ST. MARY'S UNIVERSITY
SCHOOL OF GRADUATE STUDIES

ANALYSIS ON LIQUIDITY MANAGEMENT PRACTICES OF FIVE PRIVATE COMMERICIAL BANKS IN ETHIOPIA

BY
HABTAMU TAYE

JUNE, 2014
ADDIS ABABA, ETHIOPIA

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A THESIS SUBMITTED TO ST.MARY'S UNIVERSITY, SCHOOL OF GRADUATE STUDIES IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION

JUNE, 2014

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DECLARATION

I, the undersigned, declare that this thesis is my original work, prepared under the guidance of Dr. Zenegnaw Abiy. All sources of materials used for the thesis have been duly acknowledged. I further confirm that the thesis has not been submitted either in part or in full to any other higher learning institution for the purpose of earning any degree.

_____ _____

Name Signature

St. Mary's University, Addis Ababa **June, 2014**

ENDORSEMENT

This thesis has been submitted to St. Mary's University, School of Graduate Studies for examination with my approval as a university advisor.

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Advisor	Signature
St. Mary's University, Addis Ababa	**June, 2014**

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ACKNOWLEDGEMENTS

First of all I would like to thank my advisor Dr Zinegnaw Abiy for his continuous follow ups , advises and supervision which were more than anything that I can't imagine to finalize the whole research part without his forwarded comments.

I also want to thank all the assessed banks staffs and related work units for their immediate response of my data collection activities.

I would like to thank all my family members and friends for their support in ideas, materials and any costs related to this thesis work.

Abstract

This paper aims to appraise liquidity management practices of five private commercial banks in Ethiopia. The researcher addressed the past three years' experience of the banks regarding their liquidity management practices. Various factors and their respective solutions in response to their impact on the bank's daily transactions that have direct connection with those liquidity management practices of the banks have been assessed accordingly. Liquidity management with its specific components like internal control of liquidity management, effective contingency plans, stress testing of liquidity management, sources of liquidity, management information system, policies and procedures of liquidity management in addition to top management involvement on liquidity management practices of the banks have been examined. Currently the banks are applying sound practices of liquidity management but there were some gaps on their effectiveness, there were poor management information system and effective stress testing of liquidity position in the banks. Contrary there were high involvement of top management and internal control system within the banks liquidity management activities.

Acronyms

AIB:-Awash international bank s.c

NIB: - Nib international bank s.c

DB: -Dashenbasnks.c

UB: - United bank s.c

NBE: - National bank of Ethiopia.

LM: - Liquidity Management

CP: - Contingency plan of liquidity positions.

IC: - Internal control

MIS: - Management information system.

ST: - Stress testing of liquidity risk

SL: - Source of liquidity

PP: - policies and procedures

TM: - Top management involvement.

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Chapter one

1. Introduction

1.1 Back ground of the study

Private commercial banks are a recent phenomenon in the Ethiopian economy. They came into existence after the downfall of the Dergue regime. In the Imperial regime, private commercial banks used to operate in the economy. But after Dergue came to power, private commercial banks were nationalized and amalgamated with the state owned banks, then after that Ethiopian economy was dominated by state owned banks, and now they have some growing market share in the Ethiopian economy and are some of the major players in the Ethiopian economy. Their number is also growing from time to time and currently new commercial banks are also joining the market.

Bank for International Settlements defines liquidity as the ability of bank to fund increases in assets and meet obligations as they come due, without incurring unacceptable losses. Liquidity level refers to the ability to have enough funds to meet the long-term and short term obligations. Liquidity risk arises from the fundamental role of banks in the maturity transformation of short-term deposits into long-term loans.

Liquidity management is a concept that is receiving serious attention all over the world especially with the current financial situations and the state of the world economy. Some of the striking corporate goals include the need to maximize profit, maintain high level of liquidity in order to guarantee safety, attain the highest level of owner's net worth coupled with the attainment of other corporate objectives. The importance of liquidity management as it affects corporate profitability in today's business cannot be over emphasized. The crucial part in managing working capital is required maintenance of its liquidity in day-to-day operation to ensure its smooth running and meets its obligation (Eljelly, 2004).

Measuring and managing liquidity are among the most vital activities of commercial banks. By assuring a bank's ability to meet its liabilities as they come due, liquidity management can reduce the probability of an irreversible adverse situation developing. Even in cases where a crisis develops because of a problem elsewhere at a bank, such as a severe deterioration in asset quality or the uncovering of fraud, or where a crisis reflects a generalized loss of confidence in financial institutions, the time available to a bank to address the problem will be determined by its liquidity. Indeed, the importance of liquidity transcends the individual institution, since a

liquidity shortfall at a single institution can have system-wide repercussions. For this reason, the analysis of liquidity requires bank managements to measure not only the liquidity positions of banks on an ongoing basis but also to examine how funding requirements are likely to evolve under crisis scenarios.

Liquidity management therefore involves the strategic supply or withdrawal from the market or circulation the amount of liquidity consistent with a desired level of short-term reserve money without distorting the profit making ability and operations of the bank.

Financial inter-mediation role of the commercial banks hence becomes the bed-rock of the two major functions of commercial banks namely deposit mobilization and credit extension. An adequate financial intermediation requires the purposeful attention of the bank management to profitability and liquidity, which are two conflicting goals of the commercial banks. These goals are parallel in the sense that an attempt for a bank to achieve higher profitability will certainly erode its liquidity and solvency positions and vice versa. (Olagunju, Adebayo 2011)

In the financial intermediation process, a bank collects money on deposit from one group (the surplus unit) and grants it out to another group (the deficit unit). These roles involve bringing together people who have money and those who need money.

Liquidity management is an important aspect of monetary policy implementation, while the other integral component of monetary policy, i.e. economic management, involves promoting sustainable economic growth over the long term by keeping monetary and credit expansion in step with an economy's noninflationary output potential, liquidity or reserve management as a shorter time horizon. In order to maintain relative macro-economic stability, reliance is placed on liquidity management to even out the swings in liquidity growth in the banking system. (Olagunju, Adebayo, 2011)

The study will make its contribution on which techniques should the banks have to follow and which practices needs to be adopted from each other's that are in a better use of liquidity management practices.

1.2 Back ground of the organizations.

The research started its background study from Nib International Bank S.C.

Nib International Bank S.C. (NIB) began its operations on October 28, 1999 with a paid up capital of Birr 27.6 million, authorized capital of Birr 150 million, 717 shareholders and 27 employees. Now the bank has more than 80 branches in a country wide locations, as a main target of deposit mobilization and giving various banking activities, additional to this the bank has 12 departments within its head office. More than 2500 employees are employed in those braches and departments. The bank's mission is to provide efficient and effective full-fledged commercial banking services by utilizing qualified, honest and motivated staff and the state-of-art technology and there by optimize stakeholders' interest.

The aggregate deposits mobilized by the Bank at the close of 2009/10 financial year stood at Birr 4.13 billion. It was higher by Birr 0.83 billion or 25.2% from the preceding financial year balance of Birr 3.3 billion. The growth was witnessed in all types of deposits. The number of deposit accounts also showed a yearly growth of 18.4 % and reached over 162 thousand. This is, in fact, a clear indication of the improvements made in customer service and the consequent growing confidence of the public in the Bank.

The detail is presented in Table 1 below.

Table1: Deposits by Type (In '000 Birr)

Deposit Type	**30/06/10 Amount**	**30/06/09 Amount**	**Change Absolute**
Demand deposits	1,308,874.6	1,031,727.0	277,147.62
Savings deposits	2,517,185.7	1,995,516.3	521,669.4
Time deposits	301,128.2	269,146.7	31,981.5
Total	**4,127,188.50**	**3,296,390**	**830,798.5**

Source: - Nib int bank s.c July 2009 June 2011 annual report

The aggregate deposits mobilized by the Bank at the close of 2010/11 financial year stood at Birr 5.16 billion. It was higher by Birr 1.03 billion or 25% from the preceding financial year balance of Birr 4.13 billion. A higher growth was witnessed mainly from Demand and Savings deposits.

The number of deposit accounts also showed a yearly growth of 14.8 % and reached over 187 thousand. This is, in fact, a clear indication of the growing confidence of the public in the Bank.

Table 2: Deposits by Type (In '000 Birr)

Deposit Type	30/06/11	30/06/10	Change
	Amount %	**Amount %**	**Absolute %**
Savings deposits	3,137,259 60.83%	2,517,186 61%	620,073 -24.6%
Demand deposits	1,801,800 34.94%	1,308,875 31.7%	492,925- 37.7%
Time deposits	218,342 4.23%	301,128 7.3% -	82,786 -27.5%
Total	**5,157,401 100%**	**4,127,189 100%**	**1,030,213 25%**

Source: - Nib int bank s.c July 2010 June 2011 annual report

In accordance with NBE directive No MFA/NBE Bills/001/2011, a private bank is required to purchase NBE bills that amount to 27% of the bank's loan disbursements at an interest rate of 3%. The bills have a maturity of 5 years and accordingly the bank purchased NBE bills amounting to Birr 563,281,058.

The aggregate deposits mobilized by the Bank at the close of the financial year stood at Birr5.84 billion. It was higher by Birr 680.7 million or 13.2% from the preceding financial years' balance of Birr 5.16 billion. A higher growth was attained mainly from Demand and Savings deposits. Parallel to the amount of deposit mobilized, the number of deposit accounts reached over 212 thousand registering a 13.3% growth during the reporting period. This is a clear indication that the Bank's reliability is increasing in the eyes of the public year after year.

