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PRUDENTIAL REGULATIONS AND FINANCIAL DEEPENING AMONG TIER II COMMERCIAL BANKS IN KENYA

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ABSTRACT

This study explored prudential regulations and financial deepening link among Tier II commercial banks in Kenya. The agency theory, financial intermediation theory, liquidity management preference theory and the capital buffer theory anchored the study. The study used descriptive survey and correlational design with the target population being the eight Tier II commercial banks as licensed by the CBK as at 31st December 2021. Census was undertaken. Information in its auxiliary form was gathered over timeframe as from 2017 through 2021. The data analysis was carried out using both descriptive statistics such as means and standard deviations as well as inferential statistics such as correlation and regression. The results were then presented through tables and figures. Diagnostic tests covering normality, multicollinearity and autocorrelation were carried out prior to regression analysis. In the course of conducting this study, all the literature and information obtained was appropriately cited and referenced as an ethical concern. The study established that liquidity management exerted the greatest significant effect on financial deepening (β= 0.657, p<0.05) followed by corporate governance that had negative and significant effect (β= -0.567, p<0.05), agent banking (β= 0.027, p<0.05) and lastly capital adequacy (β= 0.001, p<0.05) respectively all having positive and significant effect on financial deepening. The study concluded that prudential regulation is an important variable that allow banks to grow their financial depths. The study recommended that tier II commercial banks in Kenya should establish an optimal level of the equities and assets that would optimize financial depth. The marketing managers working among tier II commercial banks in Kenya should invest more in direct sales people to promote and create more awareness among customers on the need to take up agent banking services. The boards of directors working in tier II commercial banks in Kenya should strengthen and improve on their oversight role, demand for accountability on the side of management and ensure they minimize conflicting interests between managers and shareholders. The marketing managers of the tier II commercial banks in Kenya should put in place sound marketing practices for maximization of the deposits from customers which are a key indicator of financial deepening that the study built on for economic progress.

Key Words: *Capital Adequacy, Agent Banking, Corporate Governance, Liquidity Management*

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INTRODUCTION

Financial deepening arises when commercial banks are able to efficiently resolve financial variations that may stem from shocks. The 2007/2008 Global Financial Crisis destabilized the entire banking system and this heightened the need for financial regulations. However, over-regulation may hike the costs incurred to run a financial institution and ultimately the profitability. Another adverse effect of regulations is that they may limit and constrain the ability of commercial banks to expand and this may slow down the growth of the economy (Eden, 2014). Across the world, there is disagreement among economists on use of regulation as a financial and economic intervention because it is believed that too much regulation may contribute towards losses (Bougatef & Mgadmi, 2016).

Locally in Kenya, Mabeya, Nyakundi and Mogwambo (2016) observed that risk management prudential regulation is key in driving profitability of the commercial banks besides corporate governance regulation as well as consumer protection regulation and loan loss regulation. According to Wangari and Mutswenje (2020), the critical aspects of prudential regulations guiding the operations of the Kenyan commercial banks revolve around liquidity management (LM), corporate governance (CG), agency banking (AB) and capital adequacy (CA). These studies create gaps as they emphasized more on prudential regulations and financial performance and profitability thus failing to link the same with financial deepening hence the motivation of the present study.

Prudential regulations (PR) are guidelines and restrictions aimed at creating transparency among the banks, individuals and body corporates as they conduct their activities (Agénor, Gambacorta, Kharroubi & Pereira da-Silva (2018). In 2013, a total of 23 Prudential regulations were issued by the Central Bank of Kenya (CBK) and this was aimed at stabilizing the banking sector through protection of the deposits of the customers while ensuring that systematic risks have been well managed (Mabeya et al., 2013). All these are aimed at winning the confidence of the customers. Effective regulation of banks increases access to financial services, enhancing performing and translating to better performance outcomes. Banks that are regulated are predicted to be financially stable and may not be bankrupt so easily (Njeule, 2013). On the contrary, poorly regulated banks are characterized by limited profit prospects occasioned by significant losses and may likely be rendered as bankrupt. This may have adverse implication on the overall economy of the country at large (Schydlowsky, 2020).

Financial deepening (FD) is the ability of an institution to generate more financial assets in a country (Wangari, 2020). It is the degree which a financial entity is able to ensure that the savings have been properly mobilized so as to support investment activities within an economy. Financial deepening enhances the ability of the customers to save while improving the rate of capital allocation (Dzapasi, 2020). Furthermore, financial deepening reduces information asymmetry while helping the financial institution to manage and control the level of inherent risks. Financial deepening strengthens the financial system by ensuring that financial services are easily accessible to all people across the society. Financial deepening seeks to strengthen the rate of availability of the financial services among financial institutions (Njeru, 2016).

