



Towards sustainable microfinance: The case of Capitec Bank and Grameen Bank

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ABSTRACT

This thesis investigates the level of sustainability of two microfinance institutions (MFIs): Grameen Bank of Bangladesh and Capitec Bank of South Africa. Data from 2004 to 2013 is used in this study employing internationally accepted sustainability criteria, namely, the Small Enterprise Education and Promotion (SEEP) 2010 Microfinance Financial Reporting Standards (MFRS) and the SEEP Framework of 2005. The results of this study indicate that although the operations of both microfinance institutions are sustainable, Capitec Bank exhibits a higher level of sustainability as compared to Grameen Bank. This is evidenced by Capitec Bank's higher levels of profitability, capital adequacy and solvency, operational self-sufficiency, and healthier asset portfolio.

This finding underlines South Africa's financial sector's stability, institutional quality, competitive market, and solid regulatory framework. The sustainability criteria suggest that Capitec Bank and other South African MFIs should heed Grameen Bank's low ROE and insufficient capital adequacy and solvency measures. Ensuring healthy and strategic lending portfolios gives a good ROE for a firm's shareholders. Furthermore, the capital adequacy and solvency ratios have important implications for an institution's capital structure. Therefore, Capitec and South African MFIs should maintain healthy ROE, capital adequacy and solvency ratios in order to ensure their long-term sustainability.

As future research, it would be useful if data were made available to enable an assessment of a failed South African MFI to obtain clearer insight into the South African microfinance sector. Furthermore, data on Grameen and Capitec's asset quality and social performance will give additional insight into the social sustainability of these two MFIs.

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GLOSSARY OF TERMS

BANKSETA	Bank Sector Education and Training Authority
BSC	Balanced scorecard
CAMEL	Capital adequacy (C), asset quality (A), management capability (M), earnings (E), liquidity management (L), and sensitivity to market risk
CBA	Cooperative Banks Act
CGAP	Consultative Group to Assist the Poor
DEA	Data Envelopment Analysis
FSS	Financial Self-Sufficiency
GDRC	Global Development Research Center
IFRS	International Financial Reporting Standards
Ltd	Limited
LSM	Living Standards Measure
MBB	MicroBanking Bulletin
M-CRIL	Micro-Credit Ratings International Ltd
MFIs	Microfinance institutions
MFRC	Micro Finance Regulatory Council
MFRS	Microfinance Financial Reporting Standards
MICROS	Management (M), institutional arrangement (I), capital adequacy and asset quality (C), resources (R), operational effectiveness (O), and scalability and sustainability (S)
MIR	Microfinance Institutional Rating
MIX	Microfinance Information Exchange
NCA	National Credit Act
NDP	National Development Plan
NGO	Non-governmental Organisations
OSS	Operational Self-Sufficiency
PAR	Portfolio at Risk
PEARLS	Protection (P), effective financial structure (E), asset quality (A), rates of return and costs (R), liquidity (L), signs of growth (S)
ROA	Return on Assets
ROE	Return on Equity
ROI	Return on Investment

RoSCAs	Rotating savings and credit associations
S&P	Standard & Poor's
SEEP	Small Enterprise Education and Promotion
SHF	Shareholder Owned Firms
SMME	Small, Micro, and Medium-Sized Enterprise
TBB	The Business Bank

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1 INTRODUCTION

1.1 Background

Income inequalities and poverty can be decreased by financial development; directly, through financial inclusion, and indirectly through the effect of economic growth on poverty reduction conditioned on how equitably the gains from growth is distributed (Aghion, Caroli & Garcia-Penalosa, 1999, as cited in Green, Kirkpatrick & Murinde, 2005; Kanbur, 2000).

The role of finance in alleviating poverty and aiding development has evolved and led to the birth of microcredit in its current form. In the 1970s, Professor Muhammad Yunus, employed innovative microcredit approaches to improve the lives of the poor in a village in southeast Bangladesh (Boudreaux & Cowen, 2008). The experiment was successful; modern microcredit and the Grameen Bank were born. According to Professor Yunus (as cited in Reed, 2011:1),

The success of our venture lies in how many crumpled bank bills our once starving members now have in their hands. But the microcredit movement, which is built around, and for, and with money, ironically, is at its heart, at its deepest root not about money at all. It is about helping each person to achieve his or her fullest potential. It is not about cash capital, it is about human capital. Money is merely a tool that unlocks human dreams and helps even the poorest and most unfortunate people on this planet achieve dignity, respect, and meaning in their lives.

However, over the past few decades microcredit has evolved into microfinance, which includes a broader range of products and services for poor and low income households. In addition to needing access to microcredit, poor and low-income people require reliable, safe, and affordable financial services to save and insure (Matin, Hulme & Rutherford, 2002).

Microfinance institutions (MFIs) are an important source of finance to poor people. Low-income households are more vulnerable to, the impact of illness, natural disasters, theft, and unemployment than households with higher levels of income (World Bank, 2001). In order for them to cope with emergencies they need financial services, i.e. insurance, credit, and savings

that will enable them to survive disasters, cover living costs and save for future eventualities. Access to and use of financial services empowers the poor by giving them the ability to manage their resources (Center for Financial Inclusion, 2013). Furthermore, MFIs allow low-income households access to financial services without the burdensome and bureaucratic practices found in the formal financial sector (Mukama, Fish & Volschenk, 2005).

Microfinance promises to assuage poverty while covering its costs and perhaps even making a profit (Woller, 2002). Woller continues that this promise is the reason for microfinance's appeal and rise to world-wide prominence. It follows that MFIs need to be sustainable in order to deliver on this promise.

Rao (2003) states that an MFI's key purpose is to deliver sustainable microfinance with economic development objectives. Rao continues that MFIs are considered to be sustainable when they are profitable and efficient whilst pursuing lending priorities for the asset-poor, so as to elevate the economic status of their clients without dependence on substantial subsidies.

Furthermore, the success of an MFI is dependent on both return on investment (ROI) and the number of low-income households it serves on a sustainable basis (Khan, 2008). However, generally the poor pay interest rates that are not high enough to cover the operating costs of the MFI and consequently the MFI either remains dependent on donor contributions or fails (Morduch, 1999, as cited in Khan, 2008). Sustainable MFIs are advantageous as clients are more confident in stable institutions and MFIs can reach broader markets when financially viable without depending on subsidies to target a small part of the population (Paxton & Cuevas, 2002). In addition, there are three reasons for emphasising profitable MFIs. Firstly, microcredit is expensive for banks to administer and poor people can pay high interest rates, therefore access to microfinance is more important than its price. Secondly, subsidies caused problems in state banks and some non-governmental organisations (NGOs), as continuous subsidisation can reduce incentives for innovation and cost-cutting. Finally, there are not enough subsidies available to grow the sector sufficiently. Thus if the objective is to widen access to microfinance, there is no other alternative than pursuing financial sustainability and eventually full commercialisation (Cull, Demirgüç-Kunt & Morduch, 2009).

This led to donors encouraging all MFIs to increase interest rates, use subsidies in moderation and only in the start-up phase, earn profits, and grow as quickly as profits allow (Cull, Demirgüç-Kunt & Morduch, 2009).

In addition to the above reasons for an increased emphasis on financial sustainability, Rhyne and Otero (2006) contends that it is due to important developments in the microfinance industry that include: increased competition, commercialisation of MFIs, technology, and the policy and regulatory environment.

1.2 Problem Statement

If MFIs are to be successful at alleviating poverty, they need to be sustainable. Microfinance institutions promote financial inclusion, which leads to the attainment of assets and management of risks. Thus, MFIs increase people's productivity and employment opportunities. When MFIs fail, the poor become more vulnerable.

Although South Africa is ranked seventh globally for financial market development, the development finance sector seems to be sluggish, if not declining (Schwab, 2014). In 2013, three of the largest micro-enterprise lenders, Marang Financial Services, Women's Development Business, and the Absa Micro-enterprise Finance Division, failed (University of Pretoria & Bank Sector Education and Training Authority [BANKSETA], 2013). Furthermore, in 2014 African Bank was placed under curatorship by the South African Reserve Bank (South African Reserve Bank, 2014). This leads to the question whether the South African microfinance sector is sustainable.

In 2013, the South African government adopted the National Development Plan (NDP), which aims to eliminate poverty and reduce inequality by 2030. One way of achieving this is by strengthening financial services and by decreasing the cost thereof and improving access for small- and medium-sized firms (National Planning Commission, 2012). Furthermore, the South African government's Cabinet approved the first draft Financial Sector Regulation Bill in December 2013 and the revised draft of the Bill was published at the end of 2014 for further comment (National Treasury, 2014a). Cabinet approved the implementation of a 'twin-peaks'

model of financial regulation in 2011 to make the South African financial sector safer; the draft bill is the first in a series to implement this model. Twin peaks is a broad and inclusive framework for regulating the financial sector. The proposed Bill will establish a new Prudential Authority within the South African Reserve Bank, which will be responsible for the promotion and maintenance of financial stability of banks, insurers and financial conglomerates (National Treasury, 2014b; National Treasury, 2013).

Although government appears to be dedicated to the objective of financial inclusion and a stable financial sector, current measures were not adequate to prevent the collapse of these three MFIs. Marang and Women's Development Business both failed due to the absence of strong governance and leadership. Additionally, Marang's lack of access to on-lending capital added to its deteriorating portfolio and decreasing sustainability. Conversely, Absa's Micro-enterprise Finance Division was unsuccessful due to high overhead costs and aspects of its best practices and culture were not aligned to microfinance lending but rather to traditional banking (University of Pretoria & BANKSETA, 2013). The collapse of these three MFIs in South Africa within a space of a year merits the need to investigate the extent to which the microfinance sector in South Africa is sustainable using internationally accepted sustainability criteria such as the Small Enterprise Education and Promotion (SEEP) 2010 Microfinance Financial Reporting Standards (MFRS) and the SEEP Framework of 2005.

1.3 Objectives of the Study

The objective of this study is to investigate the extent to which the microfinance sector in South Africa is sustainable. A comparative analysis is done using a case study of Grameen Bank of Bangladesh and Capitec Bank in South Africa¹. The aim is to establish whether there are any lessons to be learnt by South Africa's microfinance sector from international best practice using Grameen Bank as the comparative case study.

¹ Due to the repetition of certain phrases, Capitec Bank will be referred to Capitec and Grameen Bank as Grameen. Furthermore, the words self-sufficiency, profitability and sustainability will be used interchangeably.

1.4 Research Questions and Scope

In light of the above, this thesis investigates the financial sustainability of the South African microfinance sector by using Capitec Bank as a proxy and comparing it with Grameen Bank.

The research questions therefore are:

- Are Capitec Bank and Grameen bank profitable?
- How adequate are their levels of capital and how solvent are these two institutions?
- What is the level of liquidity of these two institutions?
- How efficient and productive are their lending portfolios and personnel?
- To what extent are the two institutions self-sufficient?
- Are Capitec and Grameen Bank's financial performance sustainable?

A sub-question that the thesis will attempt to answer is:

- Can Capitec and other South African MFIs learn any lessons from Grameen Bank?

1.5 Research relevance

A number of studies have researched the microfinance sector albeit focusing on specific aspects of financial sustainability. Dumont and Schmit (2014) assessed MFI's financial strength by analysing 30 of the largest MFIs' cash flow statements between 2006 and 2010. The focus of their study was solely on the financial performance of the 30 MFIs. Furthermore, Ncube (2009) assessed the efficiency of the South African banking sector by analysing the cost and profit efficiency of four large and four small South African banks, one of which is Capitec, using the stochastic frontier model over the 2000 to 2005 period.

