DOES BANK COMPETITION AFFECT PROFITABILITY? THE CASE OF MULTINATIONAL BANKS IN SUB SAHARAN AFRICA

Boaz Kibs Muhanguzi*

*PhD Candidate, Department of Business, College of Economics and Management Sciences, Kampala International University, Kampala Uganda

ABSTRACT

Globalization and increased openness of modern economies presupposes that multinational enterprises, banks in particular, freely move to where they expect to reap high profits and so, increase competition. Unlike the most previous studies on the same subject matter, this specific study investigates the effect of bank competition on profitability particularly, in sub Saharan African region. to accomplish this, a panel bank sample (2007-2017) is investigated. Level of bank competitions measured using the Lerner index, a proxy for market power, while Return on Assets is used as a measure of bank profitability. Analyzing the effect of bank completion on profitability is done using a two-step system Generalized Method of Moments estimator. Other covariates (geographic diversification, country risk; debt and equity sources of financing, bank size, and economy size) are included in the regression model. Descriptive results indicate a low market power (Lerner index) implying presence of a high level of bank competition in the region. The regression output indicates a positive and significant effect of bank competition on profitability. Further, the results show a positive and significant effect of country risk, geographic diversication, sources of finance (debt and equity), and size of the economy significantly influencing bank profitability in a positive manner. Only bank size does not significantly affect profitability. This implies that competition amongst multinational banks in sub Saharan Africa yields more profits, even in economies where country risk is high. This suggests that profitability emanates from use of better efficient bank structures (management and technology) than charging high prices (monopoly)

Key Words: Bank Competition, Profitability, Multinational Banks, Sub Saharan Africa,

INTRODUCTION

Banking industry in sub Saharan Africa has undergone dramatic changes over the past 20 years. While dominated by government-owned banks in the 1980s and subject to restrictive regulations (interest rate ceilings and credit quotas), globalization, financial liberalization, and institutional and regulatory upgrades have changed the face of financial systems across the region, due to increased flow of multinational banks[1]. Today, most countries have deeper and more stable financial systems, though challenges of concentration and limited competition, high costs, short maturities, and limited inclusion persist[2]. Irrespective of the constant financial and political instabilities[3], multinational banks have spread fast across this region[4,5]leading to the expectation

of a competitive banking industry in this region. In 2016,there is apublished list ofthe 10 best performing multinational banks in Sub Saharan Africa[6](appendix table I), yet, earlier on, a study[7]finds bank profits higher in this region compared to other regions. This provides a basis for making aprudent probe on the effect of bank competition on profitability in this region.An intruiging question from this observation is whether competition enhances profitability of multinational banks in sub Saharan Africa region, a list of member countries is appended (table II).

While the period after independence saw a wave of nationalization across the continent, with many of the colonial banks exiting, this trend was reversed in the 1980s with the arrival of financial liberalization making multinational banking a critical part of Africa's financial history since colonial times[5]. Failing state-owned and private banks were sold mostly to global investors or multinational banks. Increasing international and regional economic integration, including of financial services, and deregulation further increased the number of foreign banks and by the mid-2000s many African banking systems were yet again dominated by foreign banks. By 2000, several indigenous banks in Africa mainly: the Nigerian Eco bank, Bank of Africa, Standard Bank and United Bank for Africa, had operations outside their mother countries[5]. Todate, Eco bank has the broadest footprint in the region, with a presence in more than 33 of the 49 countries. It has for long featured as one of the five largest banks in 18 countries in regions of West Africa, Central Africa and East Africa[8].By 2014, there was a rising momentum of multinational banks from developing countries competiting with previously overseas-dominated banks in Africa[9]. These banks created a competitive pressure onto the local banks[3]though literature is conflicting about the impact of this competition on their performance-profitability[10]. Though most literature posits a positive relationship between competition and profitability[2], economic theory harbors otherwise[11]. This study examines whether multinational bank competition explain the manifested high profitability in the sub Saharan African region.Results are expected to play a pivotal role among banking executives, investors and regulators; considering the increasing role of multinational banks, and the differing levels of country risk in the region.

The detrimental effects of competition[12] and profitability (repatriation) require policy interventions for the security of customers, and financial system at large.Competition is necessary for the dynamic efficiency of the banking system[13]. However, higher bank profitability may raise concerns about potential abuse of market power and risk-taking by banks. Likewise, market power and regulations can avert arbitrage and keep returns high. If higher profitability is the result of market power, then consumers could be disadvantaged through higher loan rates, lower deposit rates, credit rationing and poor quality of financial services[14]. Thus, high bank profitability may call for policy interventions to reduce bank entry barriers and other obstacles to competition, and to lower risk. However, bank profits may be reinvested, which should produce safer banks and promote financial stability[7]. On the other hand, low profitability in the banking sector may suggest intense competition or inefficiency in operations, either of which requires appropriate policy responses on competition, quality of human capital and cost of doing business.

