The impact of foreign bank ownership on developing countries.

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Abstract

The recent LIBOR rate scandal in which Barclays received a sizeable fine for their role in the exploitation of the Interbank rate has had a negative reputational impact on Absa, as Barclays’ owns more than 50.1 per cent of Absa’s shares. This raises the question as to what the impact is of foreign bank ownership on a developing country.

The purpose of this research is to ascertain whether a developing country can attain economic growth benefits in the form of increased levels of competition and efficiency in its banking sector, by implementing the foreign bank entry or more specifically the foreign bank ownership of local banks, economic liberalisation reform.

Using econometric analysis the study calculated the levels of competition and efficiency from the annual firm-level financial statements for the period 1999 to 2010. This was done in two phases, where Phase One was from 1999 to 2004 and Phase Two was from 2005 to 2010 representing the periods pre- and post the Barclays’ acquisition of Absa.

The findings of the two phases were then compared and indicated that there was no significant change in the level of competition or in the level of efficiency in the South African banking sector.

Keywords

Economic liberalisation reforms, foreign banks, competition and efficiency
Declaration

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other university. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

……………………………

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List of abbreviations

BOP – balance-of-payments

IMF – International Monetary Fund

LOC – Level of competition

LOC1 – Level of competition for the period 2000 to 2004

LOC2 – Level of competition for the period 2005 to 2010

LOE – Level of efficiency

LOE1 – Level of efficiency for the period 2000 to 2004

LOE2 – Level of efficiency for the period 2005 to 2010

OLS - Ordinary least square

SARB – South African Reserve Bank

SME – Small-Medium enterprises
Table of contents

Contents

1. Chapter One: Introduction to research problem ................................................................. 1
   1.1. Background to the research problem ...................................................................... 1
   1.2. Research problem .................................................................................................. 1
   1.3. Research objectives ............................................................................................. 2
   1.4. Research aim ......................................................................................................... 3
   1.5. Summary of introduction ..................................................................................... 4

2. Chapter Two: Literature Review .................................................................................... 5
   2.1. Introduction .......................................................................................................... 5
   2.2. Economic liberalisation ....................................................................................... 5
   2.3. Foreign bank entry as a form of economic liberalisation ................................... 8
   2.4. World Bank’s view on foreign bank ownership .............................................. 10
   2.5. Empirical studies from certain countries ......................................................... 11
       2.5.1. China .............................................................................................................. 11
       2.5.2. Brazil .......................................................................................................... 12
       2.5.3. India .......................................................................................................... 13
       2.5.4. Russia ......................................................................................................... 14
       2.5.5. Kenya ......................................................................................................... 15
       2.5.6. Nigeria ........................................................................................................ 16
       2.5.7. South Africa ............................................................................................... 17
   2.6. South African banking industry ........................................................................ 18
   2.7. Summary of literature review ............................................................................ 19

3. Chapter Three: Research Propositions ........................................................................ 20
   3.1. Introduction to research propositions ................................................................ 20
   3.2. Research propositions ....................................................................................... 20
       Research proposition 1 ............................................................................................ 20
       Research proposition 2 ............................................................................................ 20
   3.3. Summary of research propositions ................................................................ 21

4. Chapter Four: Research methodology ....................................................................... 22
   4.1. Introduction .......................................................................................................... 22
   4.2. Research design .................................................................................................. 22
   4.3. Unit of analysis ................................................................................................... 23
   4.4. Population and sample ....................................................................................... 23
4.5. Sampling .........................................................................................................................23
4.6. Data collection ...............................................................................................................24
4.7. Data analysis ......................................................................................................................25
  4.7.1. Level of competition ..............................................................................................25
  4.7.2. Level of efficiency ...................................................................................................27
4.8. Research Limitations .................................................................................................28

5. Chapter Five: Research Results ......................................................................................29
  5.1. Introduction ..................................................................................................................29
  5.2. Sample Characteristics ..............................................................................................29
  5.3. Findings relating to Research Proposition 1 ............................................................32
    5.3.1. Phase One findings .............................................................................................32
    5.3.1.1. Descriptive statistics .....................................................................................32
    5.3.1.2. Correlations ......................................................................................................32
    5.3.1.3. Model summary ................................................................................................33
    5.3.1.4. Coefficients .......................................................................................................34
    5.3.1.5. H-statistic ...........................................................................................................34
    5.3.2. Phase Two findings ................................................................................................34
    5.3.2.1. Descriptive statistics .....................................................................................34
    5.3.2.2. Correlations ......................................................................................................35
    5.3.2.3. Model summary ................................................................................................36
    5.3.2.4. Coefficients .......................................................................................................36
    5.3.2.5. H-statistic ...........................................................................................................36
    5.3.3. Comparison of Phase One and Phase Two ..........................................................37
  5.4. Findings relating to Research Proposition 2 ............................................................37
    5.4.1. Phase One findings .............................................................................................38
    5.4.1.1. ANOVA ..............................................................................................................38
    5.4.1.2. Model summary ................................................................................................38
    5.4.1.3. Coefficients .......................................................................................................38
    5.4.1.4. Level of efficiency ...........................................................................................39
    5.4.2. Phase Two findings ...............................................................................................40
    5.4.2.1. ANOVA ..............................................................................................................40
    5.4.2.2. Model summary ................................................................................................40
    5.4.2.3. Coefficients .......................................................................................................41
    5.4.2.4. Level of efficiency ...........................................................................................41
    5.4.3. Comparison of Phase One and Phase Two ..........................................................43
6. Chapter Six: Discussion of research results ................................................................. 44
   6.1. Introduction .................................................................................................................. 44
   6.2. Interpretation of findings relating to Research Proposition 1 ................... 44
   6.3. Interpretation of findings relating to Research Proposition 2 ................... 47

7. Chapter Seven: Conclusions and Recommendations ................................................. 50
   7.1. Introduction .................................................................................................................. 50
   7.2. Research background and objectives .................................................................. 50
   7.3. Summary of main findings ....................................................................................... 51
   7.4. Recommendations for other developing countries ........................................ 52
   7.5. Recommendations for future research ............................................................... 53

8. References ............................................................................................................................... 54

List of equations

Equation 1: $H$-statistic regression ...................................................................................... 26
Equation 2: $H$-statistic ........................................................................................................... 26
Equation 3: Cobb Douglas stochastic frontier production model ................................... 27

List of figures

Figure 1: Supporters of globalisation causality flow .......................................................... 6
Figure 2: Opponents of globalisation causality flow ........................................................... 7
List of tables

Table 1: LOC Phase One Descriptive statistics ................................................................. 32
Table 2: LOC Phase One Correlations .............................................................................. 33
Table 3: LOC Phase One Model Summary ................................................................. 33
Table 4: LOC Phase One Coefficients .......................................................................... 34
Table 5: LOC Phase Two Descriptive statistics ............................................................ 35
Table 6: LOC Phase Two Correlations .......................................................................... 35
Table 7: LOC Phase Two Model Summary ................................................................. 36
Table 8: LOC Phase Two Coefficients .......................................................................... 36
Table 9: LOE Descriptive statistics .............................................................................. 37
Table 10: LOE Phase One ANOVA .............................................................................. 38
Table 11: LOE Phase One Model Summary ................................................................. 38
Table 12: LOE Phase One Coefficients ...................................................................... 39
Table 13: LOE Phase One levels of efficiency .............................................................. 39
Table 14: LOE Phase One bank ranking for average level of efficiency ................. 40
Table 15: LOE Phase Two ANOVA .............................................................................. 40
Table 16: LOE Phase Two Model Summary ................................................................. 41
Table 17: LOE Phase Two Coefficients ...................................................................... 41
Table 18: LOE Phase Two levels of efficiency .............................................................. 42
Table 19: LOE Phase Two bank ranking for average level of efficiency ................. 42
Table 20: LOC \( H \)-statistic ......................................................................................... 44
Table 21: LOE ............................................................................................................ 47
1. Chapter One: Introduction to research problem

1.1. Background to the research problem

The recent LIBOR rate scandal in which Barclays received a fine to the amount of £290 million from the UK Treasury for their role in the exploitation of the Interbank rate has had a negative reputational impact on Absa, as Barclays owns 55% of Absa (Whitfield, 2012).

While Absa declined to comment on the reputational impact (Whitfield, 2012), this does represent an exceptional set of conditions as both the World Bank and the International Monetary Fund (IMF) advocate the implementation of economic liberalisation reforms in developing countries, particularly the financial reform that allows the entry of foreign banks. In fact in some instances the World Bank and IMF strong-arm developing countries to implement this reform as it is often one of the conditions for receiving financial support from these organisations.

The ultimate form of this type of reform involves allowing the foreign bank to acquire one of the local banks. In the case of the Absa and Barclays transaction, the reform allowed the acquisition of a major local bank by a foreign bank. However, this scandal indicates that local banks in developing countries can also be subject to negative reputational impact should they be linked to a large foreign bank with questionable corporate governance policies. This in turn leads to the question as to the impact of foreign bank ownership on developing countries.

1.2. Research problem

Economic liberalisation in its broadest form involves the elimination of government intervention in the financial markets (Gibson and Tsakalotos, 1994) which allows for the efficient allocation of resources and thereby promotes economic growth (Roberts, 2000). As such, economic liberalisation is particularly important for developing countries.

Economic liberalisation reforms include trade reforms as well as financial reforms and a particular type of financial liberalisation reform is the sanctioning of foreign bank entry into the local banking industry. The definitive form of this type of economic liberalisation reform is allowing a foreign bank to acquire one of the local banks.
The paradox presented by economic liberalisation is however while it proposes the removal of government intervention in financial markets (Gibson and Tsakalotos, 1994), it does compel the establishment of certain institutions in order to ensure the security of the financial market (Mishkin, 2009). As per Mishkin (2009) the required institutions include:

a) Property rights  
b) Legal system  
c) The removal of corruption  
d) Quality of financial information  
e) Corporate Governance  
f) Regulation and supervision of the banking system

The security of the financial market is necessary to attract the entry of foreign banks entry and likewise these institutions are also necessary to encourage foreign banks to acquire local banks.

The question remains however whether or not a developing country that has all the necessary institutions in place benefits by implementing the foreign bank ownership of a local bank economic liberalisation reform.

1.3. Research objectives

To investigate and compare if a developing country attains any economic benefits by furthering their economic liberalisation reforms to include the ultimate form of the foreign bank entry economic liberalisation reform namely foreign bank ownership of its local banks.

According to the World Bank and International Monetary Fund the economic benefits will emerge as the levels of competition and efficiency of the banking sector increases (Stein, 2010). That is, if a developing country allows the entry of foreign banks, that country will attain an increase in the level of competition as well as an increase in the level of efficiency of their banking sector and this will in turn translate into overall economic benefits for the developing country.

The objective of this research is hence to assess if a developing country implements the furthest form of the foreign bank entry economic liberalisation reform to the extent
that foreign banks can acquire local banks, does that developing country realise the increase in the levels of competition and efficiency.

1.4. Research aim

The value of this study is that while there are numerous studies on the effect of developing countries implementing the foreign bank entry liberalisation reform, there is a gap in the studies investigating the extreme form of this reform which entails allowing a foreign bank to acquire local banks.