Other studies have investigated the South African microfinance industry. Volschenk and Biekpe (2003) examined the South African microfinance sector by comparing differences in this sector by ranking particular challenges of 53 MFIs. In another study, Baumann (2004) compared the performance of four South African microfinance NGOs, which have a poverty-alleviation focus, against several benchmarks extracted from the MicroBanking Bulletin (MBB). Furthermore, Daniels (2004) evaluated the formal microcredit sector in South Africa and the regulatory environment of this sector between 1990 and 2000. Additional studies

investigated the impact of other South African MFIs, e.g. Afrane (2002) performed an impact study of the Sinapi Aba Trust in Ghana and the Soweto Microenterprise Development project in South Africa on four broad areas, namely economic, access to basic services, social, and psychological and spiritual aspects of the lives of beneficiaries and their communities. Mosley and Rock (2004) examined six African MFIs in order to assess their poverty impact, using the Small Enterprise Foundation and the Farmer Support Programme in the case of South Africa. Hietalahti and Linden (2006) examined the socio-economic impacts of microcredit on women's welfare by assessing the Small Enterprise Foundation and the Tšhomisano Credit Programme.

This study differs from previous studies by looking at all the sustainability criteria used by the SEEP MFRS and SEEP Framework with the exception of asset quality due to data constraints. A direct comparative analysis is done between a representative South African MFI, namely Capitec Bank, and the world renowned MFI, Grameen Bank of Bangladesh. This affords us the ability to more directly identify which lessons could be learnt by South Africa's MFI sector, from Grameen Bank, to ensure its sustainability going forward, in light of the recent collapse of three MFI institutions in South Africa.

1.6 Limitations

This thesis concentrates on the financial performance and sustainability of Grameen and Capitec. It did not focus on social performance. Although both of these aspects are important measures of the success of an MFI, there was not sufficient data to measure social performance.

Furthermore, the SEEP MFRS uses the cash ratio and the SEEP Framework uses the liquid ratio as a measure for liquidity. However, due to unavailability of data for these ratios, this thesis uses the liquid assets ratio as specified by the Microfinance Information Exchange (MIX) database.

The cost per active client ratio is used as a productivity measure by SEEP MFRS. However, as data was only partially available for this ratio, it was also not used in the thesis.

In light of the recent collapse of three MFIs in South Africa, a clearer counterfactual study would have been to compare a failed MFI with a successful MFI. However this was not feasible due to unavailability of data and lack of access to relevant information as a result of official barriers and red tape.

1.7 Outline of study

This thesis is divided into five sections. Section 2 reviews relevant literature; section 3 details the research methodology; section 4 analyses the research findings; section 5 concludes and makes recommendations for future study.

2 LITERATURE REVIEW

2.1 Microfinance

Financial services to low-income households serve as hope of poverty alleviation for poor households (Morduch, 1999). The expectation is that financial services, i.e. microfinance, can fundamentally change the economic and social structures of these households. Microfinance institutions share a commitment to supplying financial services to households that have previously been excluded from the formal banking sector.

In this thesis, microfinance is defined ‘as the provision of financial services in limited amounts to low-income persons and small, informal businesses’ (Basel Committee on Banking Supervision, 2010:1). The Bank for International Settlements describes microfinance as ‘a business line that can be carried out by a wide range of institutions providing a range of financial services, such as lending, deposit taking, insurance, payments and funds transfers’ (Basel Committee on Banking Supervision, 2010:34).

Initially the microfinance framework was based on sector-directed, supply-led and subsidised credit and grounded on incorrect assumptions regarding the willingness and ability of poor people to pay for financial services, leading to flawed policy designs and implementation. However, a new paradigm has developed over the last two decades from poor people’s willingness and ability to pay for savings, credit and insurance services. This new paradigm focuses on sustainable financial institutions and systems (Zeller & Johannsen, 2006).

Furthermore, poor people are generally excluded from the formal banking system due to a lack of collateral (Morduch, 2000). Inclusive financial systems (access to financial services without price or non-price barriers²) benefit the poor and other disadvantaged groups. When poor people are financially excluded they must rely on their own limited savings to either become

² Price barriers are the high cost of transactions of financial services. Non-price barriers include but are not restricted to geographical access to banks, lack of proper documentation of borrower, and minimum deposits (Manji, 2010). Other non-price barriers include lack of financial infrastructure, restrictive regulations, governance collapses, and a shortage of appropriate products (Standard Chartered Bank, 2014).

entrepreneurs or invest in their education, and small businesses must rely on their constrained earnings to pursue business growth opportunities. This causes continued income inequality and slower economic growth (Demirgüç-Kunt & Klapper, 2012).

This focus on financial inclusion in order to reduce poverty and to enable the poor to become entrepreneurs is generally described in the literature as outreach (Hermes, Lensink & Meesters, 2011).

The Consultative Group to Assist the Poor's (CGAP, 2006) vision for inclusive financial systems is a world in which all poor people have permanent access to a broad range of quality financial services, supplied by a diverse type of organisations, through a variety of convenient instruments. As mentioned above, financial services play an important role in poverty alleviation. When poor people have permanent access to financial services they become empowered to embark on income earning ventures that help to alleviate poverty. Various academics have investigated the impact of lack of capital on entrepreneurs. In a study by Evans and Jovanovic (1989) it was found that capital is essential for starting a business, illustrating the necessity of microfinance and financial inclusion. Furthermore, when good practice is applied and microfinance is delivered sustainably, financial services can benefit poor households by helping them progress from only surviving to planning for the future, obtaining physical and financial assets, and investing in improved nutrition, better living conditions, and their children's health and education (CGAP, 2006). Furthermore, Robinson (2001) looked at various case studies and deduced that microfinance promotes education and health and reduces the incidence of child labour.

2.2 Perspectives to Microfinance

Different scholars and groups describe the objectives of MFIs in various ways. Balkenhol (2007) states that an MFI's objective is to assist the poor in better managing risk, taking advantage of income generating opportunities, and empowering themselves through institutionalisation.

However, responsAbility (2014) contends that an MFI's principal objective is to become an efficient financial institution that provides a wide range of suitable products and services to a significant number of households and small businesses at affordable rates.

The emphasis of these two objectives is different. The first objective is of a social nature referred to as the 'welfarists' perspective; whereas the second objective is firstly of a financial nature and thereafter a social nature known as the 'institutionalist' perspective. The institutionalist perspective emphasises financial sustainability and contends that MFIs should not have to depend on external donors. Conversely, welfarists argue that the social objective of MFIs is most important and should come first (Morduch, 2000, as cited in Serrano-Cinca, Gutiérrez-Nieto & Molinero, 2011).

However, most academics and development practitioners agree that MFIs have a double bottom line – outreach and sustainability. Microfinance institutions' performance is of significance with regards to both financial results and social impact. Microfinance institutions have a combination of these objectives in their mission statement and policy, although their emphases on these goals vary (Balkenhol & Hudon, 2011).

2.3 Microfinance Institutions

Microfinance institutions can be categorised according to two criteria: their legal status and their lending methodology (Zeller & Johannsen, 2006). According to the first criteria, microfinance providers can be classified as formal, semi-formal or informal institutions. First, formal institutions include: private- and state-owned banks, postal banks, and non-bank intermediaries, such as finance or insurance companies that operate within the banking laws of a country. Semi-formal institutions include NGOs, cooperatives and sometimes banks with a special charter. Finally, informal institutions are a varied group that offer unregistered sources of credit; these include friends and family, employers, loan sharks, pawnbrokers, rotating savings and credit associations (RoSCAs). However, some informal microfinance providers become semi-formal (for example managed RoSCAs that register as chit funds in India) and a number of MFIs evolve from semi-formal to formal institutions (such as the NGO, PRODEM, that became BancoSol in Bolivia) (Matin, Hulme & Rutherford, 2002).

The second criteria, lending methodology, refers to the manner in which loans are given. The classification used is individual loans, group loans, and village banks, which are bigger groups of about 20 members (Mersland & Strøm, 2009). Both Capitec and Grameen use individual loan methodology.

Group lending methodology refers to loans made to individuals in small groups (typically consisting of three to seven neighbours). However, the group as a whole is jointly liable for the repayment of the outstanding loan if repayment difficulties should arise.

Zeller and Johannsen (2006) studied poverty outreach by type of MFI in Bangladesh and Peru and found that group-lending institutions generally attain the most depth of poverty outreach. However, their study does not provide definite evidence of whether an MFI's legal status is the critical criterion for poverty outreach. A paper by Mersland and Strøm (2009) confirms the finding that outreach is higher for group-lending institutions. They examined the relationship between firm performance and corporate governance in MFIs. However, they find that non-profit organisations and shareholder firms have the same financial performance and outreach.

Conversely, Armendáriz de Aghion and Morduch (2000) investigated individual-lending methodology and found that evidence suggests that clients in areas that are moderately industrialised does not benefit from group loans. They suggest that MFIs rather use direct monitoring, regular repayment arrangements, and non-refinancing threats to effectively enter new segments of the credit market.

Brau and Woller (2004) suggest that the capital market be utilised to give MFIs the required resources to be sustainable and that if investors can receive earnings equal to the risk accepted, the vision of MFIs being a poverty-alleviation instrument can be achieved in larger proportions.

Furthermore, Mersland and Strøm (2008) analysed 132 NGOs and 68 shareholder owned firms (SHFs) to establish whether the ownership type of an MFI is significant with regards to sustainability. Their paper established that NGOs can be as sustainable and well-performing as SHFs. Their findings suggest that there is minimal difference between shareholder owned MFIs and non-government MFIs.

2.4 Sustainability and Financial Performance

Sustainability is defined as the degree to which an organisation, in affecting its target market, ‘covers the costs of providing financial services after adjustments to its profit and loss statement’ (Saltzman, Rock & Salinger, 1998:12). Sustainability in microfinance equates to financial self-sufficiency (Brau & Woller, 2004).

However, financing the poor can be costly and thus the sustainability of an MFI may be at the expense of outreach. Providing small credit amounts involves high transaction costs with regards to screening, monitoring and administration costs, per loan (Hermes, Lensink and Meesters, 2011). This can cause a trade-off between sustainability and outreach.

Cull, Demirgüç-Kunt and Morduch (2007) completed a comprehensive study, examining the financial performance (using profitability measures) and outreach of 124 MFIs in 49 countries. The study confirms the trade-off between profitability and outreach. Furthermore, the paper also investigated whether MFIs move away from serving the poor when pursuing improved financial performance (mission drift). The research finds that group-based lenders have less mission drift than MFIs with individual lending methodology. Another study by Cull, Demirgüç-Kunt and Morduch’s (2009) findings support this idea. They contend that although commercial investment is required to fund the continuous growth of microfinance, MFIs with strong poverty reduction objectives rather than commercial goals, are better positioned to reach and supply poor clients with financial services.

In another study, Hoque, Chishti & Halloway (2011) analysed the impact of commercialisation on MFIs’ capital structure, mission, and performance. Their analysis found that MFIs should not become commercial entities and should rather implement a non-commercial approach to financing. Their study suggests that commercialisation of MFIs cause mission drift.

Conversely, Quayes (2012) investigated data from 702 MFIs in 83 countries and found a positive complementary relationship between self-sufficient MFIs and depth of outreach.

2.5 Performance Measures

As the self-sufficiency of MFIs is becoming increasingly important, various performance measurements have been developed. These measurements are used by investors or donors, depending on the MFI's funding model, and the institution's management to measure their sustainability.

