

An Analysis of the Performance of Banks: A Comparative Study of Domestic and Foreign Banks in Zambia



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ABSTRACT: Foreign-owned banks in Zambia have a commanding share of the industry's profitability, averaging 82.6% between 2016 and 2018, leaving only 17.4% of the industry's profits for the local banks and thereby resulting in huge externalisation of the financial sector's profits. The study aimed to provide a comparative analysis of foreign and domestic banks' profitability in Zambia with regards to the debt component of their capital structure and the impact of leverage on the performance of banks in Zambia over a ten year period. The study used a sample of 10 Commercial banks in Zambia and used a descriptive research methodology and a mixed research approach. The annual reports and financial statements of ten different banks were reviewed to extract secondary data between 2010 and 2020. The study found that there is a statistically stark difference in the capital structures of foreign and local commercial banks, with foreign-owned banks being more adequately capitalized and relying less on wholesale funding (leverage) as compared to local banks. The study further found that leverage has a substantial impact on a bank's financial performance.

INTRODUCTION

As at 31st December 2019, there were 19 licensed commercial banks operating in Zambia. Of these, eight were subsidiaries of foreign banks, seven were locally owned private banks, and three were partially owned by the Government. In its 2018 Annual Report, the Bank of Zambia reported that foreign banks had a commanding share of the industry's profitability, averaging 82.6% between 2016 and 2018, meaning the local banks only enjoyed 17.4% of the industry's profits, resulting in huge externalisation of the financial sector's profits.

Key findings of empirical analysis suggest that foreign-owned banks tend to outperform domestic banks in terms of profit efficiency in Sub-Saharan Africa (Kiyota, 2011). Generally, in Africa, 'where private ownership involves foreign ownership, this does seem to have a positive effect on bank performance' (Figueira, et al., 2006). However, in Kenya, ownership identity was found to have an insignificant impact on financial performance (Ongore & Kusa, 2013). Further in the Middle East, a study in Saudi Arabia found that domestic banks were more profitable than foreign banks (Alyousfi, et al., 2017).

On face value it would seem a reasonable expectation that domestic financial institutions ought to be in a position to have a competitive edge over their international counterparts. However, the current body of research reveals that domestic financial institutions are up against extreme competition from international financial institutions and that they occasionally come out on the losing end in some categories, such as technical and service portfolio innovation (Parker, 2010). According to Sturm and Williams (2004), it is abundantly obvious that domestic financial institutions are not very adept at making sensible use of the physical resources of production at their disposal. In addition to this, in comparison to their international competitors, local financial institutions are far less effective at earning money. For instance, foreign-owned banks in Zambia have consistently outperformed local banks, as shown by other indicators in the Bank of Zambia 2018 Annual Report (distribution of the Assets, Loans, Deposits, and Profit, by ownership type, 2016-2018), as shown in Table 1 below. This is because foreign-owned banks have access to relatively more favorable capital markets that local banks do not.

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Table 1. Distribution of the Assets, Loans, Deposits, and Profit, by Ownership Type, 2016-2018

	2016				2017				2018			
	Assets (%)	Loans (%)	Deposits (%)	Profit before tax (%)	Assets (%)	Loans (%)	Deposits (%)	Profit before tax (%)	Assets (%)	Loans (%)	Deposits (%)	Profit before tax (%)
Subsidiaries of foreign banks	70.8	68.1	70.4	97.2	73.4	69.2	73.6	82.3	73.0	67.9	72.2	68.3
Banks with Government stake	16.6	19.6	17.7	8.9	18.1	20.1	18.5	3.3	18.2	21.8	19.7	28.1
Local private banks	12.6	12.3	11.9	6.1	8.5	10.7	7.9	14.4	8.7	10.2	8.1	3.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Bank of Zambia 2018 Annual Report

The purpose of this research was thus to investigate the factors that contribute to the superior performance of foreign-owned banks in comparison to locally owned ones.

LITERATURE REVIEW

Numerous studies have been conducted in the past to analyze the determinants of local and foreign banks' performance. In Malaysia, empirical studies on the analysis of profitability of foreign and local banks showed marked differences. Employing Generalized Least Squares (GLS) with unbalanced panel data on seventeen Islamic banks, Muda, et al. (2013) compared the determinants of profitability of domestic and foreign Islamic banks operating in Malaysia. The study found that domestic Islamic banks were more profitable than foreign Islamic banks. The results of the study also indicated that determinants of profitability of domestic Islamic banks were different from those of foreign Islamic banks, citing overhead expenses, loans, efficiency, gross domestic product growth rate and bank size as having significant effect in determining the profitability of domestic Islamic banks, while gross domestic product per capita was the driver of profitability of foreign Islamic banks.