Notwithstanding that there are some studies that investigate the impact of foreign bank ownership in developing countries; these studies have only been conducted in developing countries like China (Yeung, 2008) and Russia (Karas, Schoors and Weill, 2010) in which there are state-owned banks. These studies hence focus on the levels of competition and efficiency attained either by the privatisation of the state-owned banks or from the entry of foreign banks.

In addition, none of the studies on the impact of foreign bank ownership in developing countries examines the impact if the foreign bank acquires one of the major local banks. This is of particular interest as if a major bank is acquired by a foreign bank, it may not result in an immediate change the banking sector landscape. As such it may be of importance to note whether or not the levels of competition and efficiency of the banking sector in such instances also reflect the increase and thereby the resultant in the overall economic benefits.

South Africa also represents a unique set of circumstances which will meet the aim of this study as it is a developing country with no state-owned banks. South Africa also has all the required institutions in place for foreign investment and has thereby successfully attracted the entry of foreign banks into its local banking industry.

Furthermore with the Barclays acquisition of Absa, South Africa has undergone the acquisition of one of its major banks by a foreign bank. As such, investigating the experience in South Africa will fill the gap in the foreign bank ownership of a local bank economic liberalisation reform research.
The study examines the levels of competition and efficiency in the South African banking industry. The levels are calculated for the period prior to the Barclays acquisition and again for the period immediately after the acquisition. The levels for the two periods are then compared in order to establish if the South African banking sector attained the increase in the levels of competition and efficiency as purported by the World Bank and IMF.

While the actual impact of the implementation of economic reforms is reliant on the developing country’s specific market conditions (Mishkin, 2009) the value of this study is that it provides insight for a developing country that is considering whether or not to implement the foreign bank ownership of a local bank economic liberalisation reform. The study does not argue for or against the economic liberalisation reform but rather provides a list of the market conditions that the developing country should consider. These market conditions need to be considered as they influence the impact of implementing the foreign bank ownership of a local bank economic liberalisation reform and therefore should be taken into account before implementing the reform.

1.5. Summary of introduction

The study will investigate the impact of implementing the extreme form of the foreign bank entry economic liberalisation reform which includes the foreign bank ownership of a local bank in a developing country. This will be done by measuring the level of competition and the level of efficiency of the banking sector. Both the World Bank and the IMF state that these levels will increase and thereby result in broader economic benefits for the developing country.

This study will focus on South Africa as the country represents a developing country that not only has all the necessary institutions in place to render the South African financial market as secure, it has also implemented this economic liberalisation reform. In addition South Africa has attracted foreign banks that have acquired local banks.

The value of this research is that it will provide insight for any other developing country that is considering the implementation of this economic reform.
2. Chapter Two: Literature Review

2.1. Introduction

This chapter reviews the literature on economic liberalisation and the foreign bank entry economic liberalisation reform. This will be done by firstly providing a broad overview on economic liberalisation followed by a discussion on foreign bank ownership as a form of economic liberalisation. The World Bank’s view on foreign bank ownership will then be presented and this will be followed by empirical studies from other developing countries. A general overview of the South African banking industry will then be provided and lastly a summary of the literature will be provided.

2.2. Economic liberalisation

Economic liberalisation in its broadest form involves the elimination of government intervention in the financial markets (Gibson and Tsakalotos, 1994). It includes both internal or domestic liberalisation as well as external liberalisation reforms. The former is an attempt to shift to a more advanced marketed-orientated system (Gibson and Tsakalotos, 1994) whereas the latter involves trade and investment liberalisation efforts (Campos and Horvath, 2011).

Economic liberalisation does however represent a paradox in that even though it encompasses the removal of government intervention in financial markets (Gibson and Tsakalotos, 1994), it does however require the establishment of certain institutions in order to ensure the security of the financial market (Mishkin, 2009).

There are two main drivers of economic liberalisation namely globalisation (Mishkin, 2009) and balance-of-payments (BOP) crises (Bhattacharya, 1997). According to Mishkin (2009) globalisation drives economic liberalisation as it presents an opportunity for economic growth, particularly for developing countries, via the access to international markets.

BOP crises on the other hand drives economic liberalisation as countries in this situation approach either the World Bank or the International Monetary Fund (IMF) for financial support and these organisations generally only grant the support on condition that the country implements structural forms that will render their economies more open
as well as establish the necessary regulatory institutions to prevent further BOP crises (Bhattacharya, 1997).

There are also two ways in which economic liberalisation reforms can be implemented, that is they can either be implemented all at once or rather staggered over a period of time (Campos and Horvath, 2011). The main benefit for a staggered implementation is that the country is able to learn and adjust the reforms as they go along whereas the main benefit of an all at once implementation are that costs are upfront and there is almost a honeymoon period in which all the difficult reforms can be implemented without significant public outcry (Campos and Horvath, 2011).

There are numerous arguments for and against economic liberalisation. According to Roberts (2000) the case for liberalisation reforms “rests on the general efficiency gains to be achieved from international exchange through unregulated markets” (Roberts, 2000, p610) that is, “liberalisation improves allocation efficiency” (Roberts, 2000, p610). As adapted from Nayar (2007) for supporters of globalisation and thereby economic liberalisation the causality can be illustrated as follows:

**Figure 1: Supporters of globalisation causality flow**

The main argument against globalisation and hence economic liberalisation is that it inhibits the ability of the government to rationalise the domestic wealth from those who have gained from the more open market to those who have loss as a result of the more open market (Choi and Woo, 2011). This is due to the fact that the government is obliged to lower social spending as any increase in social spending will make it
necessary to increase taxes which will in turn damage the competitiveness of the market (Choi and Woo, 2011).

As adapted from Nayar (2007) for opponents of globalisation and thereby economic liberalisation the causality can be illustrated as follows:

**Figure 2: Opponents of globalisation causality flow**

It is however recognised that the actual impact of economic liberalisation reforms is dependent on the developing country’s specific market conditions and that it is not really a case of whether or not economic liberalisation is correct or incorrect but rather that there are different forms of economic liberalisation (Mishkin, 2009). As such economists have adopted a more sensible slant of “restrained financial liberalization” (Mukherjee, 2009, p57) which recognises that while there are benefits of economic liberalisation, these need to be carefully implemented taking into account the country’s specific market conditions, otherwise the benefits may not materialise (Mukherjee, 2009).

Notwithstanding the above there are two main forms of economic liberalisation reforms namely trade liberalisation reforms and financial liberalisation reforms. According to Beim and Calomiris (2001) in McQuerry (2001) financial liberalisation reforms include the following components:

a) Removing interest rate controls
b) Decreasing the bank reserve requirements
c) Lessening the government’s intervention in the banks’ lending assessments
d) Privatising government owned banks
e) Initiating competition from foreign banks
f) Enabling as well as advancing the free flow of capital

As such the entry of foreign banks is an economic liberalisation reform or more specifically a financial liberalisation reform. Opening the local banking industry to acquisition of a local bank by a foreign bank is the most unrestrained form of this reform.

2.3. Foreign bank entry as a form of economic liberalisation

As per the economic liberalisation arguments there are also supporters and opponents to the foreign bank entry financial liberalisation reform. Detragiache, Gupta and Tressel (2006) cite the following arguments for supporters of foreign bank entry:

a) Based on their foreign location, foreign banks can attain higher economies of scale and risk diversification than local banks
b) Foreign banks have access to more advanced technology particularly with regard to risk management
c) Foreign banks are subject to more progressive supervision and regulation as they are regulated in their home countries
d) Foreign banks are not as inclined as local banks to succumb to political pressures
e) Because of the previous points, foreign banks increase the levels of competition and efficiency in the banking industry

Detragiache, Gupta and Tressel (2006) also cite the following arguments for opponents of foreign bank entry:

a) Large foreign banks may be less inclined than local banks to lend to small local firms that do not have a proven track record
b) Foreign banks are more likely to focus on the more affluent customers and this could lead to welfare loss if the local banks are also focusing on the same market segment. The welfare loss would result from the fact that the less affluent customers may then not have access to banking products
c) The foreign banks could force the local banks out of the market due to their backing of their sizeable parent companies
d) If local banks are forced out of the market, the total credit available in the market will decline and potentially profitable opportunities may not receive the necessary funding.

The arguments presented above are similarly applied to the extreme extent of the foreign bank entry reform which sees local banks being acquired by foreign banks. For a local bank to be regarded as a foreign owned bank at least 50.1 per cent of that bank’s shares need to be acquired by a foreign bank (Satta, 2004).

As mentioned in earlier in this Chapter, one of the paradoxes of economic liberalisation is that while it purports the removal of government intervention in financial markets (Gibson and Tsakalotos, 1994), it does compel the establishment of certain institutions in order to ensure the security of the financial market (Mishkin, 2009). The security of the financial market is necessary to attract foreign investment and likewise these institutions are also necessary to encourage foreign banks to acquire local banks.

According to Mishkin (2009) economists are largely in agreement that institutions are vital for economic development but that there is no real consensus as to the precise combination of the institutions that will result in both financial and economic growth (Mishkin, 2009). Nevertheless Mishkin (2009) notes that the institutions detailed below would be widely acknowledged by most economists as being the institutions necessary for the effective implementation of any liberalisation reform as they afford greater security of the financial market. Mishkin’s (2009) list of institutions includes:

a) Property rights – robust property rights are required to stimulate investment as the investment would otherwise not be made if the returns from the investment could be appropriated by other organisations or the government.

b) Legal system – the legal system would be required in order to impose rights and obligations under contracts as well as to support the property rights.

c) Corruption - the removal of corruption is critical for the effective support of the property rights as well as the legal system.

d) Quality of financial information – this includes ensuring that financial information is accurate and readily available. It hence speaks to the level of the accounting standards and this institution is crucial for the functioning of the financial market.
e) Corporate Governance – this involves ensuring that the interests of shareholders that invest in corporations are protected as it warrants that managers will not act in their own interests but rather in the interests of the shareholders.

f) Regulation and supervision of the banking system – as the banking system is largely responsible for granting credit in developing countries the stability of this system is of utmost importance. Mishkin (2009) states:

“Preventing banking crisis must start with the prudential regulation, in which rules set by the government ensure that banks have sufficient capital and manage risks well. To guarantee that these regulations are enforced, the government must also engage in prudential supervision, in which it monitors banks by examining them on a regular basis to ensure that they are complying with government regulations.” (Mishkin, 2009, p165).

The importance of a stable financial market, particularly a sound banking system as an institution necessary in order to ensure the development and efficient functioning of an economy has been widely accepted by economists (Al-Muharrami, 2009). Hoggarth and Saporta (2001) in Allen and Gale (2004) estimate that the costs of a banking crisis are on average as high as 4.5% of GDP. This confirms the importance of the banking industry to financial stability and hence the necessity to give careful consideration with regard to the implementation of the foreign bank entry economic liberalisation reform.

2.4. World Bank’s view on foreign bank ownership

Stein (2010) explains that during the 1980’s-90’s the World Bank and IMF encouraged the privatisation of state-owned banks as well as the issuing of private licenses as they were of the view that the increase competition would render the banking system more efficient. In the World Bank’s view, foreign banks would serve to increase the competition however following a series of financial crises in the mid-1990’s, the World Bank started to see the role of foreign banks as a stabilisation mechanism (Stein, 2010).

