

From Table 4.7 above, we can see that our data met the assumption of independent errors (Durbin-Watson value = 1.109).

D. Estimation Technique

The Hausman and the Breusch-Pagan lagrangian multiplier tests were used to choose the appropriate model that would produce accurate estimations for the research. The results of the test are shown in Table 4.13 below:

Table 4.13: Hausman Test

Model	Chi-square Stat	Probability
Model 1	74.92	0.000

If P is < 0.05 (i.e. significant) use fixed effects.

Table 4.13 shows the results of The Hausman test for the model. It reveals a Chi-square value of 74.92 alongside a probability value of 0.0000. Hence, from the results, we can conclude that the fixed and random effect estimates differ significantly. We therefore reject the null hypothesis in favor of the alternative hypothesis.

The random effect estimator is not appropriate because the random effects are probably correlated. As a result, the fixed effect is the most reliable predictor for the research.

Breusch-Pagan lagrangian multiplier test

Table 4.14: Breusch-Pagan lagrangian multiplier test for random effects

Models	chibar2 (01)	Prob > chibar2
Model (ROA)	88.53	0.000

As per Table 4.14 above, the p values for the model are all less than 0.05. This implies that the fixed effects model is better for the panel data analysis, hence the random effect model should be rejected and the analysis should be based on fixed effects estimates.

The Fixed effects Model was used to do panel fixed effect regression analysis using STATA 12 software utilizing two techniques.

- 1) Covariance model within estimator and
- 2) Individual dummy variable model.

Table 4.15: Fixed effects for Model (ROA)

1) Fixed effects: n entity-specific intercepts (using xtreg)

Fixed-effects (within) regression	Number of obs	=	335
Group variable: BankNo	Number of groups	=	34
	Obs per group:		
	min	=	8
	avg	=	9.9
	max	=	10
R-sq: within = 0.0643	F(3,33)	=	4.5
between = 0.1207	Prob > F	=	0.0094
overall = 0.0916			
corr(u_i, Xb) = 0.0570			
(Std. Err. adjusted for 34 clusters in BankNo)			

ROA	Coef.	Robust Std. Err.	T	P>t	[95% Conf. Interval]	
TDTA	0.05951	0.0294047	2.02	0.051	-0.0003133 0.1193353	
DBTEQ	-0.0655	0.0254912	-2.57	0.015	-0.1173968 -0.0136722	
SFTA	0.10486	0.0298712	3.51	0.001	0.0440831 0.1656301	
_cons	-3.2966	2.308911	-1.43	0.163	-7.99411 1.400919	
sigma_u	1.98697					
sigma_e	1.49964					
Rho	0.6371	(fraction of variance due to u_i)				

2) Individual dummy variable model.

Table 4.16: Fixed Effects using least squares dummy variable model (LSDV)

Linear regression	Number of obs	=	335
	F(36, 298)	=	26.66
	Prob > F	=	0.0000
	R-squared	=	0.6841
	Root MSE	=	1.4996

ROA	Coef.	Robust Std. Err.	T	P>t	[95% Conf. Interval]
TDTA	0.05951	0.0261109	2.280	0.023	0.0081258 0.1108961
DBTEQ	-0.0655	0.0761589	-0.860	0.390	-0.2154118 0.0843428
SFTA	0.10486	0.0484618	2.160	0.031	0.009486 0.2002272
BankNo					

2	-0.9378	0.193142	-4.860	0.000	-1.317936	-0.557746
3	1.71799	0.3724314	4.610	0.000	0.9850592	2.450917
4	0.27854	0.4294962	0.650	0.517	-0.5666881	1.123771
5	-0.2434	0.4011239	-0.610	0.545	-1.032746	0.5460425
6	-1.2472	0.3630455	-3.440	0.001	-1.961639	-0.5327235
7	-1.1777	0.3026885	-3.890	0.000	-1.77335	-0.5819943
8	-0.1743	0.3105595	-0.560	0.575	-0.7854733	0.436862
9	-3.5748	0.5659942	-6.320	0.000	-4.688692	-2.460987
10	1.09378	0.51064	2.140	0.033	0.0888658	2.098701
11	-0.7845	0.3026534	-2.590	0.010	-1.380106	-0.1888881
12	-2.9937	0.5627418	-5.320	0.000	-4.101178	-1.886275
13	-2.0998	0.4037797	-5.200	0.000	-2.894432	-1.305191
14	-5.5321	0.5866392	-9.430	0.000	-6.686538	-4.377577
15	-1.5751	0.4109517	-3.830	0.000	-2.383847	-0.7663771
16	-2.9811	0.7374218	-4.040	0.000	-4.432312	-1.529884
17	-3.7484	0.5046876	-7.430	0.000	-4.741649	-2.755243
18	-2.1283	0.8102852	-2.630	0.009	-3.722933	-0.5337215
19	-3.7591	0.3891292	-9.660	0.000	-4.524932	-2.993354
20	-2.6952	0.446719	-6.030	0.000	-3.574283	-1.816036
21	-3.41	0.4714796	-7.230	0.000	-4.337844	-2.482141
22	-1.7498	0.3790233	-4.620	0.000	-2.495691	-1.003888
23	-3.5297	0.9180265	-3.840	0.000	-5.336325	-1.723053
24	-4.2877	0.495197	-8.660	0.000	-5.262219	-3.313166
25	-1.7757	0.3339054	-5.320	0.000	-2.432792	-1.11857
26	-4.8482	0.5441844	-8.910	0.000	-5.919132	-3.777269
27	-3.263	0.3109267	-10.490	0.000	-3.874898	-2.651118
28	-2.1616	0.685314	-3.150	0.002	-3.510292	-0.8129556
29	-3.6401	0.6116449	-5.950	0.000	-4.843819	-2.436438
30	-6.4682	1.049867	-6.160	0.000	-8.53427	-4.402087
31	-5.5901	0.8860623	-6.310	0.000	-7.33379	-3.846326
32	-3.8809	0.5876982	-6.600	0.000	-5.037441	-2.724312
33	-4.6873	0.5997197	-7.820	0.000	-5.86749	-3.507046
34	-4.8806	0.6227229	-7.840	0.000	-6.106095	-3.655112
_cons	-0.7827	2.50584	-0.310	0.755	-5.714091	4.148676

