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The effect of liquidity risk on the financial performance of banking institutions in Kampala Metropolitan.

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Abstract: *This study aims to investigate the impact of liquidity risk on the financial performance of banking institutions located in the Kampala Metropolitan area of Uganda. The study applied a descriptive research design. The sample was 201 individuals. This study used both primary and secondary data that was obtained from the response of the resdondents of the applied questionnaires and the face to face interview with some of the banking officers and from journal, articles and other researcher respectively. A descriptive, correlation and linear regression model was used in data analysis. The findings are that the model's R-square value is 0.032, indicating that approximately 3.2% of the variance in overall bank financial performance can be explained by the liquidity risk practices. The adjusted R-square, which takes into account the number of predictors in the model, is 0.027. The standard error of the estimate is 1.31700, which represents the average distance between the observed values of overall bank financial performance and the predicted values by the model. The study suggests that the respondents had moderately positive perceptions regarding the effectiveness of liquidity monitoring practices in the banking institutions in Kampala Metropolitan. These findings indicate that liquidity monitoring plays a role in influencing the financial performance of the banks, potentially contributing to their overall stability and success.*

Keywords: liquidity risk, financial performance, banking institutions, Kampala Metropolitan.

Introduction

The banking industry plays a pivotal role in the economic development of nations by facilitating the mobilization and allocation of financial resources. As financial intermediaries, banks are entrusted with the responsibility of managing deposits and providing loans to individuals and businesses. However, the inherent nature of banking activities exposes these institutions to various risks, including liquidity risk, which can significantly impact their financial performance and stability.

Liquidity risk arises from the potential inability of a bank to meet its short-term financial obligations, such as withdrawals by depositors or repayment of maturing liabilities. This risk is particularly critical as it can lead to a domino effect, triggering solvency issues and undermining public confidence in the banking system. The global financial crisis of 2007-2008 highlighted the severe consequences of inadequate liquidity management, with many banks experiencing liquidity shortages that ultimately led to insolvency and the need for government bailouts.

Methods

Research Design

Characterized as a conceptual framework used in the course of conducting research, according to *Mugenda and Mugenda (2018),* a research design is a predefined structure that a researcher intends to implement in the actual research process. The primary emphasis of a research design is to elucidate the realities and forecast the occurrences associated with specific situations, following the insights of *Borg, Meridith, and Gall (2018).* This research employed descriptive and correlational research methodologies. As outlined *by Foster, Roche, Giandinoto, and Furness (2020),* the purpose of a descriptive-correlational methodology is to provide descriptions of variables and their interrelationships. The descriptive correlational approach, as defined *by Seeram (2019),* is employed to depict associations between various variables. This research design is selected because it offers the means to illustrate the connections between the liquidity management practices of banking institutions and their financial performance.

Study Population

The population encompasses entities and individuals who share common characteristics that pique the researcher's interest (*Ghauri, Gronhaugh & Strange, 2020). Hennink, Hutter, and Bailey (2020)* have explained that the target population refers to a group of individuals, objects, or items from which samples are selected for measurement. It represents the broad perspective of study results that a researcher aims to obtain *(Ghauri et al., 2020)* by defining it as a group of people from which a sample is derived. The target population constitutes the complete assembly or group of individuals that the researcher intends to investigate and analyze. Consequently, the target audience can be defined as the protective system from which evaluation data is gathered. In this research, the focus was on 10 banking institutions (Centenary Bank, Stanbic Bank, Equity Bank, Finance Trust Bank, , DFCU Bank, ABSA Bank, Housing finance Bank and UBA,). The target population included senior management, middle management, finance and accounting staff, risk management personnel and operations staff. **There were a few key reasons for selecting the specific banks that were included in this study as the target population:**

Representativeness: The 10 banks chosen - Centenary Bank, Stanbic Bank, Equity Bank, etc. - collectively represent the diverse segments of Uganda's banking sector in terms of size, ownership type, market share, and functions performed. This improves the generalizability of findings.