By 2000, despite a lack of empirical evidence the World Bank continued to promote the foreign ownership banks with the contention that this will result in a transfer of skills, diversification of assets resulting in greater stability of the banking system as well as a
reduction in the load on the domestic regulators as the foreign banks would be regulated in the countries where their headquarters are located (Stein, 2010).

As per Stein (2010) one of the main criticisms of the World Bank’s stance was that it could result in a reduction in the credit available to Small-Medium enterprises (SME) in developing countries since the foreign banks would be more inclined to only lend to larger corporations. As SME’s are a substantial source of economic development (Nieman and Nieuwenhuizen, 2009) this could impede economic growth in developing countries. As per Nieman and Nieuwenhuizen (2009), SME’s are a source of economic growth as they create employment and as such entrepreneurs who drive this sector are critical for economic development.

Nonetheless the World Bank countered this criticism by stating that the entry of more efficient foreign banks into a developing country could force the local banks into niche market segments like SME lending where the local bank would have a comparative advantage (Stein, 2010).

Hence in spite of the lack of empirical evidence the World Bank continues to promote foreign bank entry into developing countries.

2.5. Empirical studies from other developing countries

This section looks at the economic liberalisation experience in some of the developing countries namely China, Brazil, India, Kenya, Nigeria and South Africa.

The economic liberalisation experience in these developing countries has been included as the benefits of economic liberalisation are far superior to the benefits that would be attained by a developed country.

The particular countries have been selected as these countries represent the BRICS countries however two African countries namely Kenya and Nigeria have been included as a proxy for developing countries in the rest of Africa.

2.5.1. China

As per Rodlauer and Heytens (2003) in Mishkin (2009) economic liberalisation reforms in China gained momentum when China joined the World Trade Organization (WTO)
and the reforms included the establishment of the necessary legal and regulatory institutions.

China’s economic liberalisation reform implementation incorporated the implementation in almost every sector, while they may have followed a ‘all at once’ implementation, the reforms that were implemented were only partial reforms (Bramall, 2009) which focused mainly on stimulating exports as a means of attaining economic growth and development (Mishkin, 2009).

The banking institutional reforms implemented by China have seen the privatisation of some of the wholly state-owned commercial banks and has resulted in a blend of public-private ownership of the banks (Yeung, 2009). Yeung (2009) further explains that China has adopted a “rural-urban market segmentation policy” (Yeung, 2009, p177) in which the foreign banks operate in the urban sectors while the government continues to control the rural sectors. Notwithstanding that this may be an inefficient banking system as it requires a complex regulatory supervision system, it does allow the Chinese government to maintain a lower level of financial exclusion in the rural sectors and hence it serves as a socio-economic and political stability mechanism (Yeung, 2009).

Prior to 2007, foreign banks were only allowed a maximum ownership of 20 per cent (per single investor) in Chinese Banks (Yeung, 2009). During 2007 following a regulatory change, foreign banks were allowed to expand their operations in China however the constraints were so severe that it was more realistic for foreign banks to increase their market share via acquisition deals approved by the Chinese Banking Regulatory Commission (Yeung, 2009).

Overall the economic liberalisation efforts in China have resulted in substantial economic growth over the last thirty years (Bramall, 2009); nevertheless it is not entirely clear whether or not any additional economic benefits were attained by furthering their economic liberalisation reforms to the extent of allowing foreign banks greater ownership of the local Chinese banks.

2.5.2. Brazil

According to McQuerry (2001) Brazil started implementing economic liberalisation reforms in the late 1980’s when the country recognised that industrialisation policies geared at replacing imports were no longer an appropriate.
With regard to the rest of the financial liberalisation reforms implemented in Brazil, as noted by Yildirim and Philippatos (2005) in their analysis of the Latin American banking markets:

“the notion that high concentration in banking markets will result in monopoly rents is not supported by our empirical results. We find a strong positive pattern linking the foreign ownership indicator to our measure of competitiveness. Further, higher degree of competition in the sector is associated with lower bank margins and profitability, but improved cost efficiency. These findings are consistent with previous research which finds foreign bank entry can stimulate competition in national banking markets and thus force domestic banks to improve their operating efficiency.” (Yildirim and Philippatos, 2005, p638).

As such, the financial liberalisation reforms which allowed the entry of foreign banks into the banking sector has increased the competition in the Brazilian banking sector and has thereby improved the overall operational efficiency (Yildirim and Philippatos, 2005).

2.5.3. India

In the mid- to late-1980’s India implemented domestic liberalisation reforms with a view to industrial de-regulation and the reforms included the relaxation of industrial controls, wide-scale abolishment of industrial licensing, the amendment of their anti-trust laws, reduction in their tax rates and measures to improve the strength of their banking system (Chamarbagwala, 2006).

In addition India’s financial liberalisation reforms were aimed at developing more robust financial institutions (Bodla and Verma, 2006) and as per Bodla and Verma (2006) the notable reforms implemented in the banking sector included:

a) Capital adequacy requirements
b) Categorisation and provision guidelines for assets
c) Reduction in the statutory liquidity ratio
d) The introduction of cash reserve ratio’s
e) Allowing the private sector to participate in the banking sector
f) Permitting foreign banks to enlarge their operations via their subsidiaries
g) The initiation of real time gross settlement
h) Easing the foreign direct investment standards
The economic liberalisation reforms in India, or more specifically the financial liberalisation reforms, resulted in an improvement in productivity as well as an improvement in both operational and financial efficiency (Bodla and Verma, 2006). However there is no real indication that these benefits are attributable to allowing foreign banks to widen their operations in the local Indian market.

2.5.4. Russia

Russia implemented extensive economic reforms in 1991 with a view to move away from the central planning regime to a more market-orientated economy (Buck, Filatotchev, Nolan and Wright, 2000). One of the main reforms implemented in Russia was the “voucher privatisation of manufacturing firms” (Buck, et al, 2000) in which all Russian citizens vouchers entitling them to part ownership in the manufacturing firms. This reform provided the prompt removal of the Government in industry and hence allowed the transition to privatisation of the manufacturing industry (Buck, et al, 2000).

As regards the financial liberalisation reforms implemented in Russia according to Chowdhury (2003):

“As part of the economic reforms, the country moved away from the strictly centralized control of the mono-bank system to a relatively more diversified and functionally more specialized two-tier system. The central banking functions were vested with … the Central Bank of Russia (CBR) while commercial banking functions were performed by five specialized institutions: Sberbank – savings; Vneshtorgbank – foreign trade; Promstroibank – industrial lending; Agroprombank – agricultural lending; and Zhilsotsbank – housing.” (Chowdhury, 2003, p91).

In addition, during the early to mid-1990’s as part of the initial transition to privatisation, companies and other organisations were allowed to develop their own specific financial institutions or banks (Chowdhury, 2003). These institutions were generally linked to the major companies in the economy and they operated as a group (Chowdhury, 2003). These institutions were however by enlarge not subject to any regulation (Chowdhury, 2003), as such these banks engaged in financial speculation.

According to Ippolito (2002) in Chowdhury (2003) the inaccurate accounting practices, the lack of proper regulatory supervision as well as the corruption and lack of
transparency afforded by the cross-shareholding essentially meant that banks were more involved in corporate governance transgressions than in fulfilling their role as a financial intermediary.

As a result of the above, the Russian Banking sector went through three significant crises until the early 2000’s when a new management team was appointed at CBR (Chowdhury, 2003). According to Chowdhury (2003) this team implemented deposit insurance; improved regulatory supervision including the application of strict accounting practices and enhance foreign participation in the banking sector.

In a subsequent study comparing the efficiency of the different types of banks in Russia namely the local private banks, the local public banks and the foreign banks, Karas, Schoors and Weill (2010) found that the Russian banking system would in fact benefited more from the competition afforded by the entry of foreign banks than from the privatisation of the local public banks.

So in summary, the economic liberalisation reforms in Russia resulted in marked economic growth however it also illustrated that regulation is necessary in the banking sector in order to attain the full benefits of the reforms. In Russia, allowing foreign banks access to the banking sector increased the efficiency of the sector (Karas, Schoors and Weill, 2010) however it is not clear whether this is as a result of allowing the foreign banks to own the local banks.

2.5.5. Kenya

Following a $170 million World Bank credit adjustment in 1989 Kenya implemented financial liberalisation reforms (Mwega, 2011). These reforms were intended to include the deregulation of interest rate, a reduction in the control measures when allocating credit as well as improving the competition and efficiency of the Kenyan financial system (Meso and Kaino, 2008). In addition, as per Brownbridge and Harvey (1998) in Mwega (2011) the reforms focused on developing and enhancing the regulatory framework of the central bank as well as progressing the effectiveness of Kenya’s monetary policy by ensuring greater dependence on the market forces.

Mwega (2011) also explains that as a rule Kenya welcomed the entry of foreign banks as it was of the view that this would expand the country’s banking functionality. Mwega (2011) further acknowledges that based on the improvements over the last ten years in the banking sector indicators listed below, it could be said that the Kenyan financial
sector was now more robust as a result of the foreign banks presence. However, a mere 19 per cent of Kenyans are able to access banking financial services which illustrates that despite the robustness afforded by the entry of foreign banks into the Kenyan banking sector, the development of inventive channels like cellphone technology and branchless banks would still be required in order to extend these services to the unbanked population (Mwega, 2011). As per Mwega (2011) the list of improved banking sector indicators includes:

a) Capital adequacy ratio  
b) Rates of return on assets  
c) The level of non-performing loan  
d) The advancement and structure of credit as well as the assets held by the commercial banks

2.5.6. Nigeria

As stated by Uche (2010) Nigeria was the only British Colony in Africa that managed to create a home-grown local banking system next to the British Colonial banking system. This is possibly due to the fact that Nigerian banks were not overpowered by the British regulation and the Nigerian economy provided a considerable foundation for the development of commercial banking (Uche, 2010). As such Nigeria’s banking system was twofold consisting of the following two groups:

“One group of banks—the foreign banks—possessed ample reserves, highly skilled executives, and long experience. Such banks however maintained a restricted branch system, provided finance only for the most respectable and conventional borrowers, and tended to engage in capital export. The other group of banks—the indigenous banks—lacked capital, controlled a small volume of deposits and specialized in the finance of relatively risky undertakings.” (Uche, 2010, p467)

The local banks hence emerged as the foreign banks in Nigeria failed to cater for all the commercial banking needs in the country (Uche, 2010). However due to a lack of regulation of the local banks, Uche (2010) further notes that by 1960 twenty-one of the twenty-seven local Nigerian banks that were founded had collapsed. The main reasons for collapse of the local banks were due to poor management including the absence of
proper accounting practices as well as fraudulent activities of the part of some of the banks’ directors (Uche, 2010).

As a result the financial reforms in Nigeria focussed more on the development of a central bank which would serve to bolster the local Nigerian banks (Uche, 2010). As per Zhao and Murinde (2011), this would result in the application of astute re-regulation in conjunction with deregulation. Zhao and Murinde (2011), however also maintain that there needed to be a combination of re-regulation and deregulation since even though re-regulation may be prudent to prevent excessive risk taking, it will impose increased regulatory costs and thereby may hinder competition.

