the corresponding statement.

	1 STRONGLY DISAGREE	*2 DISAGREE*	*3 NATURAL*	*5 AGREE*	*6 STRONGLY AGREE*
1. The board established Liquidity policies					
2. The policy clearly establish The purpose, objectives and goals of Liquidity management					
3.Are actions to control liquidity Made in a timely manner					
4.The risk tolerance should be articulated in such a way that all Levels of management clearly understand the trade-off between risks and profits					
5. A bank has a sound process for identifying, measuring, monitoring &Controlling liquidity risk.					
6.A bank liquidity measurement is Adequate					
7.Bank's cash inflows against its outflows And the liquidity value of its assets to identify the potential for future net funding shortfalls					
8. Policy clearly establish The methodology for measuring Liquidity					
9.Appropriate risk limits been Established					
10.Funding concentrated in Relatively few sources					
11. BOA experience Significant seasonal fluctuation in its Funding sources					
12.There is appropriate level of risk tolerance in the bank					
13 The risk tolerance is articulated in such a way that all Levels of management clearly understand the trade-off between risks and profits					
14. The bank set limits to control its liquidity risk exposure and vulnerabilities.					
15.There is adequate alternative plans for emergency occur in shortage of liquidity					

THANK YOU!!

Interview

Dear Respondent:

This is an endeavor to collect information about the liquidity risk management practice in bank of Abyssinia. I intend to look into the liquidity risk management in general and our own case in particular. Such exercise is believed to have positive contribution to both academic delivery and the practical world.

I would like to thank you in advance for your cooperation.

1. How is liquidity risk identified in the bank and what are the major sources?
2. Which department (unit) is responsible for implementing the liquidity risk management policy and procedure?
3. What are the tools used by the bank to measure liquidity position?
4. What is the role of Asset and Liabilities committee (ALCO) in liquidity risk management?
5. Is there a controlling mechanism for liquidity risk in the bank? What are they?
6. Is there any contingency plan when uncertainty or crisis occurs? What are they?
7. What are the strength and weakness of the bank towards managing liquidity risk?
8. If there is any comment and suggestion forward please ……..

THANK YOU!!

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