Microfinance institutions are ultimately financial institutions that deal in money. In order to purchase and sell money, margins are important. It is also essential to operate efficiently to keep the nominal interest rates charged by MFIs low. However, MFIs also perform a social function by granting much needed credit to poor people. Therefore, it is important to assess both an MFI's financial and social performance (Serrano-Cinca, Gutiérrez-Nieto & Molinero, 2011).

There are various ways of assessing an MFI's financial performance; one method is by using performance measurement systems (PMSs). There are various PMSs that are not MFI specific but can be adapted to measure an MFI's performance. One of the best known PMSs is the balanced scorecard (BSC) developed by Kaplan and Norton in the 1990s. In addition to the conventional financial measures, the BSC further evaluates and promotes the required behaviours within the organisation by looking at four broad elements, i.e. financial, customer, internal processes, and organisational learning. These elements describe and measure activities that are important to the efficient and successful performance of a company (Waweru & Spraakman, 2012).

Another means of assessing MFIs financial performance is by using a rating agency. Various microfinance rating agencies specialise in evaluating MFIs. However, there are other types of companies that rate MFIs, e.g. ACCION International, a microfinance organisation, and Standard & Poor's (S&P) who initially only rated traditional financial institutions. Credit ratings for banks normally concentrate on three key financial ratios, namely ROE, cost income ratio, and stock-picking ratios, whereas ratings of MFIs mostly concentrate on asset quality and efficiency so as to attract investments (Berling, 2004).

The four largest specialised microfinance rating agencies, MicroRate, Micro-Credit Ratings International Limited (Ltd) (M-CRIL), Planet Rating, and MicroFinanza Rating, collaborated in 2011 to develop a shared financial rating product name and a specialised microfinance ratings comparability table. The collaboration also involved a public consultative process to gather information from industry experts before finalising the new financial rating product name and ratings comparability table. During 2012, the shared financial rating product was named Microfinance Institutional Rating (MIR) (Abrams, 2012).

Each of the four rating agencies agreed to accept MIR as its main rating product name, but will continue using their prior respective proprietary methodologies as well as rating grades and lettering systems. The various rating report topics covered by the four agencies are set out in table 1-1 in Appendix I.

According to Abrams (2012) an MIR gives an opinion on the long-term sustainability and creditworthiness of both regulated and unregulated MFIs through a thorough assessment of risks, performance, and market position.

According to the Global Development Research Center ([GDRC], n.d.), ratings, standardised performance standards, and benchmarking will become more important. This is because firstly, performance standards promote the quality and efficiency of MFIs and give private investors assurance. Secondly, in a cut-throat environment where MFIs are pressured to become commercial, regulators can use ratings and performance standards to split average and excellent MFIs. Thirdly, donors want to set performance standards to give well-defined benchmarks and guidelines to decide on future subsidies for MFIs.

Other rating agencies and companies that assess and rate MFIs and the methodology they use, are listed in the table below.

Table 2-1: Additional rating agencies

Agency	Methodology
ACCION International	CAMEL diagnostic tool. It serves as a guideline for MFIs that want to develop into formal, licensed financial intermediaries. The acronym stands for Capital adequacy (C), asset quality (A), management capability (M), earnings (E), and liquidity management (L).
Apoyo & Asociados Internacionales (AAI) (Fitch Ratings associate)	AAI is a Peruvian company and applies the Fitch Ratings Inc. conventional rating methodology to MFIs in Peru with a benchmarking approach.
CRISIL Ltd (S&P is its major shareholder)	An Indian company, CRISIL uses MICROS methodology that is MFI specific. The acronym is for: management (M), institutional arrangement (I), capital adequacy and asset quality (C), resources (R), operational effectiveness (O), and scalability and sustainability (S).
MicroBanking Bulletin (MBB)	It is a benchmarking source for the microfinance sector. The MBB publishes financial and portfolio data that is voluntarily provided by MFIs. The MFIs are grouped according to their characteristics and a peer group framework is developed. Benchmarks are established for each group. Peer groups are formed on the following main indicators: region, scale of operations, and target market. Furthermore, financial data is adjusted to ensure comparability of results. The adjustments are: inflation, subsidies, and loan-loss provision and write-offs.
PEARLS	This is the World Council of Credit Unions (WOCCU) rating system and offers credit union managers concise and easily read reports that expose organisational weaknesses and trends. Each letter of the acronym measures the key areas of credit union operations: protection (P), effective financial structure (E), asset quality (A), rates of return and costs (R), liquidity (L), signs of growth (S), and yield.

Agency	Methodology
SEEP (Small Enterprise Education and Promotion) Network	Developed standardised methods to measure and analyse financial performance and risk management for the microfinance industry, called the Microfinance Financial Reporting Standards (MFRS). It is designed to be used by all MFIs and consists of 21 core financial ratios and tables, and 6 additional non-core financial ratios (see table 3-1).
Standard & Poor	S&P developed methodology for rating microfinance securitisations. Its analysis of microfinance transactions includes, where appropriate, sections of their rating methodologies for both collateralised debt obligation transactions and consumer finance. They adjust the methodologies to address factors that are particular to emerging markets and the microfinance sectors.

Source: Berling, 2004; S&P, 2008; MIX, 2010a; SEEP, 2010; GDRC, n.d.

Although financial and social performance are both valid performance dimensions in their own right, it seems that being more partial to one than the other is against the idea of microfinance. This conundrum has led to an interest in efficiency as a third performance dimension. Efficiency measures ‘the maximisation of outputs for a given set of inputs, respectively the minimisation in input use for a given set of outputs’ (Balkenhol & Hudon, 2011).

Efficiency is a convenient measure, especially for donors that have to decide whether to continue subsidisation of an MFI, especially after the ten years thought necessary to let an MFI mature to financial self-sufficiency (Balkenhol & Hudon, 2011).

Due to MFIs having different production functions and not having the same inputs and outputs, the efficiency measure may be different for various MFIs. Certain MFIs have a high efficiency due to excellent technical proficiency or productivity values, measured by the number of borrowers to loan officers. Other MFIs may have high efficiency due to the maximisation of returns for a given level of operating expense, i.e. allocative efficiency – the efficient use of operating expenses (Balkenhol & Hudon, 2011).

However, as financial performance can be measured more easily than social performance, efficiency ratios mostly use financial aggregates. Efficiency in microfinance is mostly measured by the operating expense ratio (Balkenhol & Hudon, 2011) (as calculated in Table II-1, Appendix II and discussed further later).

Other efficiency indicators include (SEEP, 2010; Balkenhol & Hudon, 2011):

- Cost income ratio: Operating expense/Total revenues
- Cost per active client: Operating expense/Average number of active clients
- Average deposit account balance: Total deposits/Number of deposit accounts
- Cost per borrower (as described below): Operating expense/Average number of active borrowers
- Cost per loan: Adjusted operating expense/Adjusted average number of loans
- Operating expense/Loan portfolio
- Personnel expense/Loan portfolio
- Average salary/GNI per capita

Another useful way of measuring the performance and efficiency of MFIs is the Data Envelopment Analysis (DEA) method. This method evaluates the relative efficiency in which an organisation uses inputs to generate outputs. In this case, the outputs can be either financial or social (Serrano-Cinca, Gutiérrez-Nieto & Molinero, 2011).

Furthermore, ratios that are essential when measuring an MFI's self-sufficiency is operational self-sufficiency (OSS), discussed in the next section, and financial self-sufficiency (FSS). Financial self-sufficiency looks at how well an MFI would cover its costs if the operations were unsubsidised (Serrano-Cinca, Gutiérrez-Nieto & Molinero, 2011).

However, SEEP (2010) excluded these two ratios from the MFRS because once an MFI surpasses 100% sustainability or the breakeven point the ratios are less useful when measuring profitability. According to SEEP (2010) Return on Average Assets and Return on Average Equity are commercial ratios that are more suitable when analysing an established MFI's profitability.

Most of the ratios discussed above are related to financial performance measures. Unfortunately there is still no standard for social performance measures in the microfinance industry. The proxies normally used for outreach is the gender split of the MFI's customer base, the size or terms of the loan contract, the price and transaction costs accepted by the client, the number of clients, the financial and institutional strength of the lender, and the number of products the institutions offers, including deposits (Navajas et al., 2000). Other proxies include the number of clients below the poverty line, or those whose income is less than one dollar a day and the ratio of borrowers per staff member (Serrano-Cinca, Gutiérrez-Nieto & Molinero, 2011).

The number of clients indicates the breadth of outreach (scale). The higher this number, the greater the extent of outreach. Furthermore, the average loan size per customer is commonly used as an indicator of the depth of outreach (reaching the poor) (Serrano-Cinca, Gutiérrez-Nieto & Molinero, 2011). In addition, the number of female borrowers is frequently used as a social indicator as many MFIs' objective is to support women. This is because women are generally the poorest of the poor, and it is thought that they are the main providers of health and education in the family.

As can be seen from the above discussion and Table II-1 in Appendix II, the various indicators used for this thesis have been used repeatedly by various sources. A more in-depth discussion on the indicator choice follows in Chapter 3. Table 3-3 in Chapter 3 gives an overview of each of the indicators used, the purpose of each indicator and the application thereof. Table II-1 Appendix II gives the calculations for each indicator.

2.5.1 Profitability

Return on equity (ROE) and return on assets (ROA) are both profitability measures that summarise the performance in the company as a whole. Thus, if asset quality is poor or efficiency low it will be exposed in these measures (Von Stauffenberg et al., 2014).

According to Gaul (2011), ROA is the most elementary and comparable measure of profit for MFIs. Returns encapsulate all revenues and expenses of an MFI, i.e. lending, personnel expenses, rent, utilities, providing for loan losses. However, according to Serrano-Cinca,

Gutiérrez-Nieto and Molinero (2011) using ROA makes sense when measuring the performance of an industrial firm that uses assets such as plant and equipment to generate profit. Therefore, the turnover of a financial organisation does not necessarily pertain to total assets.

Tucker and Miles (2004) performed a study wherein they compared the performance of self-sufficient MFIs to those that are not yet sustainable and regional commercial banks in developing countries. They found that self-sufficient MFIs perform well on ROE and ROA.

Another measure of profitability is the operating expense ratio. However, this ratio is used in other studies as an efficiency ratio (Balkenhol & Hudon, 2011; Serrano-Cinca, Gutiérrez-Nieto & Molinero, 2011). For example, Balkenhol and Hudon (2011) define efficiency in microfinance as the operating expense ratio (see Table II-1 in Appendix II for the calculation).

However, in Mersland and Strøm's (2008) study they use the operating expense ratio as a measure of profitability and their findings suggest that SHFs are not managed more profitably than NGOs when considering this ratio. Furthermore, Rauf and Mahmood (2009) investigated the growth pattern and its impact on performance of the microfinance sector in Pakistan for the period 2004-2007 using ratio analysis. Their analysis found that microfinance banks are less sustainable than MFIs and that microfinance banks' operating expense ratio is the highest. Although microfinance banks and MFIs are different microfinance services models, unfortunately Rauf and Mahmood do not further specify what the differences are between these entities.

In another study by Mersland and Urgeghe (2013), they analysed 319 MFIs in 68 developing countries with up to five years of data. They investigated whether commercial funding to MFIs is mostly driven by the MFI's financial performance and professionalization whilst subsidised funding is mainly driven by poverty alleviation and social inclusion objectives. By using ROA, the operating expense ratio and the 30-day portfolio at risk (PAR) ratios to proxy the MFIs' financial performance; they find that a higher ROA, lower operating expense ratio, and lower 30-day PAR considerably increases the probability for an MFI of having international commercial debt. This confirms their hypothesis that commercial funding is determined by financial performance and the level of professionalization of the MFI whilst subsidized funding targets MFIs that are focused on women and do not prioritise financial performance or its level of professionalization.

