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The Role of Cross Border Banking in Fostering Financial Inclusion in sub-Saharan Africa

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Abstract

Cross border banking (CBB), though not a new phenomenon from a historical point of view, has been gaining in importance in the past decade or so in the world. This situation has engendered a heated debate about its benefits between its sympathizers and antagonists. In particular, relying on the literature, this report investigates its role in fostering financial inclusion in sub-Saharan Africa. Using a data sample of five sub-Saharan economies and after applying a trend analysis (i.e. an analysis involving comparison of the same variable over a significant period of time to detect a general pattern between associated variables), and a correlation test (i.e the degree to which two or more variables are linearly associated) to it; this report finds that indeed cross border banking does have a beneficial role in fostering financial inclusion in this region of the world with the effect of CBB on financial inclusion being more important in the following order for the five countries: Zambia (2.4319 points), Ghana (1.6892 points), Uganda (1.2355 points), Tanzania (0.5258 points), and Mozambique (0.4588 points). Furthermore, the report also stresses the importance of a financial inclusion that induces inclusive economic growth for job creation (i.e. the ability of financial institutions, banks here, to effectively intermediate) in the region and thus suggests a way of testing for the role of cross border banking in furthering financial inclusion.

Declaration

I, Longay Bonaventure Mugimba, hereby declare the following:

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- I confirm that the work submitted for assessment is my own unaided work except where I have explicitly indicated otherwise.
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Chapter 1

Introduction

1.1 Introduction

Financial systems in sub-Saharan Africa have experienced some change of approaches since the post independence era up to the early 2000's. It started with a more activist approach in the 1960's and 1970's from the various governments. This period was mostly characterized by the nationalization of the banking sector. Then followed a modernist approach in the 1980's and 1990's under which much accent was placed on the liberalization and privatization of the financial sector. Recently though (about a decade or two), a more market-friendly or market-developing approach is being brought to the front (Beck, Fuchs, & Uy, 2009). This later trend, however, seeks to go beyond just providing macroeconomic stability and an institutional framework (Beck et al., 2009). The picture is one where we see the government taking a more active role, but without suppressing private incentives and initiatives. Hence in this later approach, the role of the government is that of helping to create markets rather than of replacing them.

Thus, with this new quest in mind; that of building efficient, sustainable, competitive, stable, deeper and inclusive financial systems in sub-Saharan Africa; cross-border banking can be used as a tool or part of the solution to achieving our daunting task. One can think of it as the presence or expansion of a foreign (regional or international) bank into one or more other host country(ies).

Further, there has been a slow but significant shift in the composition of the foreign banks across the African continent in general and in sub-Saharan Africa in particular in the last two decades or so though the variation in that composition is still quite large. This shift has been characterized by and has seen the rise of some major African banks. For example, the South African based Standard Bank is now active in approximately 18 countries, while the West African Ecobank has a footprint in some 35 countries (Beck, 2014).

In the case of the sub-Saharan Africa region, cross-border banking can go a long way in helping bring: new ideas, much needed resources, competition, skills, some sort of financial stability and efficiency, and lastly much needed financial deepening and broader outreach in many of these African countries, though its effect on access to financial services has been an ambiguous one (Beck, 2014). However, cross-border banking will also bring with it an all new set of

challenges to these countries, such as: regulatory, supervision, and contagion problems. As is the case with other solutions, cross-border banking is sure to be a long and dynamic process. This will require a broader financial reform agenda, including improvements in contractual and information frameworks through regulators cooperation (Beck, 2014, p.16–17).

Given that Africa's financial systems are characterized by their shallowness (i.e. the fact that finance in Africa is not deep and thus Africa is missing out on some of its benefits, such as: its transformative effect on economies, its ability to reduce financing constraints, for small firms particularly and industries that are more dependent on external finance,etc.); their high costs, aggravated by high interest rate spread; and by limited access to finance (Beck et al., 2009); this research intends to look closely at the issue of financial inclusion (i.e. access and usage of financial services products) through measuring some proxy variables of financial depth and outreach in the sub-Saharan Africa region. To achieve this objective, we plan to look at how cross border banking as a tool can be linked to some of the indicators of financial inclusion so as to evaluate its relevance in this matter.

The reason for this choice can be attributed to the close ties or links that can be made between the level of financial inclusion and poverty alleviation, and also growth fostering in these low-income countries. For example, less than one in five households has access to any formal banking service (i.e. savings, payments, or credit and insurance) and also a level of banking penetration (i.e. In this case, it refers to how many users are there and ready to consume banks' products such as deposits, savings, insurance, etc.) below 20 percent in most of East Africa (Beck et al., 2009). It will also be of interest to investigate whether foreign or domestic banks better service the cause of financial inclusion.

The motivation for the study is to investigate how the level of financial inclusion in these sub-Saharan countries affects the fight toward reducing poverty levels in their respective communities thereby bringing about inclusive social development and growth. In the case of low levels of penetration, the study also looks at how advances in technology can be incorporated as potential innovative solutions to further broaden outreach and access levels in countries where the lack of proper infrastructure is usually a big setback for the banks' expansion.

The significance of this study is that of providing practical guidelines to the relevant stakeholders (i.e. regulators and supervisors, financial institutions, communities and entrepreneurs) that cross border banking is an essential and important tool for the African financial system development and, in its financial inclusion dimension, is closely linked, to some extent, with poverty alleviation, growth fostering (though the results on the ground remain somewhat ambiguous), and plays an important role in bringing about innovation into the sector be it through institutional management or through information technology.

The report is organized as follows. Following this introductory chapter is the literature review chapter, which gives an overview of the relevant literature with regard to our research report goal. Next is the research questions, data and methodology chapter, which states and enumerates the research report questions; then explains the provenance of our data and its construction in the case of our research, and finishes by touching on all the methods or techniques applied on the data in order to answer the study's questions. This is followed by the

results and discussion chapter, which presents all the findings and, analyses and interprets the results' meaning; and finishes by suggesting some observations. Lastly, the document ends with a conclusion chapter which summarizes the key points touched on by this report.

1.2 Problem Statement

This research investigates the extent to which the claim that cross border banking benefits affects positively the issue of financial inclusion in sub-Saharan Africa. Due to a lack of sufficient data, the research greatly relies on the literature (i.e.trend) of cross border banking in the region in order to answer the research problem. In answering this question, the research wants to assess the role that cross border banking in Africa can play in the quest of creating condition(s) for a sustainable financial broadening and deepening, and inclusion, with the aim of fostering economic growth development and poverty alleviation in the sub-Saharan Africa region.

Chapter 2

Literature Review

2.1 Financial Sector Development in Africa

In the past decade or so, African financial systems, banking in particular, have undergone a substantial number of reforms. These reforms have helped most African countries achieve more deeper and stable financial systems. In particular, through an extensive privatization process, African financial systems have seen the resurgence of foreign ownership, especially within the banking industry. However, it is important to recognize the considerable shift in the variation of that foreign ownership composition which has seen the rise of some major African banks.

Yet despite all these improvements, financial sector development in Africa is still hampered by: a lack of scale, the informality of a large part of African business activities, difficulties of governance, and the frequency and scale of shocks to the system (Honohan & Beck, 2007). For the explanation of these constraints, see (Beck & Cull, 2013, p.3).

Further, apart from their shallowness, and fragmented and deficient financial infrastructure; most African financial systems are also characterized by relatively low intermediation ratios (i.e. the inability of financial intermediaries to efficiently (1) mobilize savings from disparate savers or (2) allocate them to the most promising projects in the economy or (3) the inability for them to efficiently do both (1) and (2)) and high cost of financial services, but are still quite profitable. For example, a sample comparing 307 banks from low- and lower-middle income countries in Africa and 720 banks from non-African developing countries shows that African banks are well capitalized, over-liquid, and lend less to the real economy than their counterparts in other parts of the developing world (Beck & Cull, 2013).

2.2 Cross Border Banking: Expansion, Reasons and Business Models

2.2.1 Expansion

The liberalization and privatization processes of African financial systems that most African countries undertook almost two decades ago, have resulted in a significant increase in the number of foreign owned banks across Africa. This significant increase is essentially in terms of assets owned by foreign banks relative to total assets in the host countries' banking sector.

Nonetheless, there are important differences across African countries with regard to this increase in foreign banks' presence. On the one hand, we have countries that are still closed to foreign banks' incursion, such as: Ethiopia and Eritrea; while on the other hand, we have countries that are almost dominated by foreign banks, such as: Benin, Lesotho, Burkina Faso, etc., and in between, we have countries with a strong presence of foreign banks (i.e. 60 to 80 per cent of total banking sector assets), such as: Mali, Cote d'ivoire, Chad, etc (Beck, Fuchs, Singer, & Witte, 2014).

These foreign banks could be grouped into two broad categories. First is the group consisting of cross border banks whose parent headquarters are located outside Africa, i.e. US, Europe, and emerging markets; such as: China and India. Second is the group consisting of cross border banks whose parent headquarters are located in Africa. This group is largely dominated by banks from South Africa, Nigeria, Morocco, and Kenya (Lukonga & Chung, 2010; Beck et al., 2014).

The following is a list of cross border banks' (CBB) tables in Africa (See Appendix A for the tables).

The list below shows the landscape of foreign banks' presence on the continent. It gives an idea and an appreciation of all the cross border banking activities that are happening in Africa in terms of the bank's parent origin, their home jurisdiction, ownership structure and its footprint. The list include all cross border banks in operation as of December 31, 2013.

2.2.2 Reasons

There are many drivers that explain the expansion of cross-border banks in Africa. These reasons can be grouped into two. Firstly, we have (1) push factors (i.e. circumstances in the home country that push banks to move beyond their home countries borders) – some of those reasons are: the decline of profitable opportunities and regulatory requirements in the home jurisdiction, personal ambitions of the banks themselves; such as becoming a leading pan-African bank, for example, Ecobank. Secondly, we have (2) pull factors (i.e. the expected benefits that banks hope to reap by venturing into a new foreign market) – some of those reasons are: the need for banks to occasionally follow their big corporate clients abroad (main reason), the need to diversify their risks, and the increased attractiveness of business opportunities in other countries (Lukonga & Chung, 2010; Beck et al., 2014).

2.2.3 Business Models

Depending on their respective reasons, banks that want to venture into new territories (i.e. new markets) have to make the decision about which business model to go with along the following four dimensions: (1) establish a branch (i.e. an entity that operates as a bank but does not have a separate legal status and is therefore part of the same legal entity as the [foreign] parent bank) or a subsidiary (i.e. a separate legal entity that may be wholly owned or majority owned by a bank in another country); (2) what degree of integration to have between affiliates' operations and the parent bank; (3) enter by merger and acquisition or greenfield investment (i.e. from scratch); (4) what market segment to serve (lower or upper end market) and strategy to pursue (relationship- or transaction-based technique) (Lukonga & Chung, 2010; Beck et al., 2014). Further, all of these decisions will have to be made by also taking into account the host country's regulatory authorities' desiderata for entry to be granted.

2.3 Cross Border Banking: Benefits

The rise in the expansion of cross-border banking (CBB) has not exclusively been an African affair. Other parts of the world, such as Central and Eastern Europe, Asia, and Latin America, have also witnessed a similar rise in the expansion of CBB, as illustrated in this section.

The advent of this phenomenon has given rise to two opposing arguments in the literature on the benefits of cross border banking along four main dimensions. They are: (i) competition; (ii) efficiency; (iii) stability; and (iv) financial inclusion. On the one hand, we have the group of those in favour of CBB, who are open to foreign bank entry and have optimistic views about CBB's benefits, while on the other hand, we have the group of those against CBB , who have some reservations about foreign bank entry and are skeptical about CBB's benefits prospects.

Thus, in the following lines, we first adopt a general approach to the dissemination of the literature on the benefits of CBB along the first three dimensions (competition, efficiency and stability) within the framework of the two competing opposing views. Secondly, we touch on the benefits of CBB with respect to financial inclusion with a sub-Saharan Africa perspective

within the same framework.

2.3.1 Competition, Efficiency and Stability

Arguments in favour of CBB

From the literature about CBB, partisans of CBB argue that an open entry of foreign banks should increase competition, foster credit growth, lower volatility, and improve and implement best practices in terms of supervision and regulation for the host country's banking industry.

Supporting some the characteristics mentioned above is Claessens and Laeven (2004), who, while looking at what drives bank competition in some 50 countries using a bank-level data, find that greater foreign bank presence and fewer activity restrictions in the host country's banking sector can make for more competitive banking systems, suggesting that being open to new banks entry is the most important competitive pressure that can be exercised on a local banking system. At the same time, Cihak and Podpiera (2005), while looking at bank behaviour in East Africa, find no argument supporting that the presence of large international banks would have an adverse effect on the effectiveness and efficiency (i.e. the ability to enhance the quality production of information about firms and to exert sound corporate governance on them) of the banking sector in developing countries (in this case, East Africa). Further, the paper also stresses that solely opening the banking sector to foreigners or privatizing state-owned banks will not be enough to bring about an economic growth that is led by financial systems. But, it points to a number of structural issues, such as limited information sharing on debtors, deficiencies in the legal and judicial systems, creditor rights, etc., that need to be addressed as well, either first or simultaneously. Following in the same direction, Beck and Fuchs (2004) emphasize on the role of government in building an enabling environment for sound and market-based financial development by proposing some policy areas of improvements, such as: restructuring and divesting completely from government-owned banks, creating autonomous but accountable financial regulators and supervisors, etc.

On the stability front, the literature points to the fact that CBB can have an important role in offering some resilience to the host country's financial systems, in particular with respect to credit provisioning for local firms, especially in periods of financial distress (i.e. refers to a situation(s) when a company or a business in general breaks or honours with difficulty her or his promises to its creditors – there are usually some costs associated with it and it can also lead to bankruptcy if it is not well managed).