In a related study, Azam & Siddiqui (2012) analysed and compared the profitability of domestic and foreign banks based on quarterly data, with a sample of 36 commercial banks in Pakistan during the period 2004 and 2010. The sample was split into three categories, namely domestic banks under Government control, domestic banks under private control, and foreign banks. They found that foreign banks were more profitable than both types of domestic banks put together.

Awdeh (2015) analyzed the differences in the profitability determinants of domestic and foreign banks operating in Lebanon between 2003 and 2013. The study noted that foreign banks are more profitable than all domestic banks despite operating on the same market. In addition, domestic banks and the determinants of the profitability of foreign banks have been noted to be different. The study also shows that foreign banks are less affected by the local macroeconomic factors than domestic banks.

Azam and Siddiqui (2012) analyzed and compared the profitability of domestic and foreign banks based on a quarterly data sample of 36 commercial banks in Pakistan during 2004 and 2010. The sample was divided into three categories: domestic banks under Government control, domestic banks under private control and foreign banks. They found that foreign banks were more profitable than both types of domestic banks. Their results also showed that domestic and foreign banks had different determinants of profitability. In other words, the factors that are important in determining the profitability of domestic banks are not necessarily important for foreign banks. But it is the opposite situation in the developed countries where local banks are more profitable than foreign banks.

Ali et al. (2013) explored the profitability of commercial banks with the help of return on asset (ROA) and return on equity (ROE) models. It was found that, the efficient asset management and economic growth established positive and significant relation with profitability measured by ROA and ROE. It was also noted that, the high credit risk and capitalization led to lower profitability measured by ROA. The operating efficiency tended to exhibit a higher profitability level as measured by ROE.

SIGNALING THEORY

This theory tries to discuss the issue of under-investment triggered by information asymmetries through the selection of capital structure mix. By expanding leverage, firms are in effect verifiably expressing that they would have the capacity to meet the extra debt commitment (increased interest expense) in relation to higher earnings and cash flows in the future. Thus, firms may focus on higher leverage ratios to signal their future prospects to the potential investors.

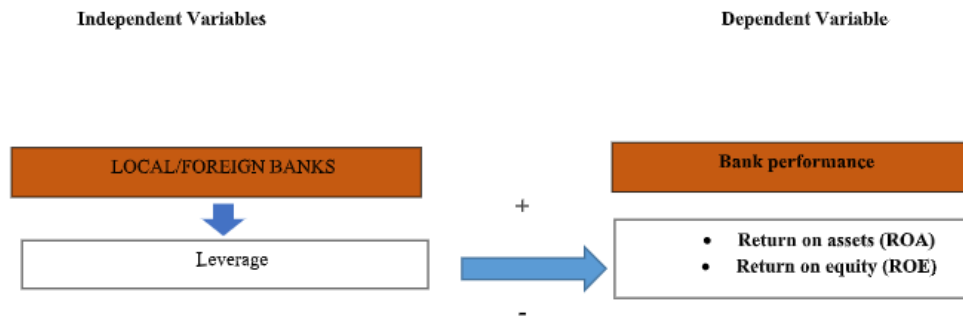
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Banks by design are in the business of borrowing and lending money. A bank taking on leverage therefore signifies confidence in its future prospects that it will be able to cover its interest costs.

This theory is relevant for this research as leverage is one of the variables that the study focused on.

CONCEPTUAL FRAMEWORK

After a review of various literature, the factors below were established as dependent and independent variables in the study.



RESEARCH HYPOTHESIS

From the literature reviewed, it was hypothesized as follows:

Ho₁: Bank Leverage does not positively affect bank performance.

Ho₂: Bank Leverage has a positive effect on bank profitability.

METHODOLOGY

The study used a descriptive research design. A mixed method approach was used to analyze data. The study sampled 10 of the 19 commercial banks operating in Zambia, 5 foreign owned banks as well as 5 locally owned banks.

RESULTS

Descriptive statistics

The statistics used to determine the data's distribution properties as per study are listed below.

Summary and descriptive statistics for both domestic and foreign banks

Table 2 Below shows the combined descriptive statistics summary.

