

DO OWNERSHIP STRUCTURES AFFECT BANKS' PERFORMANCE? AN EMPIRICAL INQUIRY ONTO TANZANIAN BANK INDUSTRY

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***Abstract.** Our inquiry is motivated by the ongoing extensive discussions on the relationship between banks performance and ownership structure which shows mixed results. We use a panel of nine Tanzanian banks from 2000 - 2009. Basing on a range of financial performance ratios and a sample of state and private owned banks in Tanzania, we compare the means and then test for the relationship between bank's performance and ownership structure with a proper regression set up. On average private owned banks have higher Return on Average Assets and lower Operating Efficiency Ratio while state owned banks have higher Return on Equity and capital adequacy indicators, Equity to deposit Liability and Liquid assets to Deposit Liability. We find little evidence to suggest a linear positive or negative relationship between ownership structure and bank performance in Tanzania. For that reason, ownership alone has no much impact on the bank's performance.*

***Keywords:** Bank's performance, Ownership Structure, Tanzania*

***JEL classification:** G21, G24, G32, F36, N27*

Introduction

Over the past three decades, a new wave of bank privatizations has significantly altered bank ownership structure in many countries. While governments have reduced their ownership stakes in banks, foreigners, and, to a lesser extent, large domestic block holders, including local companies and individuals, have stepped in. Consequently, the banking sector has experienced major transformations in its operating environment (Delis & Papanikolaou, 2009). Therefore, an efficient banking sector is better able to withstand negative shocks and contribute to the stability of the financial system.

In 1990s and early 2000s, many European banks responded to deregulation by changing their ownership structures from mutual to privately owned or listed institutions, and decreased the role and involvement of their national governments (Girardone, Nankervis & Velentza, 2009). In the late 1980s and early 1990s, a number of African countries also began to restructure their financial sectors in order to boost banking efficiency (Brownbridge & Harvey, 1998). Major reforms were introduced, such as the privatization of state-owned banks, the abolition of entry barriers to foreign capital, the removal of interest rate controls, and the development of new regulatory frameworks aimed at limiting opportunities to commit fraud and abuse depositors' funds.

Financial sector reforms in Tanzania began slowly in the 1984/85 but were intensified in 1986 by the Economic Recovery Program (ERP). The objectives of ERP (among others) were to direct more credit to the private sector. A presidential commission of enquiry into the

monetary and banking system in Tanzania was also established in 1988, and a Banking and Financial Institutions Act was passed in 1991. This geared to effect financial sector reform through the restructuring of the existing financial institutions, to promote private banking and strengthen the legislative and supervisory powers of the central bank. As from 1992, both private banks and financial institutions (domestic and foreign) were now free to enter the banking market. Foreign banks were allowed to enter into the banking system through opening branches, representative offices, or by acquiring shares of local banks. According to the Bank of Tanzania report by 2008, the Tanzanian banking sector composed of 36 banking institutions (25 commercial banks and 11 Regional Unit Banks). Out of these, 4 were fully owned by the government, 13 were locally owned and 13 were in full foreign control whereas the ownership of 10 was both local and foreign. With this number and type of banks ownership structure in the country there is no doubt that there exists fierce competition in the Tanzanian banking sector.

Experiences from developing countries have shown that bank's performance may vary across nations or between banks (Neely, 1997). Banking industry in Tanzania is open to entry and therefore it is highly contestable. What is still cloaked is the extent to which ownership structure affects banks' performance in Tanzania. This paper examines the effect of ownership structures on banks' performance in the country. And it is motivated by the gap that exists in the literature. The performance analysis of the banking sector has recently emerged as an important research trend. This is due to agency issues associated with different types of firm ownership being an area of concern in many banking systems where state-owned banks operate alongside mutual and private-sector institutions (Altunbas, Lynne & Molyneux, 2001). As a consequence, several studies have been done on bank performance and ownership type for example (Altunbas, *et al.*, 2001; Barry, Dacanay, Lepetit & Tarazi, 2008; Berger *et al.* (2005); Berger and Humphrey, 1997; La Porta *et al.*, (2002); Lafuente and Verges 2007 and Micco, Panizza & Yañez, (2004),). But, most of the available studies on the ownership-performance relationship have either concentrated on developed countries or focused on a single market, mainly the US (Lang & So, 2002) and authors have cautioned that evidence from other developed countries are not transferable to developing countries because of the absence of a well-defined market for corporate control, and weak property rights (De, 2003). This suggests the need for empirical evidence in this area and particularly on developing countries where the economies are on transition like Tanzania. Tanzania's economy provides an interesting example in this regard because the country has come out from the regulated environment and is moving to a more market-oriented scenario. For example privatization of production sectors including banks created a complex process of "financial liberalization" that changes fundamentally the way the entire financial sector is managed.

We therefore aim at answering the question on whether banks' ownership structures affect financial performance in terms of profitability, efficiency and capital adequacy. The rationale being, to extend the existing literature on performance in banking institutions by providing evidence on the relative performance across ownership types and financial structures in Tanzania. Moreover, since the restructuring and privatisation of government owned banks and non-bank financial institutions is still in progress, the findings will be useful to government policy makers, Bank of Tanzania (BOT) and other stakeholders in the banking and financial system who are concerned with the full integration of the financial system to obtain a clear picture as to whether opening the banking sector to foreigners and privatizing state-owned banks had solved the problem of banking inefficiency and enhancing the provision of banking services in the country.

The rest of the paper is organised as follows, the second part of the paper reviews the existing literature, the third part presents the methodology and data, the fourth part presents

empirical results and discussions. Finally in the conclusion part the paper gives recommendations and policy implications.

Review of Literature and Hypothesis Development

Financial sector reform in Tanzania

Privatization has been instrumental in reducing state ownership in many countries and many sectors (Megginson and Netter, 2001; Djankov and Murrell, 2002). Most developing countries launched their privatization focusing primarily on competitive firms rather than strategic sectors such as utilities, telecommunications and banking (Boubakri *et al.*, 2005). In Tanzania, a poor performance of the state-owned financial sector in late 1980s forced the government to search for new policy directions in 1990, a special presidential commission recommended: (i) increasing competition by encouraging entry of foreign banks; (ii) strengthening the existing financial institutions; and (iii) developing management accountability. Based on these, the government has issued a policy statement on financial sector reform with the aim of creating a market-based financial system, efficient in mobilizing and allocating resources and supporting long-term economic growth (Mwega, 1992).