Examples supporting the above statement include: exploiting a panel dataset comprising of 1565 banks in 20 emerging countries (Asia and Latin America); Arena, Reinhart, and Vazquez (2007), while checking the effects of foreign banks entry on financial stability, find that foreign bank participation in emerging markets has not led to increased instability in credit markets. Furthermore, the response of credit to economic activity and monetary conditions was roughly similar across both domestic and foreign banks, but the lending and deposit rates of foreign banks were smoother during periods of financial turmoil in host countries. Following in the same steps, Bruno and Hauswald (2013), while looking at how domestic lending by foreign banks affected the real economic activity for a sample of developing and advanced countries, found that

foreign banks' lending reduces financial constraints and increases real growth in comparison to local lenders. Also, the authors find that foreign banks also mitigate the consequences of informational and legal obstacles to lending, especially in developing credit markets, such as: enforcement of (debt)contracts, access to local information and borrowers, etc.

Arguments against CBB

On the other hand, again from the literature about CBB, doubters of CBB argue that an open entry to foreign banks can have detrimental effects on a host country's banking system, that is, such a policy may lead to: the crowding of local financial market (banking market here) without increasing effective competition (i.e. foreign banks usually follow their large corporate clients' expansion abroad and tend to serve only the elite), the decrease of services and products delivered to the bottom-end of the pyramid, such as: the poor, the informal, SMEs, etc.; i.e. foreign banks high dependence on hard information, such as formal financial statements [*transactional banking*] as opposed to soft information, which relies on client relationships and local market knowledge [*relationship banking*], about their clients (borrowers) can lead to a crowding out of domestic owned banks (reduction of their profits margins) which could then lead to a reduction in their credit extension capability to local businesses.

For example, while looking at the scale of foreign participation in national banking markets in 80 countries; Claessens, Demirguc-Kunt, and Huizinga (2001) provide some evidence on how foreign banks' financial conditions differ from those of domestic banks. They then suggest that these differences could reflect their customer base difference, their bank procedures as well as their regulatory and tax regimes differences. Their paper's main finding is that foreign banks tend to have higher interest margins, profitability, and tax payments than their domestic counterparts in developing countries, while the opposite is true in developed countries. Further, their paper also finds that a larger foreign ownership share of banks, for most countries, was associated with a reduction in the profitability and margins of domestically owned banks.

Challengers of CBB also argue that foreign banks entry increases contagion risks which can be a challenging task for supervisors (i.e. it may take a while before all new sophisticated products and services introduce by foreign banks are fully understood or regulated) in the host country to manage, given their lack of resources both in capacity and skill level (i.e. Know how), thereby increasing stability risks, especially in periods of financial crisis.

For example, Popov and Udell (2012), while looking at the transmission of financial distress through CBB in central and eastern Europe during the 2007-2008 crisis, find that firms reported higher credit constraints in localities populated by branches or subsidiaries of foreign banks. Foreign banks were characterized by low equity capital, low Tier 1 capital ratios, and recorded severe losses on financial assets. Along the same lines, using a bank-level data on a large group of multinational bank (48) subsidiaries (199) and stand-alone domestic banks to compare the stability of their lending during the 2008-2009 financial crisis, De Hass and Lelyveld (2014) found that multinational bank subsidiaries curtailed credit growth more aggressively than domestic banks; almost three times as much. They also found that subsidiaries that relied a great deal on wholesale funding or whose parents depended on wholesale funding had to slow down credit growth the most. Finally, they found that subsidiaries were relatively stable lenders during local

crises and therefore concluded that while the presence of multinational banks mitigates domestic financial shocks, it also opens the door for the transmission of foreign shocks. They then suggested that co-ordination and co-operation between national supervisory authorities would be required in preventing or mitigating the international spillover of financial shocks emanating from CBB transmission of shocks.

2.3.2 Financial Inclusion

The evidence from the literature about the effect of CBB on financial inclusion is ambiguous at the aggregate level (rest of the world and in Africa) and varies from country to country and is based on different data types. However, in the case of Africa, there is an emergence of a number of promising examples of CBB forms that are exporting tested and tried successful innovations (practices and products) that are benefiting the lower-end of the population in some host countries.

The following are some of the main findings from the literature.

(1) Using a financial depth data, a negative relationship of foreign banks' participation with financial depth in low-income countries (i.e. where foreign banks are faced with a limited market share, high cost on contracts enforcement, a limited credit information sharing, etc.) was established – especially in developing countries (Detragiache, Tressel, & Gupta, 2008; Cull & Peria, 2007; Claessens & Horen, 2013). Thus, Claessens and horen (2013) and Bruno and Hauswald (2014) stress the importance, for the host country's authorities, of creating a framework which enhances financial sector deepening if they are to benefit from foreign banks entry.

(2) Using enterprise lending data, both larger and small enterprises were found to benefit more from foreign banks entry in terms of credit extended to them – especially to SMEs (Clarke, Cull, & Peria, 2006).

(3) Using households data, loan-level data, branch loan, and deposit penetration; a cherry picking by foreign banks entry was established, i.e. the tendency that foreign banks borrowers were richer, formally employed, larger enterprises located in larger cities and foreign owned; the fact that only richer and more urban municipalities benefited from an increase in foreign bank branches (Beck & Brown, 2010; Mian, 2006; Beck & Peria, 2008). Further, this trend could lead to a decline in the ratio of domestic banks lending capability which in turn could have a negative impact on financial outreach (Gormley, 2010).

(4) Evidence that both foreign and domestic banks can cater or serve small local businesses as well as households was also established – with foreign banks relying more on hard information and collateral, i.e. transaction-based lending technique, while domestic banks relied more on soft information, i.e. relationship-based lending technique (Giannetti & Ongena, 2009, 2012; de la Torre, Peria, & Schmukler, 2010; Beck, Maimbo, Faye, & Triki, 2011).

(5) A negative relationship between the geographical distance of a cross-border bank parent headquarters with the access to credit strategy on the ground was also established (Mian, 2006; Claessens & Horen, 2014).

(6) Using some proxy indicators of financial inclusion, it was found that a negative relationship of foreign banks entry is associated with the number of loan and deposit accounts per capita, while with the ratio of branches and ATMs to population, the relationship was not significant (Beck, Demirguc-Kunt, & Peria, 2006, 2008).

The following is a list of some selected financial inclusion indicators from the Global Findex database - World Bank for two selected sub-Saharan African economies (See Appendix B for figures B.1 and B.2).

The indicators are grouped in terms of: (i) how individuals access financial services or what medium they utilize to access financial products – i.e. ATMs, bank agent, bank branch, mobile phone and (ii) what they mostly use it for – i.e. deposit, withdraw, for business purposes, receive grants, wages, loan and remittances, pay bills, etc. Thus, all these different measures give us an indication of the financial inclusion (i.e. access and usage of financial services) process in sub-Saharan Africa. For example, we can observe in both figures B.1 and B.2 below that the bank teller is the most preferred medium of deposit for both older adults (age 25+) and young adults (age 15-24) with 88.4% and 89.2% for figure B.1 respectively and 82.2% and 85.7% for figure B.2 respectively. While, in figure B.2, ATM is the main medium used to withdraw by both older and young adults with percentages of 72.1% and 63.4% respectively compared to only 4.5% and 15.4% in the same order for figure B.1. Mobile phone seems to be mostly used for receiving money in both figures B.1 and B.2 with percentages of 9 and 6.9 for older adults respectively and 8.4% and 6.3% for young adults in the order of the figures. Lastly, it seems like an individual, residing in one of these two countries, is most likely to get a loan from family or friends than say from a private lender with 48.9% and 37.6% for both older and young adults respectively in figure B.1, and 51.4% and 49.4% for both older and young adults respectively in figure B.2.

A sub-Saharan Africa Perspective

From a sub-Saharan Africa point of view and Africa in general, there are two kinds of foreign banks' entry that have a positive impact on financial inclusion on the continent. Firstly, it is CBB through a successful privatization of previously state-owned banks by regional major banks mostly and, to a lesser extent, non-African foreign banks. Some examples are: the privatization of Uganda commercial bank (UCB) to the South African Standard Bank group, which resulted in not only keeping open all existing branches but also in opening new ones and introducing in the process new products and increasing lending (Clarke, Cull, & Fuchs, 2007). Another successful privatization is that of the national bank of commerce (NBC), Tanzania, to the South African based Absa (now Barclays Africa Group) resulting in an improvement of its profits and portfolio quality (Cull & Spreng, 2008). Secondly, it is the advent of a new wave of CBB activities (mostly led by major pan-African banks, such as: Equity Bank, Ecobank, Barclays Africa Group, etc.) that are exporting tested successful innovations (mobile phone banking, agency banking – i.e., it refers to a retail or postal outlet contracted by a financial institution or a mobile network operator to process clients' transactions, such as deposit, withdraw, and transfer of funds, pay bills, inquire about account balance, etc.; banking agents can be supermarkets, convenience stores, lottery outlets, post offices, and many more) to other sub-Saharan African countries, that are enhancing financial broadening and deepening – i.e., it refers to the increased of different types of financial institutions and provision of financial services with a wider choice

of services geared to all levels of society (financial inclusion) in those host countries. The main aim behind these CBB activities for the banks involved is to grow their client base by targeting the lower-end of the population through the production of new, less costly but profitable, products and by being flexible in their approach to intermediation and credit extension to SMEs, in particular. For some examples of banks both regional (parent headquarters in Africa) and non-regional (parent headquarters outside Africa) that are serving the lower-end of the market in Africa, see (Beck et al., 2014, Box2.2-p.81).

Chapter 3

Research Questions, Data and Methodology

3.1 Research Questions

1 What is the role of cross border banking in fostering financial inclusion in sub-Saharan Africa?

2 In what way(s) does financial inclusion reduce poverty and inequality in a society?

3 To what extent can financial inclusion induce inclusive economic growth?

3.2 Data

We use data from the Global Financial Development Database (GFDD) and part of the Financial Access Survey (FAS) which are compiled by the World Bank and the IMF respectively. The former is an extensive dataset of financial system characteristics for 203 economies. The database provides information on financial systems over the period from 1960 to 2011 and includes measures of (1) size of financial institutions and markets (financial depth, i.e. it refers to the size of banks, and other financial institutions, and financial markets in a country, taken together and compared to a measure of economic output like gross domestic product(GDP) and one such proxy variable is private credit relative to GDP), (2) degree to which individuals and firms can and do use financial services (access), (3) efficiency of financial intermediaries and markets in intermediating resources and facilitating financial transactions (efficiency), and (4) stability of financial institutions and markets (stability) (Cihak, Demirguc-Kunt, Feyen, & Levine, 2012), while the latter is a global supply-side dataset source on financial inclusion, looking at indicators of financial access and usage. The database currently contains 152 time series and 47 key indicators which are grouped into two dimensions, (i) geographic outreach of financial services; and (ii) use of financial services. It includes annual data from 2004 to 2013 and metadata (it refers to the design and specification of data structures and to individual instances of application data [*data about data*]) for the reporting jurisdictions (IMF-Data, Last Updated October 2014).

However, in our case we consider only five economies from the sub-Saharan Africa region because it is a more practical number, namely: Ghana(GHA), Mozambique(MOZ), Tanzania(TZA), Uganda(UGA) and Zambia(ZMB). In relation to the GFDD, we selected the period from 1990 to 2011, because there is more data available from 1990 onward across all economies and included mostly measures of financial depth and access. For example, private credit to GDP, total banking assets to GDP, bank deposits to GDP, etc.; while with the FAS, we selected the all period from 2004 to 2013 and focused more on its indicators from the geographic outreach of financial services. For example, commercial bank branches per 1000 km2, commercial bank branches per 100,000 adults, ATMs per 100,000 adults, etc.

3.3 Methodology

To answer our main research question (i.e. research question number 1), we did a comparative analysis of the measures of financial depth, access and usage (i.e. financial inclusion) of financial services by observing the direction of their trends over the specified time periods and see if in the case of upward trends, they were informed by the increase in foreign banks' presence that has been happening in the past decade in sub-Saharan Africa - particularly credit and deposits over the period from 1990 to 2011 depending on the indicator being considered. We achieved this by selecting the necessary metrics and then plotting each over the time interval in order to observe its movements. Making use of the GFDD, we also ran a correlation test between our variable of interest (i.e. foreign banks among total banks (%)) and the rest of the financial development indicators we incorporated to determine their degree of association in terms of strength and direction.

Furthermore, since we are working with aggregate data and not specific bank data, we make an assumption regarding our mid-point which separates between the prior and post entry periods of one or more foreign bank(s) in a given economy for comparison purposes. Thus, relying on the literature, we chose our mid-point to be that period when most sub-Saharan economies underwent some structural reforms in their financial systems (i.e. about a decade ago), the banking system in particular, either through privatization or liberalization, and we picked that period to be approximately from 1998 to 2000. This assumption also influenced the economies we selected for our sample.

The metrics considered were,

(1) From the World Bank database (i.e. GFDD)

- bank credit to bank deposits(%), bank deposits to GDP(%)
- central bank assets to GDP(%)
- credit to government and state owned enterprises to GDP(%)
- deposit money bank assets to deposit money bank assets and central bank assets(%)
- deposit money banks' assets to GDP(%)
- domestic credit to private sector(% of GDP)
- financial system deposits to GDP(%)

- foreign bank assets among total bank assets(%)
- foreign banks among total banks(%)
- GDP(current USD)
- GDP per capita(constant 2005 USD)
- GNI(current USD)
- number of listed companies per 1,000,000 people
- private credit by deposit money banks and other financial institutions to GDP(%)
- private credit by deposit money banks to GDP(%)
- stock market capitalization to GDP(%)
- stock market total value traded to GDP(%)
- stock market turnover ratio(%)
- population(Total)

(2) From the IMF database (i.e. FAS)

- commercial bank branches per 100,000 adults
- ATMs per 100,000 adults
- deposit accounts with commercial bank per 1,000 adults

For example, the variable private credit, which is defined as deposit money bank credit to the private sector as a percentage of GDP, is a standard or proxy measurement of size (financial depth), and a linkage between it and long-term economic growth and poverty alleviation has been shown by the literature on financial development and economic growth (Demirguc-Kunt & Levine, 2008). On the access front, some common proxy variables include: the number of bank accounts per 1,000 adults, the percentage of firms with a line of credit (all and small firms). This helped us understand how a well-functioning financial system (financial institutions here) effectively provides financial services to a wide range of firms and households, and not just to the elite (large companies, rich individuals, and the politically connected).

