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UNIVERSITY OF THE WITWATERSRAND

FACULTY OF COMMERCE LAW AND MANAGEMENT



SCHOOL OF ECONOMIC AND BUSINESS SCIENCES

THE RELATIONSHIP BETWEEN FINANCIALISATION AND THE REAL ECONOMY IN SOUTH AFRICA

BY

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MASTER OF COMMERCE (COURSEWORK AND RESEARCH)

Declaration

I declare that this research report is my own unaided work. It has been submitted for the Degree of Master of Commerce (Development Theory and Policy) at the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination at any other University.

Ndonwi Gerald Mfongeh

…….. ……

Name of Student **Date Submitted**

……..

Signature

Acknowledgments

This research report would not have been possible without the help of the kind people around me, of whom only some can be mentioned here.

Above all I would like to thank God for giving me the opportunity and strength to complete this work. It was only through his spiritual guidance that it was possible.

I sincerely thank my supervisor Dr Rex Mckenzie for teaching, advising and supporting me throughout the process. All your effort and hard work have definitely made me a better person.

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Dedication

This work is dedicated to my parents Mr and Mrs Mfongeh for their love, support and encouragement. I am also thinking of my siblings Barbara, Elvis, Vera, Declan and Noel and my close friends Charles and Olivier.

Table of Contents

Declaration ii

Acknowledgments iii

Dedication iv

List of figures vii

List of tables vii

Abstract viii

CHAPTER ONE: INTRODUCTION 1

1.1 Background and Context 1

1.2 Research problem and questions 4

1.3 Hypothesis 5

1.4 Research aims and objectives 5

CHAPTER TWO: LITERATURE AND THEORETICAL FOUNDATION 6

2.1 Introduction 6

2.2 Overview of financialisation literature 6

2.3 Changes that led to growth in finance 8

2.3.1 Maximising shareholder value orientation 9

2.3.2 Change in regulation and investment pattern of institutional investors 9

2.3.3 Households turn to financial sector as a solution to falling wages 11

2.3.4 Increased financial activity by NFCs 11

2.4 South Africa's Financialisation trajectory 13

2.4.1 Introduction 13

2.4.2 A brief history of financialisation in South Africa 13

2.4.3 Empirical analysis of the NFC sector using the balance sheet approach 15

2.4.4 Conclusion 19

CHAPTER THREE: RESEARCH APPROACH AND METHOD 20

3.1 The model theoretically explained 20

3.2 Data source 23

CHAPTER FOUR: EMPIRICAL RESULTS AND ANALYSIS 26

CHAPTER FIVE - CONCLUSIONS 32

REFERENCES 34

Appendix 36

List of figures

Figure 1: Financial assets as a percentage of fixed assets for NFCs……..…….. 17

Figure 2: Financial income as a percentage of gross operating surplus for NFCs……... 23

Figure 3: Financial sector profit as a percentage of total profit..……...…….... 24

Figure 4 Major NFC investments by type……..……...……...… 27

List of tables

Table 1: Expected impact of regression variables on real investment……..23

Table 2: Correlation matrix……...28

Table 3: Regression results including all five variables……31

Table 4: Regression results for all variables excluding debt……32

Abstract

The relationship between finance and the real economy which has been the subject of centuries old debates, gained renewed prominence with the relative and unprecedented growth of the financial sector over the last few decades. Finance has changed not only in terms of its size compared to other sectors, but also in terms of the nature of its products, and how it affects outcomes in the real economy. This has become known as financialisation. Research in other places has shown that the financial sector has grown at the expense of the real economy, as it has negatively impacted real investment. This occurred against the backdrop of non-financial corporations (NFCs) diverting more of their surpluses to the financial sector in the form of financial payout and financial investment.

This research project studies the relationship between financialisation and the real economy in South Africa. Using aggregated data of all listed firms (with the exception of financial companies) on the Johannesburg Stock Exchange between 1971 and 2012 the impact of financialisation on real investment is empirically tested. Two channels in the form of financial payout (dividend and interest payments) and financial income (dividend and interest income) through which funds flow between the real economy and finance are analysed. We find that increased financial activity by NFCs may have a negative impact on real capital investment. Financial income presents more robust results than financial payout which may be an indication that the crowding out effect is a serious problem in South Africa.