Until 1991 financial institutions and banks in Tanzania had been nationalized through the Arusha declaration, and the financial and economic system was fully controlled and owned by the State. In that financial system there were three commercial banks, two insurance companies, five development finance institutions (DFIs), two contractual savings institutions, one hired Purchase Company and the central bank. The state owned many of the above mentioned institutions like, the solitary social security institution, three commercial banks, three DFIs and two insurance companies. The National Bank of Commerce (NBC) was the bank that had significance influence in the Tanzanian economy. Because it was handling the deposit taking subject to neither market competition nor did have any proper supervision or maximum deposit liabilities. Several branches of the NBC and a few DFIs were running through huge loss due to the wrong choice of projects and incompetent management. Therefore, these institutions were subjected to certain aids like, proper supervision, legal protection and auditing, to help the creditors and debtors.

In 1991, the Bank of Tanzania introduced some new guidelines to improve the management structure and financial growth and also to stop further mismanagement in the financial sector. Through these guidelines the Bank initiated the licensing of banks and formed a prudential framework for asset management, accrual of interest and provision for losses. The eligibility to get a license (i.e. the minimum capital requirement) was increased and the demonstration of the ability to operate profitably, efficiently and prudentially was made mandatory for the applicants. To supervise the whole financial system of the country, BOT also strengthened its Supervision Directorate.

Tanzanian government witnessed some advantageous effects by implementing financial reform; they included an establishment of new financial institutions and the formation of two banks by 1994. Through the NBC reform, the public confidence on the banks had been increased. The capital flight had been repatriated through the liberalization of the Tanzanian foreign exchange and financial markets and poverty was reduced to some extent. Domestic financial intermediation has been substantially liberalized. A new regulatory framework has been introduced, organizational and financial restructuring of the two largest (formerly state-owned) banks, the National Bank of Commerce (NBC) and the Cooperative and Rural

Development Bank, has been implemented, and the sector has been opened to the entry of other financial services providers. The new Banking and Financial Institutions Act approved in the second half of 1991 allowed licensing of new banks, including subsidiaries of foreign banks. The first major foreign bank (Standard Chartered) started operations in 1992, with other international banks following. As at 31 December 2009 there were 40 financial institutions (including non banking institutions).

Ownership structures in the Tanzanian Banking System

The banking sector in Tanzania can be categories into four types of firms that jointly participate in the banking system and they can be grouped by their ownership structure as follows: The first group is the *state owned banks*, which is fully owned by the government of Tanzania. The Second group is the *foreign owned banks*; this includes foreign licensed banks, subsidiaries of foreign banks or branches. The first major foreign bank was Standard Chartered, started operations in 1992, followed by Stanbic (1993), Citibank (1995), and Barclays (2000). Several other smaller foreign banks set up their subsidiaries during 1995–2002.

Privately domestically owned banks form the third group. Shareholders who are either resident individuals or institutions hold these banks and they aim to maximise their shareholder value (profit maximisation behaviour). The last group is the *jointly owned banks (local and foreign ownership)*. For example, when NBC was split in 1997 into the new National Bank of Commerce Limited (NBC) and the National Microfinance Bank (NMB); the South African banking group ABSA bought a majority stake in the NBC that allows them to participate in the management of the day to day activities of the bank as well as decision making.

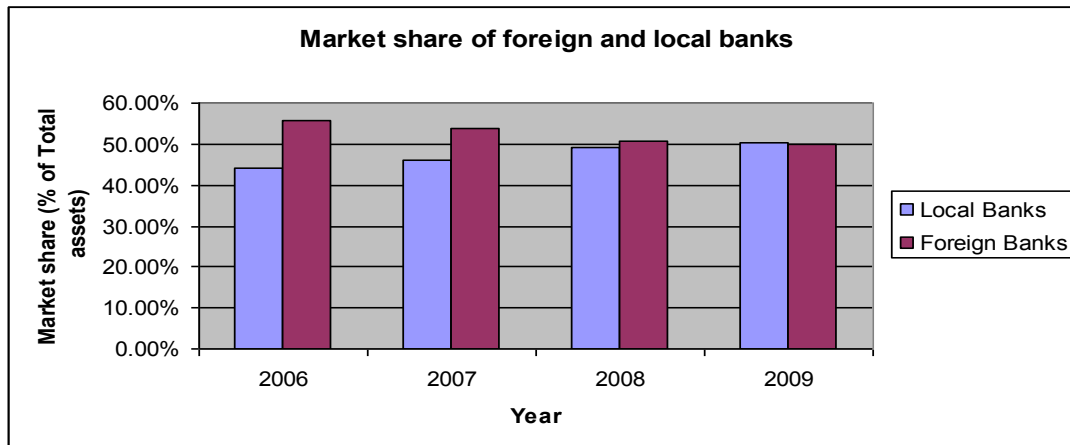
Table 2.1: Market share of foreign and domestic banks (Total Assets) (Source: DBS, 2009)

Year	2006	2007	2008	2009
Domestic Banks	44.28%	46.18%	49.34%	50.15%
Foreign Banks	55.72%	53.82%	50.66%	49.85%

In the last three years the foreign banks had been dominating the market as measured by total assets though the annual share continues to declines year by year (DBS, 2009). As depicted in Table 2.3 and Figure 2.2, market share of foreign banks decreased from 55.72% in 2006 to 53.82% in 2007, 50.66% in 2008 and 49.85% in 2009. Market share of domestic banks increased from 44.28% in 2006 to 46.18% in 2007, 49.34% in 2008 and 50.15% in 2009. In 2008 to 2009 there was a slightly difference in market share between local and foreign where Local banks now have started to dominate the market as measured by total assets.

Ownership structure will not only define who owns the business, but also will determine who controls it, who assumes liability, how profits are divided and how the business will be taxed. Therefore the choice of ownership: foreign, local, public, private, state etc. is important not only in the context of non-bank firms but also becomes crucial in the context of a bank (Boubakri *et al.*, 2005) and is an essential element for the development of a healthy banking system in developing countries (Lang & So, 2002).