From business economics' perspective, the market structure for firms in an industry can be gauged from their aggregate revenue, cost, and price functions; leading to a generalization that the industry as a whole is either competitive or monopolistic. Assessing the level of competition in an industry helps to identify key pointers by potential investors on whether to enter or ignore the market. Thus while mapping strategies for growth, the nature of the market structure is helpful at the corporate decision making level. Because competition is a complex notion since it is not directly observable, literature posits several methods for its assessment in relation to profitability. Two common related theories are: the 'Market Power' hypothesis and the 'Efficient Structure' hypothesis. According to the 'Market Power' hypothesis, the direction of causality runs from market structure to behavior, and then performance. A well concentrated structure promotes the use of market power in ways that may enhance banks' profitability. The 'efficiency structure' hypothesis relates bank's profitability to efficient management (technical) in terms of resource use. That firms with superior management or production technologies have lower costs and therefore higher profits than their counterparts[12].

Literature posits different approaches to measuring bank competition: structural and non-structual. The structural measures include; the calculation of what share of the sector's output is held by a few firms, the numbers of banks, market share, and concentration ratio or Herfindhal-Hirschmann Index. The non-structural approaches examine competitive conditions based on bank level behavior that include measures of price-cost margins. These include the H-statistic and the Lerner index[15, 16]

On the relationship between bank competition and profitability, a number of studies show mixed results. For example, within sub Saharan Africa,a study[2] on 'Freedom, competition and bank profitability in Sub-Saharan Africa' while using a system generalized method of moments GMM on data from 139 banks across 11 Sub Saharan African countries (2006-2012) findsa higher market power (limited completion) in the region that is positively related to bank profitability., suggesting that in less competitive markets banks generally earn higher returns on their assets. Another study[17] on whether competition causes stability in banks?' investigates the impact of competition on efficiency by applying a stochastic frontier analysis and generalized method of moments on a sample Sub Saharan African commercial banks. Through modelling of efficiency of the banking systems with and without competition, an increase in efficiency with a competitive banking system as the mean efficiency of the model with competition, is found to be higher than the model without competition. A study[18] on whether competition, regulation and stability matter for banking efficiency in the same region uses panel data from 440 commercial banks for the period 2006–2015 to analyze a seven-variable panel structural vector autoregressive model. The result here shows that competition results into efficiency (reduction in costs of production) leading to acquisition of market power which eventually revert to a competitive banking environment. In 2015 however, a study[19]using a panel data of 97 sub-Saharan African banks (2000-2012) analyze show competitive the banks in the region are, and what determines banks' profitability. Through recursive regression, the study finds commercial banks in SSA are more profitable, with a mean return on assets of 40%, than those in Asia, Europe or America; a profitability attributed to efficient management of resources.

Elsewhere, outside the sub Saharan African region, while analyzing the effects of structure on bank profitability in the U.S from 1994 to 2005 one study[20] finds evidence that market concentration increases bank profitability. This holds even when the largest banks are excluded from the sample, suggesting that the relationship between concentration (less competition) and profitability holds. This does not differ from the results from china in the same year[21]. In 2013, on determinants of commercial bank profitability in South Asia, results[22] show that even though increasing competition exerts negative pressure on bank profitability, high levels of industry concentration still allows South Asian banks to earn higher profits. Another study[23] onprofitability of 1,929 banks in 40 emerging economies (Eastern Europe and Middle East) and advanced economies (Western Europe) over 1999-2008 observe that a greater market share (less competition) leads to higher bank profitability.

In conclusion, though efficiency- structure hypothesis suggests a positive relationship between bank competition and profitability, literature posits ambiguous results suggesting that the existing level of competition in the banking industry can either account for profitability, inefficiency (losses) or no impact at all. Such ambiguity could be partly due to the study scope or methodology. Given the vast studies on competition and bank profitability in sub-Saharan Africa, this study does investigation differently by analyzing only the listed ten best performing multinational banks in 2016, over the period 2007-2017, using a two-step system GMM estimator. The rationale behind this study is that profitability and the existing level of competition are the key drivers of a multination firm's motive to open a new branch in a new country (environment).