2.5.2 Capital Adequacy and Solvency

Capital adequacy and solvency ratios are used to determine whether an MFI has the capacity to meet its debts and absorb unforeseen losses (SEEP, 2010). In a study done by Dorfleitner, Leidl and Priberny (2013), they investigated the determinants of failures of MFIs using the CAMELS³ rating components and other microfinance specific measures. In their study they used the capital asset ratio as a proxy for capital adequacy. They observed that capital adequacy can explain MFI failure and those MFIs with a higher capital asset ratio were less likely to fail.

In Hoque, Chishti and Halloway's study (2011) the authors observed that increased leverage (debt to equity ratio) negatively affects outreach, productivity, and risk. This is because an increase in the cost of capital leads to an increase in the cost of borrowing, increased default rates, and higher risk. Conversely, Quayes (2012) found that the debt to equity ratio is statistically significant and that it has a positive impact on the depth of outreach of an MFI.

2.5.3 Liquidity

Liquidity signifies the ease with which an MFI can service its debt and cover its short-term liabilities if it should be required (Bruett, 2005).

Dorfleitner, Leidl and Priberny (2013) used the liquid assets ratio to determine liquidity in their sample and were not able to observe a significant relationship between the liquid assets ratio and the probability of an MFI failing.

2.5.4 Efficiency and Productivity

³ CAMELS is the same as CAMEL but includes sensitivity to market risk (S)

According to Balkenhol and Hudon (2011) efficiency, in microfinance, is converting inputs such as personnel, resources, and equipment into credit, deposits, and other financial and non-financial services at a minimum cost. However, the social effects of microfinance are seldom factored into efficiency indicators. As mentioned above, Balkenhol and Hudon (2011) and Serrano-Cinca, Gutiérrez-Nieto and Molinero (2011), amongst others, use the operating expense ratio as a proxy for efficiency. An additional proxy for efficiency is the portfolio to assets ratio (SEEP, 2010; Bruett 2005).

Furthermore, productivity is measured by employee efficiency (Serrano-Cinca, Gutiérrez-Nieto & Molinero, 2011). One measure for productivity is cost per borrower; another is borrowers per staff member (Baumann, 2004).

Bartual Sanfeliu, Cervelló Royo and Moya Clemente (2011, as cited in Daher & Le Saout, 2013) used multicriterion methodology to simultaneously consider different categories involved in measuring MFI's performance. They found that portfolio to assets and ROE are the important elements for improving the performance of an MFI.

Balkenhol and Hudon (2011) investigated MBB data for all available MFIs over the 2004 to 2006 periods and found that financially sustainable MFIs are generally more efficient than those MFIs that are not yet self-sufficient. Balkenhol and Hudon (2011) observed that recent figures indicate an increase of efficiency in MFIs, partly due to economies of scale. However, they suggest that efficiency indicators vary according to methodology, region and probably the poverty-focus of the MFI.

In another study by Hermes, Lensink and Meesters (2011), they used stochastic frontier analysis to assess whether there is a compromise between outreach and efficiency in MFIs. They found that outreach is negatively correlated to efficiency of MFIs. Furthermore, they observed that MFIs with a smaller average loan balance are also less efficient. In addition, they found evidence indicating that MFIs that have a higher number of female borrowers are less efficient.

Shahzad et al. (2012) analysed the performance of MFIs in South Asia using financial ratios. They used cost per borrower, inter alia, as a proxy for productivity. The analysis of the cost per borrower ratio indicates that a higher cost per borrower ratio indicates a smaller average loan size and thus better outreach. Quayes' (2012) study confirms this. Quayes found that smaller

loans sizes have lower service costs resulting in better depth of outreach that will positively affect financial performance.

2.5.5 Self-sufficiency

Operational self-sufficiency (OSS) is a commonly used proxy for institutional sustainability (Mersland & Strøm, 2009) and is an important ratio that measures how well an MFI can cover its costs through operating revenues (Serrano-Cinca, Gutiérrez-Nieto & Molinero, 2011). However, as mentioned above SEEP (2010) excluded OSS from the MFRS because once an MFI surpassed 100% sustainability or the breakeven point, the ratio is less useful when measuring profitability.

In Mersland and Strøm's (2009) study, they used OSS, *inter alia*, as a proxy for financial performance and found that OSS is not significant in their regressions, indicating that sustainable financial performance can be achieved by both individual and group-lending MFIs. Similarly, Quayes (2012) used OSS as a measure of financial performance and observed that high-disclosure MFIs have higher OSS than low-disclosure MFIs. He deduces that high-disclosure MFIs achieve better financial performance than low-disclosure MFIs without forgoing outreach.

2.6 Microfinance in South Africa

Historically, South Africa's financial service providers concentrated on the delivery of credit and its approach to regulation of the microfinance sector has been from this perspective. South Africa has generally followed a path of sporadic and reactive financial sector reform since 1992 (Meagher et al., 2006).

The Usury Act Exemption of 1992 was created with its stated policy goal 'to spur growth in lending to micro, small and medium sized enterprises (SMMEs)' (Meagher et al., 2006:63). Due to this Exemption, creditors were allowed to charge unregulated interest rates for loans under R6,000 and payable within 36 months. The result was a thriving microcredit industry,

which was controlled by payroll and cash-based lending to urban, formally employed persons. In essence, the Exemption enabled licensed micro-creditors 'to create a separate, largely unregulated, tier of credit provision to people on the fringes of the banking system' (Meagher et al., 2006:63). Subsequently the Exemption divided the market, fencing low-income persons from the formal banking sector and formal credit opportunities. Therefore, the conditions for the development of an efficient credit market did not exist at a time when the sector was growing rapidly and it impeded development finance.

In reaction to the high interest rates and abusive practises of micro-creditors in the mid-1990s, there was a convergence of interest in establishing a consumer credit regulator. In addition to the concern of micro-creditor practices, there were fears about the lack of growth in the market's development. Particularly the unmet credit needs in 'priority areas such as enterprise, housing and education' (Meagher et al., 2006:64). Furthermore, banks were anxious about the negative reputation they may suffer due to the lack of standards in conduct and development finance.

The consequence thereof was the creation of the Micro Finance Regulatory Council (MFRC) in 1999, under a second exemption of the Usury Law. The MFRC is a non-prudential regulator and section 21 company that has to 'supervise the operations of those institutions lending under its unrestricted interest rate window to facilitate more effective consumer protection and regularisation of micro-lender operations in a growing market' (Meagher et al., 2006:64).

The credit market in South Africa was able to transform due to the introduction of the MFRC and the Exemption Notice of 1999. The Exemption Notice reformed the microcredit environment and creditors with transactions not exceeding R10,000 and payable with terms of less than 36 months were exempt. Furthermore, if micro-creditors registered and complied, they were exempt from the interest rate controls of the Usury Act, and could therefore determine their own rates (Meagher & Wilkinson, 2002).

The establishment of the MFRC created an environment where both large and small lenders have an interest in extending finance to the low-income market. The industry has changed and financial services providers are now competing to enter the market rather than trying to withdraw from it. This resulted in product innovation and included products such as housing and SMME finance, the development of improved saving products, and an expanding network

of financial institutions that are accessible to poor persons (Meagher & Wilkinson, 2002). In addition, the South African government is currently reviewing the insurance regulatory environment to enable the development of microinsurance (Calvin & Coetzee, 2010).

The MFRC supported and led an extensive review and development of new legislation and other industry infrastructure to assist in a more effective and rational financial services sector (Meagher et al., 2006). This has led to two significant pieces of regulation being introduced: the National Credit Act (NCA), No. 34 of 2005 and the Cooperative Banks Act (CBA), No. 40 of 2007.

The NCA ‘has introduced considerable consumer protection and has created a level playing field and higher professionalism among credit providers, thereby contributing to a stronger enabling environment for microfinance’ (Calvin & Coetzee, 2010:8). Whereas, the CBA ‘is intended to improve access to financial services by providing a legislative framework allowing cooperative banks to develop and provide financial services to their members’ (Calvin & Coetzee, 2010:8).

The Dedicated Banks Bill is another important piece of legislation that has been tabled (Meagher et al., 2006; Calvin & Coetzee, 2010). The Bill’s purpose is to create a gap or opportunities to establish smaller banks in South Africa. Currently there are five banks managing approximately 90% of all banking assets in the country. However, as mentioned above, this Bill has still not been introduced to the National Assembly.

Although the microfinance sector is maturing, it is still developing and innovating. It is past the rapid growth period for micro-deposit services and salary-based microloans but loans to microenterprises, a third primary product, are lagging behind and have attained less than 20% of possible market penetration (Calvin & Coetzee, 2010).

Calvin and Coetzee (2010:41) identify a key deficiency in South Africa’s microfinance industry as the absence of

coherent government policy in the development finance arena in general and, more specifically, on financial inclusion or access to finance... Development of a broad Policy on Inclusive Banking/Access/Financial Inclusion would be an important contribution to

the sector without which the uncoordinated current approach will continue to generate little traction in including more South Africans in the formal financial sector.

3 RESEARCH METHODOLOGY

3.1 Research Approach and Strategy

This thesis used case study methodology. A case study is flexible (Hakim, 2000, as cited in Keddie, 2006) and can involve one or more cases. The two case studies selected for analysis were selected for purposes of analytical generalisation. These cases are the Grameen Bank and Capitec Bank. When using analytical generalisation, the author wishes to generalise a certain set of results to some larger theory (Yin, 2009).

Furthermore, Yin (1984, as cited in Keddie 2006) elaborates that a case study can be descriptive, exploratory or explanatory. I used the exploratory case study, which provides the analysis of a phenomenon that could be systematically investigated by the use of another methodology (Keddie, 2006). The other methodology, i.e. SEEP's MFRS and its Framework, are discussed below.

Initially there were very few guidelines for MFIs regarding definitions and performance measures. In 2002, the Financial Definitions Guidelines were jointly developed by MFIs, the SEEP Network, rating companies and donor agencies. The main objective of the guidelines was to find 'standard definitions for selected financial terms and suggest a standard method of calculating certain financial ratios' (Bruett, 2005:1). The SEEP Network developed its Framework (Measuring performance of microfinance institutions: A framework for reporting, analysis, and monitoring) from these guidelines. The Framework attempted to develop a consistent performance monitoring system in accordance with the International Financial Reporting Standards (IFRS), helping managers in decision making, updating boards of directors, and reporting to investors, donors and other interested parties. Initially the Framework had 18 indicators that were priorities to most MFIs. In 2010, the Framework was updated to the MFRS and now includes 21 core financial ratios and tables, and six additional non-core financial ratios (SEEP, 2010). The ratios are divided into groups that are set-out in the table below.

Table 3-1: An overview of the core SEEP financial ratios and tables

The core financial ratios and tables	
Ratio type	Analytical focus
Profitability (7 ratios)	Will the MFI have enough financial resources to service its clients now and in future?
Capital adequacy and solvency ratios (2 ratios)	Can the MFI meet its obligations and absorb unforeseen losses?
Liquidity ratio (1 ratio)	Will the MFI have the resources to meet its obligations in a timeous manner as they become payable?
Asset quality and portfolio quality (3 ratios)	What is the quality of the MFI's loan portfolio?
Efficiency and productivity (8 ratios)	Is the MFI serving the optimal amount of clients at the lowest possible cost?
Asset-liability management tables (4 tables)	What are the intrinsic risks in an MFI's asset and liability structure?
The non-core financial ratios	
For regulated financial institutions (2 ratios)	Is the quality and solvency of the MFI's capital foundation robust enough to leverage growth from within? Can it meet its obligations and absorb unanticipated losses? How does it compare to the Basel guidelines?
For deposit-taking MFIs (4 ratios)	How essential are deposits to the MFI's funding mix? Does the MFI deliver beneficial deposit services for a range of client financial requirements whilst managing liquidity and security of deposits?

