

Factors Influencing Liquidity Level of Commercial Banks in Kisumu City, Kenya

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Abstract: Liquidity is an important determinant of financial distress, without liquidity a bank cannot meet the deposit withdrawals and satisfy customer loans and high liquidity level will mean a decline in returns to commercial banks, thus liquidity level becomes a challenge to commercial banks and investigating the factors influencing it comes in handy. Currently, an institution is required to maintain a statutory minimum of 20% of its deposit liabilities with the Central Bank. According to the Central Bank's annual reports, the liquidity ratio has been varying from year to year that is; 40% in the year 2007, 37% in 2008, 39.8% in 2009 and 44.5% in 2010, which is much higher than the liquidity ratio requirement in Kenya of 20%. This situation could therefore be a pointer that there exist other factors that tend to influence the liquidity level of commercial banks. Many studies have been done relating to liquidity and banks; however a little research has been done to investigate causes of these variations. Therefore, the main objective of this study was to investigate the factors that influence liquidity level of commercial banks in Kisumu City. The researcher chose to study on commercial banks due to availability of needed data and convenience. All 27 commercial banks operating in Kisumu City were investigated. Out of the 27 questionnaires distributed to the heads of finance, 26 questionnaires were returned successfully filled giving a response rate of 96.29 %. Exploratory survey research design was used in the study. Data was analyzed using descriptive statistics; Pearson Correlation analysis and multiple regression analysis were used to determine the relationship between the factors and the liquidity level of banks. The study found that that 42.2 % the variations in liquidity level are explained by changes in the various factors notably; contingency planning, profitability, banks major obligations, management policies, credit rating, monetary policies, government expenditure and Balance of payment status with 57.8 % of the variation being explained by other factors external to the model. From the study it can be concluded that there are other factors, other than Central Bank of Kenya regulations which influence liquidity level of commercial banks in Kisumu City. The researcher recommends a further study to be conducted based on various geographical areas since such areas represent a variation in target markets and consequently the customers banking habits. Comparisons could be done on whether or not there is any variation or similarity. The findings of this study would be useful to bank managers, central bank of Kenya, financial advisors, depositors and it forms basis for future research extending frontiers of liquidity level in financial markets.

1.1 Background of the study

Over the years, banks remained and will continue to be an important institution for any economy as they play the most fundamental role in the payments system. In most developing countries, commercial banks are the most dominant financial institutions, with the capital market institutions playing a minimal role. Of the main functions of commercial banks is the availing of funds (monetary) to its customers. For a bank to be in a position to do so, it must be in a healthy liquidity position (Litter, Silber and Udell, 2004). Impact of the economy on the liquidity of a firm is mitigated by the level of management of the firm in question.

Argenti, (2006). He notes further that the level of regulation by the government tends to play a part in

insulating a sector from economic down turns. As money will not manage itself, the regulation of money will be debated for years to come (Stals, 2002). Liquidity is the availability of funds or assurance of the availability of funds to honor a bank's cash flow commitment including the off-balance sheet cash flow items as they fall due (The Bank of Mauritius, 2007). According to the Central Bank of Kenya (2002), liquid assets comprise of notes and coins (local and foreign), balances with the Central Bank of Kenya, balances with domestic commercial banks, balances with banks abroad, balances with financial institutions, balances with mortgage finance companies, balances with building societies, treasury bills, treasury bonds, certificates of deposits or government bearer bonds, foreign currency, and bearer certificates of deposit.

Therefore when managing a financial institution, the institution should be able to meet in full all its obligations as they fall due. By enabling banks to meet their financial obligations promptly, Bernstein and Wild (2004), argue that, this instills a sense of confidence in the customers which goes further into building customers loyalty and satisfaction. On the contrary, a poor liquidity status could lead to inability of banks to meet their financial obligations. In the event of such situations, bank customers loose confidence and may engage in a run on the bank. This eventually results to bank failures since poor liquidity situation would further result to; inability to take advantage of favorable discount and other opportunities, lower profitability, delay in collection of interest and principal payments for creditors, and damage to customer relationships. The bank is under a general contractual duty to its customers to pay on demand all debts to the extent of the funds in a depositor's account. The bank should therefore be prudent in its operation; it should exercise careful and practical judgment with regard to, objectives of the bank, all risks to which the bank is exposed, the amount and nature of the bank (Central Bank of Kenya Regulations, 2002). Allan (2003) argues that regulation of banks shapes market behavior thus providing a protection to poorly informed clients and avoiding moral hazard.