Chapter 4

Results and Discussion

In this chapter, we first present all the results from our analysis, then discuss and interpret them to understand what they tell us in relation to our research objective, and lastly conclude with some observations or implications of our own on the report's raised problem.

4.1 Results

We present the findings in the following order. First is a list of charts plotting the movements of all the relevant selected indicators (as per data availability) through their respective time interval for each of the five economies included in our sample. This is followed by a table of correlation coefficients between our cross border bank variable in terms of number of foreign banks relative to total banks in the host country's banking sector, i.e. *foreign banks among total banks* for each economy in our sample and the rest of the variables we considered from the GFDD database.

4.1.1 Ghana(GHA)

Figure 4.1 below shows: two proxy variables of financial depth (private credit to GDP and the number of listed companies per 1,000,000 people), three financial market indicators and four basic indicators (GDP, GNI, GDP per capita, and total population) for the Ghanaian economy. Let us consider, for example, the private credit to GDP indicator, we see that for the 2000 to 2011 interval its percentage value almost doubled, going from just under 120% in 2000 to just under 140% in 2011. Further, the bank deposits to GDP indicator displays a low correlation coefficient value of just 0.3350 (see subsection 4.1.6 below for more discussions) with our variable of interest (i.e. *foreign banks among total banks*). What this number tells us is that the changes, in percentage value of bank deposits to GDP we observe, had little to do with the number of foreign banks operating within the Ghanaian banking industry. In contrast, however, for the same indicator when we consider the period from 1990 to 1999, we see that its percentage values are much lower. That is just a little over 40% in 1990 and a little over 100% in 1999.

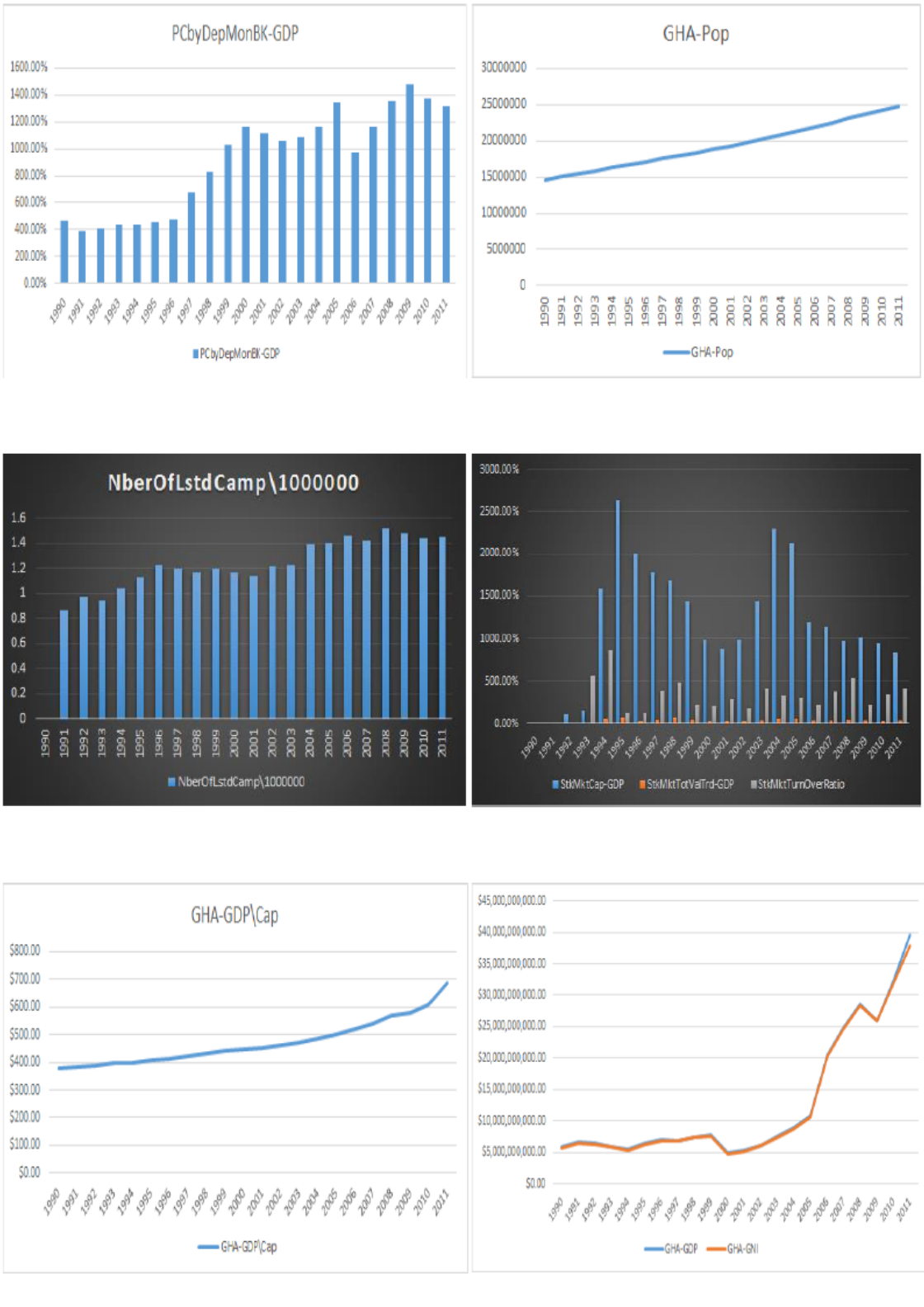
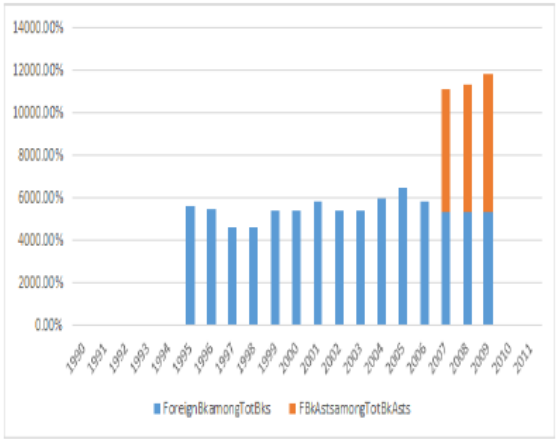
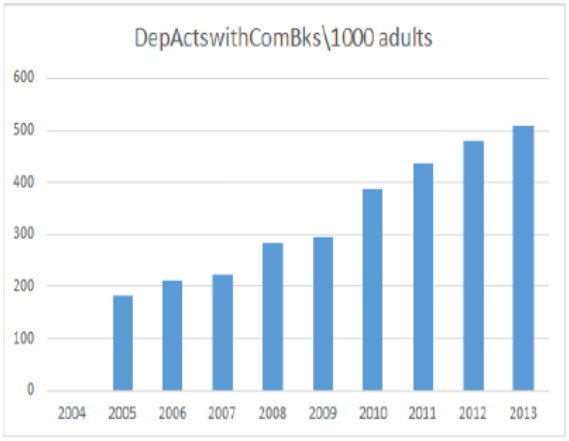
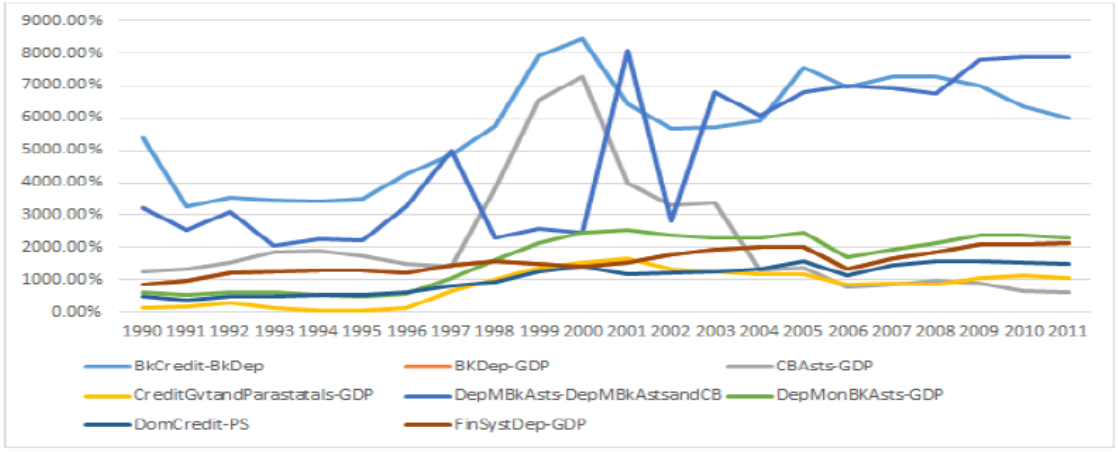


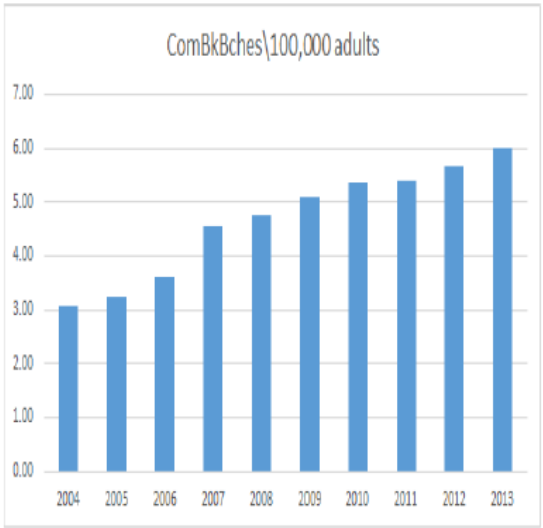
Figure 4.1: GHA-FinDev-metrics
Source: *Global Financial Development Database, World Bank*

Figure 4.2 below follows from figure 4.1 and shows: three indicators of financial access and a couple of financial depth variables complementing the other indicators in figure 4.1. We can, thus, observe that indicators' values are on the ascendant over the last decade or so (i.e. from 2000 up to around 2013). For example, we see that the number of adults with a formal bank account per 1,000 more than doubled, going from just below 200 adults in 2005 to just over 500 adults in 2013.









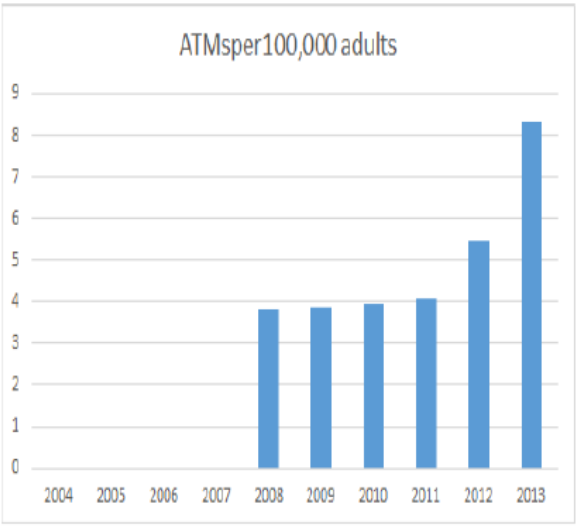


Figure 4.2: GHA-FinDev-metrics(Cont.)
Source: *Global Financial Development Database, World Bank*

4.1.2 Mozambique(MOZ)

Figure 4.3 below shows a proxy variable of financial size – private credit to GDP, which has increased during the 2000 to 2011 period from 15% in 2000 to approximately 23% in 2011. This is an improvement from a low of approximately 6% in 1993 and of just above 10% in 1999 for the 1990 to 1999 period. The indicator also shows a minor positive association with the percentage of foreign banks among total banks with a correlation coefficient value of 0.3154 (see subsection 4.1.6 below for more discussions). Further, the figure also reveals the massive predominance of foreign banks within the Mozambican banking industry both in terms of: the number (nearing the 90's% for the 2000 to 2009 period) and assets owned (almost 100% from 2005 to 2009). Thus, with a coefficient of association of just 0.3154 and an economy whose banking industry is almost 100% foreign owned, this probably tells that solely opening up your market doesn't necessarily imply deeper financial systems. Lastly, the figure also shows some indicators of financial access and some basic country indicators. For example, we can see that the number out of a 1,000 adults with a deposit bank accounts has nearly quadruple over the 2005 to 2013 period, going from around 60 adults in 2005 to just below 250 adults in 2013.

