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INFLUENCE OF LIQUIDITY REGULATION ON FINANCIAL PERFORMANCE OF COMMERCIAL BANKS IN KENYA

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ABSTRACT

This study assessed and deliberated on the influence of liquidity regulation on financial performance of commercial banks in Kenya. This research employed descriptive research design which is suitable for description and measurement of phenomena with high level of accuracy. The target population was 31 commercial banks established under banking act and licensed by CBK for the period 2014 to 2018. Secondary data was obtained and analyzed from published annual financial supervision records at the Central Bank of Kenya, and banks end year financial to statements. Descriptive data analysis was used to determine mean, median, tables graphs, and inferential analysis, where correlation analysis and regression analysis was adopted. The study established that liquidity regulation has positive influence on financial performance of commercial banks. Therefore, the study concluded that liquidity regulation has significant influence on financial performance of commercial banks in Kenya. Commercial banks are required by regulators to hold a certain level of liquidity assets so as they can meet their financial obligation as they arise. By commercial banks holding adequate liquidity, they reduce possibilities of liquidity risk which have negative effect both to individual commercial banks and financial sector as a whole. The study recommended that commercial banks management to motivate their customers to save more money with competitive interest rates, this would increase their liquidity and capital to lend more money hence improved profits.

Key Words: *Liquidity Regulation, Commercial Banks, Financial Performance*

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INTRODUCTION

Commercial banks play the important roles of financial intermediation and finance services geared towards facilitating productive economic activity. According to (Kiganda,2014) commercial banks in Kenya dominate the financial sector and as such the process of financial intermediation in the country to a great extend rely on commercial banks. Commercial banks propel the entire economy of any nation by transmitting monetary policy impulses to the economic system. During their operation, the banks face competition and other challenges that expose them to risks and therefore the need for bank supervision and regulations. Banking regulation plays a major role in determining the cost of services of banks such as if interests are unregulated it will create a great discrepancy from one bank to another. This aim is for ensuring stability in the banking sector (Yona & Inanga, 2014).

The Basel Committee on Banking Supervision (BCBS) is spearheading efforts to reform the global banking regulatory framework (BCBS, 2010a). BCBS announced Basel III proposals in December 2010 which national regulators and regional supervisory organizations are considering to evaluate its appropriateness to conditions in their own financial systems. The impact of financial crisis 2007-2009 on international financial markets and the real economy was significant. The significant effects of global financial crisis revolved around leverage, capital and liquidity. The existence of the credit bubble, with constant innovation in financial products and techniques and fair value accounting have to be cited in this context as additional causes of the phenomenon according to BCBS (2010b). Again, insufficient bank regulation is considered as one of the main causes of the financial crisis (Kombo, 2014). According to Financial Stability Board (2011, global crises had to greater extent impacted on banks across the globe. The crisis resulted from high amount of leverage, low capital injection and reduced liquidity by many banks. Consequently, they could not absorb their large business and credit losses from 2007 and many banks collapsed (International Monetary Fund, 2010). According to (Agade, 2014) inefficiency in the banking sector were transmitted to the rest of the financial sector and to a great extend shrinking liquidity and credit accessibility.

The financial markets need a strong banking system that supports transfer and distribution of funds as finances represent the methods and means through which funds are sourced, managed, disbursed and utilized (Driga & Dura, 2014). The function commercial banks in the financial markets range from being intermediaries in funds allocation to corporate governance and enhancing the information issues between investors and borrowers thereby boosting economic development. Banks are required to be efficient providing financial services that are viable within the legal, economic and political environment (Driga & Dura, 2014) because they are primary financiers within the economy.

Financial performance is a composite of an organization's financial health, its ability and willingness to meet its long term financial obligations and its commitments to provide services in the foreseeable future. Long-term goals represent the results expected from focusing on certain strategies which represent actions to be taken to accomplish long-term objectives. In wide context, financial performance refers to the extent to which financial goals are being or has been achieved. The results of a firm's policies are measured against operations in monetary terms. Measuring indicators such as ROA, ROE and ROI are used to capture a firm's internal efficiency.