Table 3: Deposits by Type (In '000 Birr)

Deposit Type	30/06/12	30/06/11	Change
	Amount %	**Amount %**	**Absolute %**
Savings Deposits	3,476,578 59.5%	3,137,259 60.8%	339,319 10.8%
Demand Deposits	2,018,573 34.6%	1,801,800 34.9%	216,774 12.0%
Time Deposits	342,975 5.9%	218,342 4.2%	124,633 57.1%
Total	**5,838,127 100.0%**	**5,157,401 100.0%**	**680,725 13.2%**

Source: - Nib int bank s.c July 2011 June 2012 annual report

At the close of the 2011/12 financial year, the Bank's outstanding loans and advances stood at Birr 3.7 billion. When compared with the preceding year, it showed a net increase of Birr 942.4 million (34.1%). The NBE Bills Directive which requires Banks to invest 27% of their loan disbursement on NBE Bills purchase had greatly contributed to the liquidity shortage that reduced the lending capacity of Banks. However, in an effort to ease the impact of NBE Bills on the liquidity positions and lending capacity of Banks, the National Bank of Ethiopia has lowered the reserve requirement ratio from 15% to 10% and simultaneously decreased the liquidity ratio requirement from 25% to 20%.

Some background of united bank s.c. are presented under.

Total deposit balance as of June 30, 2011 stood at Birr 6.1 billion; showing an increase of Birr 1.3 billion or 28.4% compared to the preceding fiscal year. The detail is presented in Table 4 below.

Table 4: Deposit by Type Values in Birr

Types of Deposits	2010/11	2009/10	Variation	%age
Demand	2,044,020,612	1,502,109,946	541,910,666	36.08
Savings	3,598,373,996	2,856,888,878	741,485,118	25.95
Time	423,432,374	365,856,417	57,575,957	15.74
Total	**6,065,826,982**	**4,724,855,241**	**1,330,516,610**	**28.38**

Source: - united bank s.c June 30 2011 annual report.

Total deposits of United Bank stood at Birr 8.1 billion showing an increase of Birr 1.3 billion (19.3%) over the balance registered as at June 30, 2012. The increase was attributable to growth in minimal interest bearing deposits driven by higher client base. Number of depositors has shown an impressive increase which is an indication of augmented public confidence entrusted on the Bank. The Bank increasingly provides globally standardized but locally delivered, reliable services to simplify the banking needs of customers and to help them manage and plan their money to achieve their financial goals and ambitions.

The core deposits of the bank, i.e. Savings and Demand accounts for 92% of the total deposits of the Bank which serves as a source of fund for the Bank's lending base with reasonable price.

Fixed time deposits accounts for 8.3% of the total deposits, demand deposits accounts for 28.0% and saving deposits accounts for 63.7% of the total deposits.

Source: - united bank s.c June 30 2013 annual report.

When we see Dashen bank's background of savings, it can be presented in the following way.

Table 5

Customers' deposits	2012	2011
Demand	3,408,063,676	4,392,717,362
Savings	8,888,844,618	7,797,453,958
Fixed	784,038,019	635,721,100
Total	**14,065,599,999**	**11,841,238,734**

ASSETS	2012	2011
Cash and balances with other banks		
Cash on hand	900,111,423	772,178,086
Deposits with local commercial banks	386,538,517	290,336,840
Deposits with foreign banks	2,241,368,284	2,209,547,284
Deposits with National Bank of Ethiopia	2,246,599,600	2,953,682,255

Total	**5,774,617,824**	**6,225,744,465**

Table 6

Customers' deposits	**2010**	**2009**
Demand	2,715,397,280	2,189,749,336
Saving	6,730,372,408	5,033,506,814
Fixed	698,780,088	701,954,139
Total	**10,144,549,776**	**7,925,210,289**

Cash and balances with other banks	**2010**	**2009**
Cash on hand	487,671,113	370,494,011
Deposits with local commercial banks	261,198,947	232,367,477
Deposits with foreign banks	2,280,213,906	658,306,784
Deposits with National Bank of Ethiopia	2,226,273,909	3,441,643,302
Total	**5,255,357,875**	**4,702,811,574**

Table 7

Customers' deposits	**2011**	**2010**
Demand	3,408,063,676	2,715,397,280
Saving	7,797,453,958	6,730,372,408
Fixed	635,721,100	698,780,088
Total	**11,841,238,734**	**10,144,549,776**

Cash and balances with other banks	**2011**	**2010**
Cash on hand	772,178,086	487,671,113
Deposits with local commercial banks	290,336,840	261,198,947
Deposits with foreign banks	2,209,547,284	2,280,213,906
Deposits with National Bank of Ethiopia	2,953,682,255	2,226,273,909
Total	**6,225,744,465**	**5,255,357,875**

Source: - Dashen bank s.c June 2010, 2011, 2012 annual reports.

Wegagenbank's financial background has taken the next part of the paper.

Wegagen Bank is a privately owned share company which started operations on June 11, 1997 with a subscribed capital of Birr 60 million and a paid up - capital of Birr30 million. The number of shareholders reached 2,130 while the total capital (including paid-up capital, share premium and legal reserves) reached over Birr 1.5 Billion as at March 31, 2012.33. It has a vision of "Becoming the most preferred Bank in Ethiopia" *and* Mission Statement "To provide a wide range of quality banking services through a dynamic workforce and up-to-date IT solutions to satisfy the desires of all stakeholders". It has also one core principle of having **strong capital and liquidity position**.

Table 8

ASSETS	**June 30 2010**	**June 30 2009**
Cash and bank balances with local banks	1,130,263,762	1,953,689,386
Reserve with National Bank of Ethiopia	598,388,527	528,388,527

Deposits with foreign banks	1,107,079,525	433,470,784
Treasury bills-NBE	199,990,000	-
Loans and advances	2,375,625,606	1,983,747,131
LIABILITIES		
Deposits from customers	3,815,751,230	3,550,855,857
Deposits from financial institutions	107,047,487	177,526,300
Other liabilities	329,984,826	251,652,599

Source: - Wegagen bank s.c 2009/2010 annual reports.

Liquidity risk arises 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 rates and the risk of being unable to liquidate an asset at a reasonable price and in appropriate time frame. The Bank has a reasonable funding base. Funds are raised mainly from customers' deposits. The maturity profile is monitored by management to ensure adequate liquidity is maintained. These have been determined on the basis of the remaining period to maturity as at the balance sheet date but do not take account of the effective maturities as indicated by the Bank's deposit retention history and the availability of liquid funds.

Source: - Wegagen bank s.c 2009/2010 annual reports.

Table 9

Assets	**2010**	**2011**
Cash and bank balances with local banks	1,109,600,218	2,285,727,420
Reserve with national bank of Ethiopia	578,388,527	803,388,527
Deposit with foreign banks	913,317,516	1,051,971,662
Treasury bills-NBE	189,563,760	-
NBE bills	1,597,430,000	899,887,000
Loans and advances	3,478,972,954	2,777,875,585
LIABILITIES		
Deposits from customers	5,428,296,886	5,733,716,853
Deposits from financial institutions	329,884,003	223,766,980
Other liabilities	505,505,925	385,944,254

Liquidity risk arises 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 rates and the risk of being unable to liquidate an asset at a reasonable price and in appropriate time frame. The Bank has a reasonable funding base. Funds are raised mainly from customers'

deposits. The maturity profile is monitored by management to ensure adequate liquidity is maintained.

Source: - Wegagen bank s.c 2011/2012 annual reports.

Awash bank financial and other background is also presented under.

Awash International Bank S.C. (AIB) is one of the biggest private commercial banks in Ethiopia in terms of capital. The Bank provides a wide range of financial services including operating savings accounts, time and demand deposits, including non-resident accounts for eligible foreigners residing in Ethiopia, Non-Resident Ethiopian, Non-Resident of Ethiopian Origin, short-term loans and overdraft facilities to all sectors of the economy (trade, industry, construction, agriculture, transport and etc.), long-term finance for large projects, letters of guarantee, domestic money transfer services. Awash International Bank s.c. (AIB) is the pioneer private commercial bank in Ethiopia after the downfall of the military regime and introduction of market economic policy in 1991. It was established by 486 founder shareholders with a paid-up capital of Birr 24.2 million. Licensed on November 10, 1994, it started banking operations on February 13, 1995. It was named after the popular river "**Awash**" which is the most utilized river in the country especially for irrigation and hydroelectric power. Awash River plays a pivotal role in the economic development of the country.

Currently, the Bank has 120 branches spread throughout the country, thus boosting the wider branch network, which makes AIB the leading private bank in branch network. All city branches and almost half of the outlying branches are providing on-line services.

It has the Vision: - "to be the strongest & most preferred bank of the people" , and mission" To provide modern, efficient, competitive, diversified and profitable banking services at domestic and international banking levels, to a continuously growing number of customers in a socially responsible manner. "**Source: - Awash international bank web site.**

The total deposits of the Bank, including margin held on letters of credit, were higher than the previous financial year by 18.9% and reached over Birr 9.6 billion as at June 30, 2012, in spite of existing stiff competition among commercial banks in deposits mobilization.

The Bank managed to mobilize significant amount of deposits, mainly due to the concerted efforts both at the Head Office and branch levels, growing public confidence in the Bank and widespread distribution of branch network. All types of deposits, particularly time deposits, exhibited substantial improvements over the corresponding period of last year. Of the total deposits, saving deposits accounted for the major portion (68.6%), followed by demand deposits (22.6%), time deposits (5.0%) and margin held on letters of credit (3.8%).