Key words: financialisation, real investment, financial assets and non-financial corporations

CHAPTER ONE: INTRODUCTION

1.1 Background and Context

The global financial crisis which started in the United States of America (US) in 2008 with the collapse of Lehman Bros, and spread to the rest of the world had very serious consequences for South Africa with an estimated fall in GDP of 3 % and loss of one million jobs between 2008 and 2009 (Ashman, Fine and Newman, 2011). Although there were numerous contributing factors, the immediate cause of the crisis was the collapse of the US housing market brought about by a sharp rise in the number of mortgages and subprime mortgages leading to a housing bubble, which eventually collapsed when the housing debt of poor homeowners became unsustainable resulting in an unprecedented level of defaults (Lapavitsas, 2009). The crisis spread to other parts of the world due to securitisation – a practice where various types of debt including mortgages, credit card and auto debt are pooled together to form new investible portfolios – which had become a common practice among commercial banks as they sought new profit areas (Lapavitsas, 2010). Subprime mortgages were broken up, packaged together with other forms of debt in what became known as collateralised debt obligations which were supplied by structured investment vehicles (McKenzie, 2011). Thus banks or originators of mortgages in general were no longer compelled to incur losses from bad deals as they were further sold to other investors, leading to a huge rise in reckless lending as financial institutions increasingly offered credit to those who simply could not afford (Allen and Carletti, 2009). These changes in the financial sector have taken place within a framework of wider structural changes occurring in the global economy over the last 30 years where the nature of finance substantially changed in terms of its size, the variety and complexity of its products and its relationship with other sectors in what has become known as a financialisation of the world economy..

Financialisation has been defined in a multiple number of ways but the overarching theme is that it is concerned with the increase in the size and role of the financial sector relative to the real productive sector of the economy. Orhangazi (2007) defines financialisation as the increase in the size and importance of financial markets and the institutions that sustain it. Meanwhile Epstein (2005, 3) says financialistion is ‘‘the increasing role of financial motives,

financial markets, financial actors and financial institutions in the operation of domestic and international economies'. Fine (2011) describes it by looking at how changes in finance affect the rest of the economy when he states that financialisation has seen the phenomenal growth of the financial sector at the expense of the other sectors of the economy. Finance has thus moved from its traditional supportive role where it assisted other sectors to generate and appropriate surpluses to one where it now focuses on generating surpluses itself.

This study adopts the narrow definition of financialisation by Stockhammer (2004), who defines financialisation as the increasing participation of non-financial corporations (NFCs) in financial market activities, chiefly through investing in financial assets and in return receiving various streams of financial income. This approach has been taken in order to show a link between increased investments in financial assets and decreased real capital accumulation for South Africa. There is by no means a consensus on the effects of increased financial involvement by NFCs. Heterodox authors like Orhangazi (2007) and Stockhammer (2004)[1] postulate that financialistion is detrimental to real capital accumulation while the neoclassical approach mostly deems the process a positive occurrence, usually expected of mature economies and argue that increased investment in financial assets is actually positive for the real economy as it leads to higher liquidity, making it easier for viable projects to find funds for investment (Lapavitsas, 2010). Tobin (1997) states that in a macroeconomic sense, financial investment is not a substitute for capital investment but complimentary and all worthy investments will ultimately find required funds. Meanwhile Russo and Zanini (2010) find that the expansion of finance has increased both financial profits and capital accumulation, though at the expense of stability. This study empirically investigates the relationship between growth in financial sector activity by NFCs and investment in real capital in order to see if the contours of South African finacialisation follow the course and shape of the finacialisation process elsewhere as described by Stockhamer, Lapavitsas, Orhangazi and other heterodox writers.