From the Central Bank of Kenya (CBK) bank supervision report as at December 2018, the Kenyan banking sector is regulated by Central Bank of Kenya (CBK), in which it comprises of 43 banking institutions (42 commercial banks and 1 mortgage finance company), 13 Microfinance Banks (MFBs), 3 Credit Reference Bureaus (CRBs), 9 representative offices of foreign banks, 19 Money Remittance Providers (MRPs),8 non-operating bank holding

companies and 70 foreign exchange (forex) bureaus. In this 43 banking institutions, 40 were privately owned with Kenya Government having majority ownership in 3 institutions. From the 40 privately owned banks, 25 were locally owned while 15 were foreign-owned. The 25 locally owned institutions comprised 24 commercial banks and 1 mortgage finance company. Out of the 15 foreign-owned institutions, 12 commercial banks are local subsidiaries of foreign banks and with 3 branches of foreign banks. All licensed forex bureaus, microfinance banks, credit reference bureaus, money remittance providers, no operating bank holding companies and are privately owned.

Statement of the Problem

Liquidity levels of commercial banks underline its ability to fund increases in assets and meet obligations as they fall due. Dubai Bank and Chase Bank Limited were put under receivership on August 14, 2015 and 7th April 2016 respectively due to liquidity and governance deficiencies**.** The banking sector's overall liquidity ratio increased from 40.4 per cent to 44.7 per cent in June 2016 and June 2017 respectively, with liquid assets increasing more rapidly than short term liabilities. The Central Bank's Prudential Guideline on Risk analysis of Assets and Provisioning requires commercial banks to classify facilities availed to their customers based on financial performance. The financial performance is dependent potentiality of the borrower and the loans are classified as either a watch, sub-standard, normal, doubtful or loss. The advances and loans in the normal category decreased to KShs 1,824.7 billion in 31st December 2016, from KShs 1,840.4 billion in 31st December 2015 translating to 0.09 per cent decrease. The normal category also accounted for 79.6 percent of the total loans compared to 85.5 percent in 2015. This is attributed to the deteriorating asset quality of the banking sector. The interest rate capping law implementation in 2016, resulted in drastic slowdown in credit to the private sector has been observed and posed challenges to the banking and financial sector. This has underscored the need to continuously monitor and assess underlying developments, in respect of which the Monetary Policy Committee commissioned respective studies to inform options for effective monetary policy. A foregoing of the above merging issues in financial institutions, Financial regulation aims at ensuring that financial stability is maintained and that there is a spur at economic growth (Tobias, 2017). Conversely, a study by KivWanyiri, Mutua and Malenya (2016) investigated how bank regulation affects non –performing loans and find that the correlation is negative between the non-performing loans and bank regulation. Kamau (2011) and Mwega (2011) pointed in his study that economic growth is driven by the banking sector through efficient allocation of resources to the productive units in an economy. Bernoulli (2011) argues that accurate and timely measurement of risk is crucial when assessing soundness of financial sector and stability of entire financial system in economy. This study assessed the influence of liquidity regulation on financial performance of commercial banks in Kenya.

Research Objectives

The objective of the study was to assess the influence of liquidity regulation on financial performance of commercial banks in Kenya. The study was guided by the following research hypothesis;

- H_0: Liquidity regulation has no significant effect on the financial performance of commercial banks in Kenya

LITERATURE REVIEW

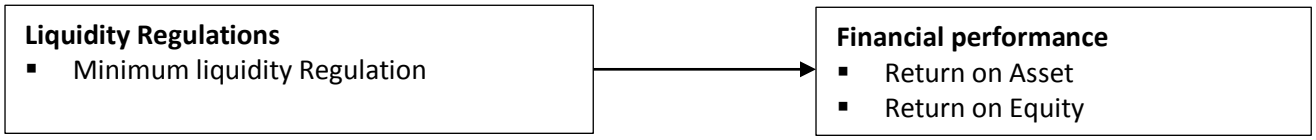
Theory of Liquidity and Regulation of Financial Intermediation

Farhi, Golosov and Tsyvinski (2009) developed the theory of Liquidity and Regulation of Financial Intermediation. The theory suggests that there are two informational concerns: agents receive unobservable shocks and can participate in markets by engaging in trades unobservable to intermediaries. Without regulations, intermediaries are not exposed to risk sharing because of external

factors arising from arbitrage opportunities. With regulations in force, intermediaries are exposed to risk sharing because of an externality arising from arbitrage opportunities.