Table 10: Deposits by Type (In '000 Birr)

Description / Financial Year	2009/10	2010/11	2011/12
Saving deposits	4,660,887.6	5,647,594.7	6,565,012.10
Demand deposits	1,383,089.3	2,014,009.0	2,158,287.90
Fixed deposits	61,963.30	82,177.60	481,057.70
L/C Margin	349,562.6	300,754.2	360,182.4
Total deposits	**6,455,502.8**	**8,044,535.5**	**9,564,540.13**

Government bonds……1,589,214.....…...2,484,718
Treasury bills……0.00….....225,000
Loan and advances……..…3,841,550.776……..…..5, 355,718.376

Source: - Awash int bank s.c 2011/2012 annual report.

1.3 Statement of the problem

Relatively speaking private commercial banks are a new phenomenon in the Ethiopian economy. They used to operate before the 1974 revolution but after that they were nationalized and amalgamated with the government owned banks and they start to operate after the demise of the Dergue regime. As they are new to the economy, some of them are more new comers to the sector, so their capital has not yet strengthened. In addition to that private banks are ordered by the NBE to buy government denominated bonds and to buy Treasury bills which compromises their own decisions in the way they think is profitable and add to their long term growth. Not only that the unprecedented high level of on inflation at home and as well as internationally is a new challenge the sector is facing, and traditionally the non – performing loans are also a challenge. Because of the high and persistent inflation the National Bank of Ethiopia (NBE) has put a lending cap on commercial banks and this hindered them from giving more loans and reduced their level of profitability for a while, but recently the cap has been lifted and private commercial banks are able to lend, but only recently this lending cap was lifted. (Simeneh, 2013)

Liquidity risk arises in the general funding activities of the banks and the management of positions. It includes the risk of being unable to fund assets at appropriate maturation and rates and the risk of being unable to liquidate an asset at a reasonable price and in appropriate time frame. Normally banks have a reasonable price funding base. Funds are raised mainly from the customer's deposits. The banking sector's exposure to interest rate risk is limited. Most of the interest rate risk is (both domestic and foreign) has been shifted to bank clients and appears to materialize through the credit risk channel in the event of adverse developments. This is because the loan contracts (including fixed interest rate loans) often allow for pertinent interest adjustments by carrying safeguard clauses (ECB, 2010).

Through the financial inter-mediation role, the commercial banks reactivate the idle funds borrowed from the lenders by investing such funds in different classes of portfolios. Such business activity of the bank is not without problems since the deposits from these fund savers which have been invested by the banks for profit maximization, can be recalled or demanded when the latter is not in position to meet their financial obligations. Considering the public loss of confidence as a result of bank distress which has bedeviled the financial sector in the last decade; and the intensity of competition in the banking sector due to the emergence of large number of new banks, every commercial bank should ensure that it operates on profit and at the same time meets the financial demands of its depositors by maintaining adequate liquidity. (Olagunju, Adebayo 2011)

Nowadays, the main challenge especially for private commercial banks is being liquid in cash and maintaining their position in performing all banking activities like, financing profitable projects, serving customers in their immediate needs to keep their line of profitability, to meet their goals and objective, and to fulfill their relative stakeholders' interest.

By mentioning various factors as the main grounds for liquidity problems those banks are working on different liquidity management practices.

1.4 Objectives

1.4.1General objective

The general objective of the research is to evaluate private commercial bank's liquidity management practices towards maintaining their liquidity position by assessing their respective story of liquidity management. The research mentioned some differences and similarities between those liquidity management practices of the banks, to identify which techniques are good and which techniques are in unfavorable out puts that makes themselves different from each other.

1.4.2 The Specific Objectives

- To critically point out on how the adopted liquidity measures of the commercial banks have been achieved.

- To identify the main sources of the bank's liquidity.

- To evaluate the applicability of sound practices for managing liquidity in these five banks.

- To assess if there are agreed strategies of the banks for the day to day management of liquidity.

- To evaluate the involvement of senior management of the banks to control and limit liquidity risks.

- To appraise how the banks information system provides reports for measuring, monitoring and controlling liquidity risks.

- To examine the frequency of the review of the banks for the assumptions utilized in managing liquidity to determine their validity of business operation.

- To evaluate the application of adequate internal control system over their liquidity management processes.

- To compare the banks contingency plans for handling liquidity crises.

1.5 Research questions

1. What are the key liquidity management practices in these five banks?
2. What features of those liquidity management practices of the banks are in constructive outputs to control their liquidity position?
3. Are the banks currently having enough sources of liquidity?
4. Is top management of the banks actively involving on liquidity management practices?
5. What helpful liquidity management practices should the banks have to adopt?
6. Is internal control system of liquidity management currently working well?

1.6 Significance of the study

The study has these basic benefits after completion of the study's straightforward requirements. Basically as a financial institute in the mission involving in many profitable projects, banks should have to keep their liquidity position in accordance with the existing economic situation; as a result the study have a huge contribution on finding and recommending effective liquidity management practices especially for these five private commercial banks, in order to maintain their liquidity position. The study recommended which practices should they have to follow and which existing practice should be maintained as a result of their supportive features. So far the study also has some benefits to other private commercial banks (new comers) in the country that have also been assessed because almost all those techniques and practices are the same for all banks involving in the same industry environment. It is apparent that if the study can meet all its objectives accordingly, it can definitely serve as some source of information for future researchers in the same research topics.

1.7Scope of the study

The main scope of the research confined to the assessment of liquidity management practices that currently exist in private commercial banks in Ethiopia to maintain their current business by applying specific comparison (Nib, United, Awash, Dashen and Wegagen banks),the selection was made as per their similarities in their establishment dates, their number of branches, their paid up capitals and their comparable services, by using their liquidity management practices and their respective liquidity positions.

1.8 Organization of the Paper

All parts of the study are composed of five chapters; the first chapter is being filled of introduction, background of the organization, statement of the problem, research questions, and objectives of the study, scope of the study and significance of the study. Various theoretical and empirical reviews have been raised in the second chapter. Chapter three described research design and methodology with all data collection methods, number of respondents, data analysis techniques and type of data. Data analysis and interpretation are placed in the fourth chapter. Conclusions and recommendations of the study appeared in the fifth chapter of the study.

Chapter Two

2.1 Review of related literatures

Bank liquidity refers to the ability of the bank to ensure the availability of funds to meet financial commitments or maturing obligations at a reasonable price at all times. Bank for International Settlements defines liquidity as the ability of bank to fund increases in assets and meet obligations as they come due, without incurring unacceptable losses. Liquidity risk arises from the fundamental role of banks in the maturity transformation of short-term deposits into long-term loans.

The conventional wisdom found in the bank management literature states that an asset is liquid if it is widely known to have low risk (such as government debt) and if it has a short maturity (a short maturity implies that the asset's price is less sensitive to interest rate movements, making large capital losses unlikely) (Garber and Weisbrod 1992 and Hempel et al. 1994). The typical bank assets which are liquid according to that definition include cash, reserves representing an excess of reserves required by law (i.e., funds held in the account at the central bank), securities (e.g., government debt, commercial paper), and interbank loans with very short maturity (one to three days).

Liquidity level refers to the ability to have enough funds to meet the long-term and short term obligations. Liquidity problems of commercial banks started long time years ago before financial reforms, many commercial banks were witnessed undergoing insolvency due to higher level of non-performing loans (chijoriga, 1997).

The growth of any economy depends on the liquidity position of commercial banks as they provide in terms of loans to MFIs, the government and the people at large. The recent economic crisis in Europe and America give the world cautions to periodically review the financial structure in terms of assets, liquidity, capital adequacy etc. Moreover the functioning of the capital markets and money market depends much on the liquidity position of the commercial banks.

Liquidity position of commercial banks is normally monitored and measured by liquidity ratio (Rychtarik, 2009).

For a commercial bank to plan for or manage its liquidity position, it first manages its money position by complying with the legal requirement. Actually, management of money position is

essential if a bank must avoid excesses or deficiencies of required primary reserves. Where there is a decline in market price of securities or where additional funds needed to correct the bank reserve position are for a very short time, it will be definitely expensive to sell securities than to borrow from another bank (Olagunju, Adebayo, 2011).

Moreover, it may be more desirable to borrow for bank's liquidity needs than to call back outstanding loans or to cancel or place embargo on new loans, a situation that will reduce the existing and potential customers of a bank. Commercial banks are expected to maintain certain levels of reserves. These reserves are statutory requirements stipulated by the central bank specifying the cash reserves equal to certain fraction of the banks' deposits or loans and advances which bank must maintain (Adeyanju, 2011).

2.1 Theoretical Review

The concept of bank liquidity- the short run ability of commercial banks to service deposit withdrawals and loan requests has undergone fundamental changes in the past 20years. Prior to that time, banks in United States measured their liquidity positions by the amounts of certain short term readily marketable assets they held. These assets commonly called secondary reserves consists of such earning assets as short term, U.S treasury bills, brokers and dealers notes and bankers acceptances. Additionally many small banks used cash assets, such as correspondent balances and excess reserves, for liquidity purposes (G Luckett, 1980).