METHODS

Data and its source

Given a list of the best performing[6] multinational banks (2016), panel data(2007-2017)from their published financial statements is extracted from the World Bank's bank scope database. This data source provides variable information on: bank profitability, level of competition, sources of capital, diversification, and bank size. Data on the level of country risk is obtained from the International Country Risk Guide's (ICRG)database using 'Euler Hermes' Ratings. Data on country size as measured by per capita income is obtained from the World Development Indicators produced by the World Bank, and available on the website of the World Bank. From this database, 126 cross sectional units of banks across 11 years, makes a total of 2520 bank-country-year observations.

Variable Description and measurement

Bank profitability is analyzed using the banks' return on assets ROA[2]. This study adopts a non-structual approach of price-cost margin (Lerner Index)for measuring bank competition[2, 18]. Other covariates used are: country risk, measured using country risk index[1], a composition of political, economic and financial risk. Sources of capital (equtiy and debt), the former measured by the ratio of equity to total capital[18, 24] while the latter measuringthe ratio of debt to total capital[27]. Geographic diversification is measured using the number of countries a bank has operations[25, 26]. Country size is measured using per capita income[2, 22], an indicator for the country's level of

economic development. Bank size is measured using total bank assets[2,3]. Table1 is a summary of variable description and measurement.

Table 1: Data and variable description

Variable	Proxy	Descritpiton	Data requirement
Bank profitability	ROA	Ratio of net income to average total assets[2]	Net income, average total assets
Bank competition	Lerner Index	Measure of bank market power signifying a bank's ability to charge price above its marginal cost[2, 18]	Total assets, total revenue, personal costs, interest expenses, non-interest expenses, total deposits and fixed assets
Country Risk	Composite risk index	Composite risk index (Financial + Economic + Political risk)[1] Hermes risk rating indices: 1=low risk (0.0-0.249), 2=moderate risk (0.25-0.449), 3=sensitive (0.50-0.749) and 4=high risk (0.750-1.00).	Hermes' world computed indices by ICRG.
Equity financing	Equity	Ratio of equity to total capital[18, 24]	Total equity and total capital
Debt financing	Debt	Ratio of debt to total capital[27]	Total debt, and total capital
Geographic diversification	Diversification	Geographic diversification[25, 26]	Number of countries a bank has operations
Bank size	Bank assets	Bank assets (log)[2,3]	Total bank assets
Country size	Per capita income	Per capita income(log)[2, 22]	Per capital income (log)
Indegenous African banks	Local banks	Trans-african[3, 9]	Banks with origin in Africa
Overseas foreign banks	Foreign	Foreign banks[3, 9]	Banks with origin from outside Africa

Source: *Literature review by the Author, 2019.*

Estimation strategy

Measuring bank competition using the price-cost margin (Lerner index) of the form in equation (1):

$$L_{it} = (P_{TA,it} - MC_{TA,it})/P_{TA,it} \quad \text{...} \quad (1)$$

where L refers to as Lerner index, P_{TA} is the price of total assets (calculated as the ratio of total revenues to total assets) and MC_{TA} is the marginal cost of producing an additional unit of output. Following the approach[28] of handling the cost structure of the banking sector through translogarithmic transformation of the cost function in equation2;

$$lnTC_{ist} = \alpha_0 + \alpha_1 \, ln \, Q_{ist} + 0.5\alpha_2 (lnQ_{ist})^2 + \sum_{j=1}^{3} \beta_j \, lnP_{i,s,t} + \sum_{i=1}^{3} \sum_{k=1}^{3} \theta_{jk} \, ln \, P_{istj}$$

$$* \, ln \, P_{istk} + \sum_{j=1}^{3} \gamma_{j}^{ln} Q_{ist^*} ln \, P_{istj} + \tau_1 Trend + 0.5 \, \tau_2 (Trend)^2 + \tau_3 Trend * ln \, q$$

$$+ \varepsilon_{i,t} \, \text{...} \quad (2)$$

Where, TC is the total costs of bank i in country s at time t, Q is bank output, P is a vector of input prices, namely labor price (P_1), price of borrowed funds (P_2) and capital price (P_3). The input prices are respectively calculated as the ratio of interest expenses to total deposits and money market funds, personnel expenses to total assets, and other operating expenses (excluding personnel expenses) to total assets. Scaling over total employees, instead of total assets is a better proxy for the price of labor, but the latter is often chosen because the number of employees is not available for many observations in sub Saharan Africa[2]. $Trend$ is a time trend capturing the dynamics of the cost-function (efficiency) over time. We also scale the input prices and TC by P_3 to ensure homogeneity of degree one in input prices of the cost function. Where, $\beta, \theta, \gamma \, and \, \tau$, are coefficients to be estimated and ε_{it} is a two-component error term computed as follows: $\varepsilon_{it} = \mu_{it} + \omega_{it}$ Where a two-sided error term is ω_{it}, and μ_{it} is a one-sided disturbance term representing inefficiency. From equation 2, assuming that inputs' prices are homogeneous, the marginal cost can be computed as shown in equation 3.