Farhi,(2009) cited a liquidity requirement regulation that corrects such an externality by the interest rate on the financial markets. They pointed out that even if markets provide less or excess liquidity and if liquidity cap or liquidity should be used depends on the nature of the reactions that agent's experience. Again, they demonstrated that the optimal liquidity requirement implements curbs client allocation subject to unobservable types and trades. Furthermore, showed closed form solutions for the optimal liquidity requirement and benefits of executing such requirements for the two crucial cases. Conversely, with the existing literature, the need for regulation is not dependent on exogenous incompleteness of markets for overall market reaction. It is not easy for an individual financial intermediary to hinder an agent to enter in additional risk sharing contracts with other intermediaries. Possibilities of concealment of trades can to great extent worsen and even end risk sharing.

Allen and Gale (2004) found that, without of aggregate shocks and inadequacy of the markets for aggregate risk, no regulation that can improve when the market reaches equilibrium. In contrast to the literature, Farhi,(2009) suggested that executing liquidity regulation requirement on the minimal (liquidity cap) or the maximal (liquidity cap) amount of liquidity holdings of the short asset for an intermediary. The explanation for the market failure and externality in which intermediaries do not internalize how liquidity provide to other intermediaries via the possibility of trades on private markets. Most importantly, this externality manifest even when aggregate shocks do not exist. Contrary to the conclusions of Holmstrom and Tirole (1998) and Allen and Gale (2004) that the government plays a role in regulating liquidity only if aggregate shocks exists. They also availed a closed form solution for the optimal regulation in two scenarios: for a setup with logarithmic utility and for the environment studied by Diamond and Dybvig (1983). There were practical suggestions in their model on implications for regulation of financial intermediation. Numerous intermediaries or different regions in a country, depending on the primary nature of the shocks that the agents whom they interact with experience, should have differ in form of liquidity regulations.



Independent Variable **Dependent Variable**

Figure 1: Conceptual Framework

Liquidity is another measure that determines the level of bank financial performance. It is defined by the bank's ability to fulfill its obligations, solely of depositors (Ongore & Kusa, 2013). The global sub-prime crisis of 2007 to 2008 underlines the need for liquidity management in financial institutions. Abdulla, Atheer and Delan (2017) posits that a requirement for effective liquidity management is to have both strong internal and external controls systems over daily operations, it calls for having contingency plans in place in case they face liquidity.

According to Dang (2011) optimum level of liquidity has strong positive relationship with bank profitability. The uncertainty of how much and when to withdraw is one of the major reasons of bank runs. A study by Rochet (2008) found that liquidity regulation minimizes cases where depositors withdraw their money at the same time from bank because they think it will fail. According

to Devinaga (2010) commercial banks are required by regulators to hold a given level of liquidity assets. The financial ratios that are mostly used to measure the liquidity position of a bank according to the above author are deposit to total asset and total loan to customer deposits. The independent variables were liquidity is measured by aggregate of loans to aggregate deposit ratio, credit risk measured by total loans to total ratio of assets, capital risk computed by total equity capital to total ratio of assets and operation risk computed by cost to ratio of income. The dependent variable was return on equity. According to Ilhomovich (2009) used total cash to deposit ratio to compute the liquidity level of banks in Malaysia. Nonetheless, the study conducted in China and Malaysia found that there were no relationship between the liquidity level of banks and the financial performances of banks (Said & Tumin, 2011).

The required minimum liquidity requirement is 20% in Kenya. But, according to CBK Bank Supervision Annual Report (2018), the average liquidity ratio as at December 2018 stood at 48 percent compared to 43 percent registered in December 2017. The banking sector average liquidity in financial year ending the in December 2018 was above the statutory minimum requirement of 20 percent. This has left many financial analysts on how can banks hold such amount of cash in a credit needy economy such as Kenya according to (Kamau, 2009). This was attributed by the CBK to the banking sector's choice to invest in the less risky government securities, whereas Ngugi and Ndung'u (2000) as authored by Kamau (2009) made justification that this liquidity problem is due to restrictions put on commercial banks at the discount window, alongside the thin interbank market, a high reserve requirement and choice of government securities. Consequently from the above foregoing analysis, the Kenyan banking sector gives an interesting case to assess the impact of liquidity on profitability.