Source: SEEP, 2010

The author used SEEP's financial ratios as these reporting practices are standardised and are MFI specific.

3.2 Data Collection, Frequency and Choice of Data

In order to analyse Grameen Bank and Capitec Bank, secondary ratio data was obtained from MIX. MIX is a non-profit organisation that collects data from MFIs. Collected information is reclassified according to IFRS for comparability purposes, and then assessed for consistency and coherence. Thereafter, it is made publicly available (MIX, 2010c).

Ratio data for the two banks span the last ten years, 2004-2013. However, all the ratios were not available for the full period for Capitec; specifically no data on the MIX database is available after 2012. The author used Capitec's 2013 and 2007 annual reports, available from their website, to calculate the ratios for the missing years. However, it was not possible to calculate the ROA, liquid assets ratio, and OSS for 2013 due to a lack of data and thus these ratios' data is only available until 2012. Furthermore, the ROA, liquid assets ratio, and operating expense ratio was also not available for 2004 and therefore data for these ratios only start at 2005. Grameen's data is available for the full period from MIX and did not need to be supplemented.

Furthermore, MIX generates benchmarks based on median values for the microfinance industry. MFIs provide data on a voluntary basis regarding portfolio performance, accounting practices, subsidies and liability structures with supporting documentation, such as annual reports. The thesis used MIX benchmarks to compare Capitec and Grameen's performance against standard sustainability criteria and global averages of the microfinance sector, focussing on MFIs that are classified by legal status as a bank. Specifically, the benchmark for MFIs classified as 'banks' is used in this study as both Capitec and Grameen Bank have this legal status. Furthermore, the MIX 2010 benchmarks are used as these are the most recent benchmarks available. The 2010 benchmark for banks is the global average for each ratio and is depicted by a dotted line on each graph in section 4.

3.3 Data Analysis Methods

As discussed above, SEEP ratios attempt to standardise MFIs' financial reporting standards. In addition, it aims to assist MFIs in obtaining relevant indicators that will support them with

analysis, monitoring and decision-making in their quest to become sustainable. The financial ratios used are presented in Appendix II, table II-1. The table below shows the various indicators used in the thesis, the purpose of each indicator and the appropriate application for each outcome.

Table 3-2: An overview of the financial ratios used

Ratio	Purpose	Application
Return on Equity	Measures the MFI's profitability. This ratio indicates how well the MFI used retained earnings and/or donor money to become sustainable.	A mature MFI should have a positive ROE.
Return on Assets	It measures how the MFI manages its assets to optimise its profitability.	Mature MFIs should have a positive ROA.
Operating Expense Ratio	This ratio measures the administrative and operating costs incurred to provide microcredit.	Low ratios can indicate an ineffective use of assets, whereas high ratios can indicate inadequate liquidity levels. However, a lower ratio indicates a more efficient MFI.
Capital Asset Ratio	Determines whether the MFI has enough capital to support its assets and absorb unexpected losses. It is a measure of the MFI's solvency.	The higher the capital asset ratio, the less likely the MFI is to fail.
Debt to Equity Ratio (also leverage or gearing ratio)	Indicates the proportion of equity and debt the MFI used to finance its portfolio and other assets.	The higher the ratio, the more risky the MFI. This is because as an MFI increases debt relative to equity, the more risky it becomes. Normally, deposit-taking MFIs and saving-based firms have higher ratios than non-commercial MFIs.

Ratio	Purpose	Application
Liquid Assets	Signifies the ease with which an MFI can service its debt and cover its short-term liabilities if it should be required.	Higher ratios indicate that the MFI is less likely to fail as there is a higher margin of safety.
Portfolio to Assets	This indicator measures the allocation of assets to its lending activity.	MFIs that are highly dependent on savings to fund their portfolios are generally more efficient at sustaining a high and constant ratio. Low ratios can indicate an ineffective use of assets, whereas high ratios can indicate inadequate liquidity levels.
Operational Self-Sufficiency	Indicates whether an MFI can cover its costs through operating revenues.	An MFI's breakeven point is 100 per cent.

Source: Von Stauffenberg et al., 2003; Bruett, 2005; SEEP, 2010; Dorfleitner, Leidl & Priberny, 2013; Posner, 2014

4 RESEARCH FINDINGS, ANALYSIS AND DISCUSSION

4.1 The Case Studies

4.1.1 Grameen Bank

Grameen Bank is a successful MFI and is perceived as the ‘international benchmark for the concept of microcredit’ (Valadez & Buskirk, 2012:13) as mentioned previously. The Grameen ‘model’ has been successful and replicated in a large number of countries. According to the Bank’s website (2014), Grameen provides financial services to rural poor people in Bangladesh, including credit, savings accounts, pension plans and loan insurance. Its overall goal is poverty elimination.

In 1974, Bangladesh was recovering from a war and the country was gripped by a famine. Professor Yunus, after a field trip to a poor neighbouring village, realised that many poor people were dependent on expensive credit from informal moneylenders and started lending small amounts of his own money to the poor (Yunus & Yolis, 1998, as cited in Schicks, 2007).

Initially his experiments were unsuccessful but eventually he came up with a model that worked. Grameen Bank was formally established in 1983 by the passing of the Grameen Bank Ordinance (Hulme, 2008). The Grameen ‘model’ is based on a group loans mechanism, where five people, mostly women, voluntarily create a group to provide shared, morally binding group securities instead of the collateral required by traditional banks (Fotabong, 2011). This is called ‘social collateral’, a blend of peer pressure and cohesion. The first loan is made to one person, and the next loan will only be given to the next person when the first is capable of meeting a regular repayment scheme, and so on. In this manner, all group members take responsibility for the repayment of the loan. Consequently, the repayment rate of loans has never fallen below 90% (Develtere & Huybrechts, 2002).

During the 1980s and early 1990s, Grameen gradually grew with substantial inflows of donor funding. By 1991, the Bank had more than one million borrowers and an increasing range of products, namely housing loans, agricultural loans, etc. However, although the number of borrowers grew steadily, the gross loan portfolio grew swiftly as clients took larger regular

loans and new types of loans (particularly housing loans). This led to rumours of repayment rates decreasing and branch managers extending new loans to defaulters, which were used to pay off the outstanding loans (Hulme, 2008).

The difficulties faced by Grameen in the latter half of the 1990s, led to its senior personnel experimenting with new products and innovative ways of managing service delivery. By early 2001, Grameen II was launched and the Bank's previous products were replaced by the new range of products on different terms. The various elements of Grameen II were designed to meet client demand and to be profitable for the Bank. Over the period of March 2001 and August 2002, all Grameen's 1,200 branches were moved from Grameen I's to Grameen II's products and systems (Hulme, 2008).

Grameen I used a 'poverty lending' approach rather than a 'financial systems' approach. But Grameen II has moved closer to a 'financial systems' approach. Although Grameen increasingly lends to non-poor clients and has moved into savings mobilisation and is concerned with the profitability of its products, it still campaigns for microfinance for poor women (Hulme, 2008). With Grameen II's move towards lending to less poor clients, it has stopped using the group lending methodology and replaced it with individual lending methodology (Armendáriz de Aghion & Morduch, 2000). Therefore, Grameen II's strategy has not been reformed but rather revolutionised (Hulme, 2008).

Grameen Bank is 94% owned by its clients and the Bangladesh government owns the remaining 6%. From 1995, Grameen does not receive donor funds (Grameen Bank, 2014) and is now using individual-based lending methodology (Cull, Demirgüç-Kunt & Morduch, 2007). According to the Grameen website (2014) it is self-reliant and has sufficient deposits from borrowers and non-borrowers to fund its operations. Below follows an overview of the Bank's characteristics.

Table 4-1: Overview of Grameen Bank⁴

⁴ All data is for 2013 except for percent of female borrowers that is for 2012.

Date Established	1 January 1983
Maturity of microfinance operations	Mature
Legal status	Bank
Regulated	No
Lending methodology	Individual
Target market	Rural, poor women and non-poor
Products and services	Loans Voluntary savings Insurance
Financial intermediation	High
Outreach	Large
Profit status	For profit
Assets	US\$ 2 213 120 838
Offices	2 567
Personnel	21 851
Number of active borrowers	6 740 000
Percent of female borrowers	96,23%
Gross Loan Portfolio	US\$ 1 091 739 513
Average loan balance per borrower	US\$ 161,98

Source: Hulme, 2008; MIX, 2010b; MIX, 2012a

4.1.2 Capitec

Capitec Bank is a profit motivated South African MFI, which provides a range of financial services to its clients. These clients are the ‘unbanked’ or financially excluded in South Africa (Coetzee, 2003).

The story of Capitec started in the late 1990s when the investment holding company PSG Group Ltd (‘PSG’) acquired two microcredit businesses in 1998 in order to enter the microfinance

sector. During the same period, PSG set up another company aimed at the payroll-deductions market, namely Anchorfin. A holding company, Keynes Rational Ltd, was set-up to manage this venture. By the end of 1998, PSG had decided to expand into the short-term loans market and acquired Finaid Financial Services (Pty) Ltd ('Finaid') (Coetzee, 2003). Finaid was a microloan business with only one product, a 30-day loan charging 30% interest per month (Ashton, 2012).

In 1999, growth in the Company levelled and further acquisitions occurred over the following two years. However, there were concerns regarding the exposure to payroll deductions of government employees and Anchorfin was disposed of (Coetzee, 2003).

PSG realised there was an opportunity to increase its provision of services as it believed there was a need for a retail bank servicing clients in the lower-income segment (Cairns, 2012). The Business Bank (TBB), a subsidiary of PSG Investment Bank Holdings Ltd (PSGIBH), acquired Keynes Rational in 2001 (Cairns, 2012). This group of entrepreneurs' goal was to provide individuals and small businesses with a variety of banking services that are economical and affordable and are based on the individual's risk profile, taking cash flow and ability-to-pay-models of risk evaluation into account. In order to realise their goal they obtained a banking license and TBB was renamed Capitec Bank Ltd in March 2001 (Coetzee, 2003). Keynes Rational was renamed Capitec Bank Holdings Ltd and in February 2002 listed on the Johannesburg Stock Exchange (Cairns, 2012).

In 2003, PSG unbundled its 56% holding in Capitec (Cairns, 2012). However, PSG Financial Services Ltd now own 28.27 % of Capitec Bank Holdings Ltd (Who Owns Whom, 2014).

At first, Capitec Bank Ltd consisted of Finaid, Capitec Division, and Capitec CBS. Finaid focused on providing short-term microcredit to clients in the living standards measure (LSM) 3-5 income-earning profiles. However, all Finaid branches were changed to the Capitec Bank brand due to Capitec's success in 2003 (Coetzee, 2003).

Conversely, the Capitec Division focussed on providing loans through a more organised environment to a higher income target market in the LSM 4-7 income-earning profiles. Their business model was very similar to that of Finaid. However, Capitec Division converted to a

full banking system that provides transactional banking, loans and deposit-taking services (Coetzee, 2003).

Finally, Capitec CBS focussed on providing commercial, unsecured loans to small businesses in the informal sector (Coetzee, 2003). However, all three divisions have now merged into Capitec Bank Ltd. Below follows an overview of Capitec's characteristics.