It would thus seem the main bone of contention between the different schools of thought is the consequences of the expansion of finance and not that finance has grown more than other sectors in recent decades. Figures show growth in finance both in SA and globally is quite evident. Vdovenko (2013) quotes work done by Barclays Capital which reports that the

[1] Orhangazi (2007) and Stockhammer (2004) are important citations in this thesis and will be developed further in the literature review chapter.

amount of assets under the management of index investment funds rose from $ 15 billion in 2003 to over $400 billion by 2013. Meanwhile the Bank for International Settlements reports that the daily volume of foreign exchange transactions increased from 570 billion per day in 1989 to over 1.9 trillion per day in 2004 (Epstien, 2005). Other studies have reported similar numbers. Fine (2011) quotes a study by McKinsey (2008) which states that the value of global financial assets grew from US$ 12 trillion in 1980 to US$ 196 trillion in 2007. Dore (2008) focuses on the derivative market and quotes over the counter derivative trading which stood at 197 trillion dollars in 2004 before reaching 516 trillion by 2007, eight times the world GDP. Krippner (2005) compares profit levels for the US of the finance sector with that of manufacturing and presents a staggering picture which shows that while the manufacturing sector fell from accounting for almost 50% of all profits in 1950 to about 10% by the mid 2000s, profits in the finance, insurance and real estate sector increased from just over 10% to about 45% in the same period. Yet finance has not only grown in terms of the value of transactions it has also grown in terms of the nature of the transactions and types of products.

As Lapavitsas (2009) states, finance is now associated with most aspects of society in the developed world and continuously growing strongly in the developing world. Households have become financialised both through the increase in their financial obligations to the financial sector and through the rising levels of their incomes generated from the financial sector in the form of their mutual and pension funds (Orhangazi, 2011). Non-financial corporations (NFCs) have also become financialised in two ways: first by changing the way in which they raise funds for investment by borrowing directly from the markets in the form of financial paper to replace their traditional relationship with banks, and second by investing more of their surpluses in the financial sector rather than in long term fixed capital (ibid and Toporowski 2008). Whether intentionally or not households and NFCs have been greatly involved in the expansion of finance by investing increasing portions of their incomes in finance and also through higher levels of financial payments to the financial sector (Russo and Zanini, 2010). NFCs will be crucial in the analysis presented in this work due to the important part they play in the real growth trajectory of any economy.

For SA we adopt a methodology used by Orhangazi (2007) for similar analysis of the US economy to investigate the relationship between the financial sector and the real economy by analysing: first, to what extent does financial sector investment by NFCs crowd out investment in real capital and second, to what extent do increased financial payouts by NFCs

slow down accumulation by limiting the amount of funds available for fixed capital. The dependent variable will be real investment while a number of explanatory variables including dividend and interest payments, incomes generated by NFCs from finance, profitability, sales and capacity utilisation of NFCs will be used in the model to empirically test whether financialisation slows down capital accumulation in South Africa.

The paper is structured as follows: the rest of this introductory chapter presents a broad introduction to financialisation where the subject is properly defined and other important issues explained. Chapter two will review the literature that explains the growth in finance and the channels through which funds flow between the real economy and the financial sector. The third chapter presents a discussion on the data, methodology and model which will be used in the project. Here the research questions are outlined and explained, the hypotheses and variables discussed and the motivation for the chosen methodology outlined. Chapter four presents the results of the empirical tests carried out while chapter five concludes. In general, I find that there is some support for the financialisation theory in SA through the financial payment and financial income channels.

1.2 Research problem and questions

The purpose of this research report is to investigate the impact of financialisation on the real productive sector of the South African economy. Studies in other parts of the world have shown that the increased role and growth in finance has negative effects on real capital accumulation and therefore growth. This is due to the fact that investors tend to prefer the short term, (but highly volatile) nature of financial sector profits than long term fixed capital profits from the real economy where profits have mostly been on a downward trajectory since the 70s (Orhangazi (2011); Lapavitsas (2010) and Stockhammer (2004)). The argument here is that by non financial corporations choosing to invest more in financial assets and transfer increasing portions of their internally generated surpluses in the form of dividends and interest payments, investment in capital for new projects is negatively affected (Orhangazi 2007).

Although South Africa's flow of funds data compiled by the South African Reserve Bank shows that gross capital formation increased steadily between 1992 and 2012, acquisition of financial assets by non-financial private businesses also increased significantly. Net acquisition of financial assets increased from about R25 billion in 1992 to over R272billion

while capital formation increased from about R44 billion to R300 billion in the same period (McKenzie 2013). The figures show that growth of investment in financial assets has been faster than the rate at which NFCs have invested in real capital (Ibid). This project investigates the relationship between the flow of funds from NFCs to the financial sector and its consequences in the period between 1971 and 2012.