$$MC_{ist} = \frac{dTC_{ist}}{dq_{ist}} \left[\alpha_1 + \alpha_2 ln \, q_{ist} + \sum_{j=1}^{3} \hat{\gamma}_j \, ln \, P_{istj} + \hat{\tau} \, Trend \right] \text{...............} \quad (3)$$

Notably, though the Lerner index captures both the impact of pricing power on the asset side and funding side of the bank, it is subject to some concerns. First, it does not recognize that some of the deviation of price level from marginal cost comes from either scale efficiency or the need to cover fixed costs[12] implying that the price may deviate from marginal costs for reasons other than monopoly. Or price may be close to marginal costs, despite considerable monopoly power. Second, it does not provide any information on the efficiency structure hypothesis that 'fiercer

competition enables more efficient banks to achieve superior performance in terms of higher profits at the expense of their less efficient rivals and also attract greater market share[12].

After computing the Lerner index for each bank in her respective country, a profit function is modelled of the form in equation (4), to examine the effect of bank competition (and other covariates) on profitability.

$$\pi_{ist} = \theta\pi_{ist-1} + \beta_1 L_{ist} + \sum_{n=1}^{k} \lambda\dot{z}_{ist} + \varepsilon_{it} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (4)$$

The subscripts *i, s* and *t* represent bank *I* in country *s* at year t, respectively; π is our measure of bank profitability and π_{ist-1} is the observation on the same bank in the same country in the previous year. The variable*L*, is the Lerner index used as a measure of bank competition, alongside the vector of control variables*z*. The error term, ε_{it} has three components: the unobserved time-invariant bank-specific effectμ_i, the unobserved time effectsω_{it}, and the random error e_{it}such that the equation$\varepsilon_{it} = \mu_i + \omega_t + e_{it}$ holds.

Because profits of a bank today can be as result yesterday's profits, a dynamic model[29]as specified in equation 5 is built.

$ROA_{ist} = \theta ROA_{ist-1} + \beta_1 L_{ist} + \beta_2 CountryRisk_{ist} + \beta_3 GeogDiversf_{ist} + \beta_4 EquityF_{ist} + \beta_5 DebtF_{ist} + \beta_6 BankSize_{ist} + \beta_7 BankOrigin_{is} + \beta_8 CountrySize_{st} + \varepsilon_{it}\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots$ (5)

Where: ROA is the measure of bank profitability, and $ROA_{ist-1}$is the observation on the same bank in the same country in the previous year. *L* Indicates the Lerner index, a measure of multinational bank competition. The level of country risk in a country at time t is denoted by $CountryRisk_{ist}$while $BankOrigin_{is}$ denotes the foundation of the bank either from overseas or pan-African. The level of country size is denoted byCPY_{st}whileε_{it} is the error term, with three components:$\varepsilon_{it} = \Psi_i + Z_t + \varphi_{it}$; the unobserved time-invariant bank-specific effects(Ψ_i), the unobserved time effects(Z_t), and the random error(φ_{it}); and the subscripts *i, s,* and *t* represent bank *i,* in country *s,* at year *t,* respectively.

Anumber of variables are controlled that are assumed to affect the relationship between competition and bank profitability. Among them include: first, country risk. The assumption made is that the higher the level of country risk, the lesser the level of bank competiton, the effect on profitability becoming ambigious. It is hypothesized that the more the number of countries a mutlinational bank has operations, the more the level of competition and the higher the profitability. Third, debt funancing which is expected to have a negative link with profitability. Fourth, equity financing is expected to have a positive relationship with profitability Fifth, bank size is expected to have a positive relationship with profitability. Sixth, bank origin where overseas banks are expected to have superior performance (profitability). Finally, on

country size and bank profitability,the priori is that banks operating in large economies are expected to reap higher profits. Table 2 is an extension of equation 5, summarizing the hypotheses (expectations) to be tested in this study as being supported by previous studies.

