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EFFECT OF DEBT EQUITY MIX ON FINANCIAL PERFORMANCE OF COMMERCIAL BANKS IN KENYA

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Abstract: *Commercial banks are supposed to record good financial performance so as to record remarkable growth. However, in the Kenyan banking industry, bank failures, mergers, acquisitions and other modes of restructuring have been adopted to salvage the banks from failure as most banks fail to record good performance. The objective of the study was to determine the effect of debt equity mix on financial performance of commercial banks in Kenya. The study adopted a descriptive research design. Target population was 43 commercial banks Kenya. The study used primary data which was collected using questionnaires. Data collected was analyzed using both descriptive statistics and inferential statistics. Findings revealed that debt equity mix had a significant positive effect on financial performance (β=.519, $p < 0.05$). The study also established that banks use a combination of term-loans and equity as a source of finance. The use of debentures and equity improves the financial performance of the banks. The banks use more of term-loans and equity than other sources of finance. Correlation analysis results revealed that debt equity mix was significantly strongly positively related with financial performance of commercial banks. The study concluded that debt equity mix enhanced financial performance of commercial banks. The study recommended that commercial banks should continue to use debt equity mix in their capital structure.*

Keywords: *Debt Equity Mix, Financial Performance, Commercial Banks*

1.0 Introduction

Financial performance of commercial banks is a precursor for realization of the going concern principle. It should be measured for commercial banks to strategize on how going forward financial performance can be improved (Gathara, Kilika, & Maingi, 2019). Globally, various ratios have been used to measure financial performance. The current study employed Return on Assets (ROA), Return on Equity, Return on Investment and Gross profit margin as the sole measures of financial performance. For commercial banks to record good financial performance that makes them to achieve financial sustainability, an optimal capital structure should be adopted. Capital structure is a combination of various proportions of debt and equity that a firm uses to finance its operations as well as purchase assets (Lee & Dalbor, 2017). Commercial banks are usually faced with a decision dilemma in-terms of the proportion of debt and equity to use in financing their operations. According to Abor and Biekpe (2019) capital structure is a determinant of good financial performance and therefore it is the responsibility of banks to determine an optimal capital structure that maximizes firm value.

Indicators of capital structure that were adopted in this study include debt equity mix. Debt equity mix refers to combination of a certain amount of equity and debt within a bank's capital structure. This is important as it helps to lower the cost of capital and enhance the market value of the bank (Adesina, et al., 2018). Banks need to decide on the mix that at its optimal, banks are able to get the advantage of leverage (Lee & Dalbor, 2017). When an appropriate capital mix is attained, banks have high chances of recording an improvement in financial performance (Arulvel & Ajanthan, 2013). Debt equity mix helps banks to maximize its value by increasing investment as well as growth opportunities. Indicators of debt equity mix adopted in this study included short term loans & equity, bonds & equity, term loans & equity, debentures & equity. It was anticipated that debt equity mix might improve financial performance of commercial banks.

Commercial banks are supposed to record good financial performance so as to record remarkable growth. This is not the actual situation on the ground as the Kenyan banking industry has been characterized with bank failures, mergers, acquisitions and other modes of restructuring so as to salvage the banks from failure (Kuria, 2013). For example, a few commercial banks have been closed, including Euro Bank and Trade Bank, while others, like Daima Bank, have been placed under legal administration by the Central Bank of Kenya. Bank failures have undermined the credibility of financial institutions in Kenya. The current study sought to assess capital structure with the intention of providing recommendations that might improve the financial performance of commercial banks in Kenya.

Empirically, some of the studies that exist on capital structure and financial performance of commercial banks have either conceptual, contextual or methodological gaps which the current study sought to address. For example, Odongo (2017) researched on capital structure and financial performance of listed companies at the Nairobi Securities Exchange Market. The study focused on commercial banks in Kenya. The study established that that increasing unit levels of cost of capital, financial leverage, cash flow, and control have positive effect on the financial performance of firms listed at the Nairobi Securities Exchange. Indicators of capital structure adopted in the study were; cost of capital, financial leverage, cash flow and control. A conceptual gap exists as the current study sought to focus on debt equity mix and therefore enhance the existing body of knowledge on capital structure and financial performance. A methodological gap exists as the study had not provided justification for the research design adopted in the study. The current study therefore sought to determine the effect of debt equity mix on the financial performance of commercial banks in Kenya. The remainder of this article is as follows; section 2 cover literature review and hypothesis development, section 3, materials & methods, section 4, results & discussions and section 5, conclusion and recommendations.