Table 4-2: Overview of Capitec Bank⁵

Date Established	1 March 2001
Maturity of microfinance operations	Mature
Legal status	Bank
Regulated	Yes
Lending methodology	Individual
Target market	Lower income, the unbanked
Products and services	Transacting Loans Voluntary savings
Financial intermediation	High
Outreach	Large (> 30, 000 borrowers)
Profit status	For profit
Assets	US\$ 427,499,7101
Offices ⁶	647
Personnel ⁷	9 491
Number of active borrowers ⁸	801,809
Percent of female borrowers ⁹	44,37%
Gross Loan Portfolio	US\$ 3 417 800 223

⁵ Data is for 2012 unless stated otherwise.

⁶ 2014

⁷ 2014

⁸ Latest available data is for 2009. However, there were in excess of 5.8 million clients at the end of August, 2014.

⁹ Latest available data is for 2008

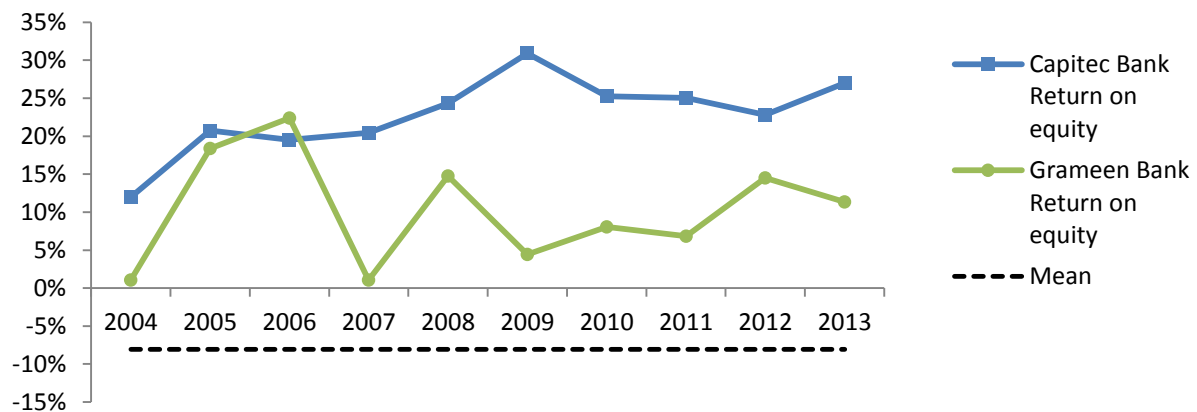
Average loan balance per borrower ¹⁰	US\$ 905,9
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Source: Coetzee, 2003; MIX, 2010b; Napier & Britain, 2011; MIX, 2012b; Capitec Bank, 2014

4.2 Profitability

4.2.1 Return on Equity

Return on equity measures the MFI's profitability. This ratio indicates how well the MFI used retained earnings and/or donor money to become sustainable.



Source: Capitec, 2007; MIX 2010b; MIX, 2012a; MIX, 2012b; Capitec, 2013

Globally, the average ROE for MFIs with 'bank' as legal status is -8%. This indicates that MFIs operating with this status are generally not profitable. Capitec's ROE has been higher than Grameen's from 2007 to 2013. Capitec's average ROE over the 2004-2013 periods was 23%. This is in contrast with Grameen's ROE of 10% over the same period. Although Grameen's ROE is not as high as Capitec's, it is positive which indicates profitability. Von Stauffenberg et al. (2014) indicate that an ROE in excess of 20% is high and thus it can be presumed that Capitec is performing well.

When considering an MFI's ROE it is also important to consider the debt to equity ratio. Microfinance institutions that want to be highly profitable and thus have a high ROE have

¹⁰ 2009

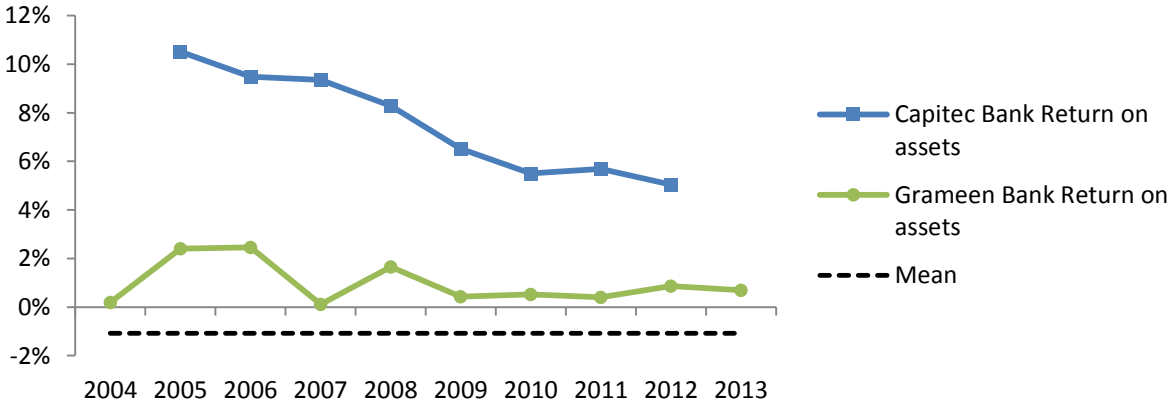
strong motivation to finance most of its assets through debt. But higher debt to equity ratios can be risky (Von Stauffenberg et al., 2014).

In addition, it is important to monitor the ROE over a period of time. It is possible that the MFI sold an asset leading to a one-time high in profitability or it could have decreased its provisions for loan losses. Therefore, an MFI’s profitability should be analysed over a number of years. Should an increasing ROE be sustained year after year, it is a good sign that the institution is profitable (Von Stauffenberg et al., 2014).

Over the period, Grameen has remained profitable; however, its ROE has been erratic. Also, Grameen’s debt to equity ratio has been above 6% since 2005, indicating that the MFI’s debt may be too high to be sustainable. Conversely, Capitec performed consistently well over time and its debt to equity ratio has been below 5% over the 2004-2013 period. In addition, its ROE has been consistently above 20% since 2005. Therefore, Capitec seems to be more profitable than Grameen Bank.

4.2.2 Return on Assets

This measurement calculates how the MFI manages its assets to optimise its profitability.



Source: MIX 2010b; MIX, 2012a; MIX, 2012b

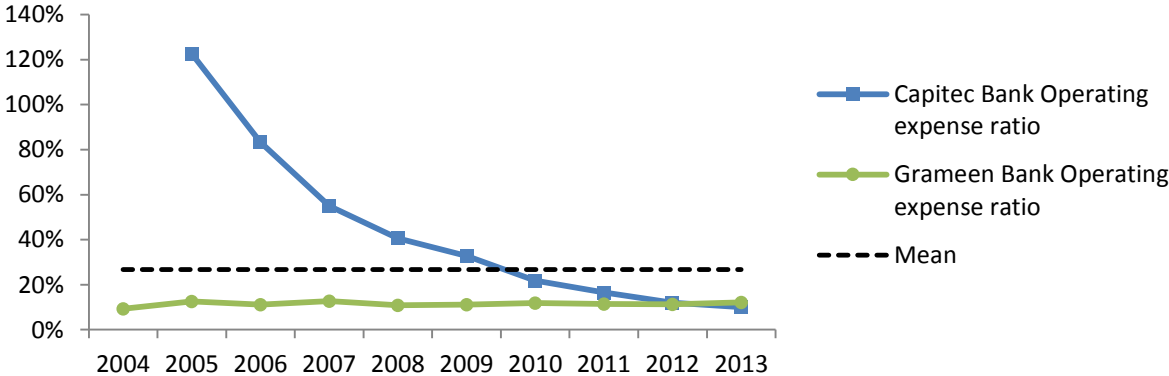
Globally, the mean ROA of MFIs with the legal status ‘bank’ is -1%. A negative ROA signifies that an institution is not profitable and thus it can be assumed that most of the MFIs with a ‘bank’ legal status are not profitable. Capitec has a much higher ROA ratio than Grameen,

although the trend has been declining. This decline was a general trend in the South African commercial banking sector between 2007 and 2009, which was due to the global financial crisis and the domestic economy slowing down (Kumbirai & Webb, 2010). Furthermore, according to an analysis by Metcalfe (2011) Capitec has grown its assets at a faster rate than other South African banks from the MFI's inception to 2009. This may explain the declining trend somewhat as ROA measures the efficiency with which the MFI manages its assets with relation to its net operating income less taxes in creating profit. If Capitec has been increasing its assets but not its operating income less taxes, this trend can be an early sign of impending profitability problems.

Nevertheless, Capitec's ROA was 5% in 2012, compared to Grameen's 0.9% in 2012 and 0.7% in 2013. Globally, all MFI's had a ROA average of 3% in 2012 (Von Stauffenberg et al., 2014), making Capitec's ROA decent. Both MFI's have a positive ROA which is encouraging.

4.2.3 Operating Expense Ratio

This ratio measures the administrative and operating costs incurred to provide microcredit.



Source: MIX 2010b; MIX, 2012a; MIX, 2012b; Capitec, 2013

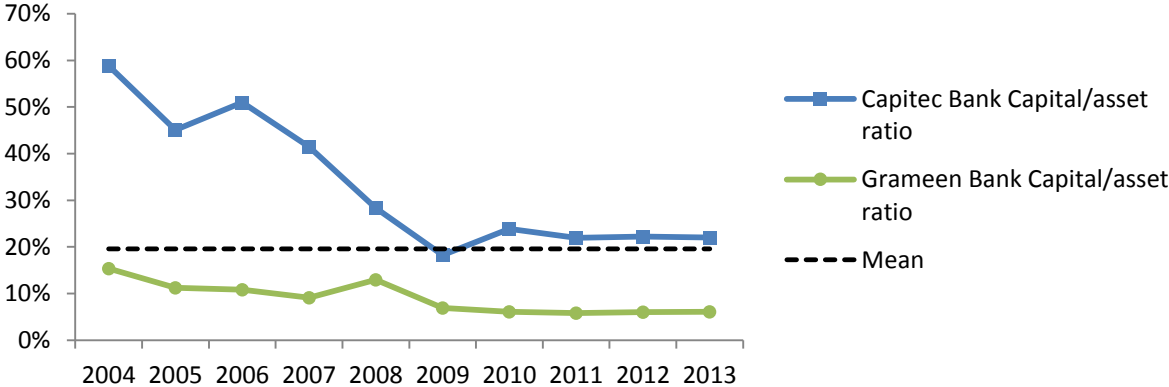
Globally, the average of the operating expense ratio for MFIs with a legal status of 'bank' is 27%. Capitec's operating expense ratio has declined rapidly from a high of 123% in 2005 to 10% in 2013. There does not seem to be a definite cause for this declining trend; this trend may simply be due to Capitec being a relatively new MFI in 2004 and that it had become more efficient by growing. This is a positive trend as a lower ratio indicates a more efficient MFI

(Von Stauffenberg et al., 2014). Grameen’s ratio has been relatively constant at between 9% and 13% and is currently at 12%. Both MFIs seem to be more efficient than the average MFI with a legal status of ‘bank’ when this indicator is considered.

4.3 Capital Adequacy and Solvency

4.3.1 Capital Asset Ratio

The capital asset ratio determines whether the MFI has enough capital to support its assets and absorb unexpected losses.