Theories on liquidity management

Liquid asset theory

This focuses on the asset side of the balance sheet and argues that banks must hold large amount of liquid assets against possible demand or payment cushion of readily marketable short term liquid assets against unforeseen circumstances. This approach is however very expensive in a current world of dynamic money market (Ngwu, 2006:58)

SHIFTABILITY THEORY

This is based on the proposition that bank liquidity is maintained if it hold assets that could be shifted or sold to other lenders or investors for cash. If loans are not required the collateral from security loan i.e. marketable securities or example could be sold for cash. If funds are needed, loan could be shifted to the Central Bank, when bank deposited securities with the Central Bank in order to meet the demand for funds, loan are said to be shifted to the Central banks. Thus, the

individual banks should be able to meet its liquidity needs provided because it always has assets to sell. (Ngwu 2006:56)

Anticipated income theory

The anticipated income theory of liquidity of commercial bank holds the view that banks liquidity can be estimated, and met if scheduled payments are based on the income of the borrowers. This theory does not deny the applicability of self-liquidating and suitability theories. It emphasized on relating loan repayment to income rather than relying heavily on collaterals. It also holds that, banks liquidity can be influenced by the maturity pattern of the loans and investment portfolios, short-term business and customer installment loans which would have more liquidity than those secured by real estate. (Ngwu 2006:57)

Liability management theory

Advocate of liability management theory of liquidity of commercial bank maintain that banks can meet liquidity requirement by biding the marked for additional funds. This approach originally found its strongest advocates in the large money market centers, the banks, and later develops the negotiable type of certificate of deposit (CD) as a major money market instrument. **(Abang-Anoh, 2008)**

Different researchers have also raised various internal and external factors and determinants of commercial banks liquidity. The researcher believed that raising those determinants in this paper also has significant benefit to see all sides of liquidity which are directly related with the research questions and hypothesis.

A research made by (TseganeshTesfaye, 2012) on the impact of liquidity on commercial banks financial performances has raised various determinants of commercial banks liquidity in this regard the researcher referred those factors explained in the research.

Capital adequacy and bank liquidity

Opposing to the standard view of liquidity creation in which banks create liquidity by transforming liquid liabilities into illiquid assets, the recent theories indicate the creation of liquidity by changing asset mixes. Diamond and Rajan (2000, 2001) and Gorton and Winton (2000) showed that banks can create more or less liquidity by simply changing their funding mix on the liability side. The more liquidity that is created, the greater is the likelihood and severity of losses associated with having to dispose of illiquid assets to meet the liquidity demands of

customers. Bank capital allows the bank to absorb greater risk (Repullo 2004). Thus, under the second view, the higher is the bank's capital ratio, the higher is its liquidity creation.

In addition to that researchers in U.S assessed the capital adequacy of the banks for liquidity as (Berger 1995) analyses the statistical relationships between bank earnings and capital for U.S. banks over the period of 1983-1989 and finds that, contrary to what one might expect in situations of perfect capital markets with symmetric information see there is a positive relationship between capital and return on equity. This result, according to the author, is consistent with the "expected bankruptcy cost hypothesis." More specifically, Berger's results suggest that banks with higher levels of capital see their funding costs decrease to such an extent that it more than offsets the cost of issuing additional capital. While Berger 1995 applies the concept of the "expected bankruptcy cost hypothesis" in the realm of capital, it is also conceptually applicable to the impact of liquid assets on profitability, whereby banks holding more liquid assets benefit from a superior perception in funding markets, reducing their financing costs and increasing profitability.

Size and bank liquidity

Large banks are likely to perform higher levels of liquidity creation that exposes them to losses associated with having to sale illiquid assets to satisfy the liquidity demands of customers. Hence, there can be positive relationship between bank size and illiquidity. However, since small banks are likely to be focused on traditional intermediation activities and transformation activities (Rauch et al. 2008; Berger and Bouwman 2009) they do have small amount of liquidity. Hence, there can be negative relationship between bank size and illiquidity.

Loan growth and bank liquidity

The loan portfolio is typically the largest asset and the predominate source of revenue. As such, it is one of the greatest sources of risk to a bank's safety and soundness. Since loans are illiquid assets, increase in the amount of loans means increase in illiquid assets in the asset portfolio of a bank. According to Pilbeam (2005, p. 42), in practice the amount of liquidity held by banks is heavily influenced by loan demand that is the base for loan growth. If demand for loans is weak, then the bank tends to hold more liquid assets (i.e. short term assets), whereas if demand for loans is high they tend to hold less liquid assets since long term loans are generally more profitable. Therefore, a growth in loans and advances has negative impact on banks liquidity.

Non-performing loans and bank liquidity

According to Bloem and Gorter (2001), though issues relating to non-performing loans may affect all sectors, the most serious impact is on financial institutions such as commercial banks and mortgage financing institutions which tend to have large loan portfolios. Besides, the large bad loans portfolios will affect the ability of banks to provide credit. Huge non-performing loans could result in loss of confidence on the part of depositors and foreign investors who may start a run on banks, leading to liquidity problems. Therefore, the amount of non-performing loans has a negative impact on banks liquidity (Tseganesh, 2012).

Besides these bank's specific factors there are also macro-economic factors in which commercial banks might not have that much capacity of control. The under mentioned macro-economic factors were also explained in (Tseganesh, 2012), here the researcher tried to adopt those macro factors from the research.

2.2 Empirical Review

Practically, liquidity management in commercial banks is surrounding both sizes of the prospective needs for liquidity at any giving time and the availability of sources of liquidity sufficient to meet them. The importance of accurate liquidity measurement cannot be over stressed as it reveals the liquidity positions of the banks through which the operators of the financial market and other creditors pronounced the credit worthiness of the banks.

In banking industry, liquidity risk has an opposite effect on profitability. Some studies such as Molyneux& Thornton (1992) and Barth et al. (2003) supported the positive effect of risk on the profitability; while some studies such as Bourke (1989) and Kosmidou et al. (2005) believed in its negative effect. Liquidity risk is usually measured as liquidity ratio which is practically calculated in two different forms. In first type, liquidity is adjusted by size which includes the ratio of cash asset to total asset (Barth et al., 2003; Demirguc-Kunt et al., 1998), the ratio of cash asset to deposits (savings) (Chen et al., 2010). Second type includes the adjusted loan by the size which includes the ratio of total asset and/or the ratio of net loan to total asset (Kosmidou et al., 2005).

The study by Vovoda (2011) revealed that bank liquidity was positively related to capital adequacy, interest rates on loans, share of non-performing loans and interest rates on interbank transactions. In contrast, financial crises, higher inflation rate and growth rate of gross domestic

product have negative impact on bank liquidity. The relation between the size of the bank and its liquidity was ambiguous as it was expected. The study also found that unemployment, interest margin, bank profitability and monetary policy interest rate/repo have no statistically significant effect on liquidity of Czech commercial banks.

One of the popular financial ratios used in such measurement is liquidity ratios which measures the ability of the bank to meet its current obligations (Vovoda, 2011). The liquidity ratios are composed of current ratio and quick ratio. Current ratio is a measure of a commercial bank's short term solvency and is calculated by dividing current assets by current liabilities incurred (Vovoda, 2011). The current assets are composed of cash and those assets which can be converted into cash in a short period which include marketable securities, receivables, inventories, and prepared expenses. Current liabilities consists all obligations maturing within a year. They include accounts payable, bills payable, note payable, accrued expenses and tax liability. A current ratio that is greater than one is adjudged satisfactory for most business firms even though it is difficult to authoritatively set one standard for all firms.

$$L1 = \frac{\text{LIQUID ASSETS}}{\text{TOTAL ASSETS}}$$

The liquidity ratio *L1* should give us information about the general liquidity shock absorption capacity of a bank (Vovoda, 2011).

$$L2 = \frac{\text{LIQUID ASSETS}}{\text{DEPOSIT + SHORT TERM BORROWINGS}}$$

The liquidity ratio *L2* is more focused on the bank's sensitivity to selected types of funding. The ratio *L2* should therefore capture the bank's vulnerability related to these funding sources. The bank is able to meet its obligations in terms of funding (the volume of liquid assets is high enough to cover volatile funding) if the value of this ratio is 100 % or more. Lower value indicates a bank's increased sensitivity related to deposit withdrawals (Vovoda, 2011).

$$L3 = \frac{\text{LOANS}}{\text{TOTAL ASSETS}}$$

The ratio *L3* measures the share of loans in total assets. It indicates what percentage of the assets of the bank is tied up in illiquid loans. Therefore the higher this ratio the less liquid the bank is (Vovoda, 2011).

$$L4 = \frac{\text{LOAN}}{}$$

DEPOSIT + SHORT TERM FINANCING

The last liquidity ratio *L4* relates illiquid assets with liquid liabilities. Its interpretation is the same as in case of ratio *L3*: the higher this ratio the less liquid the bank is (Vovoda, 2011).

The problem associated with the measure of liquidity with current ratio is that it is the test of quantity and not quality of the assets and hence, it does not reveal the true position of a firm's liquidity. Current ratio gives the rough idea of the firm's liquidity (Sunny Obilor, 2013).

The ratio of liquid assets to total deposits shows what percentage of a bank's deposits is held in liquid form. It relates liquid assets directly to deposit level. The principal limitation of these two ratios is the difficulty in ascertaining what should be the liquidity characteristics of cyclical secondary reserves (Nwanko, 1991).

The ratio of loan and advances to deposits reflects the quantity or proportion of the customers' deposits that has been given out in form of loans and the percentage that is retained in the liquid forms. The ratio serves as a useful planning and control tool in liquidity management since commercial banks use it as a guide in lending and investment, and to make a total evaluation of their expansion program. When the ratio rises to a relatively high level, banks are encouraged to lend and invest and vice versa, to take some benefit of profitability (Rychtarik, 2009).

2.2.1 Macroeconomic factors

GDP growth and bank liquidity

Aspachs et al. (2005) indicated that banks hoard liquidity during periods of economic downturn, when lending opportunities may not be as good and they run down liquidity buffers during economic expansions when lending opportunities may have picked up. Thus, it can be expected that higher economic growth make banks run down their liquidity buffer and induce banks to lend more.