2.0 Literature Review & Hypothesis Development

2.1 Debt Equity Mix on Financial Performance

Upadhyay, Bardhan, Mishra, and Yadav (2022) researched on debt equity mix and financial Performance of firms from Indian IT Sector. The purpose of the study was to determine the effect of debt equity mix on the financial performance of the selected companies. The sample size was 44 companies listed on the S&P BSE Information Technology Index. The study used secondary data for the period between 2010 to 2019. The study adopted panel data analysis to estimate the effect of debt equity mix on financial conduct of the selected firms. The study established that debt equity mix does not have a significant effect on ROA and ROE. A contextual gap exists as the study was conducted in a different geographical setting.

Odhiambo, Koske, and Limo (2022) studied on Debt-Equity mix and Financial Performance of Listed Companies at the Nairobi Securities Exchange, Kenya. The aim of the study was to determine the effect of Debt-Equity mix on the Financial Performance of Listed Companies at the Nairobi Securities Exchange. The study adopted a positivist research philosophy. The target population was 63 firms listed at the NSE. The study used a 10-year panel data, i.e., between 2010 to 2019. Data for the study was analyzed using both descriptive statistics and inferential statistics. The study established that Debt-Equity mix has a significant positive effect on the Financial Performance of Listed Companies at the Nairobi Securities Exchange. A conceptual gap exists as the current study incorporates bonds & equity which was not within the scope of their study.

Mugun, Odhiambo, and Momanyi (2019) examined the effect of debt equity mix on financial performance of microfinance institutions in Kenya. The purpose of the study was to determine the effect of debt equity mix on financial performance of microfinance institutions in Kenya. The sample size was 12 MFIs which were selected using purposing sampling method for the period from 2009 to 2013. The study used secondary data which was analyzed using both descriptive statistics and inferential statistics. The study established that debt equity mix has a positive relationship with financial performance. A contextual gap exists as the study focused on microfinance institutions while the current study will focus on commercial banks.

Nurhikmawaty, Isnurhadi, Widiyanti, and Yuliani (2020) examined the effect of debt equity mix on return on equity in subsectors property and real estate on Bei. The aim of the study was to determine the effect of debt equity mix on return on equity in subsectors property and real estate on Bei. The study adopted ex-post facto research design. Target population was 18 property and real estate companies in Indonesia from the Indonesia Stock Exchange for a period between 2014 to 2018. The study was analyzed using both descriptive statistics and inferential statistics. Findings revealed that debt equity mix has a significant effect on return on equity. A contextual gap exists as the study was conducted in subsectors property and real estate and not commercial banks. Literature reviewed led to development of the following hypothesis statement:

***H_{01}**: Debt equity mix has no significant effect on financial performance of Commercial Banks in Kenya.*

3.0 Materials & Methods

The study adopted a descriptive research design. It was chosen in order to ascertain valid and accurate factors that are relevant to the problem. According to Kumar (2018) descriptive research design is appropriate when the intention of the study is to determine the characteristics, frequencies, trends and categories. This research design was adopted in the study because it allowed the researcher to provide a detailed and accurate picture of the population characteristics as well as their behaviour (Gupta & Gupta, 2022). Target population refers to the entire population the study intends to generalize the study findings on (Mohajan, 2018). It is also known as theoretical population. In this study, the target population was 43 commercial banks Kenya. The study further targeted 5 management staffs per commercial bank which implies in terms of respondents the study targeted 215 management staffs. The study used primary data which was collected using questionnaires. The questionnaires utilized a Likert scale format this is because Likert scale helps in measurement of the variables. The study further adopted a 5-point Likert scale of the form "SD = Strongly Disagree; D = Disagree; NS = Not Sure; A = Agree; SA = Strongly Agree." Pilot testing is important before the actual study is done. It helps the researcher to assess the whole questionnaire in-terms of whether it is appropriate for collection of data that will help to address the objectives of the study (Mishra & Alok, 2022). Pilot testing was done on 21 management staffs and these management staffs were not be allowed to participate in the final study. Data collected was analyzed using both descriptive statistics and inferential statistics. SPSS version 25.0 aided in data analysis.