Figure 2.2 Market shares of foreign and domestic banks (Total Assets) (Source: DBS, 2009)



Most of the literature on state ownership of banks documents the poor performance (i.e. lower profitability, poor asset quality) of state-owned banks vis-à-vis their private counterparts (Berger, Bonime, Goldberg and White, 2004; Berger, Clarke, Cull, Klapper and Udell, 2005; Micco *et al.*, 2004). Theoretical frameworks favouring private ownership are quite extensive. The *property rights theory* states that ownership structure within any kind of organisation conditions its efficiency level and it considers state owned firms to be less efficient than privately owned ones. This assumption lies on the multi-objective nature of state owned firms, fact that is incompatible with the objective of wealth maximisation, leading to lower levels of efficiency. This problem is aggravated when the government changes the firm's objectives to accommodate the interests of different pressure groups (Alchian and Demsetz, 1972; Shleifer and Vishny, 1994).

Moreover, the dispersed principal in the state owned firms widen the separation of ownership and control, leading managers to pursue their own agenda. In the case of privately owned firms, it is assumed that managers are monitored effectively, as a result of an appropriate allocation of property rights. This gives agents both the incentives and bargaining power to decide the firm's best course of action (Grossman and Hart, 1986; Hart and Moore, 1990). Nevertheless, Grossman and Hart (1980) show that effective monitoring mechanisms over managers that are not maximising profits, may fail due to the presence of a principal scattered (free rider problem).

Likewise, the literature on the effects of foreign ownership on the performance of domestic banks is abundant (e.g. Berger *et al.*, 2005; Claessens *et al.*, 2001; Hermes & Lensink, 2004; Wu *et al.*, 2007). Though most of them have focused on developed countries, particularly, the United States (Clarke *et al.*, 2003). There have been different lines of reasoning put forward for the relatively lower performance of foreign banks compared with domestic in industrialized countries. These include different market, competitive and regulatory conditions between industrialized and developing countries (Claessens *et al.*, 2000); home field advantage of domestic banks (Clarke *et al.*, 2001) and within the U.S. that foreign banks have been relatively less profitable because they valued growth above profitability (DeYoung & Nolle, 1996). Within developing countries, the reasoning suggested for the improved performance of foreign over domestic banks included exemption from credit allocation regulation and other restriction, market inefficiencies and outmoded banking practices that allow foreign banks better performance (Claessens, Demirgüç-Kunt, & Huizinga 2000).

Empirical evidence on ownership structure and bank performance

The existing literature on state ownership of banks has documented that this form of ownership was pervasive around the world as of 1995, is more prevalent in poorer countries (Barth, Caprio and Levine, 1999), and in countries with more interventionist and less efficient governments and less secure property rights (La Porta *et al.*, 2002a). The bulk of the evidence supports the political view of government ownership of banks, which argues that government control of banks politicizes resource allocation for the sake of advancing certain political agendas (e.g. obtaining votes, bribing office holders), and by pursuing such objectives, economic efficiency is hampered (Kornai, 1979; Shleifer and Vishny, 1994).

Consistent with the political view, several papers document that; State (Government) ownership of banks inhibits financial development and economic growth (Barth *et al.*, 2004; Galindo and Micco, 2004; La Porta *et al.*, 2002a). La Porta *et al.* (2002a) show that higher government ownership of banks in 1970 is associated with slower subsequent financial development and lower economic growth. Barth *et al.* (2004) examine the relationship between state ownership and banking sector development measures. They find that government ownership of banks is negatively related to favourable banking outcomes, and positively related with corruption. Micco, Panizza, and Yañez (2006) and Sapienza (2004) provide further support for the political view. Micco *et al.* (2006) find that the difference in public and private banks' performance widens during election years, supporting the hypothesis that political considerations drive these results.

Sapienza (2004) found out that lending behaviour of state-owned banks in Italy is affected by electoral results of the party affiliated with the bank. In addition, Dinç (2005) shows that government-owned banks in emerging markets significantly increase their lending in election years relative to private banks. The author interprets this as evidence that politicians can reward their allies and punish their opponents through their influence on government-owned banks. Megginson (2005) has a more complete review of this literature. Another well-documented finding is the poor performance of state-owned banks relative to their domestic or foreign -owned counterparts (Berger, Clarke, Cull, Klapper and Udell, 2005; Mian, 2006b; Micco, *et al.*, 2004). Berger *et al.* (2005) use data from Argentina in the 1990s to analyze the static, selection, and dynamic effects of domestic, foreign, and state ownership on bank performance. They found out that state-owned banks have poor long-term performance and that those banks undergoing privatization have poor performance beforehand, but improve their performance after privatization dramatically.

Micco *et al.* (2004) examine the relationship between bank ownership and bank performance for banks in 119 countries. They find that in developing countries, state owned banks have lower profitability, higher costs, higher employment ratios, and poorer asset quality than their domestic counterparts. With the exception of state-owned banks having higher costs than their domestic counterparts, they did not find evidence of significant differences between state and domestic private banks' performance in industrial countries. Cornett, Guo, Khaksari, and Tehranian (2003) examine the differences in performance between state-owned and private banks in 16 Far East countries between 1989 and 1998. They also find that state-owned banks are significantly less profitable, have lower capital ratios, greater credit risk, lower liquidity, and lower management efficiency.

While state ownership of banks is associated with poor bank performance, the bulk of the literature documents a positive impact of foreign ownership on bank performance. Barth *et al.* (2001) provide data on the share of banking assets held by foreign -controlled banks in 91 countries as of 1998. Foreign -controlled banks hold widely differing shares of assets across countries, but there is no obvious pattern based on level of development. The data show that foreign -controlled banks hold the largest shares in countries where the rule of law

is well established, but where the financial sector is less developed. There is evidence that banks' size, efficiency and performance, and home country restrictions play a role in determining which banks expand abroad.