Table 2: Study hypotheses

Variable	Coefficient	Expectation
Lag1-profit	θ	Close to zero[30]
Lerner index	β_1	High[2]
Country risk	β_2	Negative[1]
Geographic diversification	β_3	Positive[25]
Equity financing	β_4	Positive[2, 24]
Debt financing	β_5	Negative[27]
Bank size	β_6	Ambiguous[2,30]
Overseas banks	β_{7a}	Positive[3, 10]
African banks	β_{7b}	Negative[3]
Country size	β_8	Zero[2, 19]

Source: *Author's postulations, 2019.*

Because of the dynamic regression model in equation 5, estimation strategy uses a two-step system generalized method of moments (GMM) estimator. This estimation technique helps to account for persistence of profitability as reflected in the magnitude of θ, and to deal with possible endogeneity of some of the variables used in the estimations[31]. Since the model includes the first lag of the dependent variable as part of the covariates, and unobserved individual bank effects, the standard fixed effects or random effects estimators produce inconsistent results. By construction, the individual bank effects are correlated with the lagged dependent variable. Estimation of equation 5 is done using a two-step system GMM estimator which is asymptotically more efficient than the one-step[32]. For the system GMM estimator to be consistent, two main assumptions have to be fulfilled: first, the error term is not autocorrelated, and second, the instruments used are valid. Therefore, testing the hypothesis of no autocorrelation in the error term, and Hansen test of over-identifying restrictions to examine the validity of the instruments must be done and results reported together with the main results.

RESULTS

From the summary of descriptive statistics for the key variables in Table 3, the average profitability (ROA) of multinational banks in sub Saharan Africa for the studied period (2007-2017) is 42.1 per cent with a standard deviation of 0.36. Such a high profitability could be an incentive for entry of new competitors into the banking industry. In terms of level of banking competition, an average Lerner index for market power of the bank is estimated at 0.241 with a standard deviation of 0.311.When adjusted for funding, the Lerner index yields an average of 0.264 with a standard deviation of 0.420, making it slightly higher than the non-adjusted Lerner index. This implies that the funding source for these multinational banks vary across countries in the region. The mean for country risk clearly describes sub Saharan African environment well. Traditionally, sub saharan economy is a developing economy sharing the same characteristics of

poor economies: high level of political instabilities, poor developed institutional, financial, and economic infrastructure among others; which pause a risk to investors. On average, sub Saharan region lies within the risk sensitive environment (0.698 is so close to 7) following the interpretation of the Hermers Risk index used in this analysis. Likewise, on average, a multinational bank in the region operates in 18 countries with the least number of countries being 3 and highest (Ecco bank) having operations in 36 out of the 48 sub Saharan African countries. In terms of sources of bank financing, on average, multinational banks have 21% of their capital mobilized from equity while 37% is mobiozed through debt.

Table 3: Descriptive statistics

Variable	Mean	Standard deviation	Minimum	Maximum
ROA	0.421	0.362	0.124	0.581
Lerner	-0.241	0.311	-0.022	-0.510
Adjusted-Lerner	-0.264	0.420	-0.014	-0.502
Country risk	0.698	0.071	0.120	0.875
Geog.Diversification	18	5.210	3	34
Equity financing	0.211	0.042	0.011	0.481
Debt financing	0.371	0.083	0.131	0.492
Bank size (log)	8.142	2.132	2.770	12.201
Country size (log)	4.391	1.820	0.452	7.697
Note: Bank size in terms of assets is Million USD, whereas, country size in terms of per capita income is in US dollars				

Source: Author's calculations, 2019.

Results from the two-step system generalized method of moments (GMM) regressions on the effect of multinational bank competition on profitability in sub Saharan Africaare presented in Table 4. To analyze multinational bank competition in the region, two specifications of the Lerner index are used for the estimations: the conventional Lerner and the funding-adjusted Lerner. The results value for θ, which is the coefficient of the lagged dependent variable (ROA_{t-1}) is highly significant, and so close to zero (0.0310),implying that bank profits tend to persist from year to year[30].The coefficient for bank competition indicated by (Lerner) is generally negative, low and significant. This suggests that generally, the market power for multinational banks has declined and high profitability is explained by their efficient structures-managerial and operational efficiency, alongside scale-economies. The coefficient for the Lerner index also suggest that in the less competitive sub Saharan countries (which have higher bank market power), banks generally earn higher returns on their assets. It could be this higher returns that attract more foreign banks in the region (increased geographic diversification). This finding is similar to one previous study[2].