There are different measures of financial deepening; these include liquid liabilities, credit facilities advanced to privately established entities against the Gross Domestic Products (GDP), commercial central bank asset (CCBA) as well as commercial bank deposits (Olawumi, Lateef & Oladeji, 2017). The ratio of commercial bank deposits to the Nominal GDP is a good measure of financial deepening. Deposits are critical towards survival and operation of the bank hence the reason the measure was taken. Table 1.1 gives a trend in deposits against nominal GDP of Tier II commercial banks in Kenya in relation to the Tier I and Tier II banks.

The study conducted by Agénor, Gambacorta, Kharroubi and Pereira da Silva (2018) focused on 64 advanced and developing economies where it

emerged that prudential regulations positively contributes towards financial deepening and thus the growth of an economy. Olivier and Mulyungi (2018) did an assessment of prudential regulations and how they relate with performance with a focus on banks in Rwanda and registered a direct nexus. Otieno (2013) did an assessment of financial deepening and its implication on profitability with a focus on Kenyan banks where a positive relationship was noted.

Within the Kenyan context, the Prudential regulations and the Banking Act provide licensing and regulation to commercial banks. The role of the CBK is to license and regulate these institutions. This is aimed at protecting the deposits of the clients while establishing stable institutions. The role played by commercial banks in Kenya is well acknowledged by the government since they open up opportunities for jobs while fostering the growth of the economy (Njeule, 2013). The Kenyan commercial banks have been categorized into 3 tiers by the CBK. The bases of this classification include the value of assets, the value of customers and the overall share of the market. The larger and stable banks occupy the first tier and their overall share they command in the market is relatively large. The medium banks occupy the second tier while the smaller institutions fall in the third tier (Nzoka, 2015). In total, there are 9 tier II banks with operation in Kenya.

Statement of the roblem

The ratio of bank deposits against nominal GDP is a good indicator of financial deepening among commercial banks (Türsoy & Faisal, 2018; & Ng'ang'a, 2016). A critical analysis of this ratio with specific reference to tier II banks in Kenya reveals a worrying trend. For instance, this ratio of deposits against GDP of the tier II banks in Kenya has averaged at 8% from 2016-2020 (CBK, 2020) as compared to an average deposits to GDP of 25% for tier I banks. Moreover, whereas the ratio has been on a steady upward trajectory with respect to the Tier I banks that of Tier II banks is characterized by wide fluctuations (CBK, 2020). Given the instrumental role that banking entities play, the need for them to be regulated and supervised is evident. The financial intermediation role of these tier II commercial banks in a developing economy like Kenya cannot be underestimated (Banerji, Chronopoulos, Sobiech & Wilson, 2018), yet this role can only be realized through financial deepening which has already been identified as a challenge of these institutions.

The existing studies include Kiplagat (2020) who focused on PR and FP of Kenyan commercial banks where the nexus established was critical. Olivier and Mulyungi (2018) did an assessment of prudential regulations and how they relate with performance with a focus on banks in Rwanda and noted existence of a direct nexus between constructs. Otieno (2013) did an assessment of financial deepening and its implication on profitability with a focus on Kenyan banks where a positive relationship was noted. Obenge (2018) focused on financial deepening and how it impacts on performance of Kenya's commercial banks where a significant effect was noted. Wangari and Mutswenje (2020) focused on the link between PR and FP with a focus on Kenyan banks where capital adequacy was a significant regulation noted. Mwai (2021) conducted an investigation into financial innovation and financial deepening among Kenya's banks and established a direct and significant link. Macharia and Mungai (2021) did a study linking financial deepening and financial performance with a focus on Kenyan banks where bank credit and deposits as well as regulations by the government had a direct link with financial performance.

The aforementioned studies like Kiplagat (2020) and Otieno (2013) adopted financial performance as the dependent variable which is conceptually different from financial deepening. This leads to conceptual gap. Other studies like Olivier and Mulyungi (2018) were conducted in different contexts like Rwanda and not Kenya which leads to contextual gaps. Other studies create empirical gaps by establishing direct relationship Macharia and Mungai (2021) as well as Obenge (2018) interaction between the various variables that were used. Given the gaps that have

been identified and the worrying trend in financial deepening that has been discussed in the background, this study was an analysis of the nexus between PR and financial deepening with a focus on tier II commercial banks in Kenya.

Research Objectives

The main objective of the study was to establish the effect of prudential regulations on financial deepening among Tier II Commercial banks in Kenya. The following specific objectives guided the study:

- To determine the effect of capital adequacy on financial deepening among tier II commercial banks in Kenya.
- To establish the effect of agent banking on financial deepening among tier II commercial banks in Kenya.
- To assess the effect of corporate governance on financial deepening among tier II commercial banks in Kenya.
- To investigate the effect of liquidity management on financial deepening among tier II commercial banks in Kenya.