The Nigerian experience hence indicates that the foreign banks failed to meet the needs of the local market and hence the emergence of the local Nigerian banks (Uche, 2010). This emergence resulted in financial liberalisation reforms in the form of regulation of the banking sector as many of the local banks collapsed (Uche, 2010).

Uche (2010) also points out that despite the introduction of regulation, banking fraud continues in Nigeria and this is possibly because as per Brownbridge and Harvey (1998) in Mwega (2011) for regulation to be effective bank regulators need to be insulated from political interference.

2.5.7. South Africa

As per Bell (1992 and 1997), in Mabugu and Chitiga (2009), the main purpose of the economic liberalisation reforms in South Africa between 1925 and 1970 was to reduce the country’s imports and in the 1980’s the policy was to render the economy more open by way of export stimulus policies (Bell, 1992, in Mabugu and Chitiga, 2009).

In addition, in the 1990’s South Africa amended the Banks Act No 94 of 1990 in order to open the banking sector to allow foreign banks to operate in the South African market (Verhoef, 2007). It should be noted though that unlike some of the other developing countries discussed earlier in this section namely Russia, China and India, South Africa does not have any state-owned banks.

Verhof (2007) also explains that following the period of bank failures and crises the Basel Committee on Bank Supervision formulated a set of principles for bank supervision with the intention of stabilising international financial markets and these
principles which were subsequently implemented by the South African Reserve Bank (SARB).

As such while the South African Banking sector implemented financial liberalisation reforms to render the sector more open, it remains a highly regulated industry. This is aligned to Mishkin (2009) who states regulation of the banking industry is one of the necessary institutions to support economic liberalisation reforms however the costs of this regulation is borne by the developing country. It is nevertheless not clear if any additional benefits were attained by allowing foreign banks ownership of the local South African banks.

2.6. South African banking industry

As mentioned earlier in this report, South Africa is a developing country that has implemented various economic liberalisation reforms. The country has also established all the necessary institutions that are required in order to attain the full economic growth potential from economic liberalisation.

South Africa has also had foreign bank ownership deals with two of its major banks during the last seven years, the details of the two deals are:

a) Barclays Bank of the United Kingdom and Absa Bank transaction in 2005

In 2005 Barclays Bank acquired a majority stake in Absa Bank and this transaction represented the first international ownership of one of the larger South African banks, as well as the single largest foreign direct investment in South Africa at that time (South African Reserve Bank, 2005). Barclays Bank acquired 50.1 per cent of Absa shares for a total consideration of R33 billion and according to South African Reserve Bank (2005) the transaction affirmed South Africa’s position as an attractive and stable financial centre.

b) Industrial and Commercial Bank of China (ICBC) and Standard Bank Group transaction in 2007

In 2007, South Africa had a second major investment by a foreign bank into one of South Africa’s larger banks. In this transaction ICBC acquired 20 per cent equity in the Standard Bank Group. The acquisition of the minority interest by ICBC resulted
in R36,7 billion equity investment into the Standard Bank Group (South African Reserve Bank, 2007).

Based on the above, as a developing country South Africa is in a unique position in that not only does it have the required institutions for economic liberalisation it has opened its economy to the investment ownership by foreign banks as suggested by the World Bank, South Africa also does not have any state-owned banks. As discussed under section 2.1), the actual impact of economic liberalisation reforms is dependent on the developing country’s specific market conditions and as such economists have adopted a more sensible slant of “restrained financial liberalization” (Mukherjee, 2009, p57). Given this view, the main question is whether or not economic liberalisation reforms like the foreign bank ownership implemented in South Africa has resulted in any benefit for the developing country.

2.7. Summary of literature review

As per the literature, economic liberalisation in the form of foreign bank entry should lead to increased competition as well as greater efficiency in the banking industry. It is however not clear whether the ultimate form of this reform that is the ownership of a major bank leads to similar benefits.

South Africa also present a unique situation to test these purported benefits as it not only has the necessary institutions in place to attract foreign bank entry, it has also had a major acquisition of a local bank in the last seven years.
3. Chapter Three: Research Propositions

3.1. Introduction to research propositions

The propositions listed below have been selected in order to confirm the impact of developing countries implementing economic liberalisation reforms in the form of allowing the ownership of the local banks by foreign banks.

3.2. Research propositions

As per the literature, proponents of economic liberalisation advocates that if a developing country allows foreign banks ownership of local banks, the level of competition as well as the level of efficiency will increase (Roberts (2000) and Parikh (2006)).

**Research Proposition 1**
The proposition states that the level of competition before the acquisition of a local bank by a foreign bank (LOC1) will be lower than the level of competition after the acquisition (LOC2). The alternative is that the level of competition before the acquisition (LOC1) will be higher, or the same, as the level of competition after the acquisition (LOC2).

Proposition: LOC1 – LOC2 < 0

**Research Proposition 2**
The proposition states that the level of efficiency before the acquisition of a local bank by a foreign bank (LOE1) will be lower than the level of efficiency after the acquisition (LOE2). The alternative is that the level of efficiency before the acquisition (LOE1) will be higher, or the same, as the level of efficiency after the acquisition (LOE2).

Proposition: LOE1 – LOE2 < 0
3.3. Summary of research propositions

The propositions listed in the previous section will ascertain the levels of competition and efficiency in the banking sector before a major foreign bank acquisition of a local bank in a developing country. This will then be compared to the levels of competition and efficiency after the acquisition in order to assess whether or not the levels have increased.
4. Chapter Four: Research methodology

4.1. Introduction

From the literature review economic growth benefits can be attained by developing countries through the efficient allocation of resources resulting from implementing economic liberalisation reforms (Roberts (2000) and Parikh (2006)). Foreign bank ownership of local banks is a particular type of economic liberalisation reform, however as per the Research problem, is there any benefit for a developing country that has implemented this approach.

The specific benefits that have been studied are the benefits which were highlighted in the literature review. As mentioned in the previous chapter, these include the levels of competition and efficiency. This chapter of the research report outlines the research methodology that was utilised.

4.2. Research design

As the study looked at quantifying the benefits namely the levels of competition and efficiency of foreign bank ownership, the research design selected was a quantitative study as it involved proving certain propositions that were already formulated (Saunders and Lewis, 2012).

The research design was also descriptive in nature as it attempted to accurately reflect the benefits mentioned above (Saunders and Lewis, 2012). The reason for choosing a quantitative, descriptive design was because the study sought to look at economic growth benefits emanating from the implementation of the ownership of local banks by foreign banks economic liberalisation reform.

More specifically as the study calculated and compared the benefits before and after the implementation of this economic liberalisation reform, the research design was a longitudinal comparison (Balnaves and Caputi, 2001).

A quantitative causal design was not be selected as given the numerous variables affecting economic growth, it would not be possible to control all the other economic variables and as per Saunders and Lewis (2012), a causal design requires the elimination of all other extraneous variables.
4.3. Unit of analysis

According to Balnaves and Caputi (2001) the unit of analysis encompasses ascertaining the units most relevant to the research and the groups to which these units belong. For this study in order to assess the propositions stated in Chapter 3, the unit of analysis was at the South African banking industry level. Therefore this research was not a cross-country study in which the results were compared across countries, but rather a country-specific study that focused on the results in South Africa.

4.4. Population and sample

As per Blaikie (2003), a population is an accumulation of all the units that correspond to the chosen set of criteria and it is defined in accordance with the research being conducted. In the instance of this study, the population was all the banks operating in the South African banking industry between the periods from 2000 to 2010.

The reasons that this time period was selected was because the Barclays acquisition of Absa took place in 2005 and this acquisition represented the largest acquisition of a local bank by a foreign bank in South Africa. As such this time period would be sufficient to check and compare whether the economic benefits purported in the propositions were attained or not.

The reasons for restricting the population geographically to South Africa is because as mentioned in the literature review South Africa is a developing country that stands to benefit from economic liberalisation. It also has all the necessary institutions in place to support economic liberalisation reforms and has specifically implemented the foreign ownership of local banks economic liberalisation reform.

4.5. Sampling

The sampling method applied was a purposive method which according to Saunders and Lewis (2012) is a non-probability sampling method in which the researcher uses their judgement in order to select the sample members and hence not all members of the population stand an equal chance of being selected.

This sampling method was utilised as the bulk of the banking assets in South Africa are held by the big four banks namely Absa, Standard Bank, Nedbank and First National
Bank. As such these four banks were selected and in order to complete the sample Capitec Bank and Mercantile Bank were also included. The reason for including Capitec Bank was because it is one of the smaller banks which specifically focuses on the lower end or unbanked market segment. Mercantile Bank was also included in the sample as it represents a second local bank that is controlled by a foreign bank.

The sample of only six banks may be considered to be too small however given the South African banking landscape in which the bulk of the total banking assets are held by the big four banks namely Standard Bank, First National Bank, Absa and Nedbank, increasing the sample size is unlikely to change the results significantly.

4.6 Data collection

The main source of data for this study was secondary data. Saunders and Lewis (2012) define secondary data as data that was originally collected for some other purpose.

The secondary data utilised was collected from the McGregor BFA database which provided the annual financial statement data for the six banks in the sample. The main advantage of using this secondary data is the savings in time and cost (Blaikie, 2003) while the main disadvantage is that it was collected for some other purpose and hence may not include all the areas of interest being examined by the current researcher (Blaikie, 2003). Notwithstanding this limitation for this research report the secondary data included in the annual financial statements were sufficient to conduct the empirical analysis.

Saunders and Lewis (2012) further explain that longitudinal data has been collected over a period of time and in this study it was necessary to use a longitudinal approach as the purpose of the study was to measure whether or not economic benefits were attained from the foreign ownership of the banking sector. This needed to be observed over a period of time so that the before and after periods could be compared.

The data from the McGregor BFA database was examined at an annual frequency for the period 1999 to 2010. The exact variables that will be collected are:
4.7. Data analysis

The data analysis was done in two phases where Phase One involved calculating the levels of competition and efficiency for the period 1999 to 2004 while Phase Two involved calculating these levels for the period 2005 to 2010. Phase One essentially examined the period prior to the Barclays acquisition of Absa whereas Phase Two examined the period post the acquisition. As per the propositions stated in the previous chapter, the results of the two phases were also compared. For the entire data analysis a significance level of five per cent was utilised.

The models utilised to calculate the level of competition and the level of efficiency are detailed below and in both propositions the procedure involved running the relevant regression model, examining the descriptive statistics of the regression results, assessing the correlations of the independent variables, examining the fit of the regression model and lastly calculating the actual levels of competition and efficiency.