Accessibility: As a researcher based in Kampala, I had existing connections and ability to easily access information and respondents from head offices/branches of these banks located within the city. This was important for feasibility.

Comparability: Many of these banks (e.g. Centenary, DFCU, UBA) have been operating for decades and through different economic periods, allowing comparisons over time. The inclusion of newer players like Finance Trust enhances insights.

Cooperation: During the scoping phase, these particular institutions signaled willingness to participate and support data collection from their employees. Without such cooperation, the study would not have been possible.

Profile: Collectively the banks chosen hold over 70% of industry assets, deposits and loans. They therefore offer an accurate reflection of broader sector issues as systemic risk regulators aim to understand.

The target population is as outlined in Table 3.1.

Table 1 Distribution of Target Population

Category	Target Population
Senior Management	10
Middle Management	27
Finance and Accounting Staff:	20
Risk Management Personnel	32
Operations Staff	112
Total	**201**

Source: (Banks' Resources Department records, 2023)

Sample Size Determination was done applying Simple random sampling

The sample size refers to a restricted subset taken from the larger target population, aiming to generalize the findings to a broader context *(Hennink, Hutter & Bailey, 2020).* In this instance, the study included all 201 employees who represented the sample respondent for inquiry and as earlier mentioned the 10 banking institutions represented the unit of analysis. which reprented a relatively small and manageable population size. The interviews were meant to complement the survey data and add richer context, specifically around employee experiences. The researcher selected 15 bank employees for interviews across the 10 banking institutions. The selection process involved first stratifying respondents based on their roles – the researcher wanted a mix of frontline staff, managers and executives. Within each stratum, the researcher then employed purposive sampling to select individuals that would provide maximum variation in terms of age, gender, years of experience and other characteristics.

The interviews were semi-structured, with open-ended questions, and lasted 30-45 minutes on average. All participants provided informed consent. The researcher took care to protect confidentiality by removing any identifying details from transcripts. This mixed methods triangulation allowed me to validate and enhance findings between the survey and interview data. For example, certain quantitative results like stress levels could be probed deeper qualitatively.

Sampling Procedure

Sampling techniques refer to various strategies designed to reduce the amount of data collected by concentrating on a subset of cases or elements instead of encompassing all potential cases or elements. The sampling process involves the procedure of selecting individuals from a population to form a smaller group of participants suitable for research purposes.

Data Collection Methods

After obtaining an introductory letter from the university, the researcher employed a method where questionnaires are distributed to the participants, and then collected after they have been filled out. Questionnaires are the primary means of data collection in this study. According to *Solymosi and Bowers (2018),* a questionnaire is a technique for requesting, capturing, and consolidating information. Face to face interviews where to a small extent enployed. Likert scale questions were used in the questionnaire because the responses to such inquiries could be easily summarized and categorized based on the levels of agreement reported by the respondents, as suggested *by Ivey (2017).*

Data Collection Instruments

Data collection instruments as the tools and procedures used in the measurement of variables in research. There are various methods of data collection differing in terms of costs, time and other resources at the disposal of the researcher. The data will be collected using questionnaires.

Structured Questionnaire.

The gathering of primary data was achieved by employing questionnaires. As emphasized *by Kothari et al. (2019),* questionnaires are recognized as the primary and extensively utilized means of data collection, particularly in the evaluation of institutional performance. The researcher utilized a quantitative approach, employing a meticulously designed research questionnaire. This research study also used secondary data from research journals, publications and library resourses. Five likert questionnaires deemed the most appropriate, pragmatic method to efficiently and anonymously obtain a large sample of primary data from students on their experiences, all critical factors in fulfilling the research objectives. The quantitative data obtained also complemented the qualitative secondary sources.

Validity and Reliability of the Instruments

Quality control is implemented to verify that instruments gather data in alignment with the study's intended purpose and objectives.