In Kenya, regulation of banks is the responsibility of the Central Bank of Kenya. The Banking Supervision department carries out the function of supervising banks to ensure the liquidity, solvency, and proper functioning of a stable market based banking system. Further to this, audited performance of the banking sector is measured in terms of capital adequacy, asset quality, liquidity, and earnings based on the Central Bank internal rating system. The World Trade Center disaster also raises the issue of liquidity and how to access funds when needed. During such an emergency people often withdraw cash from the bank, and this puts great pressure on a bank's liquidity. Regarding this, Comer (2004), observed that it is necessary for banking institutions to hold cash and cash equivalents in more than one federal home bank. The Central Banks Regulation on liquidity management is issued under section 33 of the Banking Act. Under the Banking Act, the Central Bank of Kenya may determine, vary or alter such minimum levels of liquid assets to be held by all institutions and to those already defined under section 19 (2) (a) - (d) of the Banking Act (The Kenya Banking Act). The CBK, in its Central Bank of Kenya Liquidity Regulations Supplement (2002), observes that the purpose of the regulation among others is to; ensure that each institution meets the minimum liquidity requirements, guide institutions in the formulation of liquidity risk

management strategies, policies, procedures, management information systems, internal controls and contingency plans for unexpected distress situations, protect deposit funds, promote a stable and efficient banking system, and endear confidence in the financial sector. The banks supervisory department continues to adopt and implement effective and sound supervisory methods in order to minimize the risk inherent in the banking system. The funding gap for commercial banks is managed through a stable funding base along with detailed forecasting.

Under section 19 of the Banking Act in Kenya, an institution shall maintain a minimum holding of liquid assets as the Central Bank may from time to time determine. Currently an institution is required to maintain a statutory minimum of 20% of its deposit liabilities with the Central Bank. The institution is also required to submit dates on its liquidity in the prescribed format (Form CBKIPR9, Liquidity Statement), and in accordance with the completion instructions attached, after each (10) working days period. In addition to the liquidity data, data on its maturity analysis of assets and liabilities will also be provided, in the prescribed format (Form CBKIPR6, Maturity Analysis of Assets and Liabilities).

The CBK however emphasizes that it is the responsibility of every board of directors of institutions to develop and document liquidity risk management strategy and relevant policies. However with all these controls banks are still failing. (Central Bank of Kenya Regulations, 2002).

Maintaining the liquidity requirement may mean that banks keep most of their assets in the form of short-term and easily convertible assets, which most of the times give lower returns. However, according to the CBK's annual report,(2010) the liquidity ratio on a global basis measured 45.5% in the year 2001, 45% in 2000, 40% in 1999 and 38% in 1998, which is much higher than the liquidity ratio requirement in Kenya of 20%. This situation could therefore be a pointer that there exist other factors that tend to influence the liquidity level of commercial banks.

1.2 Statement of the problem

Liquidity is an important determinant of financial distress, because without liquidity a bank cannot meet the deposit withdrawals and satisfy customer loans. The objective of liquidity management therefore is to ensure that banks are able to meet in full all their financial obligations as they fall due. Under section 19 of the Banking Act, an institution shall maintain a minimum holding of liquid assets as the Central Bank may from time to time

determine. Currently an institution is required to maintain a statutory minimum of 20% of its deposit liabilities with the Central Bank. Maintaining the liquidity requirement may mean that banks keep most of their assets in the form of short-term and easily convertible assets, which most of the times give lower returns. However, according to the CBK's annual reports, the liquidity ratio has been varying from year to year that is; 40% in the year 2007, 37% in 2008, 39.8% in 2009 and 44.5% in 2010, which is much higher than the liquidity ratio requirement in Kenya of 20%. This situation could therefore be a pointer that there exist other factors that tend to influence the liquidity level of commercial banks. Many studies have been done relating to liquidity and banks; however a little research has been done to investigate causes of these variations. This study therefore investigated the factors that influence liquidity level of commercial banks in Kisumu city.