The study's hypotheses were;

- H_{01} Capital adequacy has no significant effect on financial deepening among tier II commercial banks in Kenya
- H_{02} Agent banking has no significant effect on financial deepening among tier II commercial banks in Kenya
- H_{03} Corporate governance has no significant effect on financial deepening among tier II commercial banks in Kenya
- H_{04} Liquidity management has no significant effect on financial deepening among tier II commercial banks in Kenya

LITERATURE REVIEW

Theoretical Review

Financial Intermediation Theory

Gurley and Shaw (1960) developed this theory and it is premised on notion that minimization of costs linked to generation of information that drives decision making (Banerji, Chronopoulos, Sobiech & Wilson, 2018). The theory considers commercial banks are intermediaries and they help in reducing the costs of borrowing (Molnár, 2018). In perfect markets, the participants in the market are assumed to have relevant information regarding the borrowers and savers. This is contrary to the imperfect markets that are characterized by high level of information asymmetry which may adversely harm financial performance of the bank when exploited by customers (Greenbaum, Thakor& Boot, 2019). From the financial transaction perspective, this financial intermediation theory argues that financial intermediation plays a role in enhance the level of efficiency when gathering information regarding household deficiency. This way, the transaction costs for lenders are reduced (Boďa & Zimková, 2018).

This theory anchored the dependent variable financial deepening. In essence, driving financial intermediation would result in improvement in financial depth of the financial institution and systems in general.

Agency Theory

Developed by Jensen and Mackling (1976), it argues that ownership and management of the firm should be separated from each other. This however results into conflict of interest between those in managerial positions and the owners of the entities. Firms including commercial banks are driven by the basic goal of maximizing the wealth of owners and hence profitability. The theory illustrates the interaction between those managing an entity and the owners.

The management of entities have strong incentives to be self-interested in their undertakings. In any business enterprise, the management has the sole responsibility of undertaking investments and making decisions that enhance the revenue while shareholders have the responsibility of supplying adequate capital to finance the operations of the enterprise. In supplying these funds, shareholders expect the management to prudently utilize this money for overall financial health of the firm

(Solomon Bendickson, Marvel, McDowell & Mahto, 2021).

This theory shed light on the need for corporate governance which determines the interaction between the management, board and shareholders for maximization of wealth. Besides corporate governance, this theory will also anchor the variable of agent banking. Thus, the theory was used to underpin the variables of corporate governance and agent banking.

Liquidity Preference Theory

The proponent of this theory was Keynes (1939) and it asserts that firms have preference of holding cash so as to meet their obligations when they arise. Liquidity is the degree which an entity is in position to curb an increase in assets while meeting their obligations as they arise without incurring further risks (Lavoie & Reissl, 2019).

In the event that the players in the market fail to quickly convert their securities into cash more easily, liquidity risk may arise. The theory provides three reasons that motivate people to hold the assets that are liquid, transaction, precautionary and speculative purposes (Culham, 2020). There are different risks faced by commercial banks for instance liquidity risk (Oreiro, de-Paula & Heringer-Machado, 2020).

Liquidity management is a critical activity to commercial banks as it ensures that the institution is able to meet the due liabilities. Commercial banks should seek to maintain liquid short term assets like advances and loan facilities and facilities between different banks (Park & Min, 2021). The theory linked liquidity management and financial deepening.

The Capital Buffer Theory

It was Marcus (1984) who advanced this theory and its main argument is that banks have some preference of holding excess capital as a way of reducing the probability of the same capital falling below the legal requirements of capital (Abbas, Butt, Masood & Javaria, 2019). Capital buffer is the capital in excess held by a bank above the minimum amount needed by law. The theory provides an explanation that banks having low capital buffers will strive to establish a relevant capital buffer by increasing the capital in place. The theory further argues that banks having high capital buffers work as much as they can to ensure their capital buffer is maintained (Fliginskih, Usatova, Solovjeva, Kalutskaya & Zaboon, 2019).

Any breach in requirement for capital is viewed as an infringement of the legislation of the bank and no central bank can tolerate this. Banks that are undercapitalized for long periods should be closed off (Jiang, Zhang & Sun, 2020). The theory argues that the ability of the banking entity to mobilize adequate deposits is an important step in protecting erosion of the capital base. The theory indicates that more capital is important in absorbing severe shocks which is important in reducing the possibility of failure of the financial institution. This way, performance of the commercial bank will tend to improve (Sadalia, Ichtiani & Butar-Butar, 2017).

In light of this theory, banking entities are always working to hold more capital that is above the minimum established capital by regulations. This insures the financial institution against breaching the minimum capital required prescribed by regulations (Abbas & Younas, 2021). In view of this theory, a direct link is probable between capital adequacy and financial deepening among commercial banks. This theory therefore anchored the variable of capital adequacy as one the prudential regulations guiding operations of commercial banks in Kenya.

Empirical Review

Sahay et al. (2015) defined financial development as covering depth (liquidity and size of the markets), access and efficiency. Hence, financial deepening was viewed as an aspect of financial development in an economic system. In highly developed economies, the growth of the economies is weakened. The findings further disclosed that the pace of financial development serve an important role. Giesecke, Dixon and Rimmer (2017) hypothesized that banks are being required by regulators to raise more equity for funding their operations. However, the study acknowledged the

potential costs of this initiative to lower leverage. The investigation shared that macroeconomic effects of raising the capital adequacy ratio of the financial institution was small and negligible.