Validity

Validity, according *to FitzPatrick (2019),* pertains to the degree to which the conclusions drawn by the researcher possess significance and precision. It indicates the extent to which the findings of a study, derived from data analysis, accurately represent the intended purpose of the research. In simpler terms, validity is achieved when the collected data accurately measures the intended variables.

To secure content validity in research instruments, the common practice involves enlisting an expert in the specific field being studied. In the context of this research, the questionnaire will undergo a face validity evaluation conducted by a research expert affiliated with the university, who also serves as the researcher's supervisor. Furthermore, experts and lecturers will be consulted to offer their professional insights on the content and face validity of the research instrument. By adhering to this rigorous criterion, as advocated by *Kothari et al. (2019),* the research can be carried out with minimized bias, ensuring equilibrium, relevance, and overall validity.

Reliability

Reliability refers to the degree to which a research instrument consistently produces consistent and trustworthy results *(Andrade, 2018).* As proposed *by Klenke (2016),* reliability is evaluated by examining the consistency and stability of results across successive studies, providing an accurate representation of the entire population. If a study's findings are replicated under similar conditions and yield similar outcomes, the research instrument is considered reliable. This is achieved by establishing the correlation between scores obtained from different administrations of the scale.

When this correlation is sufficiently high, it indicates that the scale consistently generates dependable results and can be deemed reliable. To assess the internal consistency among the items within each construct, the Cronbach's alpha coefficient will be utilized, which ranges from 0 to 1.0. A value of 0.7 is typically considered acceptable for Cronbach's alpha, while significantly lower values suggest an unreliable scale *(Sekaran & Bougie, 2016).* The reliability of this questionnaire will be evaluated using the Cronbach's alpha coefficient with the assistance of Statistical Package for Social Sciences (SPSS) software version 28.

Procedure of Data Collection

This process involves gathering information to either support or challenge the study's hypotheses. Data was obtained following the receipt of an introductory letter from Kampala International University and approval from research regulatory bodies. These documents facilitated the data collection process and indicate the study's academic endorsement. Data collection was divided into three distinct phases: the pre-fieldwork phase, pilot testing phase, and questionnaire administration phase. The questionnaire was organized into various sections to encompass all variables.

The selection of a questionnaire as the data collection method is based on its discreet and cost-effective nature. The questionnaires were distributed using a drop-and-retrieve approach for respondents. Questionnaires are chosen for their ability to standardize data collection across participants, thereby reducing response variations. This enhances the reliability and validity of the collected data. Furthermore, questionnaires can be administered to a large number of participants simultaneously, making them an efficient data

collection tool. Lastly, data obtained from questionnaires can be easily subjected to analysis, ensuring prompt and effective data processing.

Data Management and Analysis

This section delineates the procedures for managing, processing, and analyzing the data. The data went through a process of cleaning, coding, and preparation. Questionnaires were thoroughly examined to verify their completeness and rectify any errors. The data was assigned codes before being entered into the software for analysis. Data analysis, as characterized *by Grant (2020)*, is the methodical process by which data is examined employing analytical or statistical tools, facilitating the identification of meaningful and valuable insights. In this study, the data was subjected to quantitative analysis.

Quantitative and Qualitative Data Analysis.

The gathered data was coded and entered into a computer system for examination using Statistical Package for Social Sciences (SPSS) Version 28, enabling the generation of analyses. To ensure the data's quality, a data cleansing process was also conducted to eliminate any errors. The quantitative data was analyzed through a combination of descriptive and inferential statistics, with the utilization of SPSS Version 28. Descriptive statistics was presented using frequency distributions, tables, and percentages, facilitating the interpretation of respondents' questionnaire responses. In order to assess the effect between the liquidity management practices and Financial Performance, inferential statistics (correlation and multiple regression), were employed

Results

Table 2: The Effect of liquidity risk practices on the financial performance of banking institutions in Kampala Metropolitan.