Bordo et al. (2001) suggest two explanations on the cause of liquidity runs on deposit money banks. They explained that runs on banks are a function of mass psychology or panic, such that if there is an expectation of financial crisis and people take panic actions in anticipation of the crisis, the financial crisis becomes inevitable. Bordo et al. (2001) also "asserts that crises are an intrinsic part of the business cycle and result from shocks to economic fundamentals.

Liquidity premium paid by borrowers and bank liquidity

Liquidity premium is the amount of interest rate paid by borrowers that force liquidity holders to part it. Pilbeam (2005, p. 89) stated that according to the liquidity preference theory, lenders

need high interest rate which includes the liquidity premium in order to lend. The basic idea underlining this theory is that lenders of funds prefer to lend short, while borrowers generally prefer to borrow long. Hence borrowers are prepared to pay a liquidity premium to lenders to induce them to lend long. The size of liquidity premium increases with the time to maturity. Therefore, as they got higher premium, lenders give up their liquid money (Tseganesh, 2012).

Short term/money market interest rate and bank liquidity

The money market is important because many of these instruments are held by banks as part of their eligible reserves, that is, they may be used (are eligible) as collateral if bank wishes to raise funds from central bank because they are short maturing and have less default risk. Therefore, the higher short term interest rate induces banks to invest more in the short term instruments and enhance their liquidity position (Pilbeam 2005). According to the NBE investments in the Treasury bill are considered as liquid assets to the banks

The rate of inflation and bank liquidity

Recent theories emphasize the importance of informational asymmetries in credit markets and demonstrate how increases in the rate of inflation adversely affect credit market frictions with negative repercussions for financial sector (both banks and equity market) performance and therefore long-run real activity (Huybens and Smith 1998, 1999). The common feature of these theories is that there is an informational friction whose severity is endogenous. Given this feature, an increase in the rate of inflation drives down the real rate of return not just on money, but on assets in general. The implied reduction in real returns exacerbates credit market frictions. Since these market frictions lead to the rationing of credit, credit rationing becomes more severe as inflation rises. As a result, the financial sector makes fewer loans, resource allocation is less efficient, and intermediary activity diminishes with adverse implications for capital/long term investment. In turn, the amount of liquid or short term assets held by economic agents including banks will rise with the rise in inflation. Hence, there is positive relationship between increase in inflation rate and banks liquidity (Tseganesh, 2012).

Stable Macroeconomic Environment to enhance liquidity management and ensure macroeconomic stability, there is the compelling need to insulate monetary policy from the pressure of financing the government fiscal deficit. Also, the monetary authorities should have freedom in the management of interest rate in order to sufficiently influence transactions in the intervention securities and enhance the effectiveness of instruments for liquidity management,

Uncontrolled financing of the deficit by the CBN, either through ways and means advances or the absorption of unsubscribed government debt issues, increase bank liquidity thereby constraining the effectiveness of instruments for liquidity management (Ona, 2003).

Liquidity components

- Vault cash.
- Balance held with NBE.
- Balance held with other banks in Ethiopia.
- Treasury bills.
- Negotiable certificate of Deposits.
- Banker's acceptance and other commercial papers…….

Moreover in the **Nordic investment policy (2009**), it has been pointed out that bank liquidity is very important to meet both unexpected and expected losses, it includes both cash and cash equivalent, placement with other banks and investment in securities, therefore liquidity is very crucial as it can absorb loses and increase profitability of the commercial banks. **Basel committee (2009)** indicated that the liquidity level of the commercial banks is the paramount importance for the sustainability of the banks and they further indicated that the entire inner role of the bank is to ensure the stability of the cash flow. Therefore in this paper sound liquidity management practices are assessed in these five private commercial banks in Ethiopia to prevent them from the above mentioned liquidity risks an problems.

Liquidity management helps a commercial bank to maintain stability in operations and earnings by serving as a guide to investment portfolio packaging and management. **(Samuel, 2011)**

Effective liquidity management serves as a veritable tool through which commercial banks maintain the statutory requirements of the central bank as it affects the proportion of deposits to liquid assets and deposits to loans and advances. Liquidity management reduces the incidence of bankruptcy and liquidation failure which can be the later effect of illiquidity or insolvency, and help them to achieve some margin of safety for their customers' deposits. In other words, adequate liquidity helps to generate and sustain public confidence of the depositors and the financial markets. If the financial market perceives a bank to have liquidity problems, the bank

may find it difficult to raise further funds except at a premium. Liquidity management assists commercial banks in trading off between risk and return; and liquidity and profitability. Liquidity management also serves as a tool through which commercial banks avoid over liquidity and under-liquidity and their consequences. **(Adeyanju, 2011)**

A research done in Tunisia by (mokni rim ben in 2012), has pointed out tools for managing commercial banks liquidity which can be acceptable and sound tools for private commercial banks in Ethiopia, these are strengthen liquidity risk management function, Policy, revise contingency funding plan (CFP), diversified funding sources, decrease position limits (liquidity risk tolerance), treasury and ALM systems, integrate treasury function with risk management function, enhance liquidity stress testing, maintain liquid asset portfolios (mokni rim 2012).

Banks should practice effective and sound liquidity risk management. To this end, it should put in place a robust framework that ensures that a bank has sufficient liquid assets to meet liabilities that fall due in the short term and to meet any unexpected demands for funds by its depositors or creditors. The effectiveness of a bank's liquidity risk management will determine the extent to which the institution may be subject to cash flow crisis and additional costs (mokni rim 2012).

Empirical review on Sound liquidity management practices for maintaining liquidity positions of commercial banks.

- The banks agreed strategy for the day to day management of liquidity

According to Basel 2009, principle one - banks need to be attentive to their liquidity strategy, policies and management approach. The liquidity strategy should set out the general approach the bank will have to liquidity, including various quantitative and qualitative targets. This strategy should address the bank's goal of protecting financial strength and the ability to withstand stressful events in the marketplace. The strategy for managing liquidity risk should be communicated throughout the organization, particularly in light of the fact that in many banks, managing liquidity is no longer purely the responsibility of the treasury function. In addition, new products or business strategies, such as the development of commercial credit securitization, can have an important and sometimes complex impact on liquidity risk. A breakdown in operating systems can also have a substantial impact on liquidity risk. All businesses units within the bank that conduct activities having an impact on liquidity should be fully aware of the liquidity strategy and operate under the approved policies, procedures and limits.

- **The bank's board of directors actions towards monitoring the top managementmovements on controlling the banks liquidity risks.**

Regarding the top management necessary steps towards preventing liquidity risks and the necessary follow up from the BOD has also been raised in Basel 2009, the board should strictly follow the work of the top management by indicating, 'The board of directors should ensure that senior management provides clear guidance on the level of acceptable liquidity risk in order to comply with the bank's liquidity strategy.' And also the approval of liquidity management strategies of the top management attached with the BOD. The research will make an assessment on these practices of the BOD and top management and their harmony in all perspectives of liquidity management practices.

- **The banks usage of adequate information system for measuring, monitoring, controlling and reporting liquidity risks.**

'A strong management information system is integral to making sound decisions related to liquidity. Such a system should be flexible enough to deal with various contingencies that may arise. The management information system should have the ability to calculate liquidity positions in all of the major currencies in which the bank deals, both individually and on an aggregate basis. All banks should have the ability to calculate their liquidity positions, on a day to day basis for the shorter time horizons (e.g. out to five days) and over a series of specified time periods thereafter, including for more distant periods, in order to enable them to effectively manage and monitor their net funding requirements**.**' (Basel, 2009 principle 4)

- **Contingency planning towards preventing liquidity risks.**

A bank's ability to withstand a net funding requirement in a bank specific or general market liquidity crisis can also depend on the caliber of its formal contingency plans. (The seventh ICBS, September, 1992)

Effective contingency plans should address two major questions:

- Does management have a strategy for handling a crisis?
- Does management have procedures in place for accessing cash in emergency?

The degree, to which a bank has addressed these questions realistically, provides management with additional insight as to how a bank may fare in a crisis.

- **The review of the banks on the assumption utilized in managing liquidity.**

In this session, since a bank's future liquidity position will be affected by factors that cannot always be forecast with precision, assumptions need to be reviewed frequently to determine their continuing validity, especially given the rapidity of change in banking markets. The total number of major assumptions to be made, however, is fairly limited. (Basel, 2009 7th principle)

In addition to this, there are widely accepted practices and frameworks for measuring and managing liquidity. Here the researcher referred three major dimensions that are measuring and managing net funding requirements, managing market access, and contingency plans.

Measuring and managing net funding requirements.

The analysis of net funding requirements involves the construction of a maturity ladder and the calculation of a cumulative net excess or deficit of funds at selected maturity dates. A bank's net funding requirements are determined by analyzing its future cash flows based on assumptions of the future behavior of assets, liabilities and off-balance-sheet items, and then calculating the cumulative net excess over the time frame for the liquidity assessment (A framework for measuring and managing liquidity, 1992).

Maturity ladder

A maturity ladder should be used to compare a bank's future cash inflows to its future cash outflows over a series of specified time periods. Cash inflows arise from maturing assets, saleable non-maturing assets and established credit lines that can be tapped. Cash outflows include liabilities falling due and contingent liabilities, especially committed lines of credit that can be drawn down.