Margono, Wardani and Safitri (2020) did a study on capital adequacy and liquidity and their implication on ability of Indonesian banking entities to perform. In total, 43 entities were targeted and only 30 were sampled. The study established that capital adequacy and liquidity are critical drivers of performance of the banks. The measures of capital adequacy adopted include core capital and supplementary capital. The specific focus of the study was listed banking entities. In total, 11 banking entities were targeted and census was adopted. The period of the study was 2014-2018. The results were that average core capital had been rising over the last 5 years. It was shown that core capital is a significant factor shaping FP. The need to raise the level of core capital for driving performance so as to survive in the market was suggested.

Waithanji (2012) analyzed agent banking and how it impacts on financial deepening initiative. The inquiry showed that agent banking and financial deepening are significantly connected with each other. It was shown that agent banking and financial deepening have significant interplay. Waihenya (2012) did a study on agent banking as it is linked with financial inclusion in Kenyan context. The design embraced was descriptive survey. It was shown that AB is a process that is continually evolving as well as growing. It was observed that increasing agent banking coverage had significant link with financial inclusion. It was shown that AB and financial inclusion are significantly connected with each other.

Cull et al. (2018) used a case of Democratic Republic of Congo to explore agent banking within the banking sector. The inquiry showed that agents can effectively provide basic financial services among the most remote individuals. Nisha, Nawrin and Bushra (2020) studied agent banking and its link with financial inclusion paying specific attention to banks in Bangladesh. The adopted approach was case design. AB allowed banks to grow their financial depths and particularly in huge masses of unbanked population.

Wakaisuka-Isingoma (2018) determined CG and how it relates with performance focusing on financial institutions. A total of 103 financial institutions were covered and included in the study. The design embraced was descriptive cross sectional survey. A direct and significant link was registered between CG and FP. The study focused on performance and not financial deepening as the dependent variable. Informed by agency theory, Ortega (2021) embraced correlational approach. The horizon covered by the study was 2015-2018. The study observed that corporate governance significantly predicts performance. The methodological gap from this study is that only correlational design was used while the proposed study will also cover descriptive survey design. Kafidipe, Uwalomwa, Dahunsi and Okeme (2021) focused on Nigeria and acknowledged that a sound corporate governance system is critical in improving loan profitability besides the level of stability of the banks. It was shown that the size, independence and meetings of the board as well as director shareholding have an inverse link with Tobin Q.

In Nigeria, Okoye, Olokoyo, Okoh, Ezejibn and Uzohue (2020) did an analysis of CG and its interplay with FP among banks. The ize of the board nd the stake of the directors were the proxies of corporate governance examined. It was shown that the size of the board and the equity holding by directors have a significant interplay with financial performance. John and Ogechukwu (2018) studied CG and its interplay with financial distress using Nigeria as the context. The constructs covered include audit committee and the executive management team. It was empirically determined that financial distressed financial institutions have huge size of the board that may not have adequate information on complexities of the banks.

For the study by Karanja (2017), the specific emphasis of the study was on listed banks on the NSE. A significant nexus was registered between CG

and FP. In a study by Wanyama and Olweny (2013), the constructs of corporate governance that were examined include the size, composition of the board as well as the duality of the CEO position besides leverage. The design adopted was descriptive. A strong link was registered between CG and FP.

Bagh et al. (2017) did a study whose focus was on liquidity management and profitability among banks in Pakistan. Liquidity was examined in terms of advances to deposits, deposits against assets and cash deposit ratio. It was shown that liquidity management has a direct link with ROA as a proxy of performance. Wuave, Yua and Yua (2020) did an analysis of liquidity management and its connection with financial performance placing emphasis on Nigerian context. Loans against deposits, cash reserve ratio and deposit ratio were adopted. Leveraging panel regression, it was observed that liquidity management and financial performance are significantly connected with each other. Mwangudza, Jagongo and Ndede (2020) placed emphasis on teacher's deposit taking savings and credit cooperatives. The design adopted was descriptive survey. Noted was the fact that cash, deposits and core deposits insignificantly led to financial performance.

Njeru (2016) did an assessment where the variables covered by the study include cash management, loan repayment, liquidity decision and the competency of the management team. The embraced design was descriptive survey and the results was that even though strict forecast of cash flows is undertaken by SACCOs; cash management can be affected by an array of external factors. Njue (2020) did an analysis of liquidity management and its interplay with financial performance focusing on microfinance entities in Kenyan context. Information for the inquiry was sought from auxiliary sources within the period 2012-2016. In total, 26 microfinance entities were covered in the study. It was indicated that the practices of managing liquidity had significant link with financial performance.