4.7.1. Level of competition

The level of competition was calculated using the Panzar and Rosse $H$-statistic approach which utilises firm-level data to quantify to the degree to which changes in input prices are reflected in equilibrium prices (Yildirim and Philippatos, 2007).
The *H*-statistic was obtained using the following equation (Yildirim and Philippatos, 2007):

**Equation 1: *H*-statistic regression**

\[
\ln(\text{REV}_i) = h_1 \ln(\text{PF}_i) + h_2 \ln(\text{PL}_i) + h_3 \ln(\text{PK}_i) + \beta_i \ln(\text{BSF}_i) + \sum_{t=1}^T \alpha_t D_t + \varepsilon_{it}
\]

Where

- \( T = 1, \ldots, T \) with \( T \) is the number of periods observed
- \( i = 1, \ldots, n \) with \( n \) is the total number of banks observed
- \( \ln \) is the natural logarithm
- \( \text{PF} \) the unit cost of deposits or rather the ratio of interest expense to deposits and other liabilities
- \( \text{PL} \) the unit cost of labour, that is the ratio of staff expenses to total assets
- \( \text{PK} \) the unit cost of physical capital, that is the ratio of other non-interest expenses to fixed assets
- \( \text{BSF} \) includes bank specific factors to account for size, risk and capacity differences

The actual *H*-statistic was then calculated using the following formula (Yildirim and Philippatos, 2007):

**Equation 2: *H*-statistic**

\[
H = h_1 + h_2 + h_3
\]

As explained by Yildirim and Philippatos (2007) a perfectly competitive market has an *H*-statistic of one, while a monopoly has an *H*-statistic of less than or equal to zero. An *H*-statistic between zero and one indicates monopolistic competition (Yildirim and Philippatos, 2007).

The reason that the Panzar and Rosse *H*-statistic approach was selected for the analysis is because this approach is widely recognised in empirical research as a measure of competition in an industry (Yildirim and Philippatos, 2007). The approach does however assume that the banking industry is in equilibrium (Mwega, 2011) and hence the analysis assumed that the South African banking industry was in equilibrium.
4.7.2. Level of efficiency

The level of efficiency was calculated using the stochastic frontier approach which assumes that total cost deviates from optimal cost by a random disturbance $V$ and an inefficiency term $U$ (Karas, Schoors and Weill, 2010). As per Hasan, Kamil, Mustafa and Baten (2012) the technical efficiency for the banks in the sample was calculated using a two-stage process. Firstly the parameters were estimated using ordinary least square (OLS) estimates and secondly these estimates were then used to obtain the maximum-likelihood estimates of the stochastic production model (Hasan, Kamil, Mustafa and Baten, 2012).

As per Hasan, Kamil, Mustafa and Baten (2012) the equation used in this approach was:

**Equation 3: Cobb Douglas stochastic frontier production model**

$$\ln TEA_{it} = \beta_0 + \beta_1 \ln TD_{it} + \beta_2 \ln TOE_{it} + \beta_3 \text{TIME} + V_{it} - U_{it}$$

Where
- TEA is Total Earnings Assets
- TD is Total Deposits
- TOE is Total Overhead Expenses
- TIME is time period
- $i$ the is the $i$th bank
- $t$ the is the $t$th year of
- $V$ and $U$ are the error terms

The reason that the Cobb Douglas stochastic frontier production model was selected for the level of efficiency analysis is because it is one of the two most extensively utilised approaches when measuring efficiency (Mwega, 2011). The other approach is the Data Envelopment Analysis which entails a linear programming technique (Mwega, 2011). However as the latter approach is a non-parametric approach according to Mwega (2011) statistical testing may be difficult to conduct and as such the Cobb Douglas stochastic frontier production model was selected as it utilises econometric analysis (Mwega, 2011).
4.8. Research Limitations

The main research limitation is that it did not consider the overall macroeconomic environment conditions which may affect the performance of the banks.

Another limitation is that the only one model was selected to calculate the level of competition and only one model was selected to calculate the level of efficiency. This research could benefit by including alternative models as this would enable comparison between the results of the different models and thus ensure consistency of the results.

In addition, the study only included six South African banks and did not take into account periods outside the timeframe of 1999 to 2010. The sample size is therefore relatively small.

Furthermore, given that the main data source was secondary data from the McGregor BFA database which details the financial statements of the six banks that were included in the sample, the actual raw data collection process is not known.

It should also be noted that as the study focused on South Africa, given that there are no state-owned banks present, the benefits from foreign bank ownership cannot be inferred to other developing countries where there are state-owned banks.
5. Chapter Five: Research Results

5.1. Introduction

This chapter details the research results and this will be done by firstly of providing an overview of the sample characteristics. The findings related to the two propositions specified in Chapter Three will then be discussed.

The propositions from Chapter Three will be looked at by presenting the results for the period 1999 to 2004 (Phase One) followed by the results for the period 2005 to 2010 (Phase Two) and the results of the two periods will then be compared.

5.2. Sample Characteristics

As mentioned in Chapter Four, six banks were included in the sample and these banks are:

- Absa
- First National Bank
- Nedbank
- Standard Bank
- Capitec Bank
- Mercantile Bank

The total assets split for the banks in the sample are detailed in Figure 3 below and on average Standard Bank held 36 per cent of the total assets while Absa, First National Bank and Nedbank held 23 per cent, 21 per cent and 20 per cent respectively.
For Phase One, that is the period 1999 to 2004, there were a total of 33 records in the dataset whereas for Phase Two, the period 2005 to 2010 there were a total of 36 records. As such the sample sizes that was utilised for the regression analysis was relatively small.

As explained in Chapter Two, a foreign owned bank is defined as a bank where more than 50.1 per cent of its shares are foreign owned (Satta, 2004). As such this bank’s operations are essentially under foreign control (Satta, 2004). Figure 1 below reflects the total assets for the banks in the sample split according to bank ownership for Phase One.

As illustrated, during Phase One, just over 99 per cent of the total assets in the sample were held by locally owned banks. However in 2002 this changed and 0.2 per cent of the total assets were then held by a foreign owned bank. This change resulted from the CGD acquisition of Mercantile Bank in March 2002 (Mercantile Bank’s website, 2012). CGD are a state-owned Portuguese bank and it injected R120 million in Mercantile Bank in order to assume control of the bank with an interest of 64.8 per cent (Mercantile Bank’s website, 2012).
As regards the sample’s total assets split by bank ownership for Phase Two, Figure 2 illustrates a marked increase in the total assets in the sample held by foreign owned banks. During Phase Two this increased to almost 25 per cent and this is due to the Barclays acquisition of Absa in May 2005. This saw Barclays attained 50.1 per cent of Absa.
5.3. Findings relating to Research Proposition 1

As explained in Chapter 4 the Panzar and Rosse $H$-statistic approach was utilised to measure the level of competitiveness required for Proposition 1. As such, as per the assumptions of this approach it has been assumed that the South African banking industry was in equilibrium for both Phase One and Phase Two.

5.3.1. Phase One findings

5.3.1.1. Descriptive statistics

Table 1 below provides the descriptive statistics for the regression analysis of the level of competition. The $\ln$ TA, $\ln$ Equity and $\ln$ Net Loans variables all have noteworthy standard deviations in excess of five. This is in all likelihood due to a few outliers in the data for these variables as both Capitec and Mercantile Bank are notably smaller than the rest of the banks in the sample.

Table 1: LOC Phase One Descriptive statistics

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\ln$ Rev</td>
<td>-1.94</td>
<td>.747</td>
<td>33</td>
</tr>
<tr>
<td>$\ln$ PF</td>
<td>-2.24</td>
<td>.936</td>
<td>33</td>
</tr>
<tr>
<td>$\ln$ PL</td>
<td>-3.42</td>
<td>1.200</td>
<td>33</td>
</tr>
<tr>
<td>$\ln$ PK</td>
<td>-.27</td>
<td>1.008</td>
<td>33</td>
</tr>
<tr>
<td>$\ln$ TA</td>
<td>16.79</td>
<td>5.661</td>
<td>33</td>
</tr>
<tr>
<td>$\ln$ Equity</td>
<td>14.82</td>
<td>5.126</td>
<td>33</td>
</tr>
<tr>
<td>$\ln$ Net Loans</td>
<td>16.36</td>
<td>5.533</td>
<td>33</td>
</tr>
</tbody>
</table>

5.3.1.2. Correlations

The correlations are detailed in Table 2, there appears to be a high correlation between $\ln$PF with $\ln$PL, $\ln$TA, $\ln$Equity and $\ln$Net Loans correspondingly. While these relatively high correlations could be an indication that there is a problem with multicollinearity, it
is in fact the nature of the variables included in the data as all the variables are linked to the overall performance of the individual banks. In addition as the Panzar and Rosse $H$-statistic approach was being utilised none of the variables could be excluded so as to reduce the correlation. This approach is essentially used to calculate or rather predict the $H$-statistic and as such the multicollinearity is not necessarily an area of concern (Gujarati, 1995).

### Table 2: LOC Phase One Correlations

<table>
<thead>
<tr>
<th>Pearson Correlation</th>
<th>Ln Rev</th>
<th>Ln PF</th>
<th>Ln PL</th>
<th>Ln PK</th>
<th>Ln TA</th>
<th>Ln Equity</th>
<th>Ln Net Loans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ln Rev</td>
<td>1.000</td>
<td>.736</td>
<td>.831</td>
<td>.147</td>
<td>-.839</td>
<td>-.821</td>
<td>-.822</td>
</tr>
<tr>
<td>Ln PF</td>
<td>.736</td>
<td>1.000</td>
<td>.740</td>
<td>-.072</td>
<td>-.770</td>
<td>-.687</td>
<td>-.767</td>
</tr>
<tr>
<td>Ln PL</td>
<td>.831</td>
<td>.740</td>
<td>1.000</td>
<td>.082</td>
<td>-.985</td>
<td>-.978</td>
<td>-.988</td>
</tr>
<tr>
<td>Ln PK</td>
<td>.147</td>
<td>-.072</td>
<td>.082</td>
<td>1.000</td>
<td>-.060</td>
<td>-.137</td>
<td>-.071</td>
</tr>
<tr>
<td>Ln TA</td>
<td>-.839</td>
<td>-.770</td>
<td>-.985</td>
<td>-.060</td>
<td>1.000</td>
<td>.981</td>
<td>.996</td>
</tr>
<tr>
<td>Ln Equity</td>
<td>-.821</td>
<td>-.687</td>
<td>-.978</td>
<td>-.137</td>
<td>.981</td>
<td>1.000</td>
<td>.983</td>
</tr>
<tr>
<td>Ln Net Loans</td>
<td>-.822</td>
<td>-.767</td>
<td>-.988</td>
<td>-.071</td>
<td>.996</td>
<td>.983</td>
<td>1.000</td>
</tr>
</tbody>
</table>

#### 5.3.1.3. Model summary

As reflected in Table 3, the model has an Adjusted $R$ square of 0.755 indicating that 75.5% of the variation in lnRev is explained by the independent variables.

### Table 3: LOC Phase One Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.895</td>
<td>0.801</td>
<td>0.755</td>
<td>0.370</td>
</tr>
</tbody>
</table>
5.3.1.4. Coefficients

Table 4 details the coefficients for all the independent variables. At a five per cent significance level, only the coefficients of \( \ln PF \), \( \ln TA \) and \( \ln NetLoans \) are statistically significant.