1.3 Objective of the study

The main objective of this study was to investigate the factors that influence liquidity level of commercial banks in Kisumu City, Kenya. Specifically the study was guided by the following specific objectives:

- (i) To investigate whether factors internal to commercial bank influences liquidity level of commercial banks in Kisumu City.
- (ii) To examine whether factors external to the commercial bank influences liquidity level of the commercial banks in Kisumu City.

1.4 Research questions

The research sought to answer the following questions:

- (i) Which internal factors influence liquidity level in commercial banks in Kisumu City?

- (ii) Which external factors influence liquidity level in commercial banks in Kisumu City?

1.5 Scope of study

Banks are distributed all over the country but due finance and time constraints the study was only conducted in Kisumu city. The research was conducted on all the commercial banks operating in Kisumu City making it a census study. The study was restricted to factors influencing liquidity level in commercial banks in Kisumu City.

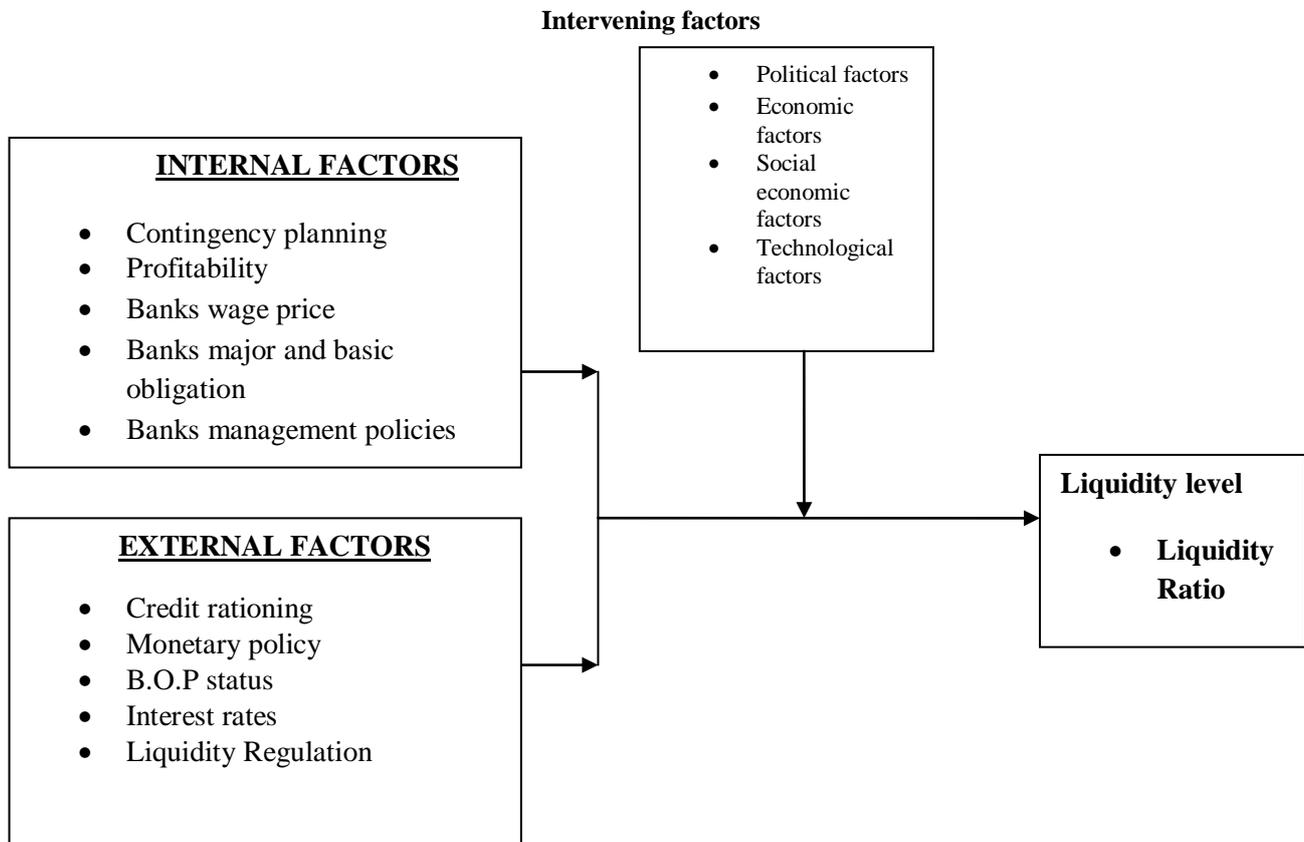
1.6 Justification of the study

The study sought to enrich the field of study in liquidity especially bring out the factors that influence the liquidity of commercial banks. The bank will get to know of the factors that influence their liquidity levels. The study opened grounds for analysis of factors to determine which factors the bank would have direct control on and how. The study will enlighten the rational depositors and enable them to make rational decisions especially in cyclical and seasonal economic trends that may influence banks liquidity. Through determination of factors that influence liquidity level and their relative importance, the central bank will determine whether its measure of liquidity level remains the most important thing. As a regulator the central bank would be able to determine whether banks should be left free since other influence will determine the liquidity level. The study will also tend to enhance the government's adoption of policies such as the foreign exchange controls, foreign direct investments, cash outflows and fiscal policies. Credit managers will be challenged to place liquidity in the context of the wider internal and external factors. This will put them in a position to make more informed decisions. Liquidity is a key indicator and predictor of bankruptcy and solvency. Financial analysts will therefore be in a position to appreciate the factors that influence the liquidity level of commercial banks and therefore advice the banks appropriately.

1.7 Conceptual frame work

Independent variables

Dependent variable



Source: (Self Conceptualization, 2012)

The conceptual model is a modification of concepts studied by various researchers on control environment, monitoring, accountability and liquidity levels. In the broad conceptual framework, the independent variables which include both internal and external factors and liquidity level being the dependent variable. There exist a number of intervening variables which include; political, economic and socio-economic factors which act as the control environment. It is assumed that there is a significant relationship between the independent and dependent variables, independent and intervening variables and independent, intervening and dependent variables. This model also will recognize other factors that affect the liquidity levels in commercial banks.