Research done in Kenya by for 43 commercial banks which were used for the period 2010 to 2013 the findings were asset quality and banks to total Assets as proxies of liquidity were negatively correlated to financial performance and significant (Ngumi, 2014).

Empirical Literature Review

Gahuthu,(2016) studied the impact of prudential regulations on the financial performance of financial institutions in Kenya.The method of data collection was mining secondary data from Sasra data base and the analytical tool used was the statistical package for social sciences (SPSS). The research used comparative design and linear regression model to establish the impact of prudential requirements. The data was able to show low financial performance before legislation and higher financial performance after legislation. Further analysis, compared the Betas of a number of dependent and independent variables before the regulatory reforms and after. On comparison, all the Betas showed that the independent variables such as; capital, credit limit, composition of memberships and liquidity were not strong pointers of financial performance but after the prudential regulations they all became strong predictors. The study suggested that financial institutions should stick to prudential regulations for them enjoy benefits of increased volume of business.

METHODOLOGY

This study used descriptive research design. The study population was 31 institutions licensed and regulated under the Banking Act. The study used purposive sampling techniques, where 31 commercial banks out of 43 licensed in Kenya were sampled. The researcher used secondary data worksheets to obtain data on both macro-prudential regulations and financial performance of banks. Data was obtained from Central bank annual reports and from banks end year financial statements from 2014 to 2018. Data collection was guided by research objectives and research questions. To analyze the data, descriptive statistics was used. Data was coded and analyzed using SPSS version 20 and Excel spread sheet.

FINDINGS

The objective of this study was to assess the influence of liquidity regulation on financial performance of commercial banks in Kenya. Simple linear regression analysis was conducted to establish the relationship between liquidity regulation and financial performance of Commercial banks in Kenya. The R square was used to establish contribution of liquidity regulation on financial performance. The results were as shown in Table 1.

Table 1: Regression Results of Liquidity regulation on financial performance

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of Estimate	Change Statistics				
					R Sq Change	F Change	df 1	df2	Sig. F Change
1	.303[a]	.092	.088	.6830	.092	8.728	1	153	.004

a. Predictors: (Constant), Liquidity regulation

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	4.072	1	4.072	8.728	.004[b]
	Residual	71.382	153	.467		
	Total	75.454	154			

a. Dependent Variable: Financial performance

b. Predictors: (Constant), Liquidity regulation

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.133	.657		1.725	.087
	Liquidity regulation	1.954	.661	.303	2.954	.004

a. Dependent Variable: Financial performance

The outcome established that there was a statistically significant relationship between liquidity regulation and financial performance of Commercial banks in Kenya. Liquidity regulation accounted for 9.2% (R^2 = 0.092) variations in the financial performance of commercial banks in Kenya. The F value was more than zero, F=8.728, P=.004, therefore, liquidity regulation is a significant predicator of financial performance of Commercial banks in Kenya.

Results also showed that liquidity regulation had a positive, linear and significant (p-value is less than 0.05) relationship with the financial performance of Commercial banks in Kenya {regression coefficient, B=1.954, t-test value, t=2.954 and P=0.004}. The results were represented in the following model:

$Y = \beta 0 + \beta_1 X_1 + \varepsilon$

Where Y= financial performance,

$\beta 0$=1.133 (constant)