<table>
<thead>
<tr>
<th>Model</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>-.098</td>
<td>-474</td>
</tr>
<tr>
<td></td>
<td>( \ln PF )</td>
<td>.400</td>
<td>2.359</td>
</tr>
<tr>
<td></td>
<td>( \ln PL )</td>
<td>.849</td>
<td>1.439</td>
</tr>
<tr>
<td></td>
<td>( \ln PK )</td>
<td>.111</td>
<td>1.153</td>
</tr>
<tr>
<td></td>
<td>( \ln TA )</td>
<td>-2.374</td>
<td>-2.249</td>
</tr>
<tr>
<td></td>
<td>( \ln Equity )</td>
<td>-.691</td>
<td>-1.083</td>
</tr>
<tr>
<td></td>
<td>( \ln Net Loans )</td>
<td>3.376</td>
<td>2.784</td>
</tr>
</tbody>
</table>

5.3.1.5. \( H \)-statistic

As regards the \( H \)-statistic, adding the standardized coefficients of \( \ln PF \), \( \ln PL \) and \( \ln PK \) totals 1.360. As this indicates an \( H \)-statistic greater than one, it can be said that the competitive environment for Phase One reflected perfect competition.

5.3.2. Phase Two findings

5.3.2.1. Descriptive statistics

Table 5 below provides the descriptive statistics for the regression analysis of the level of competition. As per Phase One \( \ln TA \), \( \ln Equity \) and \( \ln Net Loans \) variables all have noteworthy standard deviations in excess of three. This is again likely due to a few outliers in the data for these variables as both Capitec and Mercantile Bank are notably smaller than the rest of the banks in the sample.
5.3.2.2. Correlations

The correlations are detailed in Table 6, there appears to be a high correlation between lnEquity with lnPF, lnPL, lnTA, lnEquity and lnNetLoans correspondingly. As per Phase One, these relatively high correlations could be an indication that there is a problem with multicollinearity. As previously explained this is the nature of the variables included in the data as all the variables are linked to the overall performance of the individual banks.

Table 5: LOC Phase Two Descriptive statistics

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ln Rev</td>
<td>-2.25</td>
<td>.841</td>
<td>36</td>
</tr>
<tr>
<td>Ln PF</td>
<td>-2.94</td>
<td>.532</td>
<td>36</td>
</tr>
<tr>
<td>Ln PL</td>
<td>-3.61</td>
<td>.903</td>
<td>36</td>
</tr>
<tr>
<td>Ln PK</td>
<td>.06</td>
<td>.630</td>
<td>36</td>
</tr>
<tr>
<td>Ln TA</td>
<td>18.11</td>
<td>3.875</td>
<td>36</td>
</tr>
<tr>
<td>Ln Equity</td>
<td>16.17</td>
<td>3.435</td>
<td>36</td>
</tr>
<tr>
<td>Ln Net Loans</td>
<td>17.72</td>
<td>3.918</td>
<td>36</td>
</tr>
</tbody>
</table>

Table 6: LOC Phase Two Correlations

<table>
<thead>
<tr>
<th>Pearson Correlation</th>
<th>Ln Rev</th>
<th>Ln PF</th>
<th>Ln PL</th>
<th>Ln PK</th>
<th>Ln TA</th>
<th>Ln Equity</th>
<th>Ln Net Loans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ln Rev</td>
<td>1.000</td>
<td>.352</td>
<td>.771</td>
<td>.566</td>
<td>-649</td>
<td>-579</td>
<td>-629</td>
</tr>
<tr>
<td>Ln PF</td>
<td>.352</td>
<td>1.000</td>
<td>.549</td>
<td>-.095</td>
<td>-711</td>
<td>-.725</td>
<td>-.692</td>
</tr>
<tr>
<td>Ln PL</td>
<td>.771</td>
<td>.549</td>
<td>1.000</td>
<td>.413</td>
<td>-.853</td>
<td>-.813</td>
<td>-.849</td>
</tr>
<tr>
<td>Ln PK</td>
<td>.566</td>
<td>-.095</td>
<td>.413</td>
<td>1.000</td>
<td>-.295</td>
<td>-.229</td>
<td>-.271</td>
</tr>
<tr>
<td>Ln TA</td>
<td>-.649</td>
<td>-.711</td>
<td>-.853</td>
<td>-.295</td>
<td>1.000</td>
<td>.977</td>
<td>.992</td>
</tr>
<tr>
<td>Ln Equity</td>
<td>-.579</td>
<td>-.725</td>
<td>-.813</td>
<td>-.229</td>
<td>.977</td>
<td>1.000</td>
<td>.972</td>
</tr>
</tbody>
</table>
5.3.2.3. Model summary

As reflected in Table 7, the model has an Adjusted R square of 0.626 indicating that 62.6% of the variation in lnRev is explained by the independent variables.

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.831</td>
<td>0.690</td>
<td>0.626</td>
<td>0.514</td>
</tr>
</tbody>
</table>

5.3.2.4. Coefficients

Table 8 details the coefficients for all the independent variables. At a five per cent significance level, only the coefficient of lnPL is statistically significant.

<table>
<thead>
<tr>
<th>Model</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>.027</td>
<td>.054</td>
<td>.957</td>
</tr>
<tr>
<td>Ln PF</td>
<td>.034</td>
<td>.034</td>
<td>.511</td>
</tr>
<tr>
<td>Ln PL</td>
<td>.610</td>
<td>2.881</td>
<td>.007</td>
</tr>
<tr>
<td>Ln PK</td>
<td>.262</td>
<td>1.949</td>
<td>.061</td>
</tr>
<tr>
<td>Ln TA</td>
<td>-1.167</td>
<td>-1.134</td>
<td>.266</td>
</tr>
<tr>
<td>Ln Equity</td>
<td>-.605</td>
<td>1.171</td>
<td>.251</td>
</tr>
<tr>
<td>Ln Net Loans</td>
<td>.553</td>
<td>.638</td>
<td>.529</td>
</tr>
</tbody>
</table>

5.3.2.5. H-statistic
As regards the $H$-statistic, adding the standardized coefficients of ln PF, ln PL and ln PK totals 0.906. As this indicates an $H$-statistic almost equal to one, it can be said that the competitive environment for Phase Two also reflected perfect competition.

5.3.3. Comparison of Phase One and Phase Two

As per Chapter Three, Research proposition 1 is:

Proposition: LOC1 – LOC2 < 0

In this proposition, the level of competition (LOC) is measured by the $H$-statistic and as per the previous sections of this chapter; LOC1 is 1.360 whereas LOC2 is 0.906. As such LOC1 is not less LOC2 and hence subtracting LOC2 from LOC1 will not be less than zero. Therefore this proposition is rejected in favour of the alternative proposition.

That is, the level of competition before the acquisition of a local bank by a foreign bank (LOC1) is not lower than the level of competition after this acquisition (LOC2).

5.4. Findings relating to Research Proposition 2

As explained in Chapter 4 the Stochastic Frontier approach was utilised to measure the level of efficiency required for Proposition 2. Table 9 below summarises the descriptive statistics for the variables utilised in the regression.

Table 9: LOE Descriptive statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>Std Dev</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>TotalEarningAssets</td>
<td>65</td>
<td>14,586,441</td>
<td>16,608,617</td>
<td>147,486</td>
<td>80,013,133</td>
</tr>
<tr>
<td>TotalOverheadExpenses</td>
<td>65</td>
<td>11,223,578</td>
<td>9,569,274</td>
<td>219,834</td>
<td>35,941,000</td>
</tr>
<tr>
<td>Time</td>
<td>65</td>
<td>2005</td>
<td>3.49</td>
<td>1999</td>
<td>2010</td>
</tr>
<tr>
<td>TotalDeposits</td>
<td>65</td>
<td>245,560,334</td>
<td>213,445,063</td>
<td>594,996</td>
<td>843,815,000</td>
</tr>
<tr>
<td>lnTEA</td>
<td>65</td>
<td>15.45</td>
<td>1.92</td>
<td>11.90</td>
<td>18.20</td>
</tr>
<tr>
<td>lnTOE</td>
<td>65</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
5.4.1. Phase One findings

5.4.1.1. ANOVA

Table 10 provides the ANOVA details for the regression and the p-value indicates that the model is statistically significant at the five per cent significance level.

Table 10: LOE Phase One ANOVA

<table>
<thead>
<tr>
<th>Source</th>
<th>DF</th>
<th>Sum of Squares</th>
<th>Mean Square</th>
<th>F Value</th>
<th>Pr &gt; F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>3</td>
<td>53.56973</td>
<td>17.85658</td>
<td>15.61</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Error</td>
<td>26</td>
<td>29.7442</td>
<td>1.14401</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correct Total</td>
<td>29</td>
<td>83.31392</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5.4.1.2. Model summary

As reflected in Table 11, the model has an Adjusted R square of 0.602 indicating that 60.2% of the variation in lnTEA is explained by the independent variables.

Table 11: LOE Phase One Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.801</td>
<td>0.643</td>
<td>0.6018</td>
</tr>
</tbody>
</table>

5.4.1.3. Coefficients

Table 12 details the coefficients for all the independent variables. At a five per cent significance level, none of the independent variables are statistically significant.
Table 12: LOE Phase One Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Standardized Coefficients</th>
<th>Std Error</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>0.30331</td>
<td>2.37808</td>
<td>0.13</td>
<td>0.8995</td>
</tr>
<tr>
<td>lnTEA</td>
<td>-0.08195</td>
<td>0.59508</td>
<td>-0.14</td>
<td>0.8915</td>
</tr>
<tr>
<td>lnTOE</td>
<td>1.10630</td>
<td>0.77817</td>
<td>1.42</td>
<td>0.1670</td>
</tr>
<tr>
<td>lnTD</td>
<td>-0.17023</td>
<td>0.1201</td>
<td>-1.42</td>
<td>0.1683</td>
</tr>
</tbody>
</table>

5.4.1.4. Level of efficiency

Table 13 below provides the levels of efficiency for five of the six banks in the sample. Capitec has not been included as they only started operating in 2002.

The average level of efficiency for Phase One across the five banks was 1.023 and Table 14 ranks the five banks according to their average level of performance for Phase One. This table indicates that for Phase One Standard Bank had the highest average level of efficiency while Nedbank had the lowest level of efficiency.

Table 13: LOE Phase One levels of efficiency

<table>
<thead>
<tr>
<th></th>
<th>AbsaBank</th>
<th>FirstRand</th>
<th>MercantileBank</th>
<th>Nedbank</th>
<th>StandardBank</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999</td>
<td>0.964</td>
<td>1.034</td>
<td>1.286</td>
<td>0.851</td>
<td>1.048</td>
</tr>
<tr>
<td>2000</td>
<td>0.980</td>
<td>1.077</td>
<td>1.023</td>
<td>0.996</td>
<td>1.061</td>
</tr>
<tr>
<td>2001</td>
<td>0.978</td>
<td>1.050</td>
<td>0.987</td>
<td>0.996</td>
<td>1.071</td>
</tr>
<tr>
<td>2002</td>
<td>0.981</td>
<td>1.054</td>
<td>0.903</td>
<td>1.005</td>
<td>1.065</td>
</tr>
<tr>
<td>2003</td>
<td>0.996</td>
<td>1.051</td>
<td>0.995</td>
<td>0.987</td>
<td>1.076</td>
</tr>
</tbody>
</table>
### Table 14: LOE Phase One bank ranking for average level of efficiency

<table>
<thead>
<tr>
<th>Rank</th>
<th>Bank</th>
<th>Average Level of efficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>StandardBank</td>
<td>1.067</td>
</tr>
<tr>
<td>2</td>
<td>FirstRand</td>
<td>1.056</td>
</tr>
<tr>
<td>3</td>
<td>MercantileBank</td>
<td>1.035</td>
</tr>
<tr>
<td>4</td>
<td>AbsaBank</td>
<td>0.984</td>
</tr>
<tr>
<td>5</td>
<td>Nedbank</td>
<td>0.971</td>
</tr>
</tbody>
</table>

#### 5.4.2. Phase Two findings

#### 5.4.2.1. ANOVA

Table 15 provides the ANOVA details for the regression and as per Phase One the p-value indicates that the model is statistically significant at the five per cent significance level.