In constructing the maturity ladder, a bank has to allocate each cash inflow or outflow to a given calendar date from a starting point, usually the next day. (A bank must be clear about the clearing and settlement conventions it is using to determine its initial point.) As a preliminary step to constructing the maturity ladder, cash inflows can be ranked by the date on which assets mature or a conservative estimate of when credit lines can be drawn down. Similarly, cash outflows can be ranked by the date on which liabilities fall due, the earliest date a liability holder could exercise an early repayment option, or the earliest date contingencies can be called. Significant interest and other cash flows should also be included. The difference between cash inflows and cash outflows in each period, the excess or deficit of funds, becomes a starting-point for a measure of a bank's future liquidity excess or shortfall at a series of points in time.Thus,

banks will typically collect data on relatively distant periods so as to maximize the opportunities to close the gap before it gets too close. Most banks would regard it as important that any remaining borrowing requirement should be limited to an amount which experience suggests is comfortably within the bank's capacity to fund in the market.

Alternative scenarios

Evaluating whether a bank is sufficiently liquid depends in large measure on the behavior of cash flows under different conditions. Analyzing liquidity thus entails laying out "what if" scenarios. Three scenarios provide useful benchmarks: a bank's "going-concern" condition, a bank-specific crisis, and a general market crisis. Under each scenario, a bank should try to account for any significant positive or negative liquidity swings that could occur.

Measuring liquidity over the chosen time frame

It is important to note that the relevant time-frame for active liquidity management is short, generally extending out no more than a few weeks. While most banks would not actively manage their net funding requirements over a period much longer than four or five weeks, managements may consider information on requirements beyond that time frame to be useful. Clearly, banks active in markets for longer-term assets and liabilities will need to use a longer time-frame than banks which are active in short-term money markets and which are in a better position to fill funding gaps at short notice. However, even this latter category of banks may find it worthwhile to tailor the maturity of new transactions to offset gaps some time off.

Managing market access

It is important for a bank to review periodically its efforts to maintain the diversification of liabilities, to establish relationships with liability-holders and to develop asset-sales markets. As a check for adequate diversification of liabilities, a bank needs to examine the level of reliance on individual funding sources, by instrument type, nature of the provider of funds, and geographic market. In addition, a bank should strive to understand and evaluate the use of intercompany financing for its individual business offices.

Building strong relationships with some providers of funding can provide a line of defense in a liquidity problem and form an integral part of a bank's liquidity management. The frequency of contact and the frequency of use of a funding source are two possible indicators of the strength of a funding relationship. Developing markets for asset sales or exploring arrangements under

which a bank can borrow against assets is the third element of managing market access. The inclusion of loan-sale clauses in loan documentation and the frequency of use of some asset-sales markets are two possible indicators of a bank's ability to execute asset sales under adverse scenarios.

Contingency planning

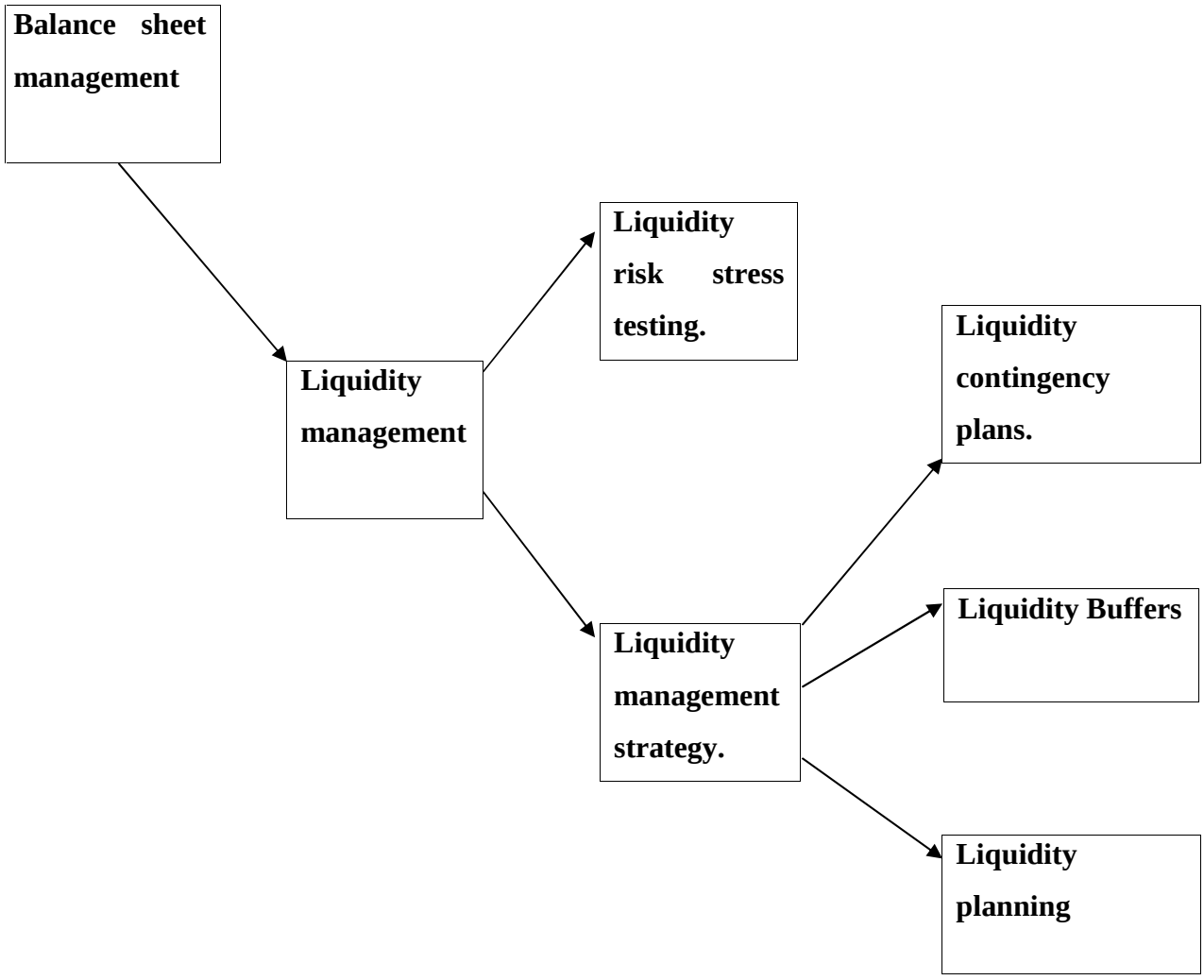
Effective contingency plans should address two major questions:

Does management have a strategy for handling a crisis? Does management have procedures in place for accessing cash in emergency? The degree, to which a bank has addressed these questions realistically, provides management with additional insight as to how a bank may fare in a crisis.

A game plan for dealing with a crisis should consist of several components. Most important are those that involve managerial coordination. A contingency plan needs to spell out procedures to ensure that information flows remain timely and uninterrupted, and that the information flows provide senior management with the precise information it needs in order to make quick decisions. A clear division of responsibility must be set out so that all personnel understand what is expected of them during a crisis. Confusion in this area can waste resources on certain issues and omit coverage on others.

Contingency plans should also include procedures for making up cash flow shortfalls in emergency situations. Banks have available to them several sources of such funds, including previously unused credit facilities and the domestic central bank

Figre 2.1 A broad scope of what managing a balance sheet typically involves in a commercial banks.



Source, Oracle finance services, 2011 practices and emerging trends in asset liability management and liquidity risks

As it is briefly expressed in the above diagram, liquidity management falls in two broad dimensions of liquidity risk stress testing and liquidity management strategy. Liquidity management strategies have also been explained in the diagram like liquidity contingency plans, liquidity buffers and liquidity planning. These strategies and practices of liquidity management will be assessed of their usages for five private commercial banks in Ethiopia.

2.2.2Empirical studies in Ethiopia

Currently, Ethiopian private commercial banks offer four major services in all of their branches namely, Credit Facility, Saving Scheme, International Banking, and Fund Transfer. Moreover, some of the banks are also providing the customer's credit card payment systems that can be used internationally.The other service the banks render is deposit services including demand deposit, savings deposit, youth savings deposit and time/fixed deposit (Simeneh, 2012).

The banks also render international banking services providing services like; opening letters of credit for importers, handling of incoming LCs for exporters, purchase of outward bills purchasing and selling of foreign currency denominated notes, receiving and transferring foreign currency payment by swift and handling incoming and outgoing international letters of guarantee. (Yimam, 2005)

Excess reserve and excess liquidity are among the major problems facing the banking system in Ethiopia today. In addition to this, that these problems are not actually distributed among the banks. Commercial Bank of Ethiopia, takes respectively 90.7 and 79.4 percent of excess reserves and excess liquid assets seen in the Ethiopian commercial banking sector at the close of June 2005.The persistence of these excess reserves and excess liquidity problem is also implied in the interest rate structure of the banks as both the lending and deposit rates are almost constant and show a very limited or no change unless NBE revised the minimum deposit rates for saving and time deposits. (Ayalew, 2006)

According to (Simeneh, 2011) currently private banks are suffering from various challenges. From those challenges expressed in the research non-performing loans, inflation, the exposure of private banks for international financial crisis, lack of appropriate technology were assessed in deep. In addition to that banking business risks like foreign exchange risk, interest risk, credit risks, operation risks, and market and liquidity risks were among the main issues. Market and liquidity risks for private commercial banks were presented like this, Liquidity risk arises in the general funding activities of the banks and the management of positions. It includes the risk of being unable to fund assets at appropriate maturation and rates and the risk of being unable to liquidate an asset at a reasonable price and in appropriate time frame. Normally banks have a reasonable price funding base. Funds are raised mainly from the customer's deposits (Simeneh, 2011).

In many private banks, Asset and liability management committees are responsible in managing funding mismatch and attaining desirable level of liquidity in the manner described in the risk management policy of the financial statement analysis of the contractual maturities of assets and liabilities (Simeneh, 2011).