Research Methodology

3.1 Research Design

Exploratory survey research design was used to acquire accurate and detailed information from the respondents. This method was ideal because it attempts to collect data from members of a population in order to determine the current status of the population with respect to one or more

variable.

3.2 Study Area

This study was conducted in Kisumu City. Being a fast growing city, it has numerous banks that operate in the area.

3.3 Target Population

The population for this study was all the 27 commercial banks operating in Kisumu city hence a census study. The researcher chose commercial banks due availability of research data and convenience.

3.4 Sampling frame

Data was collected from all 27 commercial banks operating within Kisumu city, this being a census study no sampling was required.

3.5 Data Collection

Primary data was used in the study. Primary data was collected using a semi-structured questionnaire. The researcher administered the questionnaires through the drop and pick later method. The questionnaires were administered to

the head of finance of each commercial bank in Kisumu city.

3.5.1 Sources of Data

Questionnaires were administered to the head of finance in each bank in Kisumu city to collect primary data. Secondary data was obtained from journals, textbooks and business articles.

3.5.2 Data Collection Procedure

The researcher sought permission from the University for a go ahead to collect data from the respondents and also from the commercial banks that were involved in the exercise. Upon being granted the permission, the researcher distributed the questionnaire to the respondents.

3.5.3 Instrument for Data Collection

A well structured questionnaire with research questions was used to extract information from the respondents to meet the research objectives. The data collection instrument was first pre-tested before the final data was collected.

3.5.4 Reliability Test for Data Collection Instrument

Formulated questionnaires were pre-tested to establish their validity before they were administered to the respondents. The questionnaires were well structured to enhance the research objectives.

3.5.5 Validity Test for Data Collection Instrument

The researcher discussed in details the contents and the structure of the questionnaire with the supervisors before going to the field to ensure validity.

3.6 Model Specification

$$y=f(x)$$

$$y=f(x_1 \dots x_n)$$

$$y=\alpha_0 + \alpha_1 x_1 + \dots + \alpha_n x_n + e$$

Where:

Y- Dependent Variable

X₁ – Contingency Planning

X₂-Profitability

X₃- Banks Major Obligations

X₄-Management Policies

X₅-Credit Rationing

X₆-Monetary Policies

X₇-Government Expenditure

X₈-Banance of Payment

e- Error Term

3.7 Data Analysis

Once the data was collected it was edited for completeness and consistency. Data was analyzed using descriptive statistics; Pearson Correlation analysis and multiple regression analysis were used to determine the relationship between the factors and the liquidity level of banks in Kisumu city the use of statistical package of social sciences (SPSS) for windows was also brought on board to aid the researcher in analysis of the data.