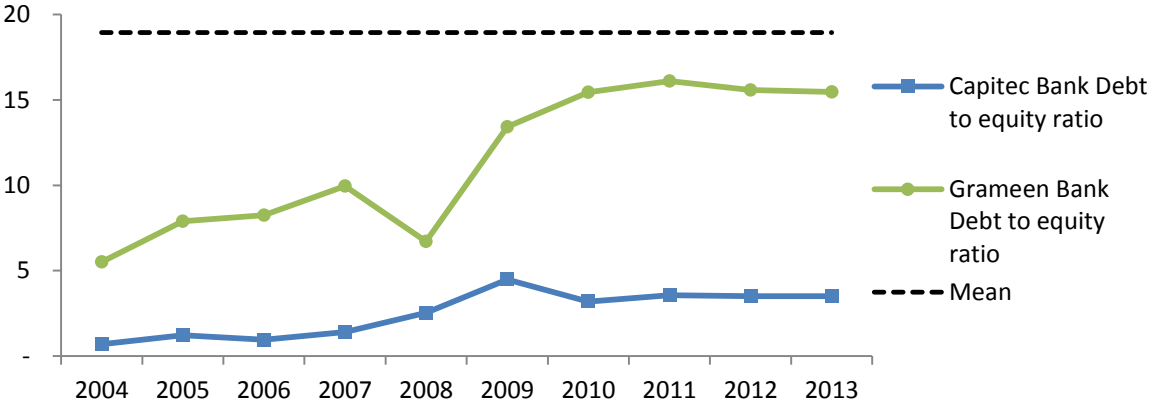


Source: MIX 2010b; MIX, 2012a; MIX, 2012b; Capitec, 2013

Capitec’s capital asset ratio has been declining over time and is currently 22% whereas Grameen Bank’s has been relatively constant, although it has decreased marginally to 6%. No explicit reason could be found in the literature why either MFI has this declining trend. The agency cost hypothesis asserts that a decreasing capital asset ratio is correlated to a decline in the agency costs of outside equity and an increase in the institution’s performance (Kar, 2012). Nevertheless, Grameen is currently underperforming, as the average for MFI’s with a legal status of ‘bank’ is 20%. Posner (2014) believes that the higher the capital asset ratio the better. Therefore, Capitec’s ratio is satisfactory, whereas Grameen’s is not.

4.3.2 Debt to Equity Ratio

This ratio indicates the proportion of equity and debt the MFI used to finance its portfolio and other assets.



Source: MIX 2010b; MIX, 2012a; MIX, 2012b; Capitec, 2013

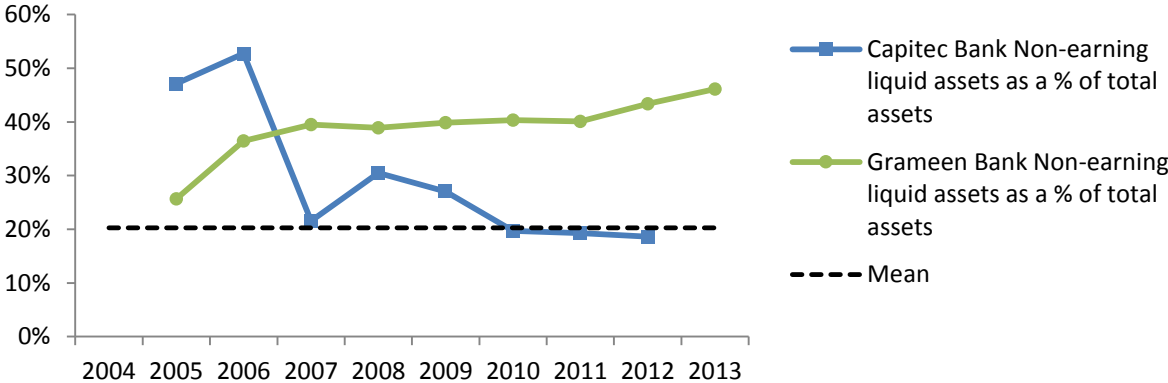
Microfinance institutions that are considered to be ‘banks’ have an average debt to equity ratio of 18,9:1. This is an unhealthy ratio as this ratio should be as low as possible. This is because MFIs’ loan portfolios are supported by very little collateral.

Capitec has a more sustainable debt to equity ratio than Grameen Bank. At financial year-end 2013, for both MFIs, Capitec’s ratio was 3,5:1 and Grameen’s 15,5:1. Capitec’s ratio is relatively low but unfortunately Grameen’s ratio implies that there is not much of a safety cushion (in the form of equity) to absorb losses. However, Von Stauffenberg et al. (2014) advise that it is also important to analyse the ratio over time. Rapid increases in the ratio suggest that the MFI is approaching its borrowing limits. MIX and Intellectap (2009) reported that between 2003 and 2007 Grameen extended new loans by increasing the leverage of its capital base and that explains the increase in this ratio over this period. However, there is no indication in the literature why the ratio decreased in 2008 and then continued its upward trend after 2008. As can be seen from Grameen’s graph, although the ratio increased rapidly from 2008-2011, there has been a marginal decrease since 2012 and the ratio is slowing. It seems that Grameen was approaching its borrowing limits. Although the ratio has been slowing, it is not decreasing rapidly enough and therefore Grameen may have solvency problems.

4.4 Liquidity

4.4.1 Liquid Assets

This ratio signifies the ease with which an MFI can service its debt and cover its short-term liabilities if it should be required.



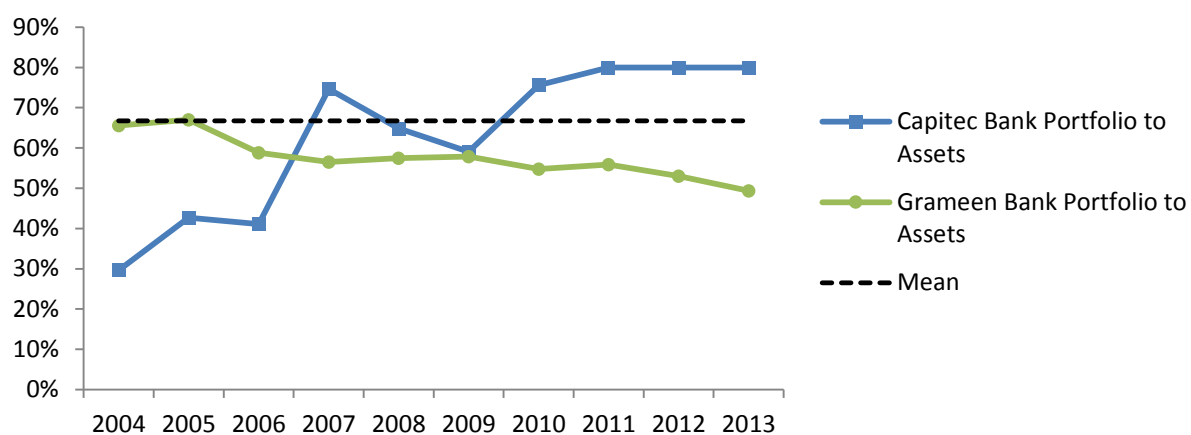
Source: MIX 2010b; MIX, 2012a; MIX, 2012b

The mean liquid assets ratio globally for MFIs with a legal status of ‘banks’, was 20% in 2010. Capitec’s liquid asset ratio has declined sharply from 53% in 2006 to 19% in 2012. However, a search of the literature suggests that there is no obvious reason for this deterioration in liquidity. Although Capitec’s liquid asset ratio has been below the 2010 global bank average since 2011, there is still a margin of safety. Conversely, Grameen’s ratio has gradually been increasing and was 46% in 2013, thus it has a high margin of safety. As with Capitec, an investigation of the literature indicates that there is no apparent reason for Grameen’s increase in liquidity.

4.5 Efficiency

4.5.1 Portfolio to Assets

This indicator measures the allocation of assets to its lending activity. The greater the share of total assets that the gross portfolio has, the better the return on its assets (Jørgensen, 2012).



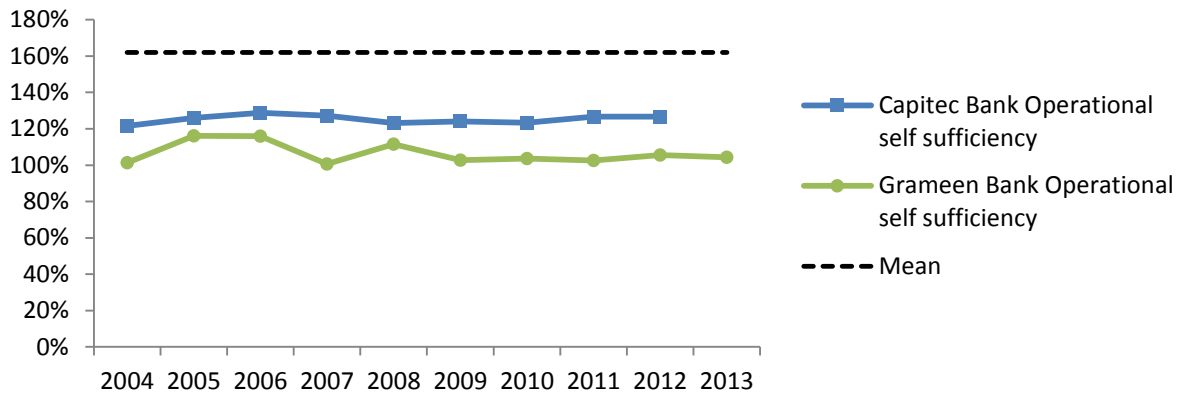
Source: MIX 2010b; MIX, 2012a; MIX, 2012b; Capitec, 2013

The portfolio to assets ratio average, globally, for MFIs with the legal status of ‘banks’ is 67%. Capitec’s portfolio to assets ratio of 80% was higher than Grameen’s 49% in 2013. Both MFIs have had some variability over the 10-year period when considering this ratio. According to Mbeba (2008), variations in this ratio may be due to seasonal activity or inflexible operational models such as ‘batch’ lending. Although it seems that Capitec is efficient due to it maintaining a high portfolio to assets ratio, a high ratio can indicate inadequate liquidity levels (SEEP, 2010). However, when Capitec’s ratio is read in conjunction with its liquid asset ratio, it seems to be acceptable. Grameen’s portfolio to assets ratio seems acceptable although it has been declining.

4.6 Self-sufficiency

4.6.1 Operational Self-Sufficiency

The OSS ratio indicates whether an MFI can cover its costs through internally generated operating revenues only and whether it can thus operate independently of subsidies (Mbeba, 2008). This ratio determines a manager’s ability to manage the institution and to cover its operating expenditures including the possibility of attracting subsidies (Hartarska & Nadolnyak, 2007).



Source: MIX 2010b; MIX, 2012a; MIX, 2012b

The global average for OSS for MFIs with a legal status of 'bank' was 162% in 2010. This is much higher than both Capitec and Grameen's ratio. Grameen's OSS has averaged 106% over the 2004-2013 period and was 104% in 2013. Capitec's OSS ratio averaged 125% over the 2004-2012 period and was 127% in 2012. However, the break-even point for MFIs using this indicator is 100% indicating that the MFI's revenue is equal to its operating expenses. Both MFIs are therefore operationally sustainable as their revenue exceeded their operating costs over the entire period.

5 RESEARCH CONCLUSIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

It is apparent from the previous section that generally both MFIs seem to be financially sustainable. Yet overall, it seems that Capitec is more financially sustainable than Grameen.

When considering the profitability ratios it is important to note that Von Stauffenberg et al. (2014) cautions that looking at profitability indicators such as ROE and ROA in isolation is of limited use as it is an aggregate of many factors. When these ratios are considered in conjunction with the debt to equity and the operating expense ratios Capitec Bank seems to be doing well. Additionally, Capitec is currently the second most profitable bank globally when considering ROA (5,08%). Furthermore, its ROE is currently 25% and debt to equity ratio 4,9:1 (Haakman, 2014). However, although Grameen Bank is currently sustainable when considering the profitability ratios the erratic nature of its ROE and relatively high debt to equity ratio may indicate that the MFI's debt may be too high to be sustainable.