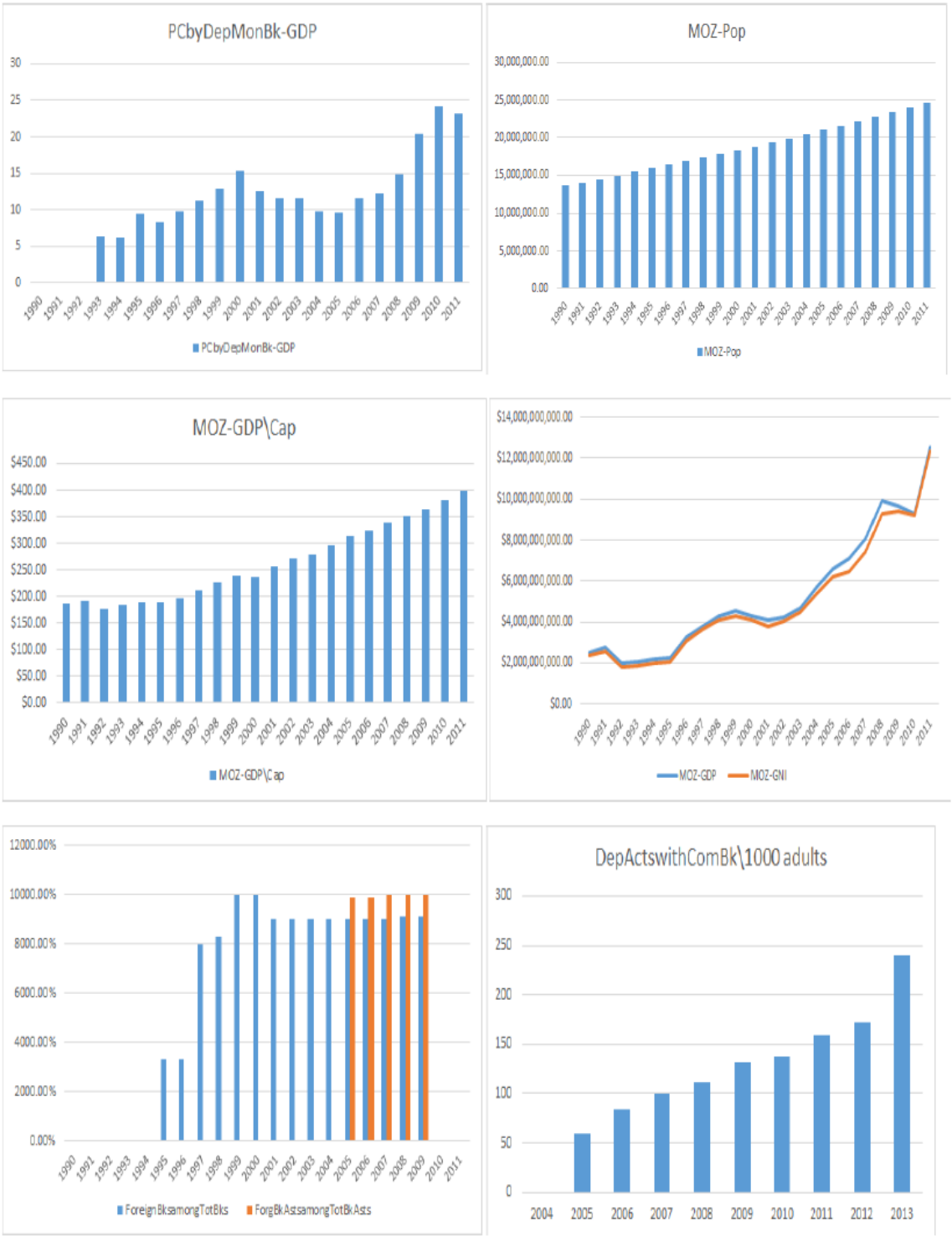
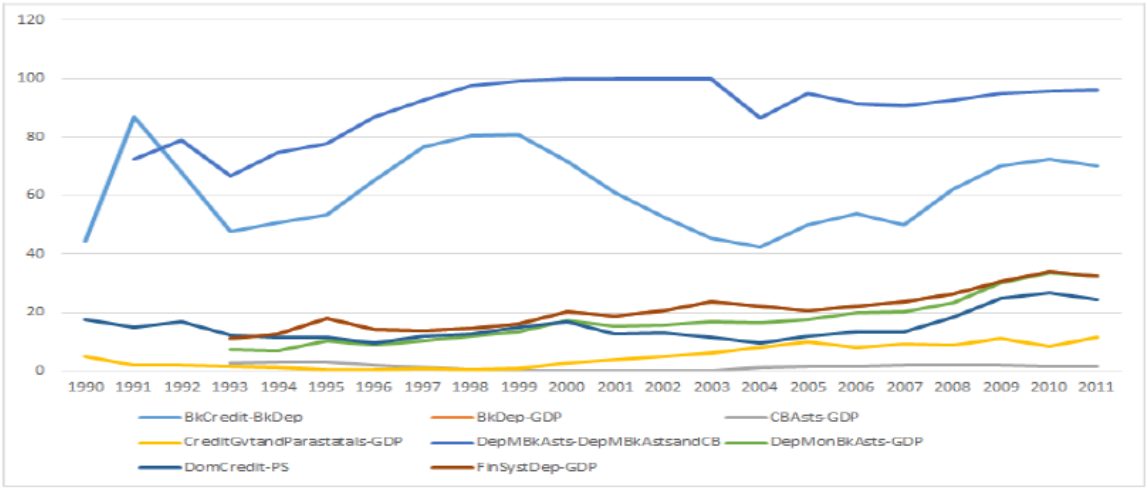


Figure 4.3: MOZ-FinDev-metrics
Source: *Global Financial Development Database, World Bank*

Figure 4.4 below follows from figure 4.3 and again shows some variables of financial depth (complementing the ones in figure 4.3) and access. And in terms of trends, the indicators are all presenting upward movements over the 2000 to 2011 period.



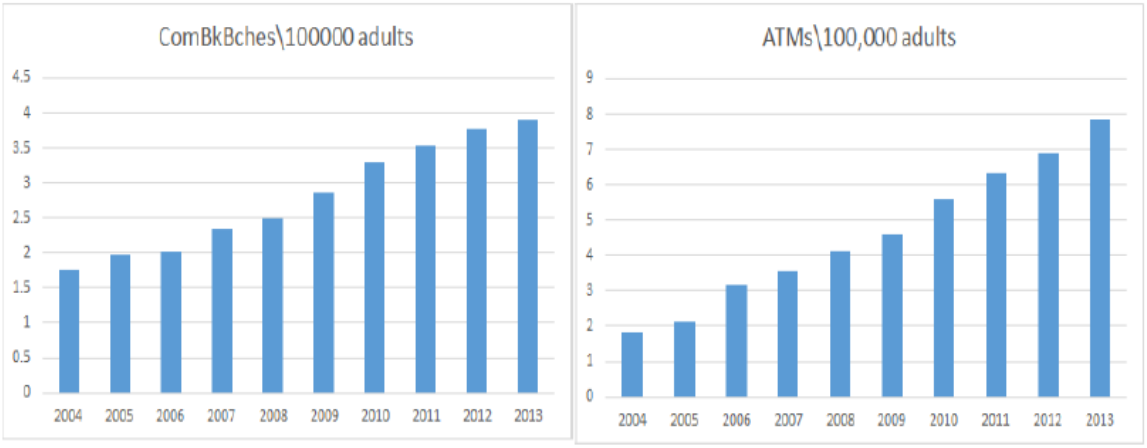


Figure 4.4: MOZ-FinDev-metrics(Cont.)
Source: *Global Financial Development Database, World Bank*

4.1.3 Tanzania(TZA)

Figure 4.5 below shows a combination of indicators of: financial depth, financial markets and country's macroeconomics indicators. For example, let us consider our two time periods of interest–i.e. prior (1990 to 1999) and post (2000 to 2011) foreign banks' entry periods and compare the values of the private credit indicator between these two periods. Then we observe that for the post foreign banks' entry period, the indicator's percentage value almost quadrupled from 4% in 2000 to near 16% in 2011. While for the prior foreign banks' entry period, its percentage value averaged 4% throughout. However, the indicator has a weak positive correlation coefficient value of 0.1216 (see subsection 4.1.6 below for more discussions) of interdependence with the percentage number of foreign banks among total banks indicator, suggesting that the nearly 70% foreign banks ownership in the Tanzanian economy is not having the anticipated real positive impact on financial depth.

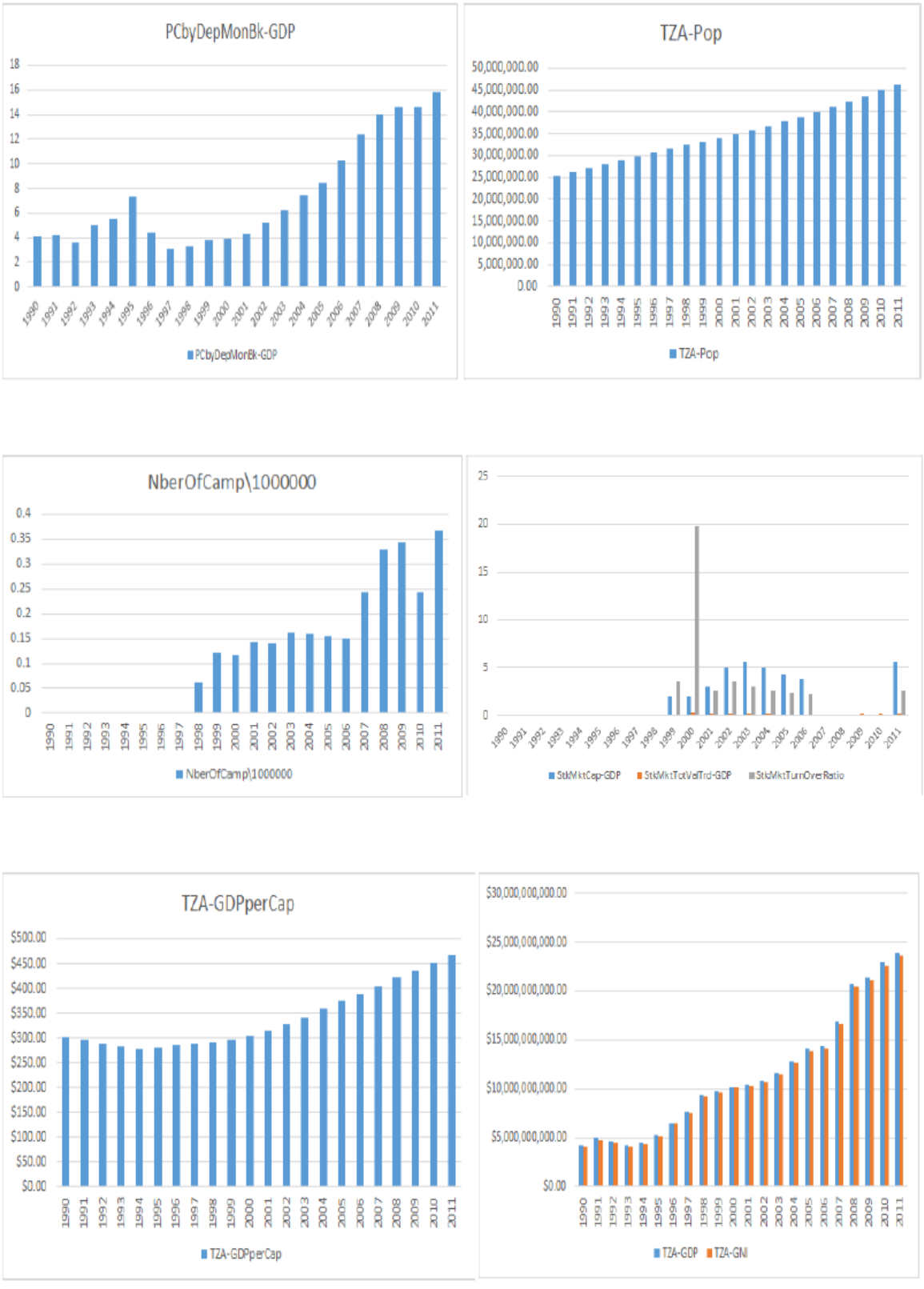
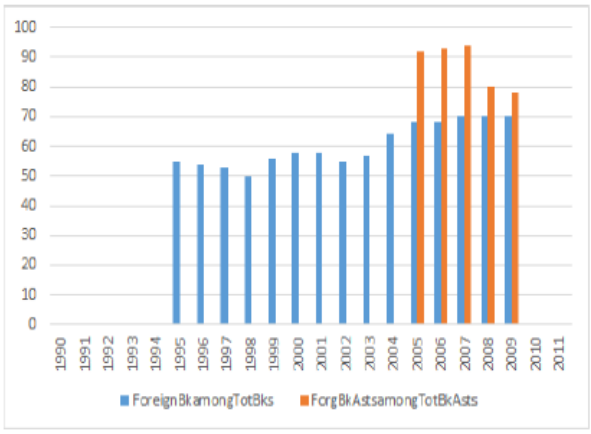
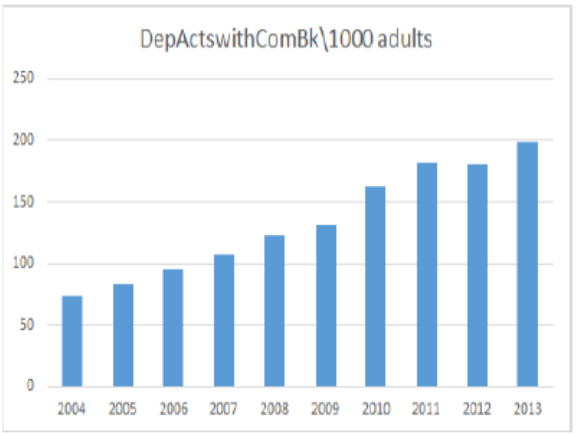
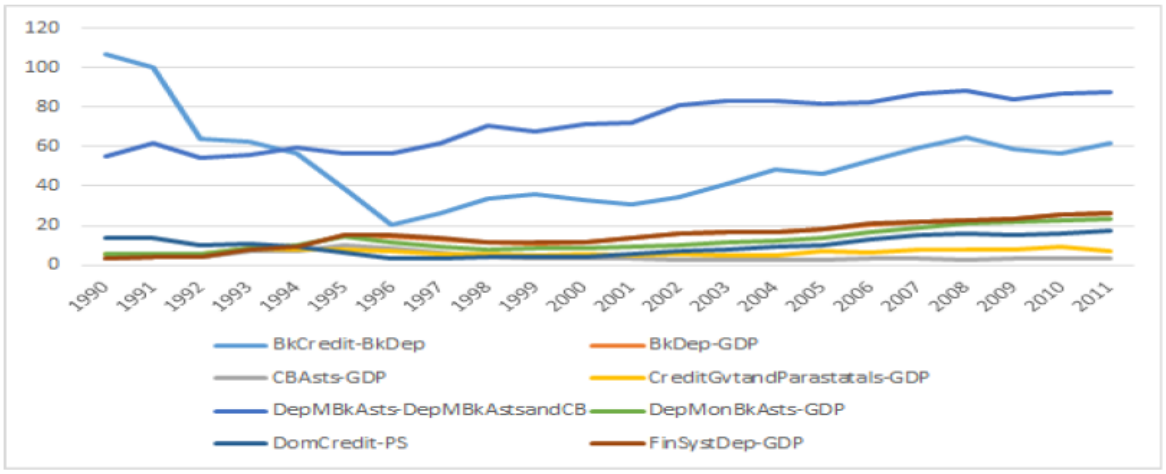