3.8 Data Presentation

After the data had been analyzed, it was then presented in percentages, frequencies charts, graphs and tables.

3.9 Research Ethics

The researcher followed standards of research ethics. These included ensuring participants were informed of about the risk involved in the research of which they consented and participant were also assured of confidentiality of the information they gave.

Results and Discussion

This study sought to identify both internal and external factors that influence liquidity level of commercial bank in Kisumu City, Kenya. A total of 27 questionnaires were administered to the heads of finance of each bank. Analysis was done with the help of SPSS version 20 for windows.

4.1 Presentation of findings

Out of the 27 questionnaires distributed to the heads of finance of each of the 27 banks in Kisumu city, 26 questionnaires were returned successfully filled. The response rate was therefore 96.29 %.

The demographic characteristics considered were bank ownership, bank size in terms of assets and number of employees.

Table 4.1 Ownership of bank

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Private	20	74.0	76.9	76.9
	Government	3	11.1	11.5	88.5
	Foreign	3	11.1	11.5	100.0
	Total	26	96.2	100.0	
Non	respondent	1	3.8		
Total		27	100.0		

Source: Research Data, 2012

The table above shows the proportion of commercial banks' ownership. It shows that most of the banks (76.9 %) were locally owned private banks, while banks owned by the government and foreigners accounted for 11.5 % each of the total population studied.

Commercial banks with more than 10 billion in assets accounted for 34.6 % of the population.

Table 4.2: Value of total assets

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	10 billion and below	17	62.9	65.4	65.4
	10 billion and above	9	33.3	34.6	100.0
	Total	26	96.2	100.0	
Non	respondent	1	3.8		
Total		27	100.0		

Source: Research data, 2012

The table above categorizes respondents into two, based on the size of their assets. The table shows that banks with 10 billion and below in assets accounted for 65.4 % of the population of the study. The same information is presented in figure below.

The table below categorizes the respondents into four based on the size of their total employees. The table shows that commercial banks with 30 employees and below accounted for 11.5 % of the population of the study while banks with between 31 and 50 employees accounted for 73.1 % of the total population and only 15.4% of the banks had above 50 employees.

Table 4.3: Number of employees

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	between 20 and 30 employees	3	11.1	11.5	11.5
	between 31 and 40 employees	11	40.7	42.3	53.8
	between 41 and 50 employees	8	29.6	30.8	84.6
	above 50 employees	4	14.8	15.4	100.0
	Total	26	96.2	100.0	
Non response		1	3.8		
Total		27	100.0		

Source: Research Data, 2012

The figure below is a graphical presentation of the results in table 4.3 above. The graph shows that banks with between 20 and 30 employees accounted for 11.5 % of the population of the study while banks with between 31 and 50 employees accounted for 73.1 % and banks with more than 50 employees accounted for 15.4%.

4.1.1: Factors influencing liquidity level in commercial banks in Kisumu city

Descriptive statistics

The table below shows the descriptive statistics for all the variables used in the study

Table 4.4: Descriptive Statistics for internal factors

	N	Minimum	Maximum	Mean	Std. Deviation
Contingency planning	26	3.00	5.00	3.5769	.70274
Profitability	26	2.00	4.00	3.5769	.75753
Banks major and	26	3.00	4.00	3.1923	.40192
Banks wage price	26	2.00	4.00	2.9615	.34418
Management Policies	26	3.00	5.00	4.0769	.62757
Maturity of Loans	14	2.00	4.00	2.8571	.53452
Customer Service	9	1.000	2.000	1.11111	.333333
Level of idle assets	18	2.00	3.00	2.6667	.48507
Regularity of cash deposits	18	2.00	3.00	2.3889	.50163
Internal Liquidity level	26	1.00	4.00	3.4615	.98917
Valid N (list wise)	2				

Source: Research data, 2012

From the above table, it can be observed that the mean internal liquidity is 3.4615 and thus on average of the sample firms, for every Kshs 1 worth of net deposit liabilities, there are Kshs 3.4615 worth of net liquid assets take care of net deposit liabilities. Of the internal factors, management policies had the highest (4.0769) mean and customer service had the lowest (1.1111) mean.