Table 2. Summary and descriptive statistics for both domestic and foreign banks

Variable	Obs	Mean	Std. Dev.	Min	Risk (CV)
ROE	110	1.495717	10.98359	-0.86477	7.343361
ROA	110	0.213372	1.282269	-0.20905	6.009547
LEV	110	0.84128	0.111103	0.119961	0.133371
SIZE	110	13.21768	1.370946	7.20934	0.103721
TANG	110	0.085712	0.403309	0.001502	4.705402
SG	110	0.493947	0.980043	-6.9784	1.984104

Table 2 above is an overview of the descriptive statistics for all banks, including the dependent and independent variables. It displays the average values of the variables whose values were derived using the financial statements. The return on equity and return on assets disclose an average of 149.57 percent and 21.33 percent, respectively, when measuring profitability. This demonstrates that there was a satisfactory return on equity over the course of the research. The coefficient of variation (CV) for the banks that were employed in the measurement of risk for ROE and ROA were 734.34 percent and 600.95 percent respectively, which implies that Zambian banks have a very high risk portfolio. The debt ratio (LEV) indicated an average of 24.39 percent, with a matching coefficient variation (CV) of 241.41 percent (risk tolerance level). The average values for bank size (SIZE), bank asset tangibility (TANG), and bank sales growth (SG) were found to be 1321.76 percent, 8.57 percent, and 49.39 percent, respectively. The majority of the banks that were sampled were of a size that is considered substantial, according to the average data. Additionally, it was evident that the Zambia's banking industry has been able to maintain a healthy expansion during the time period under consideration.

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Summary and Descriptive statistics for foreign banks

Table 3 below show the foreign banks' descriptive statistics summary.

Table 3. Summary and descriptive statistics for foreign banks

Variable	Obs	Mean	Std. Dev.	Min	Max	Risk (CV)
ROE	53	2.25397	15.7478	-0.6479	162.575	6.98673
ROA	53	0.31155	1.82198	-0.2091	18.3979	5.84811
LEV	53	0.24386	1.59937	-0.1581	16.5276	6.55848
SIZE	53	13.2257	1.55492	7.20934	15.7164	0.11757
TANG	53	0.10155	0.55707	0.0015	5.72682	5.48599
SG	53	0.56315	0.84778	-0.8921	4.5697	1.50541

Summary and Descriptive statistics for Domestic Banks

Table 4 below shows the domestic banks' descriptive statistics summary.

Table 4: Summary and descriptive statistics

Variable	Obs	Mean	Std. Dev.	Min	Max	Risk (CV)
ROE	57	0.79068	1.52551	-0.8648	14.6613	1.92937
ROA	57	0.11108	0.29076	-0.0706	2.43523	2.38167
LEV	57	0.0928	0.22402	-0.0653	2.08836	2.41407
SIZE	57	13.2102	1.18146	10.5229	15.8645	0.08944
TANG	57	0.07099	0.16256	0.00965	1.13412	2.28989
SG	57	0.4296	1.08856	-6.9784	7.3171	2.53389

When the summary and descriptive statistics for foreign banks and domestic banks were compared, it was deduced from the mean that foreign banks had much higher profits than domestic banks did over the ten-year period based on both measures of profitability, that is, ROE and ROA. The coefficient of variation (CV), which was employed in gauging risk, was greater for foreign banks in comparison to domestic banks and illustrated the fundamental risk/reward relationship. On average, the debt ratio (LEV) of foreign banks was larger than that of domestic banks. In the course of the research period, it was found that on average, foreign banks experienced a greater increase in size (SIZE) than domestic banks did. The ratio of foreign banks' fixed assets to their total assets (TANG) was found to be much higher than the ratio of domestic banks' fixed assets to their total assets.

Correlation Analysis

Correlation for foreign banks with ROE and ROA

Table 5 below shows the correlation matrix for foreign banks with ROE and ROA

Table 5. Correlation matrix for foreign banks with ROE and ROA

Variables	ROE	ROA	LEV	SIZE	TANG	SG
ROE	1					
ROA	0.6248	1				
LEV	0.1468	-0.1291	1			
SIZE	-0.225	-0.2651	-0.0111	1		
TANG	0.0916	0.5076	-0.358	-0.3169	1	
SG	0.0797	0.0456	-0.0022	0.0282	0.0101	1

The concentration here is on the variable of interest, thus, LEV in relation to ROE and ROA. LEV showed a positive and negative but weak correlation with ROE and ROA amongst the foreign banks respectively.