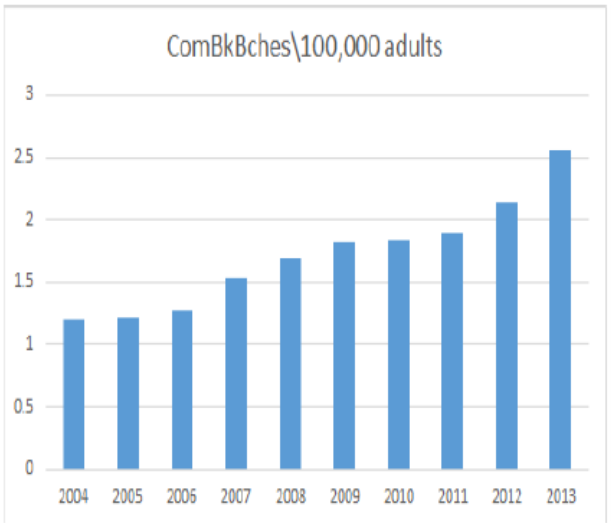
Figure 4.5: TZA-FinDev-metrics
Source: *Global Financial Development Database, World Bank*

Figure 4.6 below follows from figure 4.5 and shows measures of financial access and a couple of financial depth indicators adding to those in figure 4.5. For all of them, we notice an upward trend in their respective movements for the past decade. For example, when we observe the deposit accounts with a commercial bank per 1,000 adults for the 2004 to 2013 period, we notice that the number of adults with a formal bank account has nearly tripled, moving from just above 50 adults in 2004 to almost 200 adults in 2013.









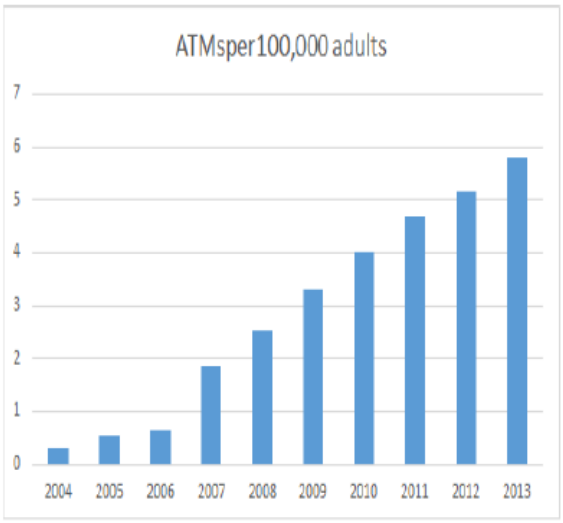


Figure 4.6: TZA-FinDev-metrics(Cont.)
Source: *Global Financial Development Database, World Bank*

4.1.4 Uganda(UGA)

Figure 4.7 below shows a combination of: financial depth, country's macroeconomics indicators, and market indicators for the Ugandan economy over the 1990 to 2011 period. Lets take the example of private credit to GDP, we notice that its percentage value at least doubled for the 2000 to 2011 period with a value of just under 60% in 2000 and nearing 140% in 2011, while for the 1990 to 1999 period, we notice very low values, with just over 20% in 1990 and a little under 60% in 1999. In the same figure, we also can notice the strong presence of foreign banks in the economy both in percentage number ($\approx 70\%$) and in assets controlled ($\approx 80\%$) for the 2000 to 2011 time interval. Further, the foreign banks among total banks indicator also appears to be strong with a number of financial depth indicators (e.g., a correlation coefficient of 0.4659 with the bank deposits to GDP indicator).

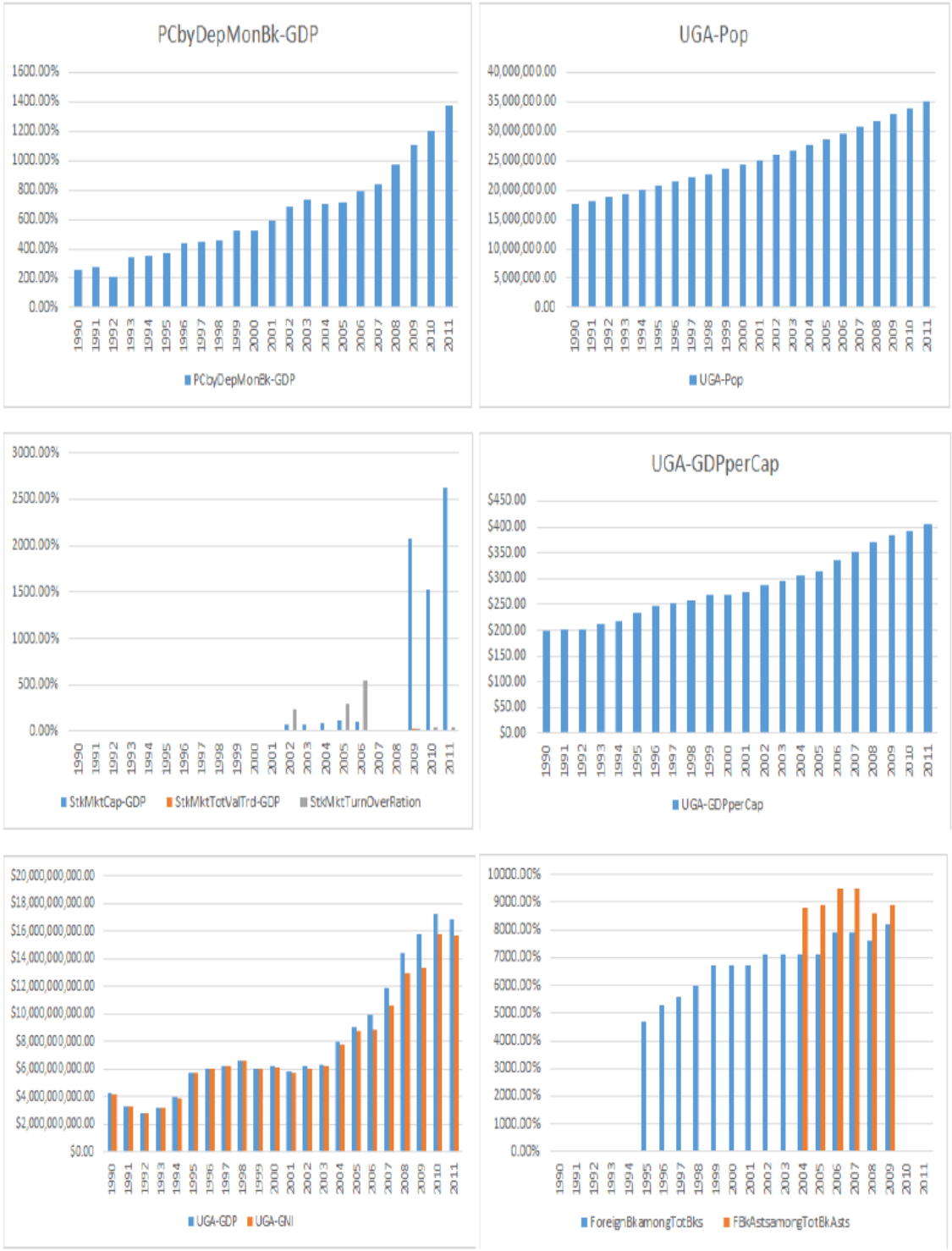


Figure 4.7: UGA-FinDev-metrics
Source: *Global Financial Development Database, World Bank*

Following from figure 4.7 is figure 4.8 below, which shows a combination of financial access indicators (from 2004 to 2013) and a couple of financial depth indicators complementing the ones in figure 4.7 (from 1990 to 2011). Again the trends in the movements of these indicators seem to be ascendant. For example, when we consider the number of adults with a bank account out of a 1,000 adults of them, we observe that that number doubles from ≈ 100 adults in 2004 to ≈ 200 adults in 2013.

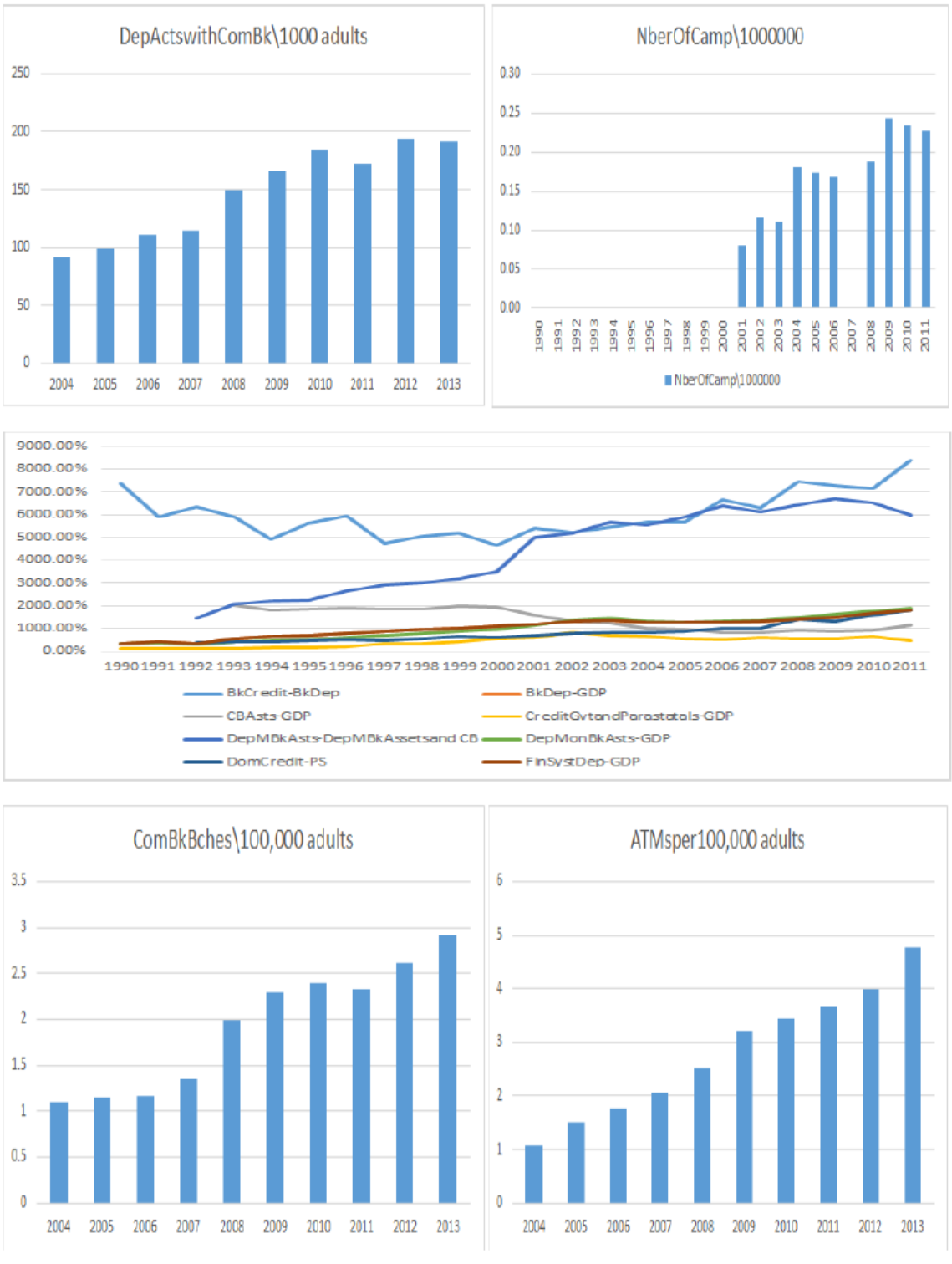


Figure 4.8: UGA-FinDev-metrics(Cont.)
Source: *Global Financial Development Database, World Bank*

4.1.5 Zambia(ZMB)

Figures 4.9 and 4.10 below show indicators of financial depth, financial access, financial market and some basic macroeconomics indicators for the Zambian economy. In figure 4.9, we see, for example, that private credit to GDP as a percentage value has been quite constant ranging in the 7 to 10% for the 1990 to 2007 with a pick of 12% in 2008. We also see a significant increase in the number of listed companies per 1,000,000 people from a low of 0.2 in 1995 to over 1.4 in 2011. While in figure 4.10, we observe the strong presence of foreign banks in the composition of the Zambian banking industry, with $\approx$ 70% in percentage number and $\approx$ 80 to 90% in assets owned. Further, the indicator also presents a strong correlation coefficient value of 0.7525 (see subsection 4.1.6 below for more discussions) with the private credit to GDP indicator, for example. Lastly in terms of financial access, we notice, for example, a considerable increase in the number of ATMs per 100,000 adults from a low of near 1 ATM per 100,000 adults in 2004 to a high of 10 ATMs per 100,000 adults in 2013.