According to (Tseganesh, 2012) The positive and statistically significant impact of capital adequacy and bank size up on the financial performance of commercial banks in Ethiopia was in line with "expected bankruptcy cost hypothesis" and the results of (Berger's 1995). According to this hypothesis banks with higher levels of capital see their funding costs decrease to such an extent that it more than offsets the cost of issuing additional capital. The coefficient sign of capital adequacy and bank size in the case of liquidity equation as well as financial performance equation were positive and statistically significant. This indicates the 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.

Since adjusting their liquidity position for managing credit risk has negative impact on financial performance, commercial banks in Ethiopia have to adopt other ways of managing credit risk for instance, minimizing adverse selection during the time of credit approval and strict follow up of borrowers to minimize the problem of moral hazards after the provision of credit.

Chapter three

This chapter deals in broad terms the research work, how it is carried out, that is the research design, sources of data, method of data collection, method of data analysis, population and sample size. All this shall be treated in this subsequent paragraph.

3.1 Research Design

The chapter presentsthe research questions, factors description and hypotheses for the study. The research approach adopted by the study is also presented in this chapter; the population and sampling design for the study have been explained. Data collection, analysis and presentation techniques are also explained here.

Top management involvement

Commercial banks are required to put an effective governance structure of liquidity risk management. The Board of Directors and senior management, special committees and relevant banking departments are responsible for the management of liquidity risk and formulate a proper assessment and accountability mechanism so as to improve the effectiveness of liquidity risk management.

H1: Top management involvement has positive effect on liquidity management of commercial banks.

Policies and procedures

Commercial banks would measure and determine their own liquidity risk tolerance in the light of the bank's businessstrategy, business characteristics and risk appetite, and formulated management strategy,policy and procedures of liquidity risk. Risk tolerance would be expressed in quantitative terms, such as the unmitigated liquidity risk level that the banks could bear under normal conditions and stress.The strategy, policy and procedures of liquidity risk management covered various on and off-balance-sheet business of the bank, business agencies, branches and affiliates that may exert a significant effect on its liquidity risk both home and abroad, including liquidity risk management in normal conditions and under stress.

H2: adequate policies and procedures of liquidity management have positive effect on liquidity management.

Internal control

Commercial banks are expected to incorporate liquidity risk management in to the scope of internal audit and review and evaluate the sufficiency and effectiveness of liquidity risk management on a regular basis.

H3: internal control has positive effect on liquidity management.

Stress testing of liquidity positions

It is a must for commercial banks to regularly conduct stress test as part of their liquidity risk management. This is in order to help them assess their capability to withstand stress incidents and to consider and prevent future possible liquidity crises, so as to promote their ability to perform repayment responsibilities under the circumstances of liquidity stress.

H4: stress testing of liquidity position has positive effect on liquidity management.

Contingency liquidity plan

Conditions require activating the plan, key contact personnel and their contact details, action points in the event of a crisis or an impending crisis, procedures for making out cash flows shortfalls in crisis situations and sources of funds and the priority in which these funds would be accessed.

H4: contingency liquidity plan has positive impact on liquidity management.

Management information system

The timely production of liquidity management reports to minimize liquidity risks of the commercial banks must be facilitated by the respective concerned work units.

H5: MIS has positive impact on liquidity management.

Table 3.1 Tabular presentation of factors affecting banks liquidity management

Liquidity management practices	**Explanation**	**Values**
Top management involvement	Effective governance structure of liquidity risk management.	Significant (Positive)

Policies and procedures	Strategy, policy and procedures of liquidity management	Significant
Internal control	Internal audit and review on effectiveness of liquidity risk management practices.	Positive
Stress testing of liquidity positions.	Assessment of capability to withstand stress incidents.	Positive
Contingency plan	Action plans in the events of crises.	Positive
Management information system(MIS)	Timely production of liquidity management reports.	Positive
Sources of liquidity	Bases for being liquid in current and liquid assets.	positive

Table 3.1 factors descriptions.

3.2Research approach

Qualitative method approach was used to come across the main objectives of the study and to go through all research questions and hypothesis. This approach allowed to critically examining the main types of liquidity management practices.All data are collected to help answering a single research question.

3.3 Population of the study

Five private commercial banks in Ethiopia, having same years of operation in the industry were assessed. These are Awash international bank S.C., Dashen bank S.C., Nib international bank S.C, United bank S.C and Wegagen bank S.C. There was an interview with five department managers of each 5 banks that are Planning and business development department managers, risk management department managers, treasury and fund management department managers, credit department and domestic banking department managers also finance managers of these banks will be interviewed. 60 Questionnaires consisted of 24 items related to the concepts affecting liquidity management practices have been distributed for respondents from the above mentioned work units (departments).

3.4 Sample size

Sixty questionnaires consisted of 27 items were distributed for 60 clerical staffs of these five private commercial banks. An interview consisted of almost 12 questions was forwarded for five directors of each five banks twenty five directors were directly involved in the interview.

3.5Data collection methods

Bath primary and secondary data were used for the study. Various studies, interviews, questioners and audited financial reports of these five banks were the main source of the conducted study on this research topic. In addition data required for the study was also collected from NBE (National Bank of Ethiopia) various reports and MOFED (Ministry of finance and economy development) website.

3.6Data presentation and analysis techniques

The data collected from the above mentioned sources were presented in a tabular form based on the classification used for the research; the data was also analyzed in a percentage to compare the responses. According to (Abang-Anoh 2008) the higher the percentage means the higher the level of acceptance of the respondents; here the researcher also applied this theory on respondent's responses.

3.7Summary of results

The study conducted survey of banks' employees (using self-administered questionnaires) and interviews. All respondents were employees of private commercial banks. Out of the total 60 questionnaires distributed 52 questionnaires were returned and the response rate was 86.66%, as it was indicated on population of the study, only treasury and fund management department of each five banks has got high coverage of respondent selection because of their contact to the research topic i.e. 30% of the questioner distributed to them, whereas planning, domestic, finance credit and risk departments covered the remaining 70% of the total number of questioners. Most respondents had above five years of experience in the banking operations.

Chapter four

4Data presentation and analysis

The previous chapters presented the coordination of the study, theoretical foundations, literature review and the research methods adopted in the study. In this chapter the data collected were presented and important regression analysis findings were discussed.

4.1 Survey results

All questioners were distributed to those five private commercial banks as a result 52 questioners returned successfully, in addition an interview with five department managers of each banks have been made.

Sample size and returned questioners.

Table 4.1.1 sample size

Sample size	60
Successfully returned questioners	52
Response rate	86.66%

Source survey result

Table 4.1.2Respondent's educational background

Education level	52
Degree and above	52
Diploma	-
Certificate	-
Total	100%

Source survey result

All the respondents have degree and above educational qualifications.

Table 4.1.3 working positions of the respondents

Recent position	**Sum**	**Rate**
Head various divisions of departments.	7	13.46%
Customer relationship managers	5	9.6%
Market research and planning experts.	8	15.38%
Issue accounts and fund control officers.	10	19.23%
Finance officers	7	13.46%
Loan officers and loan supervisors.	5	9.6%

Risk officers	7	13.47%
accountants	3	5.8%
Total	52	100%

Source survey result

From those fifty two respondents seven respondents were division heads of treasury and finance departments of the banks, the researcher also has got five customer relationship managers from customer relationship departments of the banks, eight respondents were from planning and business development departments, ten respondents were from treasury and fund control department having issue accounts and fund control officers they were also greater part of questioner respondents, seven respondents were from finance departments of the banks having finance officer job title, five loan officers and loan supervisors have been assessed, seven risk officers of the banks have responded for the questioners the least group from the respondents were accountants with only three in number.

Table 4.1.4 Length of stay in current banks of the respondents in years

Length of stay	**Sum**	**Rate**
Below two years	-	-
2-5 years	18	34.61%
6-10 years	23	44.23%
Greater than ten years	11	21.15%
Total	52	100%

Source survey result

Eighteen respondents have between two and five years' experience in their current banks, twenty three respondents have between six and ten years work experience in their current banks, fortunately the researcher has got eleven respondents that have more than ten years work experience in their respective banks.

Table 4.1.5 Top management's involvement of liquidity management on respondent's eyes

High top management involvement	**Sum**	**Rate**
Strongly disagreed	-	-
Slightly disagreed	-	-
Neutral	10	19.23%
Slightly agreed	25	48.07%
Strongly agreed	17	32.69%
Total	52	100%

Source survey result

Ten respondents from all fifty two returned questioners were stack in the middle of giving decision on their top manager's involvement in liquidity management practices of their respective banks the researcher consider their response as they might not have enough information about the raised idea or they didn't want to say a lot on this part practice of liquidity management. Twenty five respondents slightly agreed on their response of their bank's top management involvement on liquidity management practices, and only seventeen respondents strongly agreed on the effective involvement of their banks top management involvement on liquidity management the result showed that there is no enough involvement of top management in liquidity management of the assessed banks as per the perception of the respondents.

Table 4.1.6 the applicability of liquidity management policies and procedures of the banks

Usage of effective policies and procedures	**Sum**	**Rate**
Strongly disagreed	2	3.85%
Slightly disagreed	7	13.46%
Neutral	15	28.84%
Slightly agreed	20	38.46%
Strongly agreed	8	15.38%
Total	52	100%

Source survey result

Two respondents from the assessed one private commercial bank strongly disagreed on the applicability of well-organized liquidity management policies and procedures seven respondents slightly disagreed on the applicability of effective liquidity policies and procedures in their banks, fifteen respondents have no idea on the policies and procedures of liquidity management of their banks, twenty respondents slightly agreed on effectiveness of their banks liquidity policies and procedures, eight respondents strongly agreed on the applicability of liquidity management policies and procedures. As a result it can be concluded that there are relatively good liquidity management policies and procedures in those five private commercial banks.