β_1= 1.954

X_1= Liquidity regulation

Replacing in the equation above, the model becomes: $Y=1.133 +1.954X_1$

From the above equation, the constant had coefficient of 1.133, p=0.087, this implied that in the absence of liquidity regulation, financial performance would be at 1.208. This performance would be insignificant (P>0.05). On the other hand, liquidity regulation had regression coefficient of 1.954. This implied when everything is held constant, a unit increase in liquidity regulation would results to a significant increase in financial performance by 1.954 units. This finding was in

agreement with Ly (2015) who found that liquidity regulation is positively associated with performance of commercial banks. Capital regulation, official supervision, and restriction on bank activity policies are positively related to bank performance while deposit insurance, private monitoring practices have negative relationship with bank performance. Mashamba (2018) empirical results demonstrated that regulatory pressure stemming from Liquidity Coverage Ratio requirement increased instead of diminishing the profitability of banks in emerging markets although it reduced non-performing loans. The plausible explanation given for this evidence was that banks in emerging markets managed their liquidity in a manner that is consistent with Liquidity Coverage Ratio rule hence the regulation had no detrimental effects on banks in emerging economies.

The study hypothesis (H_0) stated that liquidity regulation has no significant effect on the financial performance of commercial banks in Kenya. Results indicated that liquidity regulation has significant influence on financial performance of Commercial banks in Kenya. The h**ypothesis was therefore rejected**. The results indicated that a unit increase in liquidity regulations would lead to 1475 units' improvement in financial performance of Commercial banks in Kenya.

CONCLUSIONS AND RECOMMENDATIONS

The study sought to assess the influence of liquidity regulation on financial performance of commercial banks in Kenya. Liquidity regulation was measured using the ratio of total customer deposits to total loan. There was significant relationship between liquidity regulations and financial performance of commercial bank as indicated by Pearson correlation coefficient. Simple regression analysis revealed that there is direct significant influence of liquidity regulations on financial performance of commercial banks.

The study concluded that liquidity regulation influence financial performance of commercial banks in Kenya. The study found that increase of liquidity regulation would results to significant increase in financial performance of commercial banks. Commercial banks are required by regulators to hold a certain level of liquidity assets so as they can meet their financial obligation as they arise. Therefore, by commercial banks holding adequate liquidity, they reduce possibilities of liquidity risk which have negative effect both to individual commercial banks and financial sector as a whole.

On recommendations, the study established that some commercial banks liquidity was below recommended threshold and therefore complicating their ability to meet short-term obligations. The study recommended commercial banks management to motivate their customers to save more money with competitive interest rates. This would increase their liquidity and capital to lend more money hence improved profits. Further, Central Bank must ensure that all banks comply. Implementing strict regulations will also enable the regulator to discover banks that are struggling and provide remedial measures before they collapse and depositors lose their money.

Areas for Further Studies

The study recommend for a similar study to be conducted in future to cover other prudential guidelines like corporate governance, consumer protection, Agent Banking, Consolidated supervision, prohibited Business, Risk classification of assets and provisioning, outsourcing and Foreign exchange Exposure Limits to compare the results.

REFERENCES

Ang, J. S., Cole, R. A., & Lin, J. W. (2000). Agency costs and ownership structure. the Journal of Finance, 55(1), 81-106.Allen, F., & Gale, D. (2004). Financial fragility, liquidity, and asset prices. Journal of the European Economic Association, 2(6), 1015-1048.

Allen, F., Carletti, E., & Marquez, R. (2011). Credit market competition and capital regulation. The Review of Financial Studies, 24(4), 983-1018.

Agade, R. (2014). *The effect of macroeconomic variables on operational efficiency of banking sector in Kenya* (Doctoral dissertation, University of Nairobi).

Aladwan, M. S. (2015). The impact of bank size on profitability" an empirical study on listed Jordanian commercial banks". *European Scientific Journal*, *11*(34).

Ali, K., Akhtar, M. F., & Ahmed, H. Z. (2011). Bank-specific and macroeconomic indicators of profitability-empirical evidence from the commercial banks of Pakistan. *International Journal of Business and Social Science*, *2*(6), 235-242.

Ang, J. S., Cole, R. A., & Lin, J. W. (2000). Agency costs and ownership structure. *the Journal of Finance*, *55*(1), 81-106.

Aziz, A., Sharif, A., & Salih, D. (2017). Liquidity management and profitability in islamic banks of kurdistan region of iraq: cihan bank for islamic investment and finance as a case study. *international journal of research–granthaalayah*, *5*(5).