The descriptive statistics adopted included; percentages, frequencies, mean and standard deviation. Inferential statistics adopted included both correlation analysis and regression analysis. The results of simple linear regression model was used to test the hypotheses at 0.05 level of significance. The simple linear regression model adopted in the study was as follows;

$$Y=\beta 0+ \beta_1 X_1+\varepsilon \quad (1)$$

Where; Y is financial performance, β0 is y-intercept, β_1 represents change in y for each increment change in X_1, X_1 is debt equity mix and ε is the error term.

4.0 Results & Discussions

4.1 Descriptive Statistics

The specific objective of the study was to find-out the effect of debt equity mix on financial performance of commercial banks in Kenya. The indicators of debt equity mix adopted in this study are; short term loans & equity, bonds & equity, term loans & equity and debentures & equity. Findings were presented in Table 1.

Table 1: Descriptive statistics of Debt Equity Mix

n=173		SA	A	NS	D	S. D	Mean	Std. Dev
Mix of short-term loans and equity improves financial performance.	F	60	57	16	20	20	3.6763	1.35945
	%	34.7	32.9	9.2	11.6	11.6		
Mix of bonds and equity enhances banks' earnings.	F	48	72	19	17	17	3.6763	1.25261
	%	27.7	41.6	11.0	9.8	9.8		
The bank uses a combination of term-loans and equity as a source of finance.	F	50	61	28	17	17	3.6358	1.26688
	%	28.9	35.3	16.2	9.8	9.8		
The use of debentures and equity improves the financial performance of the bank.	F	45	63	17	17	31	3.4277	1.43127
	%	26.0	36.4	9.8	9.8	17.9		
The bank uses more of term-loans and equity than other sources of finance.	F	69	75	18	2	9	4.1156	1.00489
	%	39.9	43.4	10.4	1.2	5.2		

The study sought to determine whether mix of short-term loans and equity improves financial performance, 117(67.6%) agreed while 40(23.1%) disagreed. Mix of short-term loans and equity was further established to

affect financial performance of commercial banks with (mean= 3.6763, std. Dev. = 1.35945). The study agrees with that of Odhiambo, et al. (2022) that mix of short-term loans and equity affects financial performance. On whether mix of bonds and equity enhances banks' earnings, 120(69.4%) agreed with the statement while 34(19.7%) disagreed. Mix of bonds and equity was further established to affect financial performance of commercial banks with (mean= 3.6763, std. Dev. = 1.25261). Findings resemble that of Upadhyay et al., (2022) that mix of bonds and equity affects financial performance. In regards to whether the bank uses a combination of term-loans and equity as a source of finance, 111(64.2%) agreed while 34(19.7%) disagreed. The use of a combination of term-loans and equity as a source of finance was further established to affect financial performance of commercial banks with (mean= 3.6358, std. Dev. = 1.26688). Findings resemble that of Mugun et al., (2019) that the use of a combination of term-loans and equity as a source of finance affects financial performance.

On whether the use of debentures and equity improves the financial performance of the bank, 11(64.2%) agreed while 48(27.7%) disagreed. The use of debentures and equity was further established to affect financial performance of commercial banks with (mean= 3.4277, std. Dev. = 1.43127). The study agrees with that of Nurhikmawaty et al., (2020) that the use of debentures and equity affects financial performance. Of the total respondents, 144(83.2%) agreed that the bank uses more of term-loans and equity than other sources of finance while 11(6.4%) disagreed. The use of more of term-loans and equity than other sources of finance was further established to affect financial performance of commercial banks with (mean= 4.1156, std. Dev. = 1.00489). Mugun et al., (2020) also established that the use of more of term-loans and equity than other sources of finance affect financial performance.