4.1.2: External factors influencing liquidity level in commercial banks in Kisumu city

Table 4.5 : External factors influencing liquidity level

	N	Minimum	Maximum	Mean	Std. Deviation
Credit rationing	26	3.00	5.00	3.7308	.77757
Monetary Policy	26	3.00	4.00	3.5385	.50839
Government Expenditure	26	2.00	3.00	2.0769	.27175
B.O.P status	26	3.00	4.00	3.6154	.49614
Wage Price	25	2.00	3.00	2.8800	.33166
Interest rates	26	3.00	4.00	3.5000	.50990
Economic cycles	26	3.00	4.00	3.2692	.45234
Liquidity regulations by CBK	26	4.00	5.00	4.8077	.40192
Government Role	13	3.00	4.00	3.2308	.43853
Target Market	9	3.00	4.00	3.2222	.44096
Competition	12	3.00	3.00	3.0000	.00000
Inflation	12	3.00	3.00	3.0000	.00000
Internal Liquidity requirement	26	1.00	4.00	3.4615	.98917
Valid N (listwise)	0				

Source: research data, 2012

Table 4.6, indicates on average, of the external factors, liquidity regulations by the Central Bank of Kenya (CBK) had the highest (4.8077) mean and the government expenditure had the lowest (2.0769) mean.

4.1.3 Pearson Correlations Analysis
Table 4.6 Pearson Correlations Analysis

		Liquidity level	Contingency planning	Profitability	Banks major obligations	Management Policies	Credit rationing	Monetary Policy	Government Expenditure	B.O.P status
Pearson Correlation	Liquidity level	1.000	.177	-.156	.271	.198	.168	.043	.160	.458
	Contingency planning	.177	1.000	-.199	.016	.258	-.144	.327	-.032	-.026
	Profitability	-.156	-.199	1.000	.015	-.013	-.473	-.320	.164	-.237
	Banks major and obligations	.271	.016	.015	1.000	.415	.300	-.136	-.141	.386
	Management Policies	.198	.258	-.013	.415	1.000	.372	-.010	-.036	-.030
	Credit rationing	.168	-.144	-.473	.300	.372	1.000	.078	-.277	.239
	Monetary Policy	.043	.327	-.320	-.136	-.010	.078	1.000	-.022	.061
	Government Expenditure	.160	-.032	.164	-.141	-.036	-.277	-.022	1.000	-.365
	B.O.P status	.458	-.026	-.237	.386	-.030	.239	.061	-.365	1.000
Sig. (1-tailed)	Liquidity level	.	.193	.223	.090	.166	.206	.418	.217	.009
	Contingency planning	.193	.	.164	.468	.101	.242	.051	.438	.449
	Profitability	.223	.164	.	.471	.475	.007	.056	.211	.121
	Banks major and obligations	.090	.468	.471	.	.018	.068	.255	.246	.026
	Management Policies	.166	.101	.475	.018	.	.031	.481	.431	.443
	Credit rationing	.206	.242	.007	.068	.031	.	.353	.086	.120
	Monetary Policy	.418	.051	.056	.255	.481	.353	.	.457	.384
	Government Expenditure	.217	.438	.211	.246	.431	.086	.457	.	.033
	B.O.P status	.009	.449	.121	.026	.443	.120	.384	.033	.
N	Liquidity level	26	26	26	26	26	26	26	26	26
	Contingency planning	26	26	26	26	26	26	26	26	26
	Profitability	26	26	26	26	26	26	26	26	26
	Banks major and obligations	26	26	26	26	26	26	26	26	26
	Management Policies	26	26	26	26	26	26	26	26	26
	Credit rationing	26	26	26	26	26	26	26	26	26
	Monetary Policy	26	26	26	26	26	26	26	26	26
	Government Expenditure	26	26	26	26	26	26	26	26	26
	B.O.P status	26	26	26	26	26	26	26	26	26

Source: Research data, 2012

Table 4.9 Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	95.0% Confidence Interval for B		Co linearity Statistics	
	B	Std. Error	Beta			Lower Bound	Upper Bound	Toleranc e	VIF
1(Constant)	-6.121	3.841		-1.594	.129	-14.224	1.982		
Contingency planning	.301	.321	.214	.939	.361	-.376	.979	.653	1.530
Profitability	.004	.317	.003	.014	.989	-.664	.673	.577	1.732
Banks major Obligations	-.011	.574	-.005	-.020	.984	-1.222	1.200	.625	1.600
Management Policies	.201	.382	.128	.526	.606	-.605	1.007	.578	1.729
Credit rationing	.170	.342	.134	.498	.625	-.551	.892	.470	2.127
Monetary Policy	-.122	.402	-.063	-.304	.764	-.970	.726	.797	1.255
Government Expenditure	1.543	.744	.424	2.074	.054	-.027	3.113	.814	1.229
B.O.P status	1.189	.450	.596	2.644	.017	.240	2.138	.668	1.496