Table 4.1.7 Effective internal control of liquidity management as per respondent's insight

Internal control in the respondents insight	**Sum**	**Rate**
Strongly disagreed	-	-
Slightly disagreed	7	13.46%
Neutral	6	11.53%
Slightly agreed	24	46.15%
Strongly agreed	15	28.84%

Total	52	100%

Source survey result

No respondent said there is weak internal control of liquidity management in these five commercial banks, seven and six respondents slightly disagreed and made them neutral for decision respectively, almost forty six percent of the respondents slightly agreed on the effectiveness of the internal controlling system, fifteen respondents strongly agreed on the effective internal control system of liquidity management.

Table 4.1.8 Stress testing of liquidity positions as per respondent's understanding

Effective stress testing of liquidity position	**Sum**	**Rate**
Strongly disagreed	6	11.53%
Slightly disagreed	12	23.07%
Neutral	18	34.61%
Slightly agreed	13	25%
Strongly agreed	3	5.76%
Total	52	100%

Source, survey result

As it is obvious that in order to maintain its liquidity position every banks should go through effective stress testing of liquidity position, as per the respondents view six respondents strongly disagreed on the effectiveness of these stress testing in addition, twelve respondents also slightly disagreed whereas eighteen respondents made themselves in the middle of agreement, thirteen respondents slightly agreed and only three respondents strongly agreed on their banks effective stress testing of liquidity positions.

Table 4.1.9 Respondent's view on the banks contingency plans for managing liquidity

Wise contingency plans of liquidity mgt	**Sum**	**Rate**
Strongly disagreed	6	11.53%
Slightly disagreed	11	21.15%
Neutral	13	25%
Slightly agreed	17	32.69%
Strongly agreed	5	9.61%
Total	52	100%

Source, survey result

Every bank has to have wise contingency plans of liquidity management (Basel, 2009) therefore the researcher also assessed the applicability of these banks contingency plans, six respondents

strongly disagreed on the contingency plans application of the banks, eleven respondents slightly disagreed whereas thirteen respondents was neutral, almost thirty three percent of the respondents slightly agreed on contingency plans, only five respondents strongly agreed on their banks contingency plans for managing their liquidity positions.

Table 4.1.10 Management information system (wide spread information about liquidity with in employees of those five banks)

Effective MIS	**Sum**	**Rate**
Strongly disagreed	14	26.92%
Slightly disagreed	21	40.38%
Neutral	13	25%
Slightly agreed	4	7.69%
Strongly agreed	-	-
Total	52	100%

Source, survey result

It is a must for every bank to inform its all employees and every concerned body about its strategies and goals of managing liquidity, fourteen respondents strongly disagreed on their banks information communication systems, almost forty percent of the respondents slightly disagreed on their banks MIS, thirteen respondents didn't decide on the raised point, only four respondents slightly agreed on their banks MIS for the help of liquidity management.

Table 4.1.11 Respondent's view on overall liquidity management practices of their banks

Applicability of sound liquidity mgt practices	**Sum**	**Rate**
Strongly disagreed	-	-
Slightly disagreed	5	9.61%
Neutral	29	55.76%
Slightly agreed	18	34.61
Strongly agreed	-	-
Total	52	100%

Source, survey result

Five respondents slightly disagreed on the overall liquidity management practices of the banks, twenty nine respondents were neutral on the applications of sound liquidity management practices of the banks, eighteen employees of the banks were slightly agreed on the overall liquidity management practices of their banks.

Table 4.1.12 Respondent's awareness towards the main sources of liquidity

Main sources for bank's liquidity	**Sum**	**Rate**
Strongly disagreed	1	1.92%
Slightly disagreed	5	9.61%
Neutral	17	32.69%
Slightly agreed	22	42.30%
Strongly agreed	7	13.46%
Total	**52**	**100%**

Source, survey result

In addition to managing its liquidity position each commercial banks has to identify its main sources of liquidity in order not to be under financial crises resulted in finance and economic situation of the world, as per the respondents perceptions only one respondent strongly refused on the banks' ability to identify their main sources of liquidity, five respondents slightly disagreed on the availability of enough instrument of banks liquidity, seventeen respondents hesitated from saying anything about the main sources of the banks liquidity, twenty two respondents slightly agreed on the availability of enough sources of liquidity, seven respondents strongly agreed on the banks ability to identify their main sources of liquidity.

The researcher has also made an interview with top managers of these five private commercial banks which were in various work units and departments.It can be said that all five banks treasury and fund management directors have been assessed in the interview, in addition two risk and compliance managers of the banks have gave respond for my interview, the researcher was able to get three finance managers of these five banks, fortunately four planning and business development department managers were involved on the interview, two credit department of the banks also been assessed by the researcher's interview.

Summarized top managers response for the forwarded questions in the form of interview is presented under.

Most managers answered that liquidity position of their banks has been understood in a well manner both in maintenance of liquidity position of their banks and preventing liquidity risks.

Managers in two banks of the assessed five commercial banks expressed they have recognizable liquidity than their competitor banks in the country.

Almost all managers agreed on their banks current problems of being liquid in cash, current assets and all related short period financial instruments.

Forwarded question regarding the current culture of liquidity management practices existed in the manager's banks has been answered like follow up of cash flows through periodic reports and monitoring it, forecasting of future cash flows and seasonal liquidity requirements, mobilizing resources and deposits from broad customer base instead of focusing on small target groups so as to minimize liquidity risks resulted in unexpected withdrawals and non-performing loans, creation of employees awareness towards knowing liquidity and its impacts, application of liquidity procedures and policies, follow up of loan to deposit ratio of the bank, follow up of balances at NBE and issue accounts, timely renewal of liquidity policies and procedure, timely meetings on liquidity management topics, effective internal control systems application, identification of main target areas for deposit mobilization were the current practices of the banks liquidity management.

Most managers disagreed on the effectiveness of the applied liquidity management practices of their banks, they were the members of some liquidity management movements more than three years but they didn't really felt good on the effectiveness of those practices because of various reasons they didn't expressed at the time of the interview. All banks interviewed managers agreed on the banks top management movements towards maintaining their banks liquidity. Liquidity has been seen as a main source of the bank's profitability, the bank that has high liquidity can do in it and can harvest much profit; contrary a bank facing liquidity problems can't achieve its customers satisfactions, profitability and industry requirements.

Chapter five

Conclusion and recommendation

5.1 Conclusion

The main objective of the study was to evaluate five private commercial bank's liquidity management practices towards maintaining their liquidity position by assessing their respective story of liquidity management practices. United, Wegagen, Awash, Nib and Dashen banks have been assessed accordingly.

The banks are currently facing liquidity problems resulted in various government obligations and increasing level of competition between banks and the emergence of new private commercial banks. In order to prevent the above mentioned liquidity problems, now these banks are using their at most effort for the industry requirements.

This survey result showed that those sound liquidity management practices are not implemented successfully within the assessed private commercial banks. The researcher had point out the accepted sound liquidity management practices and evaluated those banks according to each liquidity management variables.

Top management of each banks are involved continuously in managing their banks liquidity positions.

There are enough liquidity management policies and procedures within the banks, there are relatively operative internal control systems of liquidity management except two banks of five.

There is low organized way of stress testing of liquidity positions within the banks, still there is no that much satisfactory liquidity management practice in the areas of contingency plans that is making one self-ready for the future cash inflows and outflows that are directly linked with the banks day to day business activities.

Almost all respondents totally disagreed on their banks management information system there were some problems on creating awareness about the concept of liquidity and its way of management.

Even if there are many sources of liquidity those banks needs only liquid assets like treasury bills, suitable cash balances and short time repayment period for disbursed loans.

The overall liquidity management practices of the banks in the respondents eyes has been presented above, consequently the researcher forwarded the under mentioned recommendation based on the findings of the research.

5.2 Recommendations

As it was explained above the researcher has pointed out each liquidity management variables in order to evaluate the current practices of the banks. As a result the following points are forwarded as a final ends of the thesis work.

- The banks top management is currently working well but still there is some need of additionaleffort investment to lead their banks towards the fulfillment of the industry's requirements.
- Up to date liquidity management policies and procedures must be applied within all the assessed banks, the result has been showed that there are relatively good liquidity policies and procedure but they were not good enough with respect to the changing economic environment of the world, so each bank has to update its policies and procedure in a timely manner.
- Strict internal controlling systems of liquidity management must be applied with respect to the industry's current obligations, in most banks there were sufficient movements of internal control system but their effectiveness were in some doubts so each has to review its internal control systems for favorable results of liquidity for the banks operation.
- Stress testing of liquidity positions in addition to contingency plans for future liquidity problems must be within the bank's main practices of liquidity management, financial crises happened in various times within the globe has made a great impact even in the country's banks so each bank has to make itself ready for the future liquidity shortage.
- A big difference occurred between the researcher assumption and the findings were in the place of effective management information system and creation of awareness within all staffs of the banks, this has been declined by most of our respondents by saying there is no effective MIS and awareness creation grounds by the banks to make all staff alert for

the concept of liquidity, so each bank has to work hard on increasing its staff knowledge about liquidity and all banks have to modify their current management information system between the operational and managerial staffs of the banks.

- Most of the respondents hadn't said there are enough sources of liquidity so each bank has to know and identify its main sources of liquidity.
- Generally all banks should on the effectiveness of the applied liquidity management practices and they should create some permanent work activities and work units who are responsible for follow up of the bank's liquidity and monitoring related work units for their movements towards achieving their banks stated goals and objectives.

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