In terms of individual bank performance, Claessens *et al.* (2001) document that foreign banks are more profitable than their domestic counterparts in developing countries, but the opposite is true in developed markets. Demirgüç-Kunt and Huizinga (1999) study banks in 80 countries over the 1988-1995 periods and find that foreign banks have higher margins and profits than domestic banks in developing countries, but the opposite is true for industrial countries. Micco *et al.* (2004) also document that foreign banks have higher profitability, lower costs, and lower employment ratios than their domestic counterparts in developing countries, although they exhibit higher nonperforming loans than their private counterparts. Bonin *et al.* (2005) examine bank performance in six Eastern European transition economies and find that foreign banks are more efficient in terms of cost and profit than domestic and state-controlled banks. They also find support for the importance of privatizing banks by selling them to strategic foreign investors. Banks privatized in such manner are more cost and profit efficient than state-owned banks. Majnoni, Shankar, and Varhegyi (2003) study the dynamics of foreign bank ownership in Hungary between 1994 and 2000 and find that foreign banks, while pursuing similar lending policies, achieve greater profitability than their domestic counterparts. Overall, the evidence shows that in developing countries foreign banks are more efficient than their domestic counterparts, while the opposite is true for developed countries.

Several studies document the impact that foreign banks have on domestic banks. Micco *et al.* (2004) find that foreign bank presence is associated with increased competitiveness of the domestic banks (lower margins and lower overhead costs). Claessens *et al.* (2001) show that, foreign bank entry diminishes the profitability of domestic banks reduces their non-interest income and overall expenses. When other factors are controlled for, high profits reflect a lack of competition, while high overhead costs, a lack of efficiency. They argue that their findings are consistent with foreign banks improving the efficiency of domestic banks.

Unite and Sullivan (2003) studied how foreign bank entry and foreign ownership of banks affect the banks in the Philippines. Their findings show that foreign bank entry and penetration reduces interest spreads and operating expenses of domestic banks, making them more efficient. While a study by Barajas, Salazar, and Steiner (2000) showed that foreign entry appears to improve the efficiency of Colombian domestic banks by reducing non-financial costs. The authors found out that domestic and foreign entry combined deteriorates the domestic banks' loan portfolios. Generally, the bulk of the evidence supports the view that foreign banks outperform their domestic counterparts and exert a positive influence on the competitiveness of domestic banks development is explored.

Conceptual framework and hypothesis

The performance of banks can be judged from several angles and previous performance studies, such as Martin and Parker (1997) and Coelli (2002), have suggested that results can be sensitive to particular performance measures. Therefore, a combination of three performance measures is used in this paper. Therefore in this study the researcher considers profitability, efficiency and Capital adequacy aspects of performance. Profitability measures that have been used are Return on Average Assets (ROAA) and Return on Equity (ROE) and Efficiency measures are the Net Interest Margin (NIM) and Operating Efficiency Ratio (OER) because they capture different aspects of performance. However, the Equity to Deposits Liability (E/Li) and Liquid assets to Deposits Liability (LA/Li) had been used to

capture for financial soundness of the banks (Capital Adequacy). These measures had also been used in earlier studies of bank ownership and performance [See, for example, Sarkar *et al.* (1998); De (2003) and Davies and Brucato (1987)].

Ownership structure was defined along two attributes: concentration and identity of the owner(s) (Gursoy and Aydogan, 2002). The former refers to the percentage of shares owned by majority shareholder(s) while the latter is related to the identity of the major shareholder. As a result, three mutually exclusive and collectively exhaustive categories are developed, namely, majority foreign, majority domestic, majority State. The foreign and domestic groups combined are called the private banking group. The definition of "majority" in this study follows the same spirit of Gursoy and Aydogan (2002), where is defined as when the bank has at least 50% of ownership of a given category.

Some control variables for other factors which could influence the performance of the banks were also included. Those are size and age of the bank and its business orientation (Wu *et al.*, 2007). We control for the age of the bank since banks established for longer period might have enjoyed advantages, such as learning effect and a broader client base, over relative new banks. Larger banks might have also enjoyed scale or scope economies that have positive effects on their performance. The ratio of non-interest income is used to capture the business orientation of the bank. The ratio of non-interest income might positively impact the performance, since the activities such as financial consulting, trade financing and guarantees are generally activities with low-risk, low-cost and high profit (Wu *et al.*, 2007). Table 2.4 summarises the description of all variables and their measurements as used.

Based on the review of literature (theoretical and empirical review), the following hypotheses can be formulated:

Hypothesis 1: Private ownership of banks is positively related with profitability measure ROAA and ROE.

Hypothesis 2: Private ownership of banks is positively related with efficiency measure NIM while negatively correlated with OER.

Hypothesis 3: Private ownership of banks is positively related with capital adequacy measure La/Li and E/Li

Table 2.2: Description of variables and their measurement (Source: Authors, 2012)

VARIABLE	MEASUREMENT
Performance	Dependent Variable
Profitability	
Return on Asset (ROA)	ROA, is measured as the ratio of profit before tax and interest to total assets during a financial year, to show the return on bank's assets
Return on equity (ROE)	ROE is measured as the ratio of profit before tax and interest to shareholders funds (Ordinary share plus reserves). To show the return to shareholders on the bank's earnings
Efficiency	
Operational efficiency Ratio (OER) (%)	Non interest expenses + Interest expense/loan & Advances +probable losses. To determine how efficiency the bank has been in making loans. The lower the % the more the efficient the bank is.

VARIABLE	MEASUREMENT
Net Interest Margin (NIM)	Is defined as the difference between interest earned and interest expended as a proportion of average total assets. NIM measures the efficiency of portfolio management of banks. The higher the % the better.
Capital adequacy	
Liquid assets to total deposit Liabilities (LA/Li) (%)	Liquid assets/customer deposits. To show how many liquid assets the bank has to cover Customer Deposits i.e. represents a financial variable (liquidity) that enables the assessment of the banks' capability to allocate the borrowed resources
Equity capital to Deposit liabilities (E/Li) (%)	Total shareholders funds to total deposits. Shows the extent to which total capital covers the bank's deposit liability.
Ownership Structure	Independent variables
ST_PRV	A dummy variable which takes a value of 1 if the majority of the ownership is a state category, and it takes a value of 0 if majority ownership is a private (both foreign and domestic ownership)
FOR_DOM	A dummy variable, takes a value of 1 if the majority of the ownership is a foreign category, and it takes a value of 0 if the majority of the ownership is a domestic (both state and private domestic ownership)
Control variable	
The relative size of the bank (SIZE)	Measured as the natural logarithm of the total assets of the bank. This variable accounts for the potential economies of scale and scope experienced by banks
Age of the bank (AGE)	Number of years the bank has been operated
Business orientation of the bank (NONINT)	Is defined as the ratio of non-interest income to the total operating income of a financial year