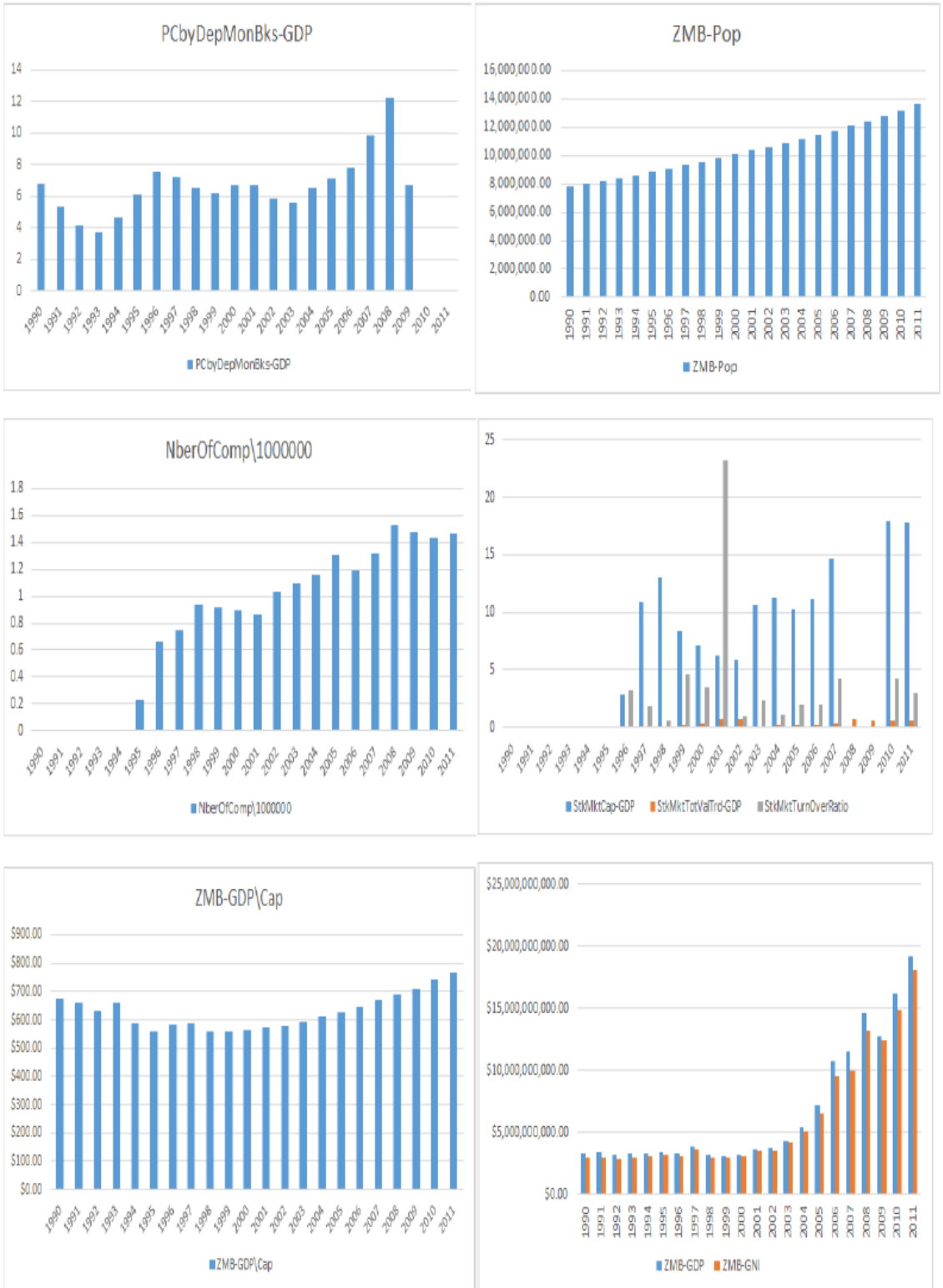


Figure 4.9: ZMB-FinDev-metrics
Source: *Global Financial Development Database, World Bank*

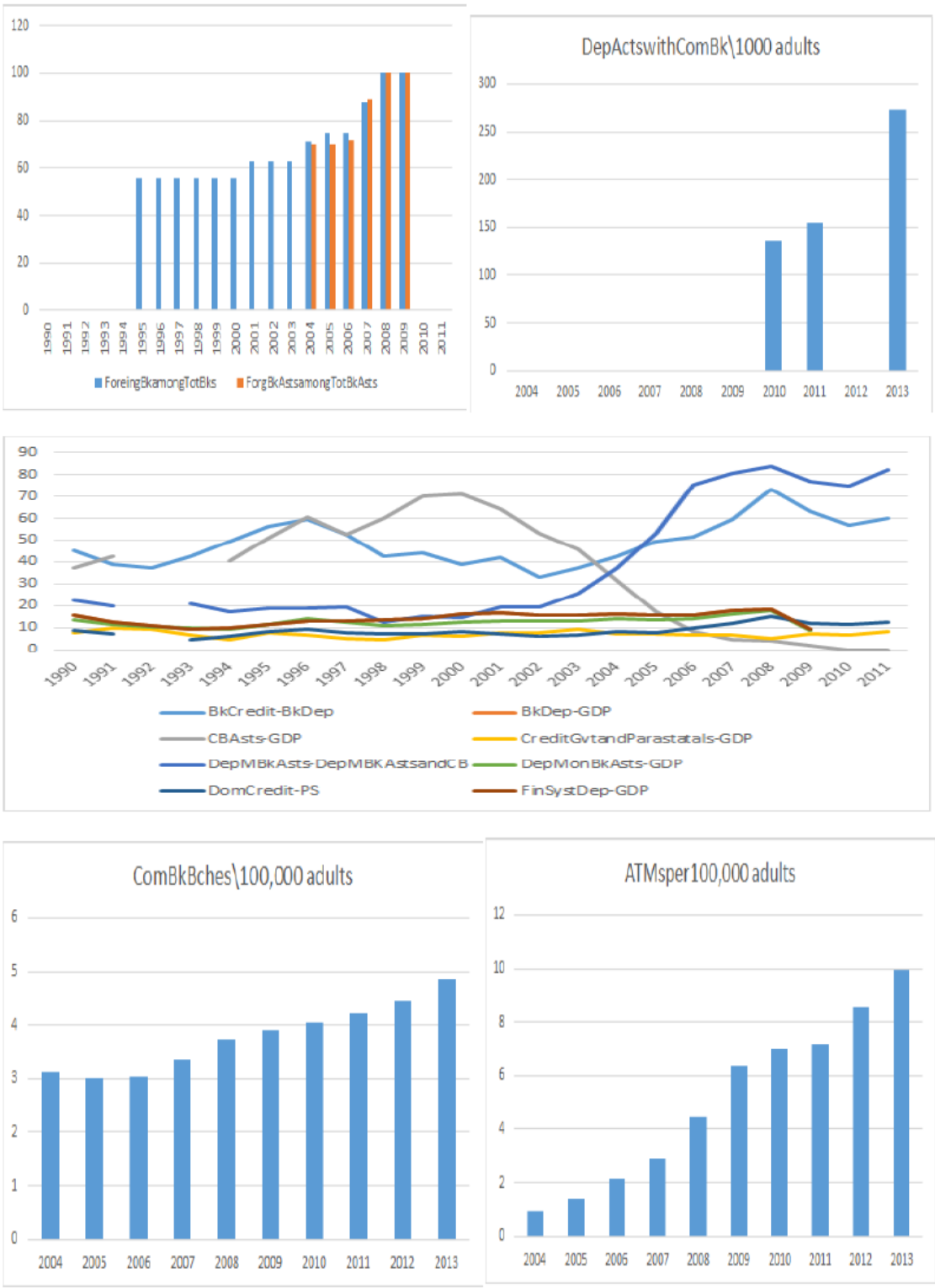


Figure 4.10: ZMB-FinDev-metrics(Cont.)
Source: *Global Financial Development Database, World Bank*

4.1.6 Correlation Coefficients

The table below (i.e. right at the end of this subsection) presents correlation coefficients between the cross border banking indicator (i.e. *foreign banks among total banks*) and some indicators of financial development for all five countries considered in this report.

We now explain and interpret some of the values in the table for each economy. Further, significant correlation coefficients values, in the table, are those higher than the country's critical value (i.e. the boundary of the critical region - thus the null hypothesis is rejected if the test statistic falls in the critical region) at 5% significance level in absolute terms.

(1) Ghana - 5% critical value (two-tailed) = 0.4329

For Ghana, we notice that the increase in the number of foreign banks in its economy has not curtailed domestic credit to the private sector, with a correlation coefficient of 0.4743 which is well above Ghana's critical value of 0.4329. Further, though its impact on deposits is weak (e.g. 0.3350 correlation coefficient with bank deposits to GDP), however, its impact on indicators such as private credit to GDP, bank credit to bank deposits, number of listed companies, stock market capitalization to GDP, etc., is strong with significant correlation coefficients values of: 0.4420, 0.5564, 0.4379 and 0.6554 respectively. Thus, it seems like opening up the Ghanaian banking industry to foreign banks has had an all around beneficial impact on its economy, particularly in terms of credit provisioning to the private sector as evidenced by their strong degree of association with the cross border banking indicator.

(2) Uganda - 5% critical value (two-tailed) = 0.4329

For Uganda, we notice that the increase in the number of foreign banks in its economy has mainly improve things on the deposits side and increase their share of assets, while curtailing both the private and domestic credit to the private sector, except at least the credit extended to the government and state enterprises. Thus, we can observe significant correlation coefficients values of: 0.4659 with bank deposits to GDP, 0.6498 with credit to government and state owned enterprises to GDP, 0.5833 with deposits money bank assets to deposits money bank assets and central bank assets,etc. Hence this will suggest that foreign banks are at least mobilizing funds but are not doing enough in terms of lending.

(3) Zambia - 5% critical value (two-tailed) = 0.4227

For Zambia, we notice that the increase in the number of foreign banks in its banking industry has had a beneficial impact across the board, i.e. from deposits mobilization to credit provisioning. Thus, we can observe significant correlation coefficients values with the following indicators: 0.6106 with bank deposits to GDP, 0.4264 with domestic credit to private sector, 0.6106 with financial systems deposits to GDP, 0.7525 with private credit to GDP,etc.

(4) Tanzania - 5% critical value (two-tailed) = 0.4227

For Tanzania, we notice that the increase in the number of foreign banks in the banking industry has seriously curtailed the ability of domestic banks' lending capability (i.e. correlation coefficient value of -0.3372 with the domestic credit to private sector indicator), furthermore, this increase has not also improve the ability of the banks to mobilize funds(e.g., an insignificant correlation coefficient value of 0.4176 with the bank deposits to GDP indicator) and their ability to extend credit (e.g., an insignificant correlation coefficient value of 0.1216 with the private credit to GDP indicator). The only significant values come in terms of banks' assets, for example, a correlation coefficient of 0.5264 with the foreign bank assets to total bank assets.

(5) Mozambique - 5% critical value (two-tailed) = 0.4227

For Mozambique, we notice the same trends as in Tanzania with respect to the increase in number of foreign banks in its banking industry. For example, low degree of association with indicators such as: bank deposits to GDP (i.e. correlation coefficient of 0.4088), domestic credit to private sector (i.e. correlation coefficient of -0.2654), private credit to GDP (i.e. correlation coefficient of 0.3154), etc.

In conclusion, for all five countries, in general, we can say that the entry of foreign banks in these economies has had a beneficial impact in at least three of them (i.e. Zambia, Ghana and Uganda) and to lesser extent in Mozambique and Tanzania in terms of financial depth (i.e. ability to intermediate) and thus in financial inclusion (i.e. access and usage of financial services through formal providers, banks here).

However, the difference in the effect of foreign banks across the five countries would suggest that reaping the benefits from opening up a country's economy to foreign banks is very much an idiosyncratic matter - i.e., it depends on the circumstances of each country (e.g., conflicts, population demography,...) and the ability of its authorities (legislators, regulators, supervisors, etc.) to create an environment that allows them to take full advantage of this phenomenon call cross border banking.

Furthermore, based on the trends we observed in the table for each country, we also computed a simple unweighted sum index in order to rank the five countries. We calculated it for four main indicators across all the countries, namely: bank deposits to GDP, domestic credit to private sector, number of listed companies and private credit by deposits money banks and other financial institutions to GDP. Thus, in descending order (i.e. from the highest index point country to the lowest), the rank was as follows: Zambia with 2.4319 points, Ghana with 1.6892 points, Uganda with 1.2355 points, Tanzania with 0.5258 and Mozambique with 0.4588. Figure 4.11 below shows a visual representation of this ranking order.