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Correlation for domestic banks with ROE and ROA

Table 6 below shows the correlation matrix for domestic banks with ROE and ROA

Table 6. Correlation matrix for Domestic banks with ROE and ROA

Variables	ROE	ROA	LEV	SIZE	TANG	SG
ROE	1					
ROA	0.6552	1				
LEV	0.1768	-0.1477	1			
SIZE	-0.192	-0.2871	0.0141	1		
TANG	0.062	0.493	-0.3595	-0.3524	1	
SG	0.0404	0.0529	-0.0258	0.0138	0.0345	1

LEV in relation to ROE and ROA. LEV showed a positive and negative but weak correlation with ROE and ROA respectively.

Normality Test

The Shapiro - Wilk W test was conducted to ascertain the normality of the data.

Table 7 below shows the Normality test for foreign banks.

Table 7. Normality test for foreign banks

Variable	Obs	W	V	z	Prob>z
ROE	53	0.09319	78.609	9.713	0.0000
ROA	53	0.11802	76.456	9.651	0.0000
LEV	53	0.09422	78.519	9.71	0.0000
SIZE	53	0.92966	6.097	4.023	0.0000
TANG	53	0.12605	75.761	9.631	0.0000
SG	53	0.7524	21.464	6.824	0.0000

Table 8 below shows the Normality test for foreign banks.

Table 8. Normality test for foreign banks

Variable	Obs	W	V	z	Prob>z
ROE	57	0.4376	51.826	8.821	0.0000
ROA	57	0.36166	58.824	9.103	0.0000
LEV	57	0.32919	61.817	9.214	0.0000
SIZE	57	0.98479	1.401	0.754	0.0000
TANG	57	0.30037	64.473	9.308	0.0000
SG	57	0.571	39.533	8.216	0.0000

From the results above, the data on the variables under Foreign banks appear to be normally distributed as the Prob>z of both the dependent and the independent variables are less than 0.10.

There is the presence of heteroskedasticity judging from the respective Prob > chi2 values of all the models among the Foreign banks and Domestic banks. Thus, the null hypothesis is to reject the constant variance in all the models. In order to address this issue of non- constant variance, the robust option is issued to obtain heteroskedastic - robust standard errors (also known as the Huber/White or sandwich estimators). H₀: Constant variance.

Comparative analysis of Banks

Given the results of the Hausman test, the random effects model was validated as the appropriate panel data estimation technique for the study.

Table 9. Random effects estimation results

	Foreign banks ROE 3.2	Domestic banks ROE 3.3	Foreign banks ROA 3.4	Domestic banks ROA 3.5
CONS	1.545** (2.862)	0.316* (0.707)	-0.851** (0.431)	0.244* (0.341)
LEV	-0.231*** (0.712)	-0.108** (0.552)	-0.249** (0.115)	-0.182* (0.142)
SIZE	0.245** (0.238)	0.153** (0.194)	0.028*** (0.039)	0.026** (0.031)
TANG	-0.792*** (0.745)	-0.104*** (0.233)	-0.005*** (0.110)	-0.038*** (0.235)
SG	0.104 (0.746)	0.051 (0.062)	0.012 (0.012)	0.009 (0.008)
Observations	53	57	53	57
Banks	12	12	12	12
Wald Chi2	1893.28	9781.33	1173.77	1859.47
Hausman (Prob)	0.7241	0.5333	0.1836	0.1255
R-Squared	0.5943	0.5178	0.5632	0.5236
Adjusted R-Sq.	0.5782	0.5001	0.5459	0.5061
Prob > chi2	0.0000	0.0000	0.0000	0.0000

Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1 (Level of Significance).

The study employed ROE and ROA as the dependent variables in the analysis equations. These equations came in one variant thus, leverage (LEV) at a time with the rest of the independent variables (SIZE, TANG and SG) used as control variables throughout the equations. All the models were jointly significant in the random effects estimation results.

Bank Leverage (Capital Structure)

In respect to their capital structure, the research discovers a statistically significant difference between the performance of domestic and foreign banks. The research rejected the hypothesis that there is no statistically significant difference between the financial performance of local and foreign banks with regard to the debt component of their capital structures. The research rejected the hypothesis that leverage has no statistically significant impact on the financial performance of Zambian domestic and foreign banks.

The high risk-tolerance traits (coefficient of variation) of the foreign banks are responsible for this.

Leverage negatively affects the financial performance (ROE and ROA) of both domestic and foreign banks, according to the research, which also found that it is statistically significant. The profitability of foreign banks, as opposed to local banks, is affected negatively, however more so.