Methodology and Data

In analysing the effect of ownership structure on banks' performance, we adopted a *survey study design*. The study covered a sample of each type of bank and financial institutions operating in the country i.e. full fledge commercial banks, non-banking financial institution and regional unit banks. This methodology provides an adequate coverage of banking system of Tanzania. Of all the banking institutions and non banking financial institutions in Tanzania, a sample of 3 state-owned banks, 3 private domestically owned banks, and 3 foreign owned banks is used in this paper. This choice includes 3 non banking financial institutions, 1 regional unit banks and 5 full fledged commercial banks. We use secondary panel data from the nine banks sourced from the audited BOT annual and quarterly reports.

Moreover, unpublished reports from commercial banks' from the BOT as well as hand-collected data from annual report of individual banks were also being requested to supplement the available data. Besides, additional information was collected from particular banks' websites. The study period is from 2000 to 2009.

Model Specification

Based on the regression hypothesis developed, we use the following model.

$$Performance = f (Ownership, other control variables) \dots \dots \dots (1)$$

Therefore the model that was used in testing for the presence of ownership effects on bank performance is the following:

$$Performance = \beta_0 + \beta_1 Dummy + \beta_2 SIZE + \beta_3 AGE + \beta_4 NONINT + \varepsilon \dots \dots (2)$$

Where:

- Performance* : Is the performance measure or indicator
- Dummy* : Is a vector of dummy variables that characterise ownership structure of banks.
- β_0 : Estimate of the regression intercept. Is the estimated average performance when the values of all variables are zero
- β_1 : The coefficient of β_1 characterise the ownership effects. It measures the estimated change in the average performance as a result of a one-unit change in ownership structure.
- β_2 : Is the coefficient to be estimated that characterise the effect of banks size on performance.
- β_3 : Is the coefficient to be estimated that characterise the effect of age of the banks on performance.
- β_4 : Is the coefficient to be estimated that characterise the effect of the ratio of non-interest income that is used to capture the effect of business orientation of the bank on performance.
- SIZE, AGE, NONINT*: Are the control variables that might affect performance, and;
- ε : Is a random error term

We then tested the model for the assumptions of multiple regressions that are not robust to violation, specifically, the assumptions of linearity, homoscedasticity, and normality. The Kenel density estimate (kdensity tests) reveals the problem of normality on the following variables OER, E/Li. To address this drawback of the model we generated natural log of the variables. We take into consideration of their impact on regression results while analysing the meaning of coefficients.

Empirical Results and Discussion

Descriptive statistics and statistical tests have been used in presenting results. The study compared the means and tested for the relationship between bank's performance and ownership structure by regressing the relevant variables. Two-tailed t-tests were used to determine whether the difference between the means for each of the financial measures were statistically significant. The regression models used in this study considers individually the impact of ownership structure upon bank performance.

On ownership structure and Bank's profitability

In banks and financial institutions the commonest measure of profitability is Return on Average Asset (ROAA) which reflects the institution's ability to use its assets productively and Return on Equity (ROE), which measures the return produced for the owners. The return on average assets (ROAA) which was measured in percentage showed that the average ROAA for the private banks was 2.8 while for the state owned banks was 1.3. The t-statistics showed that the ROAA for the private owned banks differ significantly with the state owned banks at threshold level of 5% or 0.05 ($t = 0.0144$) implying that, concerning the ROAA components private banks had been doing better. These results do support the hypothesis (H1) of this study, that private banks are more profitable than state owned banks. This observation is in line with other studies elsewhere. For example a study by Harald and Marcel (2009) found out that there has been a systematic underperformance of German state-owned banks in the recent crisis compared with privately-owned banks. Also a study by Mian (2006b) found out that government banks perform poorly and only survive due to government support.

When foreign owned banks were compared to domestically owned banks (including state-owned), the average ROAA was 3.4% and 1.8% respectively. The difference is also statistically significant at 1% level ($t = 0.0108$). This means the foreign-owned banks performs better than domestic banks. These results confirm the previous findings that foreign banks tend to be more profitable than domestic banks in developing countries (Demirgüç-Kunt and Huizinga, (2000), and Bonin, Hasan and Wachtel, (2004) and Claessens *et al.* (2001). Regression analysis was performed to test for relationship between the performance indicator ROAA and ownership structure. The results are presented in Table 4.1 for the ownership dummies ST_PRV and FOR_DOM individually.

Table 4.1 Regression results (ROAA)

Ownership dummy ST_PRV				Ownership dummy FOR_DOM		
Variable	Coefficient	t-value	P-value	Coefficient	t-value	P-value
Ownership	-2.69984	-2.93	0.004***	1.357279	1.83	0.071*
NONINT	0.0185763	0.78	0.435	-0.0284626	-1.52	0.131
SIZE	0.1293336	0.74	0.461	0.195054	1.04	0.303
AGE	0.1199632	2.66	0.009***	.0436225	1.26	0.211
Constant	-.3386473	-0.19	0.849	.1212432	0.06	0.952
R-squared			0.19			0.14

Note: *, **, *** denotes significant at 10%, 5% and 1% respectively.

Examining table 4.1, the results indicate that the ownership dummy ST_PRV has a negative coefficient and is highly significant. The later could imply that as state ownership increases the return on assets of the bank decreases and the opposite is also true. This could be due to

more effective monitoring by private bank and also by the fact that state owned banks have a tendency of keeping more non earning assets than private banks. Another explanation could be due to wrong choice of projects and incompetent management on state-owned banks. Furthermore, it could be because state-owned banks may suffer from inferior information on demand and costs or by the fact that they suffer from damaging political intervention in management decision-making.

The effect of the dummy FOR_DOM is positive but also significant. This observation means that banks are more profitable when it has a foreign investor than banks without foreign ownership. This can be explained by the fact that foreign investors with a higher amount of shares are more committed to introduce new technology and knowhow into the domestic banks compared to foreign investors with a lower amount of shares (majority domestic). Another explanation could be the fact that with foreign ownership, a broader range of products can be offered, such as a better credit card service offered by *Visa or MasterCard*, which results in a higher operating income. But also, foreign investors may transfer superior managerial knowledge into the banks to improve their corporate governance.