METHODOLOGY

This study adopted a descriptive survey and correlational design. This is an outline of how the various study activities are to be undertaken (Adams & Lawrence, 2018). Target population covers all items or elements including people that a scientist has interest to bring out some attributes on them (Bernard, 2017). Eight Tier II Commercial banks licensed by the CBK as at 31st December, 2021 were targeted (CBK, 2021). This study adopted census. The use of census was informed by the fact that the target population was relatively small and could easily be accessed during data gathering. This study utilized secondary data which was collected for the period of five years (2017-2021) using a data collection sheet. The sources of the data included the relevant publications by the CBK and the respective tier II banks. SPSS tool helped in generating means and standard deviation values.

FINDINGS AND DISCUSSION

Descriptive Statistics

Table 1: Descriptive Statistics

	n	Minimum	Maximum	Mean	Std. Deviation
Capital adequacy	40	.06	9.52	.4138	1.48
Agent banking	40	.10	.63	.2450	.103
Corporate governance	40	-30.65	729.50	27.52	115.57
Liquidity management	40	.19	92.10	2.706	14.49
Financial deepening	40	.00	.01	.0061	.003

Source: Survey Data (2023)

Table 1 shows that on average, capital adequacy accounted for 41.38% of prudential regulations with minimum and maximum values of 0.06 and 9.52 respectively. For agent banking, its average contribution towards prudential regulations stood at 24.50 with 0.10 and 0.63 being minimum and maximum values. In regard to corporate governance, its contribution towards averaged at 27.52 with the highest and lowest values of 729.50 and -30.65. The negative value of the minimum value implies that some of the studied banks were having corporate governance issues. The findings on liquidity management indicated that it had a contribution of 2.706 towards prudential regulation with maximum and minimum values of 92.10 and minimum of 0.19. On overall, the study observed that financial deepening in the studied banks was relatively low at 0.61% with minimum and maximum values of .00 and 0.01 respectively.

Diagnostic Tests

Normality Test

Regression analysis assumes that the data needed for running should have a normal distribution (Kwak & Park, 2019). In this regard, normality was done to establish if the data is normally distributed based on Skewness and Kurtosis. According to Das and Imon (2016), statistic values in the range +/-3 provide an indication of presence of normality condition.

Table 2: Normality Test

	n	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
Capital adequacy	40	1.236	.374	1.201	.733
Agent banking	40	1.912	.374	1.380	.733
Corporate governance	40	1.039	.374	1.465	.733
Liquidity management	40	1.324	.374	.992	.733
Financial deepening	40	.032	.374	-.088	.733
Average	**40**	**1.109**	**0.374**	**0.99**	**0.733**

Source: Survey Data (2023)

From Table 2, the average values of Skewness and Kurtosis are given as 1.109 and 0.99 respectively consistent with Das and Imon (2016). Thus, the study data had a normal distribution which is a desirable condition for performing regression analysis.

Multicollinearity Test

Any situation where the independent variables have a relationship with each other is described as multicolinearity (Zainodin, Noraini & Yap, 2011). This is a severe assumption and its presence would need some statistical treatment which may include dropping of the affected variables before proceeding with regression analysis. Multicollinearity was done by computing variance of inflation factor values (VIF) with 1-10 given as the threshold (Daoud, 2017).

Table 3: Multicollinearity Test

	Collinearity Statistics	
	Tolerance	VIF
Capital adequacy	.939	1.065
Agent banking	.597	1.674
Corporate governance	.993	1.007
Liquidity management	.622	1.608
Average	**.788**	**1.339**

Source: Survey Data (2023)

The findings in Table 3. indicate an average value of VIF as 1.339 which resonate with assertion of Daoud (2017). Thus, multicollinearity absence was assumed.

Autocorrelation Test

Autocorrelation is the presence of serial correlation in a data set. This is a symptom that is mostly associated with time series data. Autocorrelation was detected through Durbin Watson statistics that were interpreted appropriately.

Table 4: Autocorrelation Test

Model	Durbin-Watson (d)
1	1.978

Source: Survey Data (2023)

From Table 4, the d value is 1.978 which is in line with King (2018) It then follows that there was no serial correlation in the sample data used in this study and thus its suitability for carrying out regression analysis.

Inferential statistical Analysis

Correlation Results

The link in study variables was explored correlation-ally and Table 5. is a summary.

Table 5: Correlation Results

		Financial deepening	Capital adequacy	Agent banking	Corporate governance	Liquidity management
Financial deepening	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	40				
Capital adequacy	Pearson Correlation	.351	1			
	Sig. (2-tailed)	.026				
	N	40	40			
Agent banking	Pearson Correlation	.651	-.204	1		
	Sig. (2-tailed)	.000	.207			
	N	40	40	40		
Corporate governance	Pearson Correlation	-.203	.068	-.017	1	
	Sig. (2-tailed)	.009	.679	.915		
	N	40	40	40	40	
Liquidity management	Pearson Correlation	.296	-.021	.605	.035	1
	Sig. (2-tailed)	.014	.900	.000	.829	
	N	40	40	40	40	40

The findings in Table 5. show that capital adequacy is a moderate but positive and significant correlate of financial deepening ($r=0.351$, $p<0.05$). This means that efforts to enhance capital adequacy of tier II commercial banks would lead to an improvement in their financial depth. Amahalu et al (2017) shared that CA and FP are significantly connected with each other. Karugu et al. (2018) registered a significant link between capital adequacy and financial distress.