As compared to their domestic rivals, foreign banks take on greater risk, which is why this is the case.

According to the study's findings, the size of both local and foreign banks has a statistically significant favorable impact on both of those institutions' performance. Both foreign and domestic banks' performance was statistically significantly negatively impacted by the percentage of fixed assets in total assets (asset tangibility ratio).

Bank Size

When the research equations were analyzed, it was shown that the size of the banks had a statistically significant positive relationship with ROE for both domestic and foreign banks, respectively. While holding all other factors constant over time and across banks, an increase in SIZE of one percentage point will result in an increase in ROE of around 24.5 percent for international banks and 15.3 percent for domestic banks. Upon further examination, the size of the banks (SIZE) revealed a favorable relationship with ROA for both domestic and foreign banks. While a one percentage point increase in SIZE will result in an increase in ROA of around 2.8 percent for foreign banks and 2.6 percent for domestic banks, all other factors being constant over time and

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across banks. The results are therefore in line with the empirical study on capital structure and profitability conducted by Abor (2005).

Bank Asset Tangibility

The amount of fixed assets that banks own (TANG) showed a statistically significant negative relationship with ROE in the research equations for both foreign and domestic banks. While maintaining other factors constant over time and across banks, a rise in TANG by one percentage point would result in ROE falling by 10.4% under domestic banks and by 79.2% under foreign banks. Upon further examination, there was a negative correlation between bank size and ROA for both domestic and foreign banks. While maintaining other factors constant over time and across banks, a rise in TANG of one percentage point would result in a considerable decline in ROA of 0.5 percent for foreign banks and 3.8 percent for domestic banks. This discovery is in line with what Maina & Ishmail (2014) and Muritula found (2012).

Bank Sales Growth

When the research equations were examined, bank sales growth (SG) had a statistically insignificant impact on both domestic and foreign banks' financial performance. This results conflicts with those of Abor (2005), who found a strong positive correlation between company sales growth and profitability.

Summary of findings

According to the findings of the research, there is a statistically significant difference in terms of performance between the domestic & global banking systems in regard to their capital structures. The research results contradict the hypothesis that there is no statistically significant difference between the financial performance of domestic and international banks in regard to the debt component of their capital structures. According to the findings of the research, the hypothesis that there is no statistically significant effect of leverage on the financial performance of both foreign and domestic banks in Zambia was rejected.

The high risk accommodating qualities (coefficient of variation) of foreign banks are likely to be responsible for this occurrence. The study also established that leverage has a negative statistically significant impact on the financial performance (ROE and ROA) of both foreign and domestic banks. On the other hand, it has a relatively higher negative bearing than local banks do on the profitability of foreign banks.

This is due to the fact that foreign banks, in comparison to their local counterparts, take on a greater amount of risk.

According to the findings of the research conducted, the size of both domestic and foreign banks has a very favorable impact on their levels of performance. The proportion of total assets that are made up of fixed assets is known as the asset tangibility ratio. Both domestic and foreign banks had a negative and statistically significant effect on their performance as a result of this ratio.

CONCLUSION

There is a significant gap when comparing the profitability and organizational make-up of local and foreign financial institutions. In addition to this, the foreign banks' proactive risk-taking qualities contributed to their superior performance compared to that of their domestic competitors. Leverage also has a negative effect on the financial performance of both foreign and domestic banks in Zambia. According to the findings of the research, leverage plays a significant part in determining the financial performance of banks in Zambia. Therefore, it is essential to lay a strong emphasis on the significance of bank capital structure, since this is a significant decision considering funding for every business.

RECOMMENDATIONS

Because debt often has a detrimental influence on a company's capacity to turn a profit, the management of banks in Zambia, both domestic and foreign, should place primary emphasis on the generation of internally generated funds for their business operations. Internally generated revenues may come from a variety of sources inside a bank, such as interest on loans, transaction and transfer fees, overdraft fees, savings deposit fees, and so on. In this vein, financial institutions have an obligation to make certain that domestically produced funds contribute to the achievement of the targeted financial performance objectives. As a consequence of this, banks in Zambia need to determine their optimal leverage level and find a way to strike a strategic balance between the risks connected with linked financing and the rewards that should be given to the bank's shareholders.

The study also reiterates the need for managers of both foreign and domestic banks in Zambia to appreciate the necessity of a paradigm shift away from leverage-equity dependence and toward the level of innovative banking as the way forward for higher performance in the Zambian banking industry.

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