For the control variables, the results show that in highly risky markets (adverse country risk), bank profits are likely to increase as indicated by the positive and significant sign of the coefficients for country risk (0.0111, 0.0112), though this is only significant at 10 percent. This is consistent with the standard asset-pricing models that suggest that arbitrage will ensure that

riskier assets are compensated with higher returns[1]. Geographic diversification posits a positive and significant relationship with bank profitability implying that those banks with many countries of operation are highly competitive and yield more profits (return on assets). About bank's sources of capital, the coefficient for equity source (0.0431) is relatively higher than that of debt (0.0271) and both are significant at one percent significance level, implying that multinational banks within the region benefit highly through sale of shares than debentures. Larger banks (in terms of total assets) are found to accumulate higher profits probably due to efficient structure hypothesis and scale-efficiency[12]. However, this result is not statistically significant. Likewise, the size of the economy only becomes significant at 10 percent significance level, implying that, multinational banks in larger economies make abit more profits than those in small economies (in terms of percapital income).

Table 4: The GMM estimates

Variable	Model I	Model II=Adjusted Lerner
Lag1_ROA	0.0310*** (0.0011)	0.0211*** (0.0021)
Conventional-Lerner	-0.1041*** (0.0115)	-
Adjusted- Lerner	-	-0.1013*** (0.0111)
Country risk	0.0111* (0.0115)	0.0112* (0.0113)
Geog.Diversification	0.0340** (0.0321)	0.0324** (0.0310)
EquityFinancing	0.0431*** (0.0012)	0.0451*** (0.0011)
Debt Financing	0.0271*** (0.0001)	0.0264*** (0.0003)
Bank size	1.0110 (0.0123)	1.0052 (0.0122)
Country size	0.7987* (0.0201)	0.6987* (0.0211)
Constant	0.1411*** (0.0011)	0.1531*** (0.0021)
Number of observations	2520	2520
Number of banks	126	126
Number of countries	48	48
Number of instruments=j	42	47
AR(1)p	0.0222	0.0331
AR(2)p	0.0511	0.0517

Hansen p>ch2	*0.4422*	0.4425
Diff-in-Hansen testP	0.3282	0.4985
Robust standard errors are in parentheses; ***, **, and * show 1, 5 and 10 per cent levels of significance, respectively		

Source: *Author's calculations from Muteso's (2016) best performing multinational banks in Sub Saharan Africa, analyzed for the period 2007-2017.*

In all, since from table 4, the number of instruments denoted as j is much lower than the number of multinational banks in the sample (j< 126). Hence, the basic condition to keep the results reliable is met (Brundell & Bond. 1998). Also, the results from Arellano-Bond test for zero autocorrelation in first-differenced errors, the Hansen test of over-identifying restrictions, and the difference-in-Hansen tests of exogeneity of instrument subsets suggest that the underlying assumptions are not violated because their p-values are very high. This leads to a conclusion that the estimated results in table 4 are efficient, robust and reliable, and the model is well specified.

SUMMARY AND CONCLUSION

Globalization and increased openness of modern economies presupposes that multinational enterpreises, banks in particular, freely move to where they expect to reap high profits. Unlike previous studies on bank competition and profitability in sub Saharan Africa, this specific study investigates how multinational bank competion has affected profitability. Using a two-step, system GMM to regress ROA as a measure of bank performance; conventional, and adjusted-Lerner indices for bank competition alongside six other control variables (geographic diversification, country risk; debt and equity sources of financing, bank size and economy size), results indicate a low market power (Lerner index) due to high level of competition impling that high profitability is explained by the efficient-structure of multinational banks in sub Saharan Africa. Further, the results find country risk, geographic diversication and sources of finance (debt and equity)and size of the economy significantly influencing bank profitability in a positive manner. It only bank size that does not significantly affect profitability. Therefore, competition amongst multinational banks in sub Saharan Africa yields more profits, even in economies where country risk is high. Multinational banks should go ahead and spread to newer economies in the region as benefits from their efficient structures are still high. One major limitation of this study is (purposive sampling) that it only considered the sample from the once, best performing multinational banks. Therefore, a call for future research is to explore other sampling techniques (random and stratified) and investigate how competition amongst the selectedfew affects the bank profitability.

Declaration and Acknowledgement

I *Kibs B Muhanguzi,* a Ph.D candidate at the Departmentof Business management, College of Economics and Management Sciences, Kampala International University, declare this paper, an extract from my Ph.D thesis titled '*country risk, corporate strategy and performance of selected*

multinational banks in sub saharan africa', that the opinions and conclusions expressed herein are solely mine and do not represent the opinions or policy of any multinational bank in africa. I assume all the responsibility for the accuracy, completeness, or usefulness of the contents of this report. Reference herein to any other related author does not necessarily constitute or imply endorsement, recommendation or favor to them.