However, results indicated a weak linear relationship between the independent variables and the dependent variable. The two coefficient of determination (R^2) were relatively very low which showed that the model can only explain 19% and 14% of the ROAA in these two ownership dummies. These observations suggest that there are possibly other variables, not specific to a bank's ownership, which could partly explain the performance of banks in Tanzania but were not included in the model. These may relate to industry-specific variables and/or country-specific macroeconomic and regulatory governance effects such as monetary policy, the size of the population in a country among others.

With respect to the other control variable, for the ownership dummy ST_PRV; all had a positive but insignificant effect (with exception to AGE which seems to have a highly significant effect). This confirms earlier predictions that the AGE will impact on performance of the bank favourably. While no significant impact was found for control variables SIZE and NONINT. This probably could be due to the fact that it is not a motive for state owned banks to undertake fee based activities. None of the control variable showed a significant effect for the ownership dummy FOR_DOM. In other words, it is not necessarily the case that banks will gain from the economies of scale. Moreover, when a bank becomes larger, some additional costs might also be included, such as more promotion costs as larger banks generally operate on a nationwide basis, while smaller banks are more regionally oriented. A negative coefficient for the control variable, business orientation (NONINT) is a pointer to the higher costs and relatively higher salaries that need to be paid to the skilled specialists and highly qualified professionals needed to carry out the fee-based activities of banks.

Regarding the profitability measure ROE, the results of t-test indicated that, the average ROE (in %) for state owned banks was 7.3 as compared to 2.8 for private banks. Inconsistent ROAA, ROE show that, state owned banks perform better than privately owned banks which differed significantly at 10% level ($t = 0.1016$). At the same time there was a slightly difference in performance between foreign owned banks and domestically owned banks. Their respective mean values were 3.4 and 4.8 which suggest that, domestic banks were better off with ROE than foreign banks although the difference was statistically insignificant. Table 4.2 present the results of regression analysis for the performance indicator ROE and ownership dummies ST_PRV and FOR_DOM individually.

Table 4.2: Regression results for (ROE)

Ownership dummy ST_PRV				Ownership dummy FOR_DOM		
Variable	Coefficient	t-value	P-value	Coefficient	t-value	P-value
Ownership	4.831957	1.13	0.260	-2.050683	-0.61	0.542
NONINT	-0.09039	-0.83	0.411	-0.0068373	-0.08	0.936
SIZE	0.689061	0.85	0.395	0.5163104	0.61	0.545
AGE	0.178108	0.86	0.395	0.3187393	2.04	0.044**
Constant	-4.07613	-0.50	0.621	-4.432813	-0.49	0.625
R-squared		0.08				0.07

Note: *, **, *** denotes significant at 10%, 5% and 1% respectively.

On examining table 4.2, the results indicated that none of the ownership dummy had a statistical significant effect. However the coefficient for ownership dummy ST_PRV was positive, while that of ownership dummy FOR_DOM was negative. Inconsistent to ROAA, the results of t-test indicated that, state owned banks perform better than privately owned banks with respect to ROE. However, the difference in means that seem to be very large in the simple comparison of means becomes much smaller and even statistically insignificant in regression modelling (after controlling for other factors). These findings illustrate the importance of controlling for bank-specific factors in a proper regression set-up. This could be explained by the fact that, state and private-owned banks have very different size and tend to operate in different segments of the banking market.

Although the regression for ROE showed a poor fit with reference to the R^2 but the important fact is that the positive coefficient of ownership dummy ST_PRV becomes insignificant, indicating that the state ownership variable did not have a significant influence to ROE. Therefore the findings of this study contradicts previous study finding by Zeitun and Gary (2007); Sun, (2008), who found out that there were a significant positive relationship between ownership concentration and the accounting performance measure of return on assets (ROA) and return on equity (ROE).

From the table it can also be observed that with exception to AGE for the ownership dummy FOR_DOM, none control of the variables had a significant influence on the ROE of the bank. This contradicts the expectation that the age, size and business orientation of a bank has influence on its performance. A possible explanation could be that State owned banks have social aims to fulfil. These goals affect the products and services offered (product mix), and the geographic dispersion of branches in both urban and rural areas (market coverage). Therefore despite of a longer existence of some state-owned banks, the way they are operating now is as they have been doing since the reform policies in the 1980s. Therefore, the actual age and size of the banks would not make difference to the performance of the banks.

Ownership structure and Bank's efficiency

Net Interest Margin (NIM %) and Operational Efficiency Ratio in percentage (OER %) were used to determine how efficient were the banks in making loans and portfolio management. Concerning efficiency at managing their portfolios both State owned and Private owned banks showed on average the same level of efficiency (average NIM of about 6%) and the difference was statistically insignificant (t-test= 0.6088). Explaining the efficiency differences, the higher interest margin and the more diversified performing assets on privately owned banks shift the balance in favour of the state owned banks. This is probably due to the fact that non-interest expenses were excluded in the computation of the NIM, and

what makes difference between state owned and private banks are the non-interest expenses (cost of administration of the loan).

Meanwhile the domestically owned banks have average NIM of 7.96% while foreign banks had 4.49% meaning that domestic banks were more efficient in managing their portfolio than foreign banks which showed a significant difference ($t= 0.0001$). Regression results in table 4.3 also proved that foreign ownership of bank negatively impacts on NIM. Which implies that, domestic owned bank has a positive impact on net interest margin. The reason for this feature could be because of their large network, they are in a position to cater to the needs of small and medium enterprises that are situated in non-urban areas. Therefore foreign banks were at a relative disadvantage at reaching out to this category of enterprises on account of their smaller network.

Regression results indicated a negative relationship for both ownership dummy variables and all control variables. But the influence of ownership was statistically insignificant. A possible explanation for the negative relationship is as explained earlier, state owned banks have social aims to fulfil which in turn narrow their product mix to reflect the social goal imposed to them, i.e., to grant low adjustable interest rate mortgages to underprivileged people for example farmers.