Banerjee, B. (2015). The Determinants of Bank Profitability in Slovenia, 1999– 2014.

Bernoulli, D. (2011). Exposition of a new theory on the measurement of risk. In *The Kelly capital growth investment criterion: Theory and practice* (pp. 11-24).

Bibow, J. (1995). Some reflections on Keynes's 'finance motive'for the demand for money. Cambridge Journal of Economics, 19(5), 647-666.

Blair, M. M. (1995). Rethinking assumptions behind corporate governance. *Challenge*, *38*(6), 12-17.

Berle, A. A., & Means, G. C. (1967). 932. Modern Corporation and Private Property. *New York.: McMillan*.

Bathala, C. T., & Rao, R. P. (1995). The determinants of board composition: An agency theory perspective. *Managerial and decision economics*, *16*(1), 59-69.

Caprio, G. (1997). *Safe and sound banking in developing countries: We're not in Kansas anymore*. World Bank Publications.

Carpenter, M. A., & Westphal, J. D. (2001). The strategic context of external network ties: Examining the impact of director appointments on board involvement in strategic decision making. *Academy of Management journal*, *44*(4), 639-660.

Diamond, D. W., & Kashyap, A. K. (2016). Liquidity requirements, liquidity choice, and financial stability. In Handbook of macroeconomics (Vol. 2, pp. 2263-2303). Elsevier.

Diamond, D. W., & Dybvig, P. H. (1983). Bank runs, deposit insurance, and liquidity. Journal of political economy, 91(3), 401-419.

Denis, D. J., Denis, D. K., & Sarin, A. (1999). Agency theory and the influence of equity ownership structure on corporate diversification strategies. Strategic Management Journal, 20(11), 1071-1076.Diamond, D. W., & Rajan, R. G. (2000). A theory of bank capital. *the Journal of Finance*, *55*(6), 2431-2465.

Diamond, D. W., & Rajan, R. G. (2000). A theory of bank capital. *the Journal of Finance*, *55*(6), 2431-2465

Drigă, I., & Dura, C. (2014). The financial sector and the role of banks in economic development. In *6th International Multidisciplinary Symposium "Universitaria SIMPRO* (pp. 10-11).

El-Rimawi, S. Y., Ziadat, K. N., & Al-Jarrah, I. M. (2010). The determinants of the Jordanian's banks profitability: A cointegration approach. *Jordan Journal of Business Administration*, *153*(3128), 1-15.

Essendi, L. K. (2013). *The effect of credit risk management on loans portfolio among Saccos in Kenya* (Doctoral dissertation, University of Nairobi).

Edwards, S. (1997). Trade policy, growth, and income distribution. *The American Economic Review*, *87*(2), 205-210.

Eisenhardt, K. M. (1989). Agency theory: An assessment and review. *Academy of management review*, *14*(1), 57-74.

Farhi, E., Golosov, M., & Tsyvinski, A. (2009). A theory of liquidity and regulation of financial intermediation. *The Review of Economic Studies*, *76*(3), 973-992.

Freixas, X., & Rochet, J. C. (2008). *Microeconomics of banking*. MIT press.

Goel, A. M., & Thakor, A. V. (2010). Do envious CEOs cause merger waves?. *The Review of Financial Studies*, *23*(2), 487-517.

Green, C. J., Pentecost, E. J., & Weyman-Jones, T. G. (Eds.). (2011). *The financial crisis and the regulation of finance*. Edward Elgar Publishing.

Gakure, R. W., Ngugi, J. K., Ndwiga, P. M., & Waithaka, S. M. (2012). Effect of credit risk management techniques on the performance of unsecured bank loans employed commercial banks in Kenya. *International Journal of Business and Social Research (IJBSR)*, *2*(4), 221-236

Grossman, S. J., & Hart, O. D. (1982). Corporate financial structure and managerial incentives.

Gorton, G., Metrick, A., Shleifer, A., & Tarullo, D. K. (2010). Regulating the shadow banking system [with comments and discussion]. *Brookings papers on economic activity*, 261-312.

Holmström, B., & Tirole, J. (1998). Private and public supply of liquidity. *Journal of political Economy*, *106*(1), 1-40.