Liquidity Risk Practices	**N**	**Mean**	**Std. Deviation**
The bank has established guidelines for short-term lending practices.	201	3.0100	1.56841
Compared to previous years, our bank has raised the amount of funds retained within the institution.	201	3.3781	1.43747
This bank has diminished its off-balance-sheet obligations in contrast to recent years.	201	3.4229	1.39473
The bank aligns the quantities of assets and liabilities concerning their maturity.	201	3.4328	1.41659
Short-term financial instruments are more commonly employed by the bank than long-term ones.	201	3.4129	1.36881
The bank maintains ample balances in settlement accounts to cover overnight settlements.	201	3.3582	1.41811
The bank typically forecasts potential net customer withdrawals or inflows.	201	3.4080	1.42223
Valid N (listwise)	201		

Source: *Primary data,* (2024)

The study investigated liquidity risk practices in a bank, focusing on various aspects related to short-term lending, fund retention, off-balance-sheet obligations, asset-liability alignment, instrument preferences, settlement account balances, and customer withdrawal forecasting. A total of 201 respondents participated in the study, providing their perceptions on these practices. The results indicate that the bank has established guidelines for short-term lending practices, with a mean value of 3.0100 and a standard deviation of 1.56841, suggesting a neutral perception among the respondents regarding the existence of such guidelines. In terms of fund retention, the bank's efforts to raise the amount of funds retained within the institution were perceived positively, with a mean

value of 3.3781 and a standard deviation of 1.43747. This suggests that, compared to previous years, the bank has been successful in increasing its retained funds.

Furthermore, the bank's efforts to diminish off-balance-sheet obligations in contrast to recent years received a positive perception, with a mean value of 3.4229 and a standard deviation of 1.39473. This indicates that the respondents agreed that the bank has been successful in reducing its off-balance-sheet obligations. The bank's practice of aligning the quantities of assets and liabilities concerning their maturity was also positively perceived, with a mean value of 3.4328 and a standard deviation of 1.41659. This suggests that the bank has been effective in managing the maturity profiles of its assets and liabilities.

Regarding instrument preferences, the use of short-term financial instruments over long-term ones was more common, as indicated by a mean value of 3.4129 and a standard deviation of 1.36881. This suggests that the respondents agreed with the bank's preference for short-term instruments. Additionally, the bank's maintenance of ample balances in settlement accounts to cover overnight settlements received a positive perception, with a mean value of 3.3582 and a standard deviation of 1.41811. This indicates that the respondents believed that the bank has been maintaining sufficient balances for settlement purposes.

Lastly, the bank's ability to forecast potential net customer withdrawals or inflows was perceived positively, with a mean value of 3.4080 and a standard deviation of 1.42223. This suggests that the respondents agreed that the bank has been effective in forecasting customer behavior in terms of withdrawals and inflows.

Therefore, the study reveals that the respondents perceived the bank's liquidity risk practices positively, with agreement or positive perceptions observed across various aspects. These findings, supported by the statistical values, suggest that the bank has implemented effective measures and strategies in managing liquidity risks, which may contribute to its overall financial stability and performance.

Table 1: Linear regression on liquidity risk practices

Table 4:Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.178[a]	.032	.027	1.31700

a. Predictors: (Constant), Liquidity risk practice

Table 5:ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	11.271	1	11.271	6.498	.012[a]
	Residual	345.165	199	1.734		
	Total	356.436	200			

a. Predictors: (Constant), Liquidity risk practice

b. Dependent Variable: Overall Bank financial Performance

Table 6:Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.452	.856		6.371	.000
	Liquidity risk practice	-.581	.228	-.178	-2.549	.012

a. Dependent Variable: Overall Bank financial Performance

The model's R-square value is 0.032, indicating that approximately 3.2% of the variance in overall bank financial performance can be explained by the liquidity risk practices. The adjusted R-square, which takes into account the number of predictors in the model, is 0.027. The standard error of the estimate is 1.31700, which represents the average distance between the observed values of overall bank financial performance and the predicted values by the model.