Table 4.3: Regression results (NIM %)

Ownership dummy ST_PRV				Ownership dummy FOR_DOM		
Variable	Coefficient	t-value	P-value	Coefficient	t-value	P-value
Ownership	-0.2484723	-0.30	0.763	-0.822093	-1.29	0.200
NONINT	-0.0795396	-3.77	0.000***	-0.0822807	-5.14	0.000***
SIZE	-1.20583	-7.76	0.000***	-1.061834	6.58	0.000***
AGE	-0.0133086	-0.33	0.741	-.0303503	-1.02	0.309
Constant	23.34082	14.75	0.000***	22.21613	12.96	0.000
R-squared			0.59			0.60

Note: *, **, *** denotes significant at 10%, 5% and 1% respectively.

Another reason might be, state owned banks in accordance with their nature, since these banks have few branches, mostly located in rural areas, and their credit portfolio is concentrated in activities related to agriculture, livestock farming, and consumption the banks have tended to focus on meeting their social aims, while neglecting operational performance and asset quality, and displaying too little flexibility with regard to loan collateral and interest spread, which leaves these banks with a great amount of non-performing loans.

These results could also lead to believe that the state owned banks apply more relaxed credit policies to their bad creditors as compared to the privately owned banks. These results contradict with the findings by De (2003); where ownership dummy PUBLIC (ST_PRV for this study) was found to have a positive coefficient which was highly significant. Their reasons were; Most of the public sector banks have access to low cost funds in the nature of current accounts, huge savings accounts and large amount of floating funds. The primary reasons for this access are their reach and the very fact that they have been in business for a long period of time. The other important reason for the high net interest margins of public sector banks is the fact that this group of banks charge high rates of interest on loans given to small and medium enterprises (SMEs). On the contrary, most of the state-owned banks in

Tanzania are financial institutions licensed and authorized by BOT to engage in banking business not involving the receipt of money on current account subject to withdrawal by cheque.

Turning to the operations ratios, the results of t-test indicated that state-owned banks have, on average, higher operational efficiency ratio (OER) relatively to banks which are privately owned, and the difference is highly significant ($t= 0.001$). The latter could imply that state owned banks are less operationally efficient than private banks. Therefore when it comes to managing operations efficiently, the privately owned banks do a better job and this could be reflected in their lower operating efficiency ratio and higher Return on Assets. This implies that state-owned banks may have a more serious problem with underperforming loans compared to privately-owned banks. This could be the result of state-owned banks accepting riskier business, perhaps due to political pressures. Privately-owned banks pursuing a profit maximization objective can be expected to have an incentive to assess more accurately borrowers' credit worthiness and economize on loan loss reserves and provisions.

Simultaneously, the results also show that domestic banks (including state owned) tend to have higher OER compared to foreign bank with a significant difference ($t= 0.001$). The estimation of the model also indicated that foreign ownership has negatively and highly significant related with OER, which implies that the foreign ownership reduces the operational cost. This can be explained by the smaller and well managed network of these banks, also by the automation process followed by them and the modernisation drive implemented by many of them that helped them to cut their costs and thus provides them with the competitive edge. These results seem to correspond with evidence presented in the literature, Micco *et al.* (2004) who documented that foreign banks have higher profitability, lower costs, and lower employment ratios than their domestic counterparts in developing countries. Also the results are so interesting because they do support the hypothesis 2 of this study that, Private (domestic and foreign) is negatively related with the efficiency measure OER. Table 4.4 summarized the results of regression analysis for the ownership dummies ST_PRV and FOR_DOM individually with performance indicator OER%.

Table 4.4: Regression results (OER %)

Ownership dummy ST_PRV				Ownership dummy FOR_DOM		
Variable	Coefficient	t-value	P-value	Coefficient	t-value	P-value
Ownership	51.51631	4.89	0.000***	-23.68913	-2.64	0.010***
NONINT	-0.342468	-1.26	0.210	0.5513877	2.44	0.017**
SIZE	0.8555758	0.43	0.669	-0.7202947	-0.32	0.752
AGE	-1.615847	-3.14	0.002***	-0.1358049	-0.32	0.746
Constant	35.60505	1.75	0.083	29.55252	1.22	0.225
R-squared			0.29			0.16

Note: *, **, *** denotes significant at 10%, 5% and 1% respectively.

The control variable AGE seems to have significant negative effect for the ownership dummy ST_PRV, where NONINT significant positive effect for the ownership dummy FOR_DOM. The later implies that business orientations for foreign banks are associated with inefficiency of the bank. It should be also kept in mind that the high and positive relation of NONINT in the OER regression is a pointer to the higher costs and relatively higher salaries that need to be paid to the skilled specialists and highly qualified professionals needed to carry out the fee-based activities of banks. Whereas the negative coefficient for SIZE may be a result of the presence of fixed costs like insurance, lawyer's fees, auditor's fees, etc.

Ownership structure and bank capital adequacy

Financial institutions are required by the BOT to maintain a minimum liquid asset ratio (LAR) based on a percentage of their deposit liabilities as measured from time to time. In the normal course of operations, liquid assets used to meet the minimum LAR should not be used or relied upon by a financial institution to meet normal demands for the payment of funds. This, in effect, provides deposit-taking institutions with cover against the risk that their liquid liabilities run down faster than they can liquidate assets. Therefore, it was also the one of the objective of this study to assess whether there is a relationship between ownership structure and bank capital adequacy. Liquid assets to Deposit Liability ratio (La/Li %) and Equity to Deposit Liability ratio (E/Li %) were used to determine the financial soundness of the bank.

Concerning the capital adequacy ratios, namely liquid assets to deposits liability (La/Li), the results of t-test suggest that, on average, State-owned banks perform better than private-owned ones and this difference is statistically significant at 5% level (t-value= 0.0238). This could imply that liquid assets of state owned banks have a greater ability to cover deposit liability more than private bank. A possible explanation for this could be that, the Tanzanian government guarantees the deposit portfolio of the state owned banks. This fact enables these banks to have a different capital strategy as compared to the privately owned banks. However, it appears to be higher, on average, in foreign-owned banks than in local banks, the difference was also statistically significant at 5% threshold level (t-value= 0.0509). To assess the relationship between the performance indicator for financial soundness of the banks (La/Li) and ownership structure, regression analysis was also performed. The results of the analysis are present in the table 4.5.