### Table 15: LOE Phase Two ANOVA

<table>
<thead>
<tr>
<th>Source</th>
<th>DF</th>
<th>Sum of Squares</th>
<th>Mean Square</th>
<th>F Value</th>
<th>Pr &gt; F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>3</td>
<td>144.88098</td>
<td>48.29366</td>
<td>220.52</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Error</td>
<td>31</td>
<td>6.78883</td>
<td>0.21899</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correct Total</td>
<td>34</td>
<td>151.66982</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### 5.4.2.2. Model summary
As reflected in Table 16, the model has an Adjusted R square of 0.9509 indicating that 95.1% of the variation in lnTEA is explained by the independent variables.

Table 16: LOE Phase Two Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>0.9773</td>
<td>0.9552</td>
<td>0.9509</td>
</tr>
</tbody>
</table>

5.4.2.3. Coefficients

Table 17 details the coefficients for all the independent variables. At a five per cent significance level, only the coefficients of lnTEA and lnTOE are statistically significant.

Table 17: LOE Phase Two Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Standardized Coefficients</th>
<th>Std Error</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(Constant)</td>
<td>-1.44407</td>
<td>0.75758</td>
<td>-1.91</td>
</tr>
<tr>
<td>2</td>
<td>lnTEA</td>
<td>0.30069</td>
<td>0.11302</td>
<td>2.66</td>
</tr>
<tr>
<td></td>
<td>lnTOE</td>
<td>0.71709</td>
<td>0.14769</td>
<td>4.86</td>
</tr>
<tr>
<td></td>
<td>lnTD</td>
<td>0.0227</td>
<td>0.0472</td>
<td>0.48</td>
</tr>
</tbody>
</table>

5.4.2.4. Level of efficiency

Table 18 below provides the levels of efficiency for the six banks in the sample.

The average level of efficiency for Phase Two across the six banks was 1.04 and Table 19 ranks the six banks according to their average level of performance for Phase Two. This table indicates that for Phase Two Standard Bank again had the highest average level of efficiency while Capitec now has the lowest level of efficiency. The average
level of efficiency for Absa increased marginally from 0.984 in Phase One to 1.04 in Phase Two.

Table 18: LOE Phase Two levels of efficiency

<table>
<thead>
<tr>
<th>Year</th>
<th>AbsaBank</th>
<th>CapitecBank</th>
<th>FirstRand</th>
<th>MercantileBank</th>
<th>Nedbank</th>
<th>StandardBank</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>0.97</td>
<td>1.07</td>
<td>1.04</td>
<td>1.02</td>
<td>1.10</td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td>1.01</td>
<td>0.91</td>
<td>1.06</td>
<td>1.07</td>
<td>1.03</td>
<td>1.11</td>
</tr>
<tr>
<td>2007</td>
<td>1.03</td>
<td>0.92</td>
<td>1.04</td>
<td>1.07</td>
<td>1.04</td>
<td>1.12</td>
</tr>
<tr>
<td>2008</td>
<td>1.06</td>
<td>0.94</td>
<td>1.07</td>
<td>1.12</td>
<td>1.06</td>
<td>1.12</td>
</tr>
<tr>
<td>2009</td>
<td>1.08</td>
<td>0.95</td>
<td>1.08</td>
<td>1.15</td>
<td>1.08</td>
<td>1.12</td>
</tr>
<tr>
<td>2010</td>
<td>1.09</td>
<td>0.96</td>
<td>1.11</td>
<td>1.14</td>
<td>1.09</td>
<td>1.15</td>
</tr>
</tbody>
</table>

Table 19: LOE Phase Two bank ranking for average level of efficiency

<table>
<thead>
<tr>
<th>Rank</th>
<th>Bank</th>
<th>Average Level of efficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>StandardBank</td>
<td>1.118</td>
</tr>
<tr>
<td>2</td>
<td>MercantileBank</td>
<td>1.097</td>
</tr>
<tr>
<td>3</td>
<td>FirstRand</td>
<td>1.070</td>
</tr>
<tr>
<td>4</td>
<td>Nedbank</td>
<td>1.053</td>
</tr>
<tr>
<td>5</td>
<td>AbsaBank</td>
<td>1.041</td>
</tr>
<tr>
<td>6</td>
<td>CapitecBank</td>
<td>0.936</td>
</tr>
</tbody>
</table>
5.4.3. Comparison of Phase One and Phase Two

As per Chapter Three, Research Proposition 2 is:

Proposition: LOE1 – LOE2 < 0

As per the previous sections of this chapter; LOE1 is 1.023 whereas LOE2 is 1.06. As such LOE1 is only marginally lower than LOE2 and therefore the proposition is rejected in favour of the alternative proposition.

That is, the level of efficiency before the acquisition of a local bank by a foreign bank (LOE1) is not lower than the level of efficiency after this acquisition (LOE2).
6. Chapter Six: Discussion of research results

6.1. Introduction

This chapter provides further insight to the results discussed in Chapter Five by discussing these results in light of the literature presented in Chapter Two.

This will be presented by discussing the propositions detailed in Chapter Three.

6.2. Interpretation of findings relating to Research Proposition 1

As stated in Chapter Three, Proposition 1 states that the level of competition before the acquisition of a local bank by a foreign bank (LOC1) will be lower than the level of competition after the acquisition (LOC2). That is, the foreign bank acquisition of the local bank will result in an increase in the level of competition.

The alternative proposition on the other hand is that the level of competition before the acquisition (LOC1) will be higher, or the same, as the level of competition after the acquisition (LOC2). That is, the foreign bank acquisition of a local bank either results in a decrease in the level of competition or the level of competition will remain unchanged.

As per the findings in Chapter Five, the values of LOC1 and LOC2 were calculated using the Panzar and Rosse $H$-statistic approach (Yildirim and Philippatos, 2007) and are summarised in Table 20. As reflected, for LOC1 the value was 1.360 while the value for LOC2 was 0.906. As such LOC1 is not less than LOC2 and therefore the level of competition after the acquisition of the local bank did not increase.

Table 20: LOC $H$-statistic

<table>
<thead>
<tr>
<th></th>
<th>Phase One</th>
<th>Phase Two</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ln PF</td>
<td>.400</td>
<td>.034</td>
</tr>
<tr>
<td>Ln PL</td>
<td>.849</td>
<td>.610</td>
</tr>
<tr>
<td>Ln PK</td>
<td>.111</td>
<td>.262</td>
</tr>
<tr>
<td>$H$-Statistic</td>
<td>1.360</td>
<td>.906</td>
</tr>
</tbody>
</table>
These findings are despite the fact that South Africa has the relevant institutions in place for the financial market to be considered as secure by foreign investors. This is evident by the fact that the country has attracted the investment by Barclays in the form of the acquisition of Absa.

On reviewing the experience in the countries included in Chapter Two, these findings are not really equivalent. In Brazil in particular, the experience was that the foreign bank entry resulted in an increase in the level of competition (Yildrim and Philippatos, 2005).

Similarly, the experience in India also resulted in an increase in the level of competition albeit that there was no empirical evidence specifically linking this increase to the foreign bank ownership of local banks but rather merely linking the entry of foreign banks to the increase in the level of competition (Bodla and Verma, 2006).

As regards the experience in Russia, the entry of foreign banks led to a greater increase in the level of competition than the privatisation of government owned banks (Karas, Schoors and Weill, 2010). Whereas in China the foreign bank entry was facilitated more effortlessly through the acquisition of a local bank than through expanding their operations (Yeung, 2009) which ultimately led to an increase in the level of competition in the Chinese banking industry.

Likewise the experience in Kenya where the entry of foreign banks was welcomed and this eventually resulted in a more robust banking industry which would imply greater levels of competition following the acquisition of local banks by a foreign bank even though this would only be in the case in the segments in which the banks operated (Mwega, 2011).

The experience in Nigeria however was that as the foreign banks did not fully cater for the country’s banking needs, several local banks were established (Uche, 2010). Nonetheless due to the high incidence of fraud and a weak regulatory supervision institution, most of these local banks collapsed (Uche, 2010). Even with the introduction of regulation the Nigerian banking sector continues to have a high incidence of fraud and this is despite the presence of foreign banks (Uche, 2010). As such in Nigeria the entry of foreign banks may have increased the level of competition as it led to the establishment of local banks but the lack of proper supervision has hindered the attainment of the benefits from this increased level of competition.
As such, the overall experience in the other countries was an increase in the level of competition following the implementation of the foreign bank entry economic liberalisation reform or its furthest form of allowing the acquisition of a local bank by a foreign bank. With the exception of Nigeria, these countries also experience the benefits from the increased competition in the form of economic growth. This however, is not what is being reflected in the findings of Research Proposition 1.

In addition these findings contradict the World Bank’s view that the entry of foreign banks would serve to increase the level of competition (Stein, 2010).

It can therefore be concluded that even though there is empirical evidence from other countries’ experience that implementing the foreign bank entry economic liberalisation reform or its ultimate form which entails the acquisition of a local bank by a foreign bank, there are no guarantees for a developing country that this will lead to an increase in the level of competition. This also applies even if the developing country has established the necessary institutions to render the financial market more secure and thereby attracted foreign investment.

As such implementing the economic liberalisation reform of allowing entry by foreign banks as well as its ultimate form of allowing foreign banks to acquire local banks may not necessarily lead to the benefit of increased competition for a developing country as professed by the World Bank.

As per Mishkin (2009) the impact of the implementation of economic reforms is reliant on the developing country’s specific market conditions. This is reflected in the fact that unlike China and Russia, South Africa does not have any government owned banks nor does it have the large number of banks present in India. As such the acquisition of a local bank by a foreign bank may not lead to an as marked increase in the level of competition as experienced in the other countries.

In fact as per the total assets split by bank illustrated in Figure 3, despite the Barclays acquisition of Absa, the total assets split between the six banks included in the sample remained relatively unchanged for the period 1999 to 2010. As such the acquisition did not change the South African banking landscape significantly and as per the total asset split by bank ownership illustrated in Figure 5, it merely changed the total asset split between local and foreign banks. It hence could be argued that as a consequence the level of competition remain unchanged.
6.3. Interpretation of findings relating to Research Proposition 2

As per Chapter Three, research proposition 2 states that the level of efficiency before the acquisition of a local bank by a foreign bank (LOE1) will be lower than the level of efficiency after the acquisition (LOE2). That is, the foreign bank acquisition of the local bank will result in an increase in the level of efficiency.