Therefore, I would like to thank my academic supervisors: John Mutenyo (Assoc. Prof) and Emenike O Kule (Assoc Prof) plus otherDoctoral Research Committee members; Dr. Owolusi O Dele, Dr. Muhammed Kibuuka; and the secretary (Coordinator, Directorate of Higher Degrees and Research) Dr. Joseph B.K. Kirabo. Your tireless, helpful, often provocative, and progressive comments made towards shaping the entire thesis deserve acknowledgement. My family, whose financial and other resources, were put aside for this academic work; to you all, I say thank you.

REFERENCES

Moyo, J., Nandwa B, Oduor, J. and Simpasa A. Financial Sector Reforms, Competition and Banking System Stability in Sub-Saharan Africa**.** Paper presented at the joint RES-SPR Conference on "Macroeconomic Challenges Facing Low-Income Countries" Hosted by the International Monetary Fund with support from the UK Department of International Development (DFID) Washington, DC-January 30–31, 2014.

Sarpong-Kumankoma E, Abor J, Aboagye Q.Q.A, andAmidu, M. "Freedom, competition and bank profitability in Sub-Saharan Africa", Journal of Financial Regulation and Compliance, Vol. 26 Issue: 4, pp.462-481, 2018. https://doi.org/10.1108/JFRC-12-2017-0107

Pelletier, A.Financial performance of foreign banks in developing countries. *Evidence from sub-Saharan African banking markets.* Essays on performance, corporate financial strategy and organization of multinational banks in Africa. A thesis submitted to the Department of Management of the London School of Economics for the degree of Doctor of Philosophy, London, September 2014. The London School of Economics and Political Science

Kasekende, L. "Developing a Sound Banking System in Sub Saharan African Countries," in *African Finance in the 21st Century, 2013*

Mlachila, Seok, and Masafumi. Banking in Sub-Saharan Africa. The Macroeconomic Context Washington, D.C. International Monetary Fund, 2013.

Mutiso, L. The 10 best performing multinational banks in sub Saharan Africa, 2016. https://afkinsider.com/126654/126654/b

Flamini, V., Schumacher, L. andMcDonald,C.A. "The determinants of commercial bank profitability in Sub-Saharan Africa"2009. International Monetary Fund wp/09/15.

Beck, T. and Cull,R. "Banking in Africa", Policy Research Working Paper 6684/2013. The World BankDevelopment Research Group, Finance and Private Sector Development.

Thorsten, B., Fuchs M, Singer.D and Makaio, W. Making Cross-Border Banking Work for Africa. Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH and International Bank for Reconstruction and Development / The World Bank, 2014. ISBN: 978-3-944152-39-4.

Claessens et al.,. "Foreign Bank Presence in Developing Countries 1995-2006: Data and Trends." Working paper.2012. URL file:///H:/d912f509a274a57ec9.pdf

Seelanatha, L. "Market structure, efficiency and performance of banking industry in Sri-Lanka",Banks and Bank Systems, Vol. 5 No. 1, 2010 pp. 20-31.

Shijaku, G. Bank Competition in Albania: An Analysis through the Boone Indicator, 2017. Sourced at: https://www.researchgate.net/publication/318492934

Casu, B., Girardone, C, and Molyneux, P (2015). Introductionto banking,2015, Vol. 10. UK: Pearson Education.

Chortareas, G.E, Garza, G.J.G. and Girardone, C. "Banking sector performance in Latin America: market power versus efficiency", Review of Development Economics, Vol. 15 No. 2, 2011. pp. 307-325.

Berger, Allen N., Leora F. Klapper, and Rima Turk-Ariss. "Bank Competition and Financial Stability." Journal of Financial Services Research, Vol.35, 2009. pp99-118.