Gopinath, S. (2011). Macroprudential Approach to Regulation-Scope and Issues.

Haque, S. M., & Wani, A. A. (2015). Relevance of financial risk with financial performance: An insight of Indian banking sector. *Pacific Business Review International*, *8*(5), 54-64.

Kama, U., Yakubu, J., Bewaji, P., Adigun, M. A., Adegbe, O., & Elisha, J. D. (2013). Mortgage financing in Nigeria. *Central Bank of Nigeria Occassional Paper*, (50).

Kamau, A., & Were, M. (2013). What drives banking sector performance in Kenya. *Global Business and Economics Research Journal*, *2*(4), 45-59.

Kamau, A. W. (2009). *Efficiency in the banking sector: An empirical investigation of commercial banks in Kenya* (Doctoral dissertation).

Kiaritha, N., Waiganjo, M., & Nungu, M. (2014). Adding Value to Knowledge or Eroding the Quality of Education? a Critical Examination of the Module II Degree Programmes in Kenyan Public Universities. In *A Comparative Analysis of Higher Education Systems* (pp. 59-71). Brill Sense.

Kremmling, M. D. (2011). The Influence of Financial Sector Regulation on Bank Performance. *A Study of Bank Performance during the World Financial Crisis. Prieiga per Internetą:< http://pure. au. dk/portal/files/39955708/The_Influence_of_Financial_Sector_Regulation_on_B ank_Performance. pdf>,(prisijungta 2014 02 02)*.

Kombo, K. (2014). *Effects of Basel III Framework on Capital Adequacy of Commercial Banks in Kenya* (Doctoral dissertation, United States International University-Africa)

Kolum, M. C. (2016). *A micro and macro prudential approach to financial soundness assessment of Commercial Banks in Kenya* (Doctoral dissertation, Strathmore University).

Kothari, C. R. (2004). *Research methodology: Methods and techniques*. New Age International.

Koehn, M., & Santomero, A. M. (1980). Regulation of bank capital and portfolio risk. *The journal of finance*, *35*(5), 1235-1244.

Kwambai, K. D., & Wandera, M. (2013). Effects of credit information sharing on nonperforming loans: the case of Kenya commercial bank Kenya. *European Scientific Journal*, *9*(13).

Marshall, A., & Marshall, M. P. (1920). *The economics of industry*. Macmillan and Company.

Mehran, H., & Thakor, A. (2011). Bank capital and value in the cross-section. *The Review of Financial Studies*, *24*(4), 1019-1067.

Mwenda, L. (2018). *Effect of Prudential Regulations on Financial Performance of Microfinance Banks in Kenya* (Doctoral dissertation, University of Nairobi).

Mathenge, W. G. (2007). *Financial regulatory structure reform in Kenya: the perception of financial intermediaries in Kenya regarding the case for a single financial regulator* (Doctoral dissertation, University of Nairobi).

Mallin, C., Mullineux, A., & Wihlborg, C. (2005). The financial sector and corporate governance: the UK case. *Corporate Governance: An International Review*, *13*(4), 532-541.

Mwongeli, J. A. (2016). *The Effect of Regulations on Financial Performance of Commercial Banks in Kenya* (Doctoral dissertation, University Of Nairobi).

Mwangi, M. (2018). The Effect of Size on Financial Performance of Commercial Banks in Kenya. *European Scientific Journal*, *14*(7), 373-385.

Musabi, A. B., & Mbithi, M.2017 Influence of prudential regulations on financial performance of commercial banks in kenya.

Mureithi, C. (2012). Effects of Financial regulation on financial performance of Deposit taking Microfinance in Kenya. *Unpublished MBA project, University of Nairobi*.

Myers, S. C., & Rajan, R. G. (1998). The paradox of liquidity. *The Quarterly Journal of Economics*, *113*(3), 733-771.

Moessner, R., & Allen, W. A. (2010). Central bank co-operation and international liquidity in the financial crisis of 2008-2009.

Ndung'u, N., & Ngugi, R. W. (2000). Banking Sector Interest Rate Spreads in Kenya,

Ngumi, P. M. (2014). *Effect of bank innovations on financial performance of commercial banks in Kenya* (Doctoral dissertation).