An analysis of the capital adequacy and solvency indicators indicate that Capitec's capital is adequate and that it is not likely to fail. This is due to its capital asset ratio signifying that it has enough capital to support its assets and absorb unexpected losses and its debt to equity ratio being sufficiently low. Conversely, Grameen's capital adequacy and solvency indicators suggest that it will not be able to withstand unexpected losses as its capital asset ratio is too low and its debt to equity ratio indicates that the institution may have solvency problems in the years ahead.

The liquidity indicator shows that Capitec needs to be aware of its liquidity position. Although its liquid assets ratio suggests that it can service its debt and cover its short-term liabilities if needed, when read in conjunction with the portfolio to assets ratio, there may be some caution needed. Nevertheless, Capitec has been performing well over the last decade and seems to be becoming more sustainable. Furthermore, Moody's Investors Service (2014) reports that Capitec already complies with Basel III liquidity ratios and has a prudent liquidity approach. Equally, Grameen Bank's liquidity ratio suggests that it has a high margin of safety and that the MFI is performing sustainably despite the medium term risks posed by its debt to equity ratio as explained above.

An analysis of the efficiency indicator indicates that both Capitec and Grameen are relatively efficient. Both MFIs' portfolio to assets ratio suggests an effective use of its assets. Furthermore, when considering the self-sufficiency indicator both MFIs are operationally sustainable as their revenue exceeded their operating costs over the entire period. This clearly shows that the MFIs can operate independently of subsidies.

When all the indicators are considered, Capitec Bank and other South African MFIs should heed Grameen Bank's low ROE and capital asset ratios and high debt to equity ratio. Ensuring healthy and strategic lending portfolios gives a good ROE for a firm's shareholders. Furthermore, the capital asset and debt to equity ratios have important indications for an institution's capital structure. Therefore, Capitec and South African MFIs should maintain healthy ROE, capital asset, and debt to equity ratios in order to ensure their long-term sustainability.

As future research, it would be useful if data were made available to enable an assessment of a failed South African MFI to obtain clearer insight into the South African microfinance sector. Furthermore, data on Grameen and Capitec's asset quality and social performance will give additional insight into the social sustainability of these two MFIs.

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APPENDIX I

Table I-1: Rating report topics

M-CRIL	MICROFINANZA RATING	MICRORATE	PLANET RATING
<p>GOVERNANCE AND STRATEGY</p> <ul style="list-style-type: none"> • Country external environment • Board (experience, independence, strategic role, separation with management) • Quality of management – key man risk • Institutional experience and focus • Strategy/orientation of MFI (market competitiveness, target clients) • Suitability of products and services • Funding strategy and sources (diversification, subsidized/commercial, stable/fluctuating, currency) • Compliance with legal and regulatory requirements/ Network participation <p>ORGANISATION AND MANAGEMENT</p> <ul style="list-style-type: none"> • Human Resource Quality & Systems • Staff – salary/incentive structure and productivity • Client protection principles – policy and practice • Quality of Accounting systems and practices • MIS – data flow integrity and report generation capability • IT systems – MIS & Accounting integration • Internal Audit and Monitoring - scope, frequency and rigour • Tracking system for overdues • Client dynamics and awareness 	<p>EXTERNAL CONTEXT</p> <ul style="list-style-type: none"> • Country Risk. Political and Macroeconomic context • Regulatory Risk. Tax and supervision compliance • Industry Risk: Financial System and Microfinance Sector <p>GOVERNANCE AND STRATEGY</p> <ul style="list-style-type: none"> • Institutional Background • Ownership, Governance and Decision-making • Strategic and Operational Plan • Financial Projections • Quality of products offered • Market Positioning and franchise value <p>ORGANIZATION AND OPERATIONS</p> <ul style="list-style-type: none"> • Organization and Structure • Human Resources (HR) and Staff Policy • Risk Management, Internal Control and Internal Audit • Information Technology (IT) and Management Information System (MIS) • External Audit and Accounting Policies 	<p>FINANCIAL SITUATION</p> <ul style="list-style-type: none"> • Profitability • Solvency and capital adequacy • Financial Liquidity • Maturity Risk • Interest Rate Risk • Foreign Exchange Risk <p>MICROFINANCE OPERATIONS</p> <ul style="list-style-type: none"> • Portfolio Composition • Reliable credit information and Credit Analysis • Credit Approval Process • Guarantees • Credit Terms and Conditions • Overindebtedness • Savings Products and Services <p>PORTFOLIO QUALITY</p> <ul style="list-style-type: none"> • Portfolio at Risk • Write-offs • Refinanced Loans • Risk Operations • Provisions • Collections 	<p>MICROFINANCE SECTOR GOVERNANCE</p> <ul style="list-style-type: none"> • Decision-making • Planning • Management team • HR Management <p>INFORMATION</p> <ul style="list-style-type: none"> • Information management and systems <p>RISK MANAGEMENT</p> <ul style="list-style-type: none"> • Internal controls • Internal audit <p>ACTIVITIES (FINANCIAL SERVICES)</p> <ul style="list-style-type: none"> • Financial services management • Credit risk level • Credit risk coverage <p>FUNDING AND LIQUIDITY</p> <ul style="list-style-type: none"> • Capital Adequacy and funding strategy • Minimum capital requirement • Liquidity risk • Market risk

M-CRIL	MICROFINANZA RATING	MICRORATE	PLANET RATING
FINANCIAL PERFORMANCE <ul style="list-style-type: none"> • Capital Adequacy • Profitability (RoA, OSS, FSS) • Margins – spread (FCR, OER, and Yield analysis) • Asset Utilisation • Portfolio analysis for concentration risk (area and activity) • Repayment track record on external debt • Debt Service coverage Ratio and ALM 	ASSETS STRUCTURE AND QUALITY <ul style="list-style-type: none"> • Assets Structure • Portfolio Structure, Seasonality and Concentration Risk • Portfolio Quality and Credit Risk • Credit Policies and Procedures and management of lending activities FINANCIAL STRUCTURE AND MANAGEMENT <ul style="list-style-type: none"> • Capital Adequacy and Solvency Risk • Liabilities, indebtedness and Concentration Risk • Financial Needs and Funding Plan • Assets and Liabilities Management (Liquidity Risk and Market Risk) FINANCIAL AND OPERATIONAL RESULTS <ul style="list-style-type: none"> • Profitability and Sustainability • Revenues and Expenses Structure and Margins, Efficiency and Productivity 	ORGANIZATION AND MANAGEMENT <ul style="list-style-type: none"> • Management and Personnel • Organization and structure • Internal Control • Management Information Systems GOVERNANCE AND STRATEGIC POSITION <ul style="list-style-type: none"> • Ownership and Board • Strategic Positioning SOCIAL PROFILE <ul style="list-style-type: none"> • Mission analysis • Social orientation CONTEXT <ul style="list-style-type: none"> • Financial and microfinance sector 	EFFICIENCY AND PROFITABILITY <ul style="list-style-type: none"> • ROA • Revenue quality • Operating efficiency • Asset deployment • Profitability outlook

Source: Abrams, 2012

APPENDIX II

Table II-1: Quantitative indicator ratios

Indicator	MFRS ratio	Sources that use ratio
Profitability	Return on Equity: $\frac{\text{Net operating income} - \text{Taxes}}{\text{Average equity}}$	Bruett 2005; SEEP, 2010; MIX, n.d. Bruett 2005; SEEP, 2010; Serrano-Cinca, Gutiérrez-Nieto & Molinero, 2011; MIX, n.d. Bruett 2005; SEEP, 2010; Balkenhol & Hudon, 2011; Serrano-Cinca, Gutiérrez-Nieto & Molinero, 2011; MIX, n.d.
	Return on Assets: $\frac{\text{Net operating income} - \text{Taxes}}{\text{Average assets}}$	
	Operating Expense Ratio: $\frac{\text{Operating Expense}}{\text{Average Gross Loan Portfolio}}$	
Capital adequacy and solvency	Capital Asset Ratio: $\frac{\text{Total equity}}{\text{Total assets}}$	SEEP, 2010; Dorfleitner, Leidl & Priberny, 2013; MIX, n.d. Bruett, 2005; SEEP, 2010; MIX, n.d.
	Debt to Equity Ratio: $\frac{\text{Total liabilities}}{\text{Total equity}}$	
Liquidity	Liquid Assets: $\frac{\text{Non - earning liquid assets}}{\text{Average total assets}}$	Dorfleitner, Leidl & Priberny, 2013; MIX, n.d.
Efficiency	Portfolio to Assets: $\frac{\text{Gross loan portfolio}}{\text{Total assets}}$	Bruett 2005; SEEP, 2010; MIX, n.d.

Indicator	MFRS ratio	Sources that use ratio
Self-sufficiency	Operational Self-Sufficiency: $\frac{\text{Financial Revenue}}{\text{Financial Expense} + \text{Impairment Losses on Loans} + \text{Operating Expense}}$	Bruett, 2005; Serrano-Cinca, Gutiérrez-Nieto & Molinero, 2011; MIX, n.d.

Source: Saltzman, Rock & Salinger, 1998; Bruett, 2005; SEEP, 2010; Balkenhol & Hudon, 2011; Serrano-Cinca, Gutiérrez-Nieto & Molinero, 2011; Dorfleitner, Leidl & Priberny, 2013; MIX, n.d.

APPENDIX III

Table III-1: Outcome of the indicators for Grameen Bank

Ratio	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
ROE	0.01	0.18	0.22	0.01	0.15	0.04	0.08	0.07	0.15	0.11
ROA	0.002	0.024	0.025	0.001	0.017	0.004	0.005	0.004	0.009	0.007
Operating Expense Ratio	0.09	0.13	0.11	0.13	0.11	0.11	0.12	0.11	0.11	0.12
Capital Asset Ratio	0.15	0.11	0.11	0.09	0.13	0.07	0.06	0.06	0.06	0.06
Debt to Equity Ratio	5.51	7.89	8.25	9.96	6.71	13.43	15.44	16.11	15.57	15.46
Liquid Assets	-	0.26	0.36	0.40	0.39	0.40	0.40	0.40	0.43	0.46
Portfolio to Assets	0.66	0.67	0.59	0.57	0.57	0.58	0.55	0.56	0.53	0.49
OSS	1.01	1.16	1.16	1.01	1.11	1.03	1.04	1.03	1.06	1.04

Source: MIX, 2012a

Table III-2: Outcome of the indicators for Capitec

Ratio	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
ROE	0.12	0.21	0.20	0.20	0.24	0.31	0.25	0.25	0.23	0.27
ROA	-	0.105	0.095	0.094	0.083	0.065	0.055	0.057	0.050	-
Operating Expense Ratio	-	1.23	0.83	0.55	0.41	0.33	0.22	0.17	0.12	0.10
Capital Asset Ratio	0.59	0.45	0.51	0.41	0.28	0.18	0.24	0.22	0.22	0.22
Debt to Equity Ratio	0.70	1.22	0.96	1.41	2.53	4.49	3.18	3.56	3.50	3.50
Liquid Assets	-	0.47	0.53	0.22	0.30	0.27	0.20	0.19	0.19	-
Portfolio to Assets	0.30	0.43	0.41	0.75	0.65	0.59	0.76	0.80	0.80	0.80
OSS	1.22	1.26	1.29	1.27	1.23	1.24	1.23	1.27	1.27	-

Source: Capitec, 2007; MIX, 2012b; Capitec, 2013