4.2 Inferential Statistics

4.2.1 Correlation Analysis

Correlation analysis was adopted to facilitate the examination of the nature of association between capital structure and financial performance of commercial banks. Correlation analysis is usually used when the intention of the study is to ascertain whether there is a positive or negative relationship between the study variables and it also helps to determine the strength of the relationship that exists between the debt equity mix and financial performance. Correlation analysis is adopted to determine whether these variables are positively strong or weak, negatively weak, or strong and whether no relationship exists between the study variables. Correlation analysis results were presented in Table 2.

Table 2: Correlation analysis

n=173		Financial performance	Debt equity mix
Financial performance	Pearson Correlation	1	
	Sig. (2-tailed)		
Debt-equity mix	Pearson Correlation	.661*	1
	Sig. (2-tailed)	.000	

*. Correlation is significant at the 0.05 level (2-tailed).

Debt equity mix was found to have a significantly strong positive relationship with financial performance of commercial banks of (r = 0.661, p-value < 0.05). This implies that there is a positive relationship between debt equity mix and financial performance of commercial banks. Findings are similar to that of Odhiambo, et al. (2022) that debt equity mix has a significantly strong positive relationship with financial performance.

4.2.2 Simple Linear Regression Analysis

Simple linear regression analysis was adopted to predict financial performance from capital structure. The model summary results were presented in Table 3.

Table 3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.688[a]	.473	.460	2.37319

a. Predictors: (Constant), Debt-equity mix

The results as displayed in Table 3 shows that, the value of adjusted R-square was 0.460 which indicates that the model explained 46% of financial performance from debt equity mix. Analysis of variance (ANOVA) was adopted to assess the goodness of fit of the regression model. The findings are shown in Table 4.

Table 4: ANOVA

	Model	Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	848.728	1	212.182	37.674	.000b
	Residual	946.185	171	5.632		
	Total	1794.913	172			

a. Dependent Variable: Financial performance

b. Predictors: (Constant), debt equity mix

The value of the F test is F (1, 172) = 212.182, p<0.05. This implies that the model is reliable and can be used to predict financial performance of commercial banks. Regression coefficient analysis was conducted in order to determine the beta which was used to determine the extent to which debt equity mix affects financial performance. Findings were as shown in Table 4.

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Table 4: Regression Coefficient

		Unstandardized Coefficients		**Standardized Coefficients**	**F**	**Sig.**
		B	Std. Error	Beta		
1	(Constant)	26.681	1.577		16.920	.000
	Debt equity mix	.519	.075	.672	6.938	.000

a. Dependent Variable: Financial performance

Debt equity mix had a positive and significant effect on financial performance of commercial banks of ($\beta = 0.519$, $p < 0.05$). This implies that an increase in debt equity mix by one unit increases financial performance by 0.519 units. Findings resemble that of Mugun et al., (2019) that debt equity mix has a positive and significant effect on financial performance. Hypothesis 1 (H_{01}) predicted that debt equity mix has no significant effect on the financial performance of commercial banks in Kenya. Results revealed debt equity mix has a significant effect on financial performance of commercial banks in Kenya ($p<0.05$). The null hypothesis was rejected and the alternative hypothesis that debt equity mix has a significant effect on financial performance of commercial banks in Kenya was accepted. It was therefore noted that debt equity mix has a significant positive effect on financial performance. Findings resemble that of Mugun et al., (2019) that debt equity mix affects financial performance.

5.0 Conclusions & Recommendations

The study concluded that debt equity mix improves financial performance. Mix of short-term loans and equity improves banks' performance. Mix of bonds and equity enhances banks' earnings. The use of a combination of term-loans and equity as a source of finance affects banks' performance. The use of debentures and equity improves the financial performance of the commercial banks. Commercial banks use more of term-loans and equity than other sources of finance and hence it affects their financial performance. The study recommended that commercial banks should continue to use debt equity mix in their capital structure. Mix of short-term loans and equity should be part of the banks finance capital structure. Mix of bonds and equity should be part of the banks' capital structure. Commercial banks should continue to use of a combination of term-loans and equity as their source of finance. Commercial banks should continue to use debentures and equity as a source of finance. Further studies should be conducted on capital structure and financial performance however, other indicators of capital structure rather than debt equity mix. This will help to broaden study scope and it will help to enhance existing literature on capital structure and financial performance.

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