Naceur, B. S. (2003). The Determinants of the Tunisian Banking Industry: Panel Evidence. Proceedings of the Economic Research Forum 10th Annual Conference, Marakesh, Morocca.

Obamuyi, T. M. (2013). determinants of banks'profitability in a developing economy: evidence from nigeria. *organizations and markets in emerging economies*, *4*(08), 97-111.

Johnson, K. W., & Li, G. (2010). The debt-payment-to-income ratio as an indicator of borrowing constraints: Evidence from two household surveys. *Journal of Money, Credit and Banking*, *42*(7), 1373-1390.

Kaaya, I., & Pastory, D. (2013). Credit risk and commercial banks performance in Tanzania: A panel data analysis.

KIPPRA Discussion Paper No. 5. *Kenya Institute for Public Policy Research and Analysis (KIPPRA), Nairobi*.

Lugaliki, W. B. (2012). *The effect of prudential regulation on the stability of commercial banks in Kenya* (Doctoral dissertation, University of Nairobi, Kenya).

Njoroge, P., Ozdaglar, A., Stier-Moses, N. E., & Weintraub, G. Y. (2014). Investment in two-sided markets and the net neutrality debate. *Review of Network Economics*, *12*(4), 355-402.

Nyaundi, D. N. (2015). *The effects of capital adequacy requirements on liquidity of commercial banks in Kenya* (Doctoral dissertation, University of Nairobi).

Ongore, V. O., & Kusa, G. B. (2013). Determinants of financial performance of commercial banks in Kenya. *International journal of economics and financial issues*, *3*(1), 237.

Wojori, A. A., Akintoye, I. R., & Adidu, F. A. (2011). The challenge of risk management in Nigerian banks in the post consolidation era. *Journal of Accounting and Taxation*, *3*(2), 23-31.

Rochet, J. C. (2008). Liquidity regulation and the lender of last resort. *Financial Stability Review*, *11*, 45-52.

Rasiah, D. (2010). Review of Literature and Theories on Determinants of Commercial Bank Profitability. *Journal of Performance management*, *23*(1).

Rasiah, Devinaga. (2010). Theoretical framework of profitability as applied to commercial banks in Malaysia. *European Journal of Economics, Finance and Administrative Sciences*, *19*(19), 75-97.

Sarlija, N., Bensic, M., & Zekic-Susac, M. (2006, February). A Neural Network Classification of Credit Applicants in Consumer Credit Scoring. In *Artificial Intelligence and Applications* (pp. 205-210).

Sangmi, M. U. D., & Nazir, T. (2010). Analyzing financial performance of commercial banks in India: Application of CAMEL model. *Pakistan Journal of Commerce and Social Sciences (PJCSS)*, *4*(1), 40-55.

Said, R. M., & Tumin, M. H. (2011). Performance and financial ratios of commercial banks in Malaysia and China. *International Review of Business Research Papers*, *7*(2), 157-169.

Thakor, A. V. (2010). Disagreement costs, control and corporate finance. *Control and Corporate Finance (July 27, 2010)*.

Tarus, D. K., Chekol, Y. B., & Mutwol, M. (2012). Determinants of net interest margins of commercial banks in Kenya: A panel study. *Procedia Economics and Finance*, *2*, 199-208.

Winslow, B. G. (2014). *" It was by reason of being Mormons that we were kept at arm's length": Mormonism, Freemasonry, and conflicting interests on the Illinois frontier* (Doctoral dissertation)

Yona, L., & Inanga, E. (2014). Financial sector reforms in bank regulations and supervision and its impact on banking competitiveness and economic efficiency of commercial banks in Tanzania. *Research Journal of Finance and Accounting*, *5*(4), 33-48.

Uzhegova, O. (2010). The relative importance of bank-specific factors for bank profitability in developing economies. *Available on 22nd December 2018 from: http://ssrn. com/abstract*, *1595751*.

Vyas, R. K., Singh, M., & Yadav, R. (2008). The impact of capital adequacy requirements on performance of scheduled commercial banks. *Asia Pacific Business Review*, *4*(2), 74-81.