The ANOVA table shows that the regression model as a whole is statistically significant, as indicated by the F-value of 6.498 and a significance level of 0.012. This suggests that the inclusion of liquidity risk practices as predictors significantly contributes to explaining the variation in overall bank financial performance. The coefficients table, the unstandardized coefficients represent the estimated effect of each predictor on the dependent variable (overall bank financial performance). The constant term is 5.452, indicating the expected value of the dependent variable when all predictors are zero.

The coefficient for liquidity risk practice is -0.581. It suggests that, on average, a one-unit decrease in liquidity risk practice is associated with a 0.581-unit decrease in overall bank financial performance. The standardized coefficient (Beta) of -0.178 indicates the standardized effect size of liquidity risk practice, considering other variables in the model. The t-value of -2.549 indicates that the coefficient for liquidity risk practice is statistically significant at a significance level of 0.05. This suggests that there is a significant relationship between liquidity risk practices and overall bank financial performance.

Therefore, the regression analysis suggests that liquidity risk practices have a statistically significant but relatively weak relationship with overall bank financial performance. The negative coefficient indicates that better liquidity risk practices are associated with higher overall financial performance. However, it's important to note that the model explains only a small portion of the variance in bank financial performance, indicating that other factors not included in the model may also influence overall performance.

Discussion of findings

The findings revealed that 3.2% of the variance in overall bank financial performance can be explained by the liquidity risk practices (R^2= 0.032) The adjusted R-square, which takes into account the number of predictors in the model, is 0.027. The standard error of the estimate is 1.31700, which represents the average distance between the observed values of overall bank financial performance and the predicted values by the model. The ANOVA table shows that the regression model as a whole is statistically significant, as indicated by the F-value of 6.498 and a significance level of 0.012. This suggests that the inclusion of liquidity risk practices as predictors significantly contributes to explaining the variation in overall bank financial performance. The coefficients table, the unstandardized coefficients represent the estimated effect of each predictor on the dependent variable (overall bank financial performance). The constant term is 5.452, indicating the expected value of the dependent variable when all predictors are zero.

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Conclusion

Based on the findings, it is concluded that while the regression model indicates a statistically significant relationship between liquidity risk practices and bank financial performance, with liquidity risk practices alone explaining around 3.2% of the variance in performance, this implies there are other important factors influencing financial results as well. Existing literature highlights how maintaining prudent liquidity risk management, as evidenced through holdings of liquid assets and avoidance of illiquid investments, can enhance stability and lower funding costs. However, research also suggests individual risk methods often have modest isolated impacts, though adopting a comprehensive, multifaceted approach to liquidity risk management delivers greater benefits to long-term bank success. Some studies have observed slightly varying effect sizes across different market and regional contexts over time

too. Overall, the analysis provides validation for theories regarding liquidity risk management's importance for prosperity in the banking sector. And our own utilization of rigorous liquidity risk practices appears well-placed to bolster the financial resilience of our institution, in line with both prior empirical studies and the significance of strategic liquidity risk governance indicated in the regression modeling.

Recommendations

Recommendations to banking institutions in Kampala Metropolitan concerning the effect of liquidity risk management on financial performance:

Implement a comprehensive liquidity risk management framework. The framework should include clear policies and procedures for identifying, assessing, and mitigating liquidity risks.

Maintain a sufficient level of liquid assets. Liquid assets are assets that can be easily converted into cash to meet short-term obligations. Banks should maintain a sufficient level of liquid assets to cover potential liquidity shortfalls.

Avoid illiquid investments. Illiquid investments are investments that cannot be easily converted into cash. Banks should avoid illiquid investments, as they can increase the risk of a liquidity shortfall.

Monitor liquidity risk on an ongoing basis. Banks should monitor liquidity risk on an ongoing basis to identify and mitigate potential risks. Monitoring should include regular reporting and analysis of liquidity data.

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