Table 4.15 & Table 4.16 above yielded the same regression coefficient results.

Interpreting the regression coefficients:

a. Deposits

The coefficient of deposits was 0.05951. This meant that with a unit increase in deposits (TDTA), the performance of commercial banks increased by 0.05951 as assessed by ROA i.e. holding all the other factors constant. $P > t = 0.023$

The results also show that deposits had a significant effect on performance.

Our findings are in line with those of Gul et al (2011), who found a positive association between deposits and ROA. Other studies that are supported by this study include Naceur and Goiaed (2001).

However, the above research findings are in contrast to some other research studies e.g. Dietrich and Wanzenried (2009) and Nafula (2003) who on their study found out that customer deposits had a significant and negative effect on earnings of banks.

b. Debt

The coefficient of debt was - 0.0655. This meant that with a unit increase in debt (DBTEQ), the performance of commercial banks as measured by ROA declined by 0.0655 holding all other factors constant. $P > t = 0.390$

From the study's findings we can conclude that debt a negative but non –significant effect on commercial banks performance.

Our findings corroborate those of other earlier research, such as Nassar (2016), Uremadu, and Onyekachi (2019) who found out that Debt had a negative and non- significant influence on performance.

These research findings are however in conflict with those found by Gill, Biger, and Mathur (2011), who discovered that using a higher share of debt in the capital structure had a positive link with profitability.

c. Equity (SFTA)

The regression coefficient was 0.10486. This implies that holding all other factors constant, a one-unit increase in equity (SFTA) enhanced the performance of commercial banks as assessed by ROA by 0.10486.

At the 95 percent confidence level, $P > t = 0.031$, which is less than 0.05. This implies that equity had a significant and favorable impact on performance. Hence, the study revealed that shareholders' funds significantly predicted the banks performance ($\beta = 0.10486$, $p < .05$);

Our study is consistent with the findings of Wilson et al (2012); Shubita and Alsawalhah (2012); Olalekan and Adeyinka (2013) and Ayaydin and Karakaya (2014) who noted that increase in bank equity had a considerable favorable influence on bank performance.

Table 4.21: Panel Regression Model Summary

Model Summary				
Model	R Square	Adjusted R-squared	F	Prob > F
1	0.6841	0.646	F(36, 298) = 26.66	0.000

The financial structure was tested using panel regression modelling to see if it predicted the performance of commercial banks. The regression model's findings revealed the following:

Model 1: ROA

The predictors explained 68.41% of the variance ($R^2 = 0.6841$, $F(36, 298) = 26.66$, $P < .005$).

The model was also significant since the P value was 0.0000, which was less than the significant figure.

Recommendations

Under each specific objective, the following recommendations have been made based on these research findings.

A. *The effect of deposits on Kenyan commercial banks' financial performance*

Deposits were statistically significant in the model. The regression results showed that an increase in deposits would improve the banks financial performance significantly. It is recommended to bank managers to look for ways to attract more deposits, especially deposits for longer periods of time. These deposit funds can be used to finance their investment activities. The available deposited funds can also be issued as loans to customers. Hence the bank can generate loan interest which forms a significant portion of commercial banks income. This will in effect enhance their financial performance.

B. *The effect of Debt on Kenyan commercial banks' financial performance*

Debt had a negative effect on performance. This indicated that if the debt-to-equity ratio in the capital structure surpasses a cer-

tain level, the firm's performance suffers. Firms should therefore, on average, maintain lower levels of debt. As a result, it is recommended to bank management that they should maintain a good debt-to-equity ratio.

C. The effect of equity on Kenyan commercial banks' financial performance

The correlation results suggested a moderately positive relationship between equity and commercial bank performance. The regression coefficient results also revealed that bank's performance would improve for every unit change in equity. Equity variable was also statistically significant. Based on the foregoing findings, bank management is encouraged to prioritize equity financing over debt financing when making critical financing decisions. Although a conclusion may review the main points of the paper, do not replicate the abstract as the conclusion. A conclusion might elaborate on the importance of the work or suggest applications and extensions. Authors are strongly encouraged not to call out multiple figures or tables in the conclusion—these should be referenced in the body of the paper.

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