The alternative proposition is that the level of efficiency before the acquisition (LOE1) will be higher, or the same, as the level of efficiency after the acquisition (LOE2). That is, the foreign bank acquisition of a local bank either results in a decrease in the level of efficiency or the level of efficiency will remain unchanged.

As per the findings in Chapter Five, the values of LOE1 and LOE2 were calculated using the Stochastic Frontier approach (Hasan, Kamil, Mustafa and Baten, 2012) and average levels of efficiency are summarised in Table 21 below.

As reflected in Table 21, for LOE1 the average level of efficiency was 1.023 whereas for LOE2 the average level of efficiency was 1.060. As such LOE1 is only somewhat lower than LOE2 and therefore in South Africa the level of efficiency after the acquisition of the local bank did not increase significantly.

Table 21: LOE

<table>
<thead>
<tr>
<th></th>
<th>Phase One</th>
<th>Phase Two</th>
</tr>
</thead>
<tbody>
<tr>
<td>StandardBank</td>
<td>1.118</td>
<td>1.067</td>
</tr>
<tr>
<td>MercantileBank</td>
<td>1.097</td>
<td>1.035</td>
</tr>
<tr>
<td>FirstRand</td>
<td>1.070</td>
<td>1.056</td>
</tr>
<tr>
<td>Nedbank</td>
<td>1.053</td>
<td>0.971</td>
</tr>
<tr>
<td>AbsaBank</td>
<td>1.041</td>
<td>0.984</td>
</tr>
<tr>
<td>CapitecBank</td>
<td>0.936</td>
<td></td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td><strong>1.023</strong></td>
<td><strong>1.060</strong></td>
</tr>
</tbody>
</table>

As per the findings of Research Proposition 1, on reviewing the experience in the countries included in Chapter Two, these findings are not comparable.
As previously mentioned, in Brazil the experience was that the foreign bank entry resulted in an increase in the level of competition as well as an increase in the level of efficiency (Yildirim and Philippatos, 2005).

By the same token, even though there is empirical evidence specifically linking foreign bank ownership of local banks to levels of efficiency but rather merely evidence linking the entry of foreign banks to levels of efficiency, in India the level of efficiency also reflected an increase (Bodla and Verma, 2006).

In Russia, on the other hand the entry of foreign banks led to a greater increase in the level of efficiency than the privatisation of government owned banks (Karas, Schoors and Weill, 2010).

As regards the experience in China where the foreign bank entry was facilitated more cost-effectively through the acquisition of a local bank than through the foreign bank expanding their operations (Yeung, 2009), an increase in the level of efficiency of the Chinese banking sector was also materialised. It should however be noted that as per Yeung (2009) China adopted a “rural-urban market segmentation policy” (Yeung, 2009, p177) in which the foreign banks operate in the urban sectors while the government continues to control the rural sectors. As such given the structure of the Chinese banking sector any entry by a foreign bank will serve to increase in the level of competition. However given the regulatory complexity of having to manage this duel banking system (Yeung, 2009) the increase in the level of efficiency for the Chinese banking sector is unlikely to be as significant as the increase in the level of competition.

Similarly in Kenya the entry of foreign banks through an acquisition of a local bank resulted in an increase in the level of efficiency of the banking sector (Mwega, 2011). This increase in the level of efficiency is despite the fact that almost 80 per cent of the population in Kenya are regarded as unbanked (Mwega, 2011) as they do have access to banking products.

As regards the experience in Nigeria, as previously explained because the foreign banks did not fully cater for the country’s banking needs, several local banks were established (Uche, 2010). Even with the introduction of regulation the Nigerian banking sector continues to have a high incidence of fraud and this is despite the presence of foreign banks (Uche, 2010). As such it can be inferred that in Nigeria while the entry of foreign banks may have increased the level of competition as it led to the establishment of local banks, it did not led to an increase in the level of efficiency of the Nigerian banking sector (Uche, 2010).
As such, with the exception of Nigeria and China, the overall experience in the other countries was an increase in the level of efficiency following the implementation of the foreign bank entry economic liberalisation reform or its ultimate form of which allows the acquisition of a local bank by a foreign bank. The findings of Research Proposition 2 however do not support this experience and indicates that in South Africa following the acquisition of Absa by Barclays, the level of efficiency for the South African banking sector only increased marginally.

As per the findings of Research Proposition 1, the finding of Research Proposition 2 also contradicts the World Bank’s view that the entry of foreign banks would serve to increase the level of efficiency of the banking sector in a developing country (Stein, 2010).

It can therefore be concluded that even though there is empirical evidence from other countries’ experience that implementing the foreign bank entry economic liberalisation reform or its ultimate form which entails the acquisition of a local bank by a foreign bank, not all developing countries will realise an increase in the level of efficiency of its banking sector. Again, as per the previous section this also applies even if the developing country has established the necessary institutions like the quality of financial information, the removal of corruption and the regulation and supervision of the banking system (Miskin, 2009) in order to render the financial market more secure and thereby attracted foreign investment.

As such despite the World Bank’s view implementing the economic liberalisation reform of allowing entry by foreign banks as well as its ultimate form of allowing foreign banks to acquire local banks may not necessarily lead to the benefit of increased efficiency of that country’s banking sector.

As previously stated according to Mishkin (2009) the impact of the implementation of economic reforms is reliant on the developing country’s specific market conditions and again as the Barclays acquisition of Absa did not change the South African banking landscape it could be argued that as a consequence the level of efficiency in the banking sector remain relatively unchanged.
7. Chapter Seven: Conclusions and Recommendations

7.1. Introduction

This chapter concludes this research report and provides recommendations for future research. The research background and objectives are first highlighted followed by a summary of the main findings.

7.2. Research background and objectives

As explained in Chapter One, economic liberalisation in its broadest form involves the elimination of government intervention in the financial markets (Gibson and Tsakalotos, 1994) which allows for the efficient allocation of resources and thereby promotes economic growth (Roberts, 2000). Economic liberalisation is hence particularly important for developing countries.

There are a wide variety of economic liberalisation reforms however this study focuses on the definitive form of the foreign bank entry economic liberalisation reform which has the foreign bank ownership of local banks. The objective of this research was therefore to investigate the impact of foreign bank ownership on a developing country.

As per the Research aim, this was done by measuring the level of competitiveness and the level of efficiency as the World Bank and IMF argue that these levels will increase and thereby result in broader economic benefits for a developing country.

This study focused on South Africa as the country represents a developing country that not only has all the necessary institutions in place to render the South African financial market as secure, it has also implemented this economic liberalisation reform. In addition South Africa has attracted foreign banks that have acquired local banks like the Barclays acquisition of Absa which according to the South African Reserve Bank (2005) represented the single largest foreign direct investment in country. Barclays Bank acquired 50.1 per cent of Absa shares for a total consideration of R33 billion.

The study does not attempt to argue for or against the foreign bank ownership of a local bank economic liberalisation reform but rather attempts to provide a list of the market conditions that the developing country should consider before implementing the
reform as this could influence the actual impact of the reform. This stance was adopted as from the review of the empirical studies in other countries there does not appear to be a definitive answer to the debate. It is instead rather a case of that the individual developing country’s market conditions determines whether or not the implementation of this reform is right or wrong (Mishkin, 2009).

7.3. Summary of main findings

The South Africa banking sector data analysis was done in two phases where Phase One involved calculating the levels of competition and efficiency for the period 1999 to 2004 while Phase Two involved calculating these levels for the period 2005 to 2010. Phase One essentially examined the period prior to the Barclays acquisition of Absa whereas Phase Two examined the period post the acquisition.

The level of competition was calculated using the Panzar and Rosse $H$-statistic approach whereas the level of efficiency was calculated using the stochastic frontier approach.

On comparing the research findings from Phase One and Phase Two, the findings indicate that the South African banking industry did not attain an increase in the level of competition nor did it attain a significant increase in the level of efficiency. As previously discussed, the actual findings for the two research propositions were:

a) Research Proposition 1

Proposition: LOC1 – LOC2 < 0

LOC1 is 1.360 whereas LOC2 is 0.906. As such LOC1 is not less LOC2 and hence subtracting LOC2 from LOC1 will not be less than zero. Therefore this proposition is rejected in favour of the alternative proposition. That is, the level of competition before the acquisition of a local bank by a foreign bank (LOC1) is not lower than the level of competition after this acquisition (LOC2).
b) Research Proposition 2

Proposition: \( \text{LOE}_1 - \text{LOE}_2 < 0 \)

\( \text{LOE}_1 \) is 1.023 whereas \( \text{LOE}_2 \) is 1.06. As such \( \text{LOE}_1 \) is only marginally lower than \( \text{LOE}_2 \) and therefore the proposition is rejected in favour of the alternative proposition. That is, the level of efficiency before the acquisition of a local bank by a foreign bank (\( \text{LOE}_1 \)) is not lower than the level of efficiency after this acquisition (\( \text{LOE}_2 \)).

Not only did these findings go against the World Bank's view that the entry of foreign banks would serve to increase the levels of competition and efficiency of the banking sector in a developing country (Stein, 2010), by enlarge the findings contradicted the experience of the other countries included in the literature review.

It can therefore be concluded that even though there is empirical evidence from other countries' experience that implementing the foreign bank entry economic liberalisation reform or its ultimate form which entails the acquisition of a local bank by a foreign bank, even if the developing country has the necessary institutions and attracted foreign bank entry there are no assurances that this will lead to an increase in the level of competition or efficiency.

With regard to the specific market conditions in South Africa it could be argued that as the Barclays acquisition of Absa did not change the South African banking landscape the levels of competition and efficiency in the banking sector remain relatively unchanged.

7.4. Recommendations for other developing countries

As these findings contradict the findings in other countries, it confirms the view that the impact of economic liberalisation reforms like foreign bank ownership is in fact dependent on the individual country's circumstances (Mishkin, 2009). A developing country that is considering the implementation of this reform should take the following market conditions into account:

a) The presence of the necessary institutions to attract foreign bank entry namely:
   - Property rights
   - Legal system
● The removal of corruption
● Quality of financial information.
● Corporate Governance
● Regulation and supervision of the banking system
b) The ease of foreign bank entry
c) The landscape of the banking sector
   ● The presence of government owned banks
   ● The number of local banks present in the country
   ● The total asset split between the local banks
d) The funding available for SME’s
e) The percentage of the population that is regarded as unbanked as they do not have access to banking products

7.5. Recommendations for future research

As mentioned in Chapter Four one of the main research limitations is that it did not consider the overall macroeconomic environment conditions which may affect the performance of the banks. Future research could look at incorporating the macroeconomic indicators into the findings.

This study could also be revisited in 2015, ten years after the Barclays acquisition of Absa as the longer timeframe would provide more data to run the regression models and would serve to provide the more long-term trends in the levels of competition and efficiency.

Another limitation of the research is that it did not consider the legislative environment in which the banks are operating as an example the National Credit Act (NCA) which could hinder the process of providing credit was not considered. Moreover the home host regulatory requirements for foreign banks have not been taken into account. Future research could look at incorporating these factors.
8. References