It was observed that agent banking and financial deepening are strongly, significantly and positively related with each other ($r=0.651$, $p<0.05$). This means that strengthening agent banking in tier II commercial banks in Kenya would allow them to greatly improve on their financial depth. The finding is consistent with Waihenya (2012) who did a study on agent banking as it is linked with financial inclusion in Kenyan context. It was observed that increasing agent banking coverage had significant link with financial inclusion. It was shown that AB and financial inclusion are significantly connected with each other. Cull et al. (2018) showed that agents can effectively provide basic financial services among the most remote individuals. Nisha, Nawrin and Bushra (2020) noted that agent banking allowed banks to

grow their financial depths and particularly in huge masses of unbanked population.

Corporate governance is a weak, negative and significant correlate of financial deepening (r= -0.203, p<0.05). This negative relationship implies that some of the tier ii banks were having corporate governance issues that were adversely affecting their ability to improve on their financial depths. In other words, the corporate governance issues in some of the tier II banks in Kenya were curtailing and hindering them from achieving greater financial depths. The findings are supported by Okoye, Olokoyo, Okoh, Ezejibn and Uzohue (2020) who noted that the size of the board and the equity holding by directors have a significant interplay with financial performance. John and Ogechukwu (2018) determined that financial distressed financial institutions have huge size of the board that may not have adequate information on complexities of the banks. In a study by Wanyama and Olweny (2013), the constructs of corporate governance that were examined include the size, composition of the board as well as the duality of the CEO position besides leverage. A strong link was registered between CG and FP.

Liquidity management was a weak but direct correlate of financial deepening (r=0.296, p<0.05). This means that proper management of liquidity position among tier II commercial banks would contribute towards an increase in their financial depth. The finding concurs with Njeru (2016) who did an assessment where the variables covered by the study include cash management, loan repayment, liquidity decision and the competency of the management team. The results were that even though strict forecast of cash flows is undertaken by SACCOs; cash management can be affected by an array of external factors. Njue (2020) did an analysis of liquidity management and its interplay with financial performance focusing on microfinance entities in Kenyan context. It was indicated that the practices of managing liquidity had significant link with financial performance

Regression Analysis

The study performed regression analysis to test the formulated hypotheses. Table 6. is an overview of the regression model summary.

Table 6: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.866[a]	.750	.721	.00163

Source: Survey Data (2023)

From Table 6, it can be deduced that prudential regulations have strong and far reaching implications on financial deepening of Tier II commercial banks. The study noted that on overall, 72.1% change in financial deepening among tier II commercial banks can be explained by variation in prudential regulations (Adj. R^2= 0.721). This then implies that aside from prudential regulations, there is interplay of other issues that equally exert an effect on financial deepening which should be of key focus among tier ii commercial banks by future scholars. Table 7. is an overview of the ANOVA findings.

Analysis of Variance

Table 7: ANOVA Results

	Sum of Squares	df	Mean Square	F	Sig.
Regression	.000	4	.000	26.254	.000[b]
Residual	.000	35	.000		
Total	.000	39			

Source: Survey Data (2023)

Table 7. shows that on overall, the regression model adopted in this study was significant and thus relevant in exploring the prudential regulation and financial deepening nexus (F=26.254, p<0.05). The beta coefficients and significance determined through p-value are summarized as shown in Table 8.

Summary of Coefficients

Table 8. represents coefficients.

Table 8: Coefficients and Significance

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	-.001	.001		-.766	.449
Capital adequacy	.001	.000	.543	6.227	.000
Agent banking	.027	.003	.895	8.181	.000
Corporate governance	-.567	-.115	.216	-4.930	.015
Liquidity management	.657	.232	.226	2.832	.042

From Table 8, the following equation is predicted between prudential regulations and financial deepening:

$$FD = -0.001+0.001CA_{it}+0.027AB_{it}-0.567CG_{it}+0.657LM_{it}+\varepsilon_{it}$$

Where;

FD is financial deepening

CA_{it} is capital adequacy of firm i at time t

AB_{it} is agent banking of firm i at time t

CG_{it} is corporate governance of firm i at time t

LM_{it} is liquidity management of firm i at time t

$\beta_{0\,It}$ is Constant of firm i at time t

β_{1-4} Beta Coefficients

It then follows based on beta coefficients that liquidity management exerted the greatest effect on financial deepening (β=0.657) followed by corporate governance that had negative effect (β= -0.567), agent banking (β= 0.027) and lastly capital adequacy (β= 0.001) respectively all having positive effect on financial deepening. Thus, while a unit increases in liquidity management, agent banking and capital adequacy would lead to an improvement in financial deepening, poor and weak corporate governance mechanisms on the other hand would reduce financial deepening.