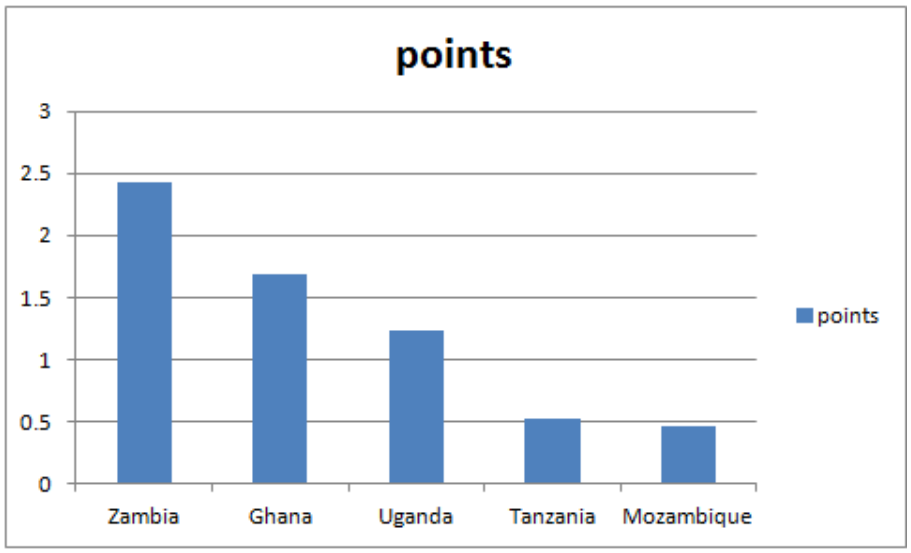


Figure 4.11: Ranking Order in terms of CBB Importance
Source:*author*

Indicators	GHA-Foreign banks among Total banks	UGA-Foreign banks among Total banks	TZA-Foreign banks among Total banks	ZMB-Foreign banks among Total banks	MOZ-Foreign banks among Total banks
Bank credit to bk dep.	0.5564	-0.2807	-0.5854	0.3200	-0.0404
Bank dep. to GDP	0.3350	0.4659	0.4176	0.6106	0.4088
Central bk asts to GDP	0.3157	0.2610	-0.1697	0.1136	-0.2018
Credit to gvt. & state owd enterp.	0.5331	0.6498	-0.1762	-0.2678	0.2098
Dep. Mon. bk asts to dep. Mon. bk asts & CB asts	0.2391	0.5833	0.4490	0.3381	0.5680
Dep. Mon. Bks' asts to GDP	0.4977	0.4269	0.2278	0.6045	0.3331
Dom.credit to p.sector	0.4743	0.2521	-0.3372	0.4264	-0.2654
Fin. Syst. dep. to GDP	0.3350	0.4659	0.4334	0.6106	0.4088
Frg. bk asts. among tot. bk asts.	0.2434	0.5666	0.5264	0.6935	0.4394

Indicators	GHA-Foreign banks among Total banks	UGA-Foreign banks among Total banks	TZA-Foreign banks among Total banks	ZMB-Foreign banks among Total banks	MOZ-Foreign banks among Total banks
GDP(curr USD)	-0.1206	0.1998	0.2682	0.1312	0.2286
GDP per Cap.(cst 2005 USD)	0.0891	0.3788	0.1525	-0.2598	0.3243
GNI(curr USD)	-0.1122	0.1933	0.2728	0.1278	0.2055
Nber.of lstd.comp. per 1,000,000	0.4379	0.2691	0.3238	0.6424	-
Pop.(total)	0.3111	0.3892	0.3785	0.4425	0.4141
P.credit by dep. Mon. bks & other fin. inst. to GDP	0.4420	0.2484	0.1216	0.7525	0.3154
P.credit by dep.Mon.bks to GDP	0.4420	0.2484	0.1216	0.7523	0.3154
Stk.Mkt.Cap. to GDP	0.6554	-0.2040	0.2717	0.1162	-
Stk.Mkt.tot. value traded to GDP	0.5112	0.1414	0.2734	0.3786	-
Stk.Mkt.trnOv. ratio	-0.0650	0.3045	0.2700	0.1438	-

Source: *Author–Correlation Coefficients Table-Continues*

However,we would have preferred to check for causation, for example run a multivariate regression, if more data on both indicators of cross border banking and financial inclusion had been available.

4.2 Discussion

The results section in this chapter presents this research's findings as stipulated in the methodology section in the previous chapter. This section's goal, however, is that of trying to interpret the meaning of these findings and situating the message(s) they relay to the main research objective of this report - i.e. what's the role of cross border banking in fostering financial inclusion in sub-Saharan Africa?

Now, financial inclusion is the access to and usage of financial services by previously ex-

cluded segments of the population and businesses – in particular the lower-end of the pyramid and SMEs. We, therefore, looked at measures of financial depth (size) and access mostly, as they illustrate closely the above definition, to gauge the extent of the impact that the entry of foreign banks in a given sub-Saharan economy, whether through privatization or liberalization, has on that country's financial development metrics pertaining to access to and usage or depth of financial products - i.e. do foreign banks, up on their entry in an economy of our region of interest, enhance or further the financial inclusion agenda in that economy?

Subsections 4.1.1 – 4.1.5 in the previous section, through their figures (figures 4.1 to 4.10), show at a broader level that the increase, both in the number and asset of foreign banks as a percentage of the total (local) banking industry in these five economies over the past decade, has coincided with an upward trend in the movement of proxy indicators of financial development, in particular those of depth and access (e.g., private credit to GDP, bank deposit to GDP, commercial bank branches per 100,000 adults, deposit accounts with commercial bank per 1,000 adults, etc.). Further, in subsection 4.1.6, a correlation matrix was computed, between the cross border banking variable and the financial development variables, to determine the degree of association between them by interpreting their correlation coefficients values. Hence, we found that overall the correlation was positive across all five countries with Zambia, Ghana, and Uganda showing strong correlation coefficients, while the coefficients are not so strong for Tanzania and Mozambique.

Thus, when comparing the prior and post entry of foreign banks intervals in our sample's findings, we notice a considerable increase in the value of all measurements indicators of interest (as shown and explained in Figures 4.1 to 4.10 in the previous section) – such as: domestic credit to private sector, private credit by deposit money banks to GDP, bank credit to bank deposits, number of listed companies per 1,000,000 people, commercial bank branches per 100,000 adults, etc. from the year 2000 to 2011 and from 2004 to 2013 (i.e. post entry interval of foreign banks) across all economies in the sample, though from a correlation point of view out of the five economies three, namely: Ghana, Uganda and Zambia, seem to show some significant coefficients of interdependence or association between the proportion of foreign banks as a percentage of the total banks and the rest of indicators measuring the level of depth and access in these economies, while for the period from 1990 to 1999 (prior entry interval of foreign banks) the values of the measurements indicators are much lower in general or are unavailable across all economies in the sample.

Relying on the findings of this report and plus the fact that all included economies in the sample had a foreign banks' proportion of 50% and above, we, thus, conclude that allowing foreign banks' entry in a given economy of our sample has an enhancing effect in supporting the financial inclusion agenda.

Consequently, with caution since causation was not established between foreign banks' entry participation in an economy and all indicators of financial development relating to access and depth or usage of financial services; based on these findings and the literature on financial inclusion in sub-Saharan Africa, it is therefore our view that cross border banking has a beneficial role in fostering financial inclusion in the sub-Saharan Africa region.

4.3 Some Observations for CBB and financial inclusion in sub-Saharan Africa

Relying on the literature, we now suggest some of our views to what this report set out to achieve. Thus, the type of financial inclusion we want for sub-Saharan Africa in particular, and Africa in general, is that which is able to induce an inclusive economic growth that creates jobs, thereby alleviating poverty. That is, as Ojah (2014) defines it in his article at the occasion of the 2014 World Economic Forum on Africa, at its basic level, it is the effective utilization by economic agents of the total financial services at their disposal to effect desired exchanges, and particularly, to support the highest possible activity in the real economy, while at a more deeper level, it means (1) pooling of the most available heap of investable funds possible from all nooks and crannies (lower-end of the population) of the economy (i.e. access) and, (2) channeling the pooled funds to attractive production activities (i.e. usage), particularly those of small-to-medium size enterprises (SMEs) which are usually the main engines of economic growth and job creation (poverty alleviation) across sub-Saharan countries in particular and Africa in general. Simply put, the type of financial inclusion, that we desire, is the one that can bring about **effective financial intermediation**.

Therefore, only to the extent that this new trend (preferred) of cross border banking activity (i.e. exportation of successful innovations by foreign banks with the goal of increasing their client base through serving the lower-end of the population), or any trend of CBB for that matter, achieves effective financial intermediation in the respective sub-Saharan host countries they are operating in, can we affirmatively say that cross border banking has had a beneficial role in financial inclusion in sub-Saharan Africa.

Left alone, this new trend of CBB activity will not be enough in enhancing the kind of financial inclusion we have preconized above, it will also need (first or simultaneously) the implementation of a credible policy agenda from local authorities (government, regulators, and supervisors) and a supportive physical and institutional infrastructure in the respective host countries.

The process of establishing a financial inclusion that is an enabler of effective financial intermediation could be impeded, in this case, by the risk of cross border banking transmission of financial distress, especially during periods of crisis. Thus, this potential risk would call for co-ordination and co-operation between home and host supervisors at different levels (bilateral, sub-regional, regional) mostly in tranquil periods and the implementation of clear contingency plans for crisis resolution scenarios.

Chapter 5

Conclusion

This study set out to investigate the role of cross border banking in financial inclusion in sub-Saharan Africa. That is, we wanted to find out whether cross border banking, as a process, had a beneficial or not impact on financial inclusion in this region of the world. Based on the findings of this report, we find that indeed cross border banking does have a beneficial role in fostering financial inclusion in this part of the world, though the extent to which its effect is palpable varies from one country to another and greatly depends on each country's ability of creating a conducive environment that will allow it to reap the benefits of cross border banking, particularly on financial inclusion. Further, relying on the literature about cross border banking benefits and financial inclusion and growth, this report also first establishes the type of financial inclusion needed for the sub-Saharan region, i.e. the one that spurs inclusive economic growth, thereby alleviating poverty. Thus, its essence, here, is effective financial intermediation. Secondly, though the effect of cross border banking on financial inclusion from the literature is quite ambiguous, the establishment of the essence of financial inclusion for sub-Saharan Africa allows the report to draw a basis for testing for the role of cross border banking activity in fostering financial inclusion in sub-Saharan Africa, i.e. whether beneficial or not, nonetheless. Finally, the report also suggests some supportive recommendations to accompany this trend of cross border banking activity in enhancing financial inclusion within the region in terms of creating incentives and containing its contagion risks.

Current data is either insufficient or simply unavailable. Hence, for future work, as data permits, further empirical work on this topic would certainly be welcome – especially focusing on this new trend movement from some of the major pan-African banks.

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Appendix A

List of Cross Border Banks in Africa

No.	Name	Origin	Location of headquaters	Majority ownership/largest minority shareholder	Number of African countries
1	Ecobank	African	Togo	South Africa	32
2	United Bank for Africa(UBA)	African	Nigeria	Nigeria	19
3	Standard Bank Group(Stanbic)	African	South Africa	South Africa	18
4	Banque Marocaine du Commerce Exterieur(BMCE)	African	Morocco	Morocco	18
5	Societe Generale	Non-African	France	France	17
6	Citigroup	Non-African	USA	USA	15
7	Banque Sahelo-Saharienne pour L'investissement et le Commerce(BSIC)	African	Libya	Libya	14
8	Standard Chartered	Non-African	UK	UK	14
9	BNP Paribas	Non-African	France	France	13
10	Attijariwafa Bank	African	Morocco	Morocco	12
11	Banque Centrale Populaire du Maroc(BCP)	African	Morocco	Morocco	11
12	Barclays Africa Group	African	South Africa	UK	10

No.	Name	Origin	Location of headquaters	Majority ownership/largest minority shareholder	Number of African countries
13	Access Bank	African	Nigeria	Nigeria	9
14	Bank of Baroda	Non-African	India	India	9
15	Guaranty Trust Bank Ltd.	African	Nigeria	Nigeria	9
16	Libyan Foreign Bank	African	Libya	Libya	9
17	Afriland First Bank	African	Cameroon	Cameroon	8
18	Banque Regionale de Solidarite(BRS)	African	Niger	USA	8
19	BGFI Bank	African	Gabon	Gabon	8
20	First National Bank(FNB)	African	South Africa	South Africa	8
21	First Bank of Nigeria	African	Nigeria	Nigeria	7
22	Kenya Commercial Bank(KCB)	African	Kenya	Kenya	6
23	NedBank	African	South Africa	South Africa	6
24	Orabank	African	Togo	USA	6
25	Access Holding	Non-African	Germany	Unknown	5
26	Albaraka Bank(Group)	Non-African	Bahrain	Bahrain	5
27	BancABC	African	Botswana	Zimbabwe	5
28	Diamond Bank	African	Nigeria	Nigeria	5
29	Equity Bank	African	Kenya	Kenya	5
30	HBL Pakistan(Habib bank Ltd.)	Non-African	Pakistan	Tanzania	5

No.	Name	Origin	Location of headquaters	Majority ownership/largest minority shareholder	Number of African countries
31	International Commercial Bank(ICB)	Non-African	Switzerland	Malaysia	5
32	Keystone Bank Group	African	Nigeria	Nigeria	5
33	Rabobank	Non-African	Netherlands	Netherlands	5
34	Diamond Trust Bank	African	Kenya	Switzerland	4
35	First International Bank Liberia Ltd.	African	Liberia	Unknown	4
36	HSBC Bank	Non-African	UK	UK	4
37	I&M Bank Group	African	Kenya	Kenya	4
38	Mauritius Commercial Bank	African	Mauritius	Mauritius	4
39	Skye Bank	African	Nigeria	Nigeria	4
40	Zenith Bank	African	Nigeria	Nigeria	4
41	Arab Bank Plc	Non-African	Jordan	Various	3
42	Banco Espirito Santo	Non-African	Portugal	Portugal	3
43	Bank of India	Non-African	India	India	3
44	Credit Agricole	Non-African	France	France	3
45	Groupe Banque Populaire	Non-African	France	France	3
46	NIC Bank Group	African	Kenya	Kenya	3
47	Advans Bank	Non-African	Luxembourg	Luxembourg	2
48	African Bank Corporation(ABC Bank)	African	Kenya	Kenya	2

No.	Name	Origin	Location of headquaters	Majority ownership/largest minority shareholder	Number of African countries
49	Banco Africano de Investimentos(BAI)	African	Cape Verde	Angola	2
50	Bank of China	Non-African	China	China	2
51	Bank of Khartoum Juba	African	Sudan	Sudan	2
52	Banque pour le Commerce et l'Investissement en Mauritanie	African	Mauritania	USA	2
53	Barclays Bank PLC	Non-African	UK	UK	2
54	Byblos Bank S.A.L.	Non-African	Lebanon	Various	2
55	Capital Bank/FMB	African	Malawi	Malawi	2
56	Commercial Bank of Africa	African	Kenya	Kenya	2
57	Commercial Bank of Ethiopia	African	Ethiopia	Ethiopia	2
58	Coris Bank	African	Burkina Faso	Burkina Faso	2
59	Deutsche Bank	Non-African	Germany	Germany	2
60	Exim Bank	African	Djibouti	Tanzania	2
61	Habib Bank AG Zurich(HBZ)	Non-African	Switzerland	Switzerland	2
62	Imperial Bank	African	Kenya	Various	2
63	Investec Bank(Mauritius) Ltd.	African	South Africa	South Africa	2
64	Kingdom Bank Africa Ltd.	African	Zimbabwe	Zimbabwe	2