On examining table 4.5 below, it can be observed that, ownership dummy ST_PRV does have a negative effect and the effect appears to be statistically significant at 10% level. These results indicate that, state ownership of bank is negatively related with the performance indicator La/Li. This implies that state ownership reduces the banks' liquidity. This can be explained by the fact that state owned banks because of their nature of operation (traditional banking) they are not required to maintain huge cash.

Table 4.5 Regression results (La/Li)

Ownership dummy ST_PRV				Ownership dummy FOR_DOM		
Variable	Coefficient	t-value	P-value	Coefficient	t-value	P-value
Ownership	-23.20216	-1.94	0.056*	25.6144	2.80	0.006***
NONINT	1.066713	3.46	0.001***	0.6390724	2.77	0.007***
SIZE	-1.361316	-0.60	0.550	-2.828588	-1.22	0.227
AGE	3.297792	5.63	0.000***	2.789269	6.54	0.000***
Constant	25.28245	1.09	0.277	46.42567	1.88	0.064*
R-squared			0.35			0.38

Note: *, **, *** denotes significant at 10%, 5% and 1% respectively.

While ownership dummy FOR_DOM seem to have a highly significant positive effect as is shown by the high value of the t-ratio. This implies that while state ownership of banks is

associated with capital inadequacy of the bank, the foreign ownership is associated with better financial soundness. The liquidity ratio shows that foreign banks tend, on average, to have better liquidity position than domestically-owned ones and these results are significant. The increase in the market share that these banks experienced in terms of deposit portfolio helps to explain the positive and statistically significant impact that the leverage ratio has upon efficiency.

Size of the bank has a negative and highly significant coefficient. That means larger banks are less liquid than smaller banks. This feature is because larger banks accept more deposits therefore they need a high cover against the risk that their liquid liabilities run down faster than they can liquidate assets. The control variable NONINT and AGE for both ownership dummies appears to have positive coefficients which are also highly significant. Which implies that the age of the banks and its fee based activities does have a favourable impact on financial soundness of the bank.

E/Li ratio seems to be higher on average (about 15%) for state-owned banks than private banks and the difference is highly statistically significant (t-value= 0.002). This implies that state-owned banks have higher equity in relation to deposits liability than their private counterpart. As explained earlier state owned banks obtain deposits guarantee from the Government that enables these banks to increase their leverage ratio with no restriction. At the same time, the ratio appears to be higher for domestic banks than foreign banks and there is evidence of a statistically significant difference at 10% level (t-value= 0.0747)

Table 4.6: Regression results (E/Li).

Ownership dummy ST_PRV				Ownership dummy FOR_DOM		
Variable	Coefficient	t-value	P-value	Coefficient	t-value	P-value
Ownership	-16.37871	-3.01	0.003***	5.122348	1.15	0.252
NONINT	0.4684609	3.35	0.001***	0.1883153	1.68	0.096
SIZE	-6.36912	-6.18	0.000***	-5.517159	-4.90	0.000***
AGE	2.305349	8.67	0.000***	1.809315	8.74	0.000***
Constant	55.43661	5.28	0.000	54.3920	4.54	0.000
R-squared			0.55			0.51

Note: *, **, *** denotes significant at 10%, 5% and 1% respectively.

Regression results presented in table 4.6 above indicate that, ownership dummy ST_PRV does have a significant negative effect while ownership dummy FOR_DOM impacts positively but the effect is not significant. Which means that, state ownership of banks unfavourably impact the financial soundness of the bank as measured by E/Li ratio. This result can be attributed to the larger extent by the funding capacity of these banks. This is because the state owned banks can only obtain equity capital from the Government.

With exception to NONINT for ownership dummy FOR_DOM, all control variables seem to have highly significant association with E/Li (SIZE negatively while AGE positively). That implies that as the bank size increase the E/Li ratio decreases. This is because the economies of scale and scope are present especially in larger banks, but beyond a crucial threshold, larger firms experience lower performance. As in the case of the state owned banks as the bank expands it accepts more deposits.

Conclusions and Implications

This study has examined the effects of ownership structure on performance in the context of Tanzanian banks. Regression analysis indicated mixed result, ownership of banks was found to have significant impact on ROAA while no effect on ROE. Concerning ownership structure and bank efficiency, the study finds that ownership structure have highly significant effect on operational efficiency (OER) of the bank while no impact on the Net interest margin (NIM). With respect to Liquid asset to deposit liability ratio (La/Li) and Equity to deposit liability ratio (E/Li), the study finds that ownership structure appears to have a statistically significant effect on La/Li while only state ownership was found to have significant effect on E/Li. Therefore the study finds little evidence to suggest that, there is a pure linear positive or negative relationship between ownership structure and bank performance in Tanzania. Therefore, it is recommended that, rather than privatisation strategies, policies that lead to the establishment of effective monitoring mechanisms that aim to foster competition may also yield performance improvements.

However, there is some evidence that foreign-owned banks are more efficient than domestically-owned banks as evidenced by the estimations of the model. Foreign ownership was found to have a highly significant relationship with OER and ROAA, which implies that the foreign banks are more profitable and reduces the operational cost. Some previous studies (e.g. Megginson and Netter, 2001) have suggested that foreign ownership can improve the management of assets in emerging countries. Hence, the policy advice here is to create a favourable environment for foreign investors as it could attract more foreign entry in the banking sector in Tanzania.

Moreover, this study, while establishing the relationship between ownership structure and bank's performance, still leaves a number of open questions and possible directions for further research in this field. Firstly, it is advisable to try to generate more data for future analysis. Secondly, when assessing state owned banks, it must be considered that these firms aim to be efficient in a broader view, accounting for social objectives more related to stakeholders, like universalising the access to products and services offered by the financial system. Finally, the findings do not suggest that improving bank performance is simply a matter of changing ownership. Rather, the causes of bank performance seem to be found in wider economic and regulatory issues, although this needs much fuller investigation than has been possible in this study. Hence, a possible area for future research. Besides, future research could usefully focus on the broader view of measuring performance. In other words, future research should be concerned with the causes of performance differences that are not related to ownership *per se*.

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