Hypotheses Testing

The study formulated four hypotheses that were tested on the basis of the p-values.

Capital Adequacy and Financial Deepening

H_{01} Capital adequacy has no significant effect on financial deepening among tier II commercial banks in Kenya

Table 8. provide the p-value of capital adequacy as p=0.000 which is less than 0.05. Thus, the study rejects hypothesis Ho1 above and deduce that capital adequacy is a significant predictor of financial deepening among tier II commercial banks in Kenya. This means that strengthening capital adequacy of the tier II banks in Kenya would be key in allowing them to increase their financial depth. The finding agrees with the capital buffer theory by Marcus (1984) whose main argument is that banks have some preference of holding excess capital as a way of reducing the probability of the same capital falling below the legal requirements of capital. The results further agree with Margono et al. (2020) who did a study on capital adequacy and liquidity and their implication on ability of Indonesian banking entities to perform where it was shown that core capital is a

significant factor shaping FP. Karugu et al. (2018) adopted positivism approach and the design was descriptive and registered a significant link between capital adequacy and financial distress.

Agent Banking and Financial Deepening

H_{02} Agent banking has no significant effect on financial deepening among tier II commercial banks in Kenya

Results from Table 8. indicate that agent banking had a p-value of 0.000 which is less than 0.05. This means that agent banking was significant. Hence, the study rejects hypothesis Ho2 deducing that agent bank is key prudential regulations that allow tier II banks in Kenya to improve on their financial depth. In other words, commercial banks that have invested in strong agent banking have improved on their financial depth. Similarly, Waihenya (2012) did a study on agent banking as it is linked with financial inclusion in Kenyan context. It was observed that increasing agent banking coverage had significant link with financial inclusion. It was shown that AB and financial inclusion are significantly connected with each other. Cull et al. (2018) showed that agents can effectively provide basic financial services among the most remote individuals. Nisha, Nawrin and Bushra (2020) noted that agent banking allowed banks to grow their financial depths and particularly in huge masses of unbanked population.

Corporate Governance and Financial Deepening

H_{03} Corporate governance has no significant effect on financial deepening among tier II commercial banks in Kenya

The findings in Table 8 give the p-value under corporate governance as p=0.015 which is p<0.05. This shows that the variable was significant. Hence, the study reject hypothesis Ho3 and inferred that corporate governance is an important prudential regulation that tier II commercial banks in Kenya should not ignore if they wish to grow their financial depth. The findings are in line with Wakaisuka-Isingoma (2018) established a direct and significant link between CG and FP. Ortega (2021) observed that corporate governance significantly predicts performance. Kafidipe, Uwalomwa, Dahunsi and Okeme (2021) noted that the size, independence and meetings of the board as well as director shareholding have an inverse link with Tobin Q.

Liquidity Management and Financial Deepening

H_{04} Liquidity management has no significant effect on financial deepening among tier II commercial banks in Kenya

The findings in Table 8 give p-value of liquidity management as p=0.042. This is lower than the significant level of 0.05, hence it was significant. Thus, the study rejects hypothesis Ho4 and maintained that liquidity management is a significant predictor of financial deepening among tier II banks in Kenya. The finding is supported by liquidity preference theory by Keynes (1939) whose argument is that firms have strong preference of holding cash so as to meet their obligations when they arise thus contributing towards sound liquidity management. The finding is consistent with Bagh et al. (2017) who did a study whose focus was on liquidity management and profitability among banks in Pakistan. Liquidity was examined in terms of advances to deposits, deposits against assets and cash deposit ratio. It was shown that liquidity management has a direct link with ROA as a proxy of performance.

Wuave, Yua and Yua (2020) did an analysis of liquidity management and its connection with financial performance placing emphasis on Nigerian context. Loans against deposits, cash reserve ratio and deposit ratio were adopted. Leveraging panel regression, it was observed that liquidity management and financial performance are significantly connected with each other. Mwangudza, Jagongo and Ndede (2020) placed emphasis on teacher's deposit taking savings and credit cooperatives. The design adopted was descriptive survey. Noted was the fact that cash, deposits and core deposits insignificantly led to financial performance. The study creates methodological gap by exclusively leveraging descriptive survey design unlike the present study that will also adopt correlational design. The findings

are consistent with Njeru (2016) who did an assessment where the variables covered by the study include cash management, loan repayment, liquidity decision and the competency of the management team. The results were that even though strict forecast of cash flows is undertaken by SACCOs; cash management can be affected by an array of external factors. Njue (2020) indicated that the practices of managing liquidity had significant link with financial performance.