Fu, X. M., Lin, Y. R, andMolyneux, P. Bank competitionand financial stability in Asia Pacific. Journal ofBanking & Finance, 38, 2014. pp 64–77. doi:10.1016/j.jbankfin.2013.09.012

Akande, J. O, andKwenda, F. Does competition cause stability in banks? SFA and GMM application to Sub-Saharan Africa commercial banks. Journal of Economics and Behavioral Studies, 9(4), 2017. pp 173–186. doi: 10.22610/jebs.v9i4.1832

Akande O.J. Do competition, regulation and stability matter for efficiency in Sub-Saharan African banking sectors? Cogent Economics & Finance (2018), 6: 1493667https://doi.org/10.1080/23322039.2018.1493667

Oino, A. Competitiveness and Determinants of Bank Profitability in Sub Saharan Africa. International Journal of Economics and Finance; Vol. 7, No. 10; 2015. ISSN 1916-971X E-ISSN 1916-9728. Published by Canadian Center of Science and Education

Tregenna, F. "The fat years: the structure and profitability of the U. S banking sector in the pre-crisisperiod", Cambridge Journal of Economics, Vol. 33 No. 4, 2009. pp. 609-632.

Fu, X.M. and Heffernan, S. "The effects of reform on china's bank structure and performance", Journal of Banking and Finance, Vol. 33 No. 1, 2009. pp. 39-52.

Perera, S., Skully, Mand ChaudreyZ. "Determinants of commercial bank profitability: South Asian evidence", Asian Journal of Finance and Accounting, Vol. 5 No. 1, 2013. pp. 365-380.

Mirzaei, A and Moore. "What are the driving forces of bank competition across different income groups of countries?" Journal of International Financial Markets, Institutions and Money, Vol. 32, 2014. pp. 38-71.

Athanasoglou, P.P., Brissimis, S.Nand Delis, M.D. "Bank-specific, industry-specific and macroeconomic determinants of bank profitability", Journal of International Financial Markets, Institutions and Money, Vol. 18 No. 2, 2008. pp. 121-136.

Driffield N, Du J andGirma, S. Optimal geographic diversification and firm performance: Evidence from the United Kingdom, 2018.

Bany-Ariffin, A., Matemilola, B., Wahid, L., and Abdullah S.16). International diversification and firm's value: evidence from developing nations. *Review of international Business and Strategy, Vol. 26*(2), 2016. pp 166-183.

Muritala, T. et al.,. An Empirical Analysis of Capital Structure on Firms' Performance in Nigeria. *International Journal of Advances in Management and Economics.*, 2012. pp 115-124.

Boone, J. *"A New Way to Measure Competition.", Economic Journal, Vol.118, 2009: 1245-1261.*

Dietrich, A, andWanzenriedG. "The determinants of commercial banking profitability in low-, middle-, and high-income countries", The Quarterly Review of Economics and Finance, Vol. 54 No. 3, 2014 pp. 337-354

Fakhri J. H, Nigar B. and Nayef, A. Bank-Specific and Macroeconomic Determinants of Bank Profitability: Evidence from an Oil-Dependent Economy. International journal of financial studies, 2018

Arellano, M. and Bover, O. "Another Look at the Instrumental Variables Estimation of Error Components Models", Journal of Econometrics, Vol. 68, Issue 1, July (1995), Pages 29 – 51.

Windmeijer, F. "A finite sample correction for the variance of linear efficient two step GMMestimators", Journal of Econometrics, Vol. 126 No. 1, 2005. pp 25–51, available at: www. eiu.com

Appendices

Table I: The 10 best performing multinational banks in sub Saharan Africa, 2016

Bank name	Bank code	Number of Countries	Origin
Eco bank	1	36	Pan African
Standard bank	2	20	Pan African
Barclays	3	12	Overseas
c	4	10	Overseas
Bank of Africa	5	16	Pan African
Citi bank	6	9	Overseas
Equity	7	5	Pan African
Access bank	8	7	Pan African
Commercial Bank of Africa	9	4	Pan African
Zenith	10	5	Pan African

Source: *Mutiso Lilian, 2016; afkinsider.com/*

Table II: List of Sub Saharan African Countries

Angola	Madagascar
Benin	Malawi
Botswana	Mali
Burkina Faso	Mauritania
Burundi	Mauritius
Cameroon	Mozambique
Cape Verde	Namibia
Central African Republic	Niger
Chad	Nigeria
Comoros	Rwanda
Republic of the Congo	Sao Tome and Principe
Democratic Republic of the Congo	Senegal
	Seychelles
Cote d'Ivoire	Sierra Leone
Djibouti	Somalia
Equatorial Guinea	South Africa
Eritrea	South Sudan
Ethiopia	Sudan
Gabon	Swaziland
The Gambia	Tanzania
Ghana	Togo

Guinea	Uganda
Guinea-Bissau	Zambia
Kenya	Zimbabwe
Liberia	

Source: The Royal Society-Africa Capacity Building Initiative, Department for International Development DFID