Dependent Variable: Internal Liquidity requirement

The table above shows the findings based on the Pearson correlation coefficient

The liquidity level is negatively correlated with profitability with a coefficient of -.156 and is significant. As the profitability increases the liquidity level is expected to decline. The contingency planning is positively related with liquidity level with a coefficient of .177 and significant at 5% level of significance.

4.1.4: Multiple Regression Analysis

The multiple regression model summaries are as follows:

Table 4.7 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. Change	
1	.650 ^a	.422	.150	.91191	.422	1.552	8	17	.212	2.033

a. Predictors: (Constant), B.O.P status, Contingency planning, Management Policies, Profitability, Government Expenditure, Monetary Policy, Banks major and, Credit rationing

b. Dependent Variable: Internal Liquidity requirement

Source: Research Data, 2012

R² statistic measures how well the regression line approximates the real data points and measures the proportion of the total variation in the dependent variables that is explained by the independent variables. The R² of the model is 42.2 %. This means that 42.2 % of the variation in liquidity level is explained by variations in contingency planning(X₁), profitability(X₂), banks major obligations(X₃), management policies(X₄), credit rating(X₅), monetary policies(X₆), government expenditure(X₇) and B.O.P status (X₈). The remaining variation, which is the error term, of 57.8 % is attributed to other factors.

The multiple regression models is fitted as follows:

$$Y = -6.121 + .301X_1 + .004 X_2 - 0.201X_3 + 0.170X_4 - 0.122X_5 + 1.543X_6 + 1.189X_7$$

$$R^2 = 42.2\%$$

The constant of the model is -6.121 and indicates that holding other independent variables constant at zero the liquidity level will be -6.121. The relationship between liquidity level and contingency planning is positive. Thus a contingency planning impacts positively on liquidity level.

4.2 Discussion of findings

From the results of the study, 76.9 % of the banks were locally owned private banks, while banks owned by the government and foreigners accounted for only 11.5 % of the total population studied. Commercial banks with more than 10 billion in assets accounted for only 34.6 % of the population while banks with 10 billion and below in assets accounted for 65.4 % of the population of the study (see table 4.2).

Variations in liquidity level are caused by both internal and external factors. Internal factors found significant in determining liquidity level of commercial banks in Kisumu are contingency planning, profitability, banks major obligations and management policies.

On the hand external factors found significant in determining liquidity level of banks in Kisumu are credit rating, monetary policies, government expenditure and B.O.P status. The study also supports observations by Baumol and Blinder (1988) that banks will want to squeeze the maximum possible money supply out of any given amount of cash reserves.

On average, external factors like; liquidity regulations by the Central Bank of Kenya had the highest mean of 4.8077 and the government expenditure had the lowest 2.0769. This means that regulation by central bank of Kenya affects most the liquidity level in commercial banks.

From the results, R^2 shows the proportion of the total variation in the dependent variables that is explained by the independent variables. From the study, R^2 of the model is 42.2 % meaning that 42.2% of the variation in liquidity level is explained by variations in contingency planning, profitability, banks major obligations, management policies, credit rating, monetary policies, government expenditure and B.O.P status. Error term takes the remaining variation while other factors take 57.8 % (see table 4.9)

A significant coefficient of -0.156 in profitability shows that liquidity level is negatively correlated with profitability. This means that as profitability increases the liquidity level is expected to decline. A significant coefficient of -0.201 of banks major obligations also shows that there is a negative

correlation between bank liquidity levels and its major obligations.