No.	Name	Origin	Location of headquaters	Majority ownership/largest minority shareholder	Number of African countries
65	Millennium Bank	African	Mozambique	Portugal	2
66	Opportunity International	Non-African	USA	USA	2
67	ProCredit	Non-African	Germany	Germany	2
68	State Bank of India(SBI)	Non-African	India	India	2
69	State Bank of Mauritius	African	Mauritius	Mauritius	2
70	The HongKong and Shanghai Banking Corporation Ltd.	Non-African	UK	UK	2
71	Union Bank Nigeria	African	Nigeria	UK	2
72	ADIB Egypt	African	Egypt	United Arab Emirates	1
73	Ahli United Bank(Egypt) SAE	Non-African	Bahrain	Bahrain/Kuwait	1
74	Algeria Gulf Bank	Non-African	Algeria	Kuwait	1
75	Arab Banking Corporation	Non-African	Bahrain	Libya/Kuwait/UAE	1
76	Arab Tunisian Bank	African	Tunisia	Jordan	1
77	Banco Comercial do Atlantico	African	Cape Verde	Portugal	1
78	Banco Comercial e de Investimentos(BCI)	African	Mozambique	Portugal	1

No.	Name	Origin	Location of headquaters	Majority ownership/largest minority shareholder	Number of African countries
79	Banco de Fomento - Angola	African	Angola	Portugal	1
80	Banco International de Sao Tome e Principe(BISTP)	African	Sao Tome	Portugal	1
81	Banco Millennium Angola SA	African	Angola	Portugal	1
82	Banco Totta de Angola SARL	African	Angola	Portugal	1
83	Banco Unico	African	Mozambique	Portugal	1
84	Bank of West Africa(Banco da Africa Ocidental)	African	Guinea-Bissau	Portugal	1
85	Bank VTB Africa	African	Angola	Russia	1
86	Banque de Depot et Credit de Djibouti(BDCD)	African	Djibouti	Switzerland	1
87	Banque Internationale pour l'Afrique au Congo(BIAC)	African	Congo, Democratic Republic	Luxembourg	1
88	Banque Internationale pour l'Afrique au Niger SA(BIA)	Non-African	Burkina Faso	Belgium	1
89	Cairo International Bank(CIB)	African	Uganda	Egypt	1
90	China Construction Bank	Non-African	China	China	1

No.	Name	Origin	Location of headquaters	Majority ownership/largest minority shareholder	Number of African countries
91	Commercial Bank Group	African	Cameroon	Luxembourg	1
92	Cooperative Agricultural and Credit Bank	African	Djibouti	Yemen	1
93	Dahabshiil Bank International S.A.	Non-African	United Arab Emirates	United Arab Emirates	1
94	Dubai Bank Kenya Ltd.	Non-African	Kenya	United Arab Emirates	1
95	Finance Bank Zambia Ltd.	African	Zambia	Netherlands	1
96	Finibanco Angola	African	Angola	Portugal	1
97	Islamic Bank of Senegal(Banque Islamique du Senegal)	African	Senegal	Saudi Arabia	1
98	JPMorgan Chase Bank	Non-African	USA	USA	1
99	Mercantile Bank Ltd.	African	South Africa	Portugal	1
100	Royal Bank of Scotland	Non-African	UK	UK	1
101	Saba Islamic Bank(SIB)	African	Djibouti	Yemen	1
102	UBS	Non-African	Switzerland	Switzerland	1
103	Union National Bank - Egypt SAE	African	Egypt	United Arab Emirates	1
104	Warka Bank	Non-African	Iraq	Iraq	1

Source : (Beck et al., 2014, p.60-66)

Appendix B

List of some Selected Financial Inclusion Indicators

Country Name : Cameroon/CMR

Series Name	2011 [YR2011]	MRV [MRV]
ATM is main mode of deposit, older adults (% with an account, age 25+)	0.3	0.3
ATM is main mode of deposit, young adults (% with an account, age 15-24)	7	7
ATM is main mode of withdrawal, older adults (% with an account, age 25+)	4.5	4.5
ATM is main mode of withdrawal, young adults (% with an account, age 15-24)	15.4	15.4
Bank agent is main mode of deposit, older adults (% with an account, age 25+)	2.8	2.8
Bank agent is main mode of deposit, young adults (% with an account, age 15-24)	1.9	1.9
Bank agent is main mode of withdrawal, older adults (% with an account, age 25+)	2.2	2.2
Bank agent is main mode of withdrawal, young adults (% with an account, age 15-24)	1.9	1.9
Bank teller is main mode of deposit, older adults (% with an account, age 25+)	88.4	88.4
Bank teller is main mode of deposit, young adults (% with an account, age 15-24)	89.2	89.2
Retail store is main mode of deposit, older adults (% with an account, age 25+)	8.5	8.5
Retail store is main mode of deposit, young adults (% with an account, age 15-24)	0	0
Retail store is main mode of withdrawal, older adults (% with an account, age 25+)	8	8
Retail store is main mode of withdrawal, young adults (% with an account, age 15-24)	0	0
Account at a formal financial institution, older adults (% age 25+)	19.6	19.6
Account at a formal financial institution, young adults (% ages 15-24)	5.5	5.5
Account used for business purposes, older adults (% age 25+)	4.5	4.5
Account used for business purposes, young adults (% ages 15-24)	0.4	0.4
Account used to receive government payments, older adults (% age 25+)	3	3
Account used to receive government payments, young adults (% ages 15-24)	0.4	0.4
Account used to receive remittances, older adults (% age 25+)	1.6	1.6
Account used to receive remittances, young adults (% ages 15-24)	1.1	1.1
Account used to receive wages, older adults (% age 25+)	3.1	3.1
Account used to receive wages, young adults (% ages 15-24)	1.1	1.1
Account used to send remittances, older adults (% age 25+)	2.1	2.1
Account used to send remittances, young adults (% ages 15-24)	1.3	1.3
Mobile phone used to pay bills, older adults (% age 25+)	0.8	0.8
Mobile phone used to pay bills, young adults (% ages 15-24)	0.1	0.1
Mobile phone used to receive money, older adults (% age 25+)	9	9
Mobile phone used to receive money, young adults (% ages 15-24)	8.4	8.4
Mobile phone used to send money, older adults (% age 25+)	4.1	4.1
Mobile phone used to send money, young adults (% ages 15-24)	1.6	1.6
Checks used to make payments, older adults (% age 25+)	1.6	1.6
Checks used to make payments, young adults (% ages 15-24)	0.7	0.7
Electronic payments used to make payments, older adults (% age 25+)	0.5	0.5
Electronic payments used to make payments, young adults (% ages 15-24)	0.3	0.3
Loan from a financial institution in the past year, older adults (% age 25+)	6.2	6.2
Loan from a financial institution in the past year, young adults (% ages 15-24)	1.2	1.2
Loan from a private lender in the past year, older adults (% age 25+)	10.7	10.7
Loan from a private lender in the past year, young adults (% ages 15-24)	3.7	3.7
Loan from an employer in the past year, older adults (% age 25+)	2	2
Loan from an employer in the past year, young adults (% ages 15-24)	0.5	0.5
Loan from family or friends in the past year, older adults (% age 25+)	48.9	48.9
Loan from family or friends in the past year, young adults (% ages 15-24)	37.6	37.6
Loan through store credit in the past year, older adults (% age 25+)	2.3	2.3
Loan through store credit in the past year, young adults (% ages 15-24)	2.3	2.3
Purchased agriculture insurance, older adults (% working in agriculture, age 15+)	4.3	4.3
Purchased agriculture insurance, young adults (% working in agriculture, age 15+)	0	0
Personally paid for health insurance, older adults (% age 25+)	1.3	1.3
Personally paid for health insurance, young adults (% ages 15-24)	0.9	0.9
Automated teller machines (ATMs) (per 100,000 adults)	#N/A	1.4
Branches, commercial banks (per 100,000 adults)	#N/A	1.4
Credit depth of information index (0=low to 6=high)	2	2
Domestic credit to private sector (% of GDP)	#N/A	11.9
GNI per capita, Atlas method (current US$)	#N/A	1200
GNI, Atlas method (current US$)	#N/A	23429289763
Inflation, consumer prices (annual %)	#N/A	1.3
Point-of-sale terminals (per 100,000 adults)	#N/A	#N/A
Population, total	#N/A	19599000
Poverty headcount ratio at $2 a day (PPP) (% of population)	#N/A	30.4
Strength of legal rights index (0=weak to 10=strong)	6	6

Data from database: Global Findex (Global Financial Inclusion Database)
Last Updated: 04/18/2012

Figure B.1: CMR-Findex
Source: Global Findex *Global Financial Inclusion Database - World Bank*

Country Name : Lesotho/LSO

Series Name	2011 [YR2(	MRV [MRV]
ATM is main mode of deposit, older adults (% with an account, age 25+)	13.4	13.4
ATM is main mode of deposit, young adults (% with an account, age 15-24)	10.7	10.7
ATM is main mode of withdrawal, older adults (% with an account, age 25+)	72.1	72.1
ATM is main mode of withdrawal, young adults (% with an account, age 15-24)	63.4	63.4
Bank agent is main mode of deposit, older adults (% with an account, age 25+)	0.2	0.2
Bank agent is main mode of deposit, young adults (% with an account, age 15-24)	0	0
Bank agent is main mode of withdrawal, older adults (% with an account, age 25+)	0.9	0.9
Bank agent is main mode of withdrawal, young adults (% with an account, age 15-24)	0	0
Bank teller is main mode of deposit, older adults (% with an account, age 25+)	82.2	82.2
Bank teller is main mode of deposit, young adults (% with an account, age 15-24)	85.7	85.7
Retail store is main mode of deposit, older adults (% with an account, age 25+)	0.2	0.2
Retail store is main mode of deposit, young adults (% with an account, age 15-24)	0	0
Retail store is main mode of withdrawal, older adults (% with an account, age 25+)	0	0
Retail store is main mode of withdrawal, young adults (% with an account, age 15-24)	0.9	0.9
Account at a formal financial institution, older adults (% age 25+)	20.5	20.5
Account at a formal financial institution, young adults (% ages 15-24)	13.9	13.9
Account used for business purposes, older adults (% age 25+)	4.3	4.3
Account used for business purposes, young adults (% ages 15-24)	2.3	2.3
Account used to receive government payments, older adults (% age 25+)	6.1	6.1
Account used to receive government payments, young adults (% ages 15-24)	6.1	6.1
Account used to receive remittances, older adults (% age 25+)	10.9	10.9
Account used to receive remittances, young adults (% ages 15-24)	7.4	7.4
Account used to receive wages, older adults (% age 25+)	8.2	8.2
Account used to receive wages, young adults (% ages 15-24)	2.9	2.9
Account used to send remittances, older adults (% age 25+)	5.5	5.5
Account used to send remittances, young adults (% ages 15-24)	5.6	5.6
Mobile phone used to pay bills, older adults (% age 25+)	4.7	4.7
Mobile phone used to pay bills, young adults (% ages 15-24)	4.3	4.3
Mobile phone used to receive money, older adults (% age 25+)	6.9	6.9
Mobile phone used to receive money, young adults (% ages 15-24)	6.3	6.3
Mobile phone used to send money, older adults (% age 25+)	6	6
Mobile phone used to send money, young adults (% ages 15-24)	5	5
Checks used to make payments, older adults (% age 25+)	2.7	2.7
Checks used to make payments, young adults (% ages 15-24)	1.7	1.7
Electronic payments used to make payments, older adults (% age 25+)	2.7	2.7
Electronic payments used to make payments, young adults (% ages 15-24)	2.8	2.8
Loan from a financial institution in the past year, older adults (% age 25+)	3.5	3.5
Loan from a financial institution in the past year, young adults (% ages 15-24)	1.9	1.9
Loan from a private lender in the past year, older adults (% age 25+)	6.1	6.1
Loan from a private lender in the past year, young adults (% ages 15-24)	4.8	4.8
Loan from an employer in the past year, older adults (% age 25+)	3.5	3.5
Loan from an employer in the past year, young adults (% ages 15-24)	2.1	2.1
Loan from family or friends in the past year, older adults (% age 25+)	51.4	51.4
Loan from family or friends in the past year, young adults (% ages 15-24)	49.4	49.4
Loan through store credit in the past year, older adults (% age 25+)	4.4	4.4
Loan through store credit in the past year, young adults (% ages 15-24)	3.3	3.3
Purchased agriculture insurance, older adults (% working in agriculture, age 15+)	12.3	12.3
Purchased agriculture insurance, young adults (% working in agriculture, age 15+)	7.4	7.4
Personally paid for health insurance, older adults (% age 25+)	2.8	2.8
Personally paid for health insurance, young adults (% ages 15-24)	1.3	1.3
Automated teller machines (ATMs) (per 100,000 adults)	#N/A	7.3
Branches, commercial banks (per 100,000 adults)	#N/A	3.5
Credit depth of information index (0=low to 6=high)	0	0
Domestic credit to private sector (% of GDP)	#N/A	13.6
GNI per capita, Atlas method (current US$)	#N/A	1090
GNI, Atlas method (current US$)	#N/A	2.37E+09
Inflation, consumer prices (annual %)	#N/A	3.6
Point-of-sale terminals (per 100,000 adults)	#N/A	#N/A
Population, total	#N/A	2171000
Poverty headcount ratio at $2 a day (PPP) (% of population)	#N/A	62.3
Strength of legal rights index (0=weak to 10=strong)	6	6

Data from database: Global Findex (Global Financial Inclusion Database)
Last Updated: 04/18/2012

Figure B.2: LSO-Findex
Source: Global Findex *Global Financial Inclusion Database - World Bank*