CONCLUSION AND RECOMMENDATIONS

From correlation analysis, capital adequacy is a moderate but positive and significant correlate of financial deepening. Thus, efforts to enhance capital adequacy of tier II commercial banks would lead to an improvement in their financial depth. Based on regression analysis, the study rejects hypothesis Ho1 above and deduce that capital adequacy is a significant predictor of financial deepening among tier II commercial banks in Kenya. This means that strengthening capital adequacy of the tier II banks in Kenya would be key in allowing them to increase their financial depth.

It was observed from correlation analysis that agent banking and financial deepening are strongly, significantly and positively related with each other. This means that strengthening agent banking in tier II commercial banks in Kenya would allow them to greatly improve on their financial depth. Results from regression analysis indicate that agent banking was significant. Hence, the study rejects hypothesis Ho2 deducing that agent bank is key prudential regulations that allow tier II banks in Kenya to improve on their financial depth. In other words, commercial banks that have invested in strong agent banking have improved on their financial depth.

As per correlation analysis, corporate governance is a weak, negative and significant correlate of financial deepening. This negative relationship implies that some of the tier ii banks were having corporate governance issues that were adversely affecting their ability to improve on their financial depths. In other words, the corporate governance issues in some of the tier II banks in Kenya were curtailing and hindering them from achieving greater financial depths. Results from regression analysis indicate that agent was significant. Hence, the study rejects hypothesis Ho2 deducing that agent bank is key prudential regulations that allow tier II banks in Kenya to improve on their financial depth. In other words, commercial banks that have invested in strong agent banking have improved on their financial depth.

The study established from correlation analysis that liquidity management was a weak but positive and significant correlate of financial deepening. This means that proper management of liquidity position among tier II commercial banks would contribute towards an increase in their financial depth. From regression analysis, the study rejected hypothesis Ho4 and maintained that liquidity management is a significant predictor of financial deepening among tier II banks in Kenya.

On the first objective based on correlation analysis, the study concludes that commercial banks that constantly improve on their capital adequacy have greater chances of growing their financial depth. From correlation results, it is apparent that strict adherence to capital adequacy aspect of prudential regulations provided by the CBK provides a good a good opportunity for commercial banks to grow their financial depths. Thus, growth in financial depth among commercial banks in Kenya is strongly hinged on adherence to prudential regulations like capital adequacy.

With respect to the second objective based on correlation analysis, the study concluded that an increased investment in agent banking would greatly allow commercial banks to grow their financial depths. In view of regression analysis, agent banking is an important prudential regulation that should not be ignored if a commercial bank seeks to grow its financial depth in a competitive and dynamic industry and environment.

In regard to the third objective and on the basis of correlation results, it can be concluded that

existence of weak corporate governance mechanisms hinders commercial banks from growing their financial depth. Based on regression analysis, low financial depth among commercial banks in Kenya can be attributed to existence of weak and poor corporate governance mechanisms. It also implies that for commercial banks to enhance and grow their financial depths, they need to adhere to corporate governance as required by the prudential regulations.

As per the last objective and in accordance to regression results, it can be concluded that proper liquidity management can allow a bank to grow its financial depth. Sound liquidity management allow a bank to meet its obligations including timely disbursal of loans and this in turn results into growth in financial depth. In view of regression analysis, it can be concluded that in order for banks to growth their financial depth, strict adherence to liquidity management as provided for in the prudential regulations by CBK is paramount.

From correlation and regression analysis, capital adequacy was positive and significant predictor and correlate of financial deepening. Hence, finance managers working in tier II banks in Kenya should establish an optimal level of the equities and assets that would optimize financial depth. The managers working in these banks should ensure their prudent use of equities and assets to support financial deepening.

Correlation and regression analysis showed that agent banking and financial deepening were positively and significantly linked with each other. Thus, marketing managers working among tier II banks in Kenya should invest more in direct sales people to promote and create more awareness among customers on the need to take up agent banking services. This is because doing so would increase the uptake of agent banking and this would in term contribute towards the growth in financial depth of these institutions.

As per correlation and regression analysis, weak corporate governance mechanisms adversely affect financial deepening. Based on these findings, it boards of directors working in tier II commercial banks in Kenya should strengthen and improve on their oversight role, demand for accountability on the side of management and ensure they minimize conflicting interests between managers and shareholders. It is further recommended that the management team of these institutions should cut down on costs so as to increase operating efficiency and increase the revenue generating potential.

The study established from correlation and regression analysis that liquidity management was a positive and significant variable. In line with these findings, marketing managers of the tier II commercial banks in Kenya should put in place sound marketing practices for maximization of the deposits from customers which are a key indicator of financial deepening that the study built on. These strategies should also be geared towards an increase in the uptake of loan facilities. Innovative ways of funding should be adopted by finance managers working in tier II commercial banks to ensure there are adequate funds to meet their obligations.

Suggestions for Further Research

Other aspects like financial inclusion or profitability should be adopted as dependent variables in future. Future studies should be conducted focusing across the entire commercial banks in Kenya for comparative purpose. Other institutions like the Microfinance institutions or even deposit taking SACCOs should be explored by future inquiries.

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