From the research, a constant of -6.121 in the model indicates that holding other independent variables constant at zero the liquidity level will be -6.121. This shows that there is a positive relationship between liquidity level and contingency planning, meaning that contingency planning impacts positively on liquidity level (see table 4.9). These results are consistent with similar studies such as Argenti (1976), Stals (1999). However, the results contradicts Hempel et al (1994)

5.1 Summary of Findings

5.1.1: factors internal to commercial bank influences liquidity level of commercial banks

The objective of the study was to investigate the factors that influence liquidity level of commercial banks in Kisumu City, Kenya. Liquidity ratio was used as a proxy for firm's liquidity level. Since liquidity level of a commercial bank is influenced by multiple factors, these factors were categorized into two, internal and external factors as discussed in this report. The findings of the study support the proposal by Sinkey (1992) that to avoid vulnerability of a bank to economic shocks it is important to build a sound banking system. This study ranked liquidity regulations by the CBK as an important variable in influencing liquidity level of commercial banks in Kisumu.

Descriptive statistics revealed that mean liquidity level among commercial banks in Kisumu was 3.4615, implying that for every Kshs 1 worth of net deposit liabilities, there are Kshs 3.4615 worth of net liquid investments to take care of short term obligations associated with deposit liabilities. This is far much above the minimum statutory requirement of Kshs 2.0. The following nine internal factors were identified: contingency planning, profitability, banks major obligations,, banks wage price, management policies, maturity of loans, customer service, level of idle assets, and regularity of deposits. Of these factors, management policies had the highest (4.0769) mean and customer service had the lowest (1.1111) mean.

5.1.2: factors external to the commercial bank influences liquidity level of the commercial banks

On the other hand ,twelve factors external to the bank were identified namely; credit rationing, monetary policy, government role, government expenditure, B.O.P status, wage price, interest rates, economic cycles, liquidity regulations by CBK, target market, competition and inflation. Of

these factors, liquidity regulations by the Central Bank of Kenya (CBK) had the highest (4.8077) mean and the government expenditure had the lowest (2.0769) mean.

The multiple regression analysis was carried out to establish the impact of each of these factors on the liquidity level of commercial banks in Kisumu. The results of the model fitted using SPSS software shows that 42.2 % the variations in liquidity level are explained by changes in the independent variables notably; contingency planning, profitability, banks major obligations, management policies, credit rating, monetary policies, government expenditure and B.O.P status with 57.8 % of the variation being explained by other factors external to the model.

5.2 Conclusion of the Study

The conclusion of the study therefore is that variations in liquidity level are caused by both internal and external factors. Internal factors found significant in determining liquidity level of commercial banks in Kisumu are contingency planning, profitability, banks major obligations and management policies.

On the hand external factors found significant in determining liquidity level of banks in Kisumu are credit rating, monetary policies, government expenditure and B.O.P status. The study also supports observations by Baumol and Blinder (1988) and Marshall (1974) that banks will want to squeeze the maximum possible money supply out of any given amount of cash reserves.

5.3 Recommendations of the Study

From the results of the study, it has emerged that there are a number of factors that influence liquidity level of commercial banks in Kisumu, CBK regulations being one of them. The regulator should take into account that the liquidity level of commercial banks in Kisumu is influenced by other factors other than regulatory and in situations where banks are facing liquidity crises, the CBK should advise these banks from a well-informed point of view as well as be able to determine causes of any illiquidity.

While formulating their policies, commercial banks in Kisumu should take into account that there are many factors that influence liquidity. Some of these factors are controllable since they are within the bank while others call for proper adjustments and competition since they are external to the bank. Given knowledge of these factors influencing liquidity level, banks should be able to analyze situations that could result to liquidity risk.

5.4 Limitations of the Study

Due to finance and time constraints, the research was limited to only commercial banks in Kisumu city. Therefore, to generalize the results for a larger group, the study should have involved a larger area of study, may be in other sectors of the economy or in other areas of the country.

5.5 Suggestions for Further Research

In order to improve this study, the researcher would like to suggest the following for further investigation. An exclusive study on the factors that influence the liquidity level of commercial banks in Kenya .Future research should be conducted on categories of demographic characteristics. Such characteristics could be on the bank ownership and size of the bank among others. Testing of the other factors that were put forward other than those tested by the questionnaire to determine their relative importance.

Further research could be conducted based on various geographical areas since such areas represent a variation in target markets and consequently the customers banking habits. Comparisons could be done on whether or not there is any variation or similarity.

Study of the non-banking financial institutions should be undertaken in order to make a comparison of the results. Since the study tested only the banking institutions, other financial institutions should be studied in order to compare the results.

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