We attempt to do this by seeking answers to the following questions:

1. Do increased levels of investment in the financial sector by NFCs lead to lower capital accumulation in the real productive sector in South Africa?
2. Do higher financial payouts (dividends and interest payments) to the financial sector by NFCs negatively affect investment in fixed capital?

1.3 Hypothesis

The paper relies on the work of Orhangazi (2007) which sought to establish a link between growth in finance and weak capital accumulation in the USA. Following Orhangazi there is one main hypothesis and two sub hypotheses

Main hypothesis

Financialisation of the South African economy has led to a decline in real capital accumulation in the real productive sector

Two sub hypotheses are also identified as follows: first, increased investment by non-financial corporations in financial assets crowds out investment in fixed capital investment in the real economy and second, increased financial payouts by non-financial corporations in the form of dividend and interest obligations to the financial sector contribute to a slowing down in real investment.

1.4 Research aims and objectives

The main aim of this research report is to investigate the relationship between financialisation and capital accumulation in South Africa. We seek to find out if growth in finance has a negative effect on real investment.

CHAPTER TWO: LITERATURE AND THEORETICAL FOUNDATION

2.1 Introduction

This section reviews the literature on financialisation as a process. The relationship between finance and the real economy comes in for close scrutiny with central focus being the role of finance in the economy and how it has evolved over time. Other facets of the financialisation process like the size of finance relative to the other sectors and how it affects real investment are also discussed. Two other important aspects of financialisation discussed are the changes that led to the recent growth in finance and also the channels through which funds move from the real economy to finance.

2.2 Overview of financialisation literature

The financial crisis of 2008 which evolved from the financial sector in the US and spread to the world economy provided the ideal opportunity for a revival of the old argument of the role finance should play in the economy. Mainstream economists have provided explanations for the crisis which seem to suggest it was a rare and unexpected occurrence but not a systemic failure while heterodox economists suggest the problem was structural in the sense that the unprecedented growth of finance caused problems as it became too powerful and thus difficult to properly regulate (Orhangazi, 2011). These differing viewpoints on the causes of the crisis are also closely linked to the arguments on the nature and role of the financial sector and its relationship with the real economy.

Most mainstream theories on the relationship between finance and the productive sector deem the financial sector as having a supportive role, aiding the real productive sector in a number of ways including linking surplus units to deficit ones, supplying of credible information and the efficient allocation of resources (ibid). This so as the role of finance in the production process is limited to providing active players access to important inputs but not fully involved itself and should thus assist the real economy in surplus generation but generate none itself (Fine, 2011). According to Keynesian theory, finance should be monitored and regulated as most crises are related to instances of market failure. Lapavitsas (2010) speaks of a rentier financial sector which is encouraged by the presence of deregulation in the economy. The short term nature of financial sector activities makes it more attractive to rentiers avoiding long term investments in fixed assets.

Although the role of finance has never been a settled issue, finance has traditionally played a more supportive role to the real economy which has not been the case over the last three decades. Finance has grown not only in size but also in the role it plays in the wider economy. It has evolved in terms of the types of activities it engages in, the types of institutions it interacts with and with respect to how it is regulated. These changes have had serious consequences not only for the sector but the entire economy. One major adverse consequence of such changes in finance has been the proliferation of financial crises which as Bordo et al (2001) find have become more frequent in recent decades than they were during the Bretton Woods era.

Of keen interest to heterodox economists is the effect financialisation has on long-term capital accumulation. Orhangazi (2007) and Stockhammer (2004) show that growth in finance has had a negative impact on the rate at which real investment is being made. Growth in finance at the expense of the real economy has taken place against the backdrop of several changes in the wider global economy including the shareholder value wave of the 1980s, falling profits of NFCs since the end of the golden age, financialisation of households and NFCs and regulations that have favoured finance. Due to the fact that several factors exist that could slowdown real investment, it is important for studies of this nature to not only show that growth in finance coincided with slowdown in capital accumulation, but that there is a link between the two.

Studies using similar methodology show that financialisation negatively affects real capital accumulation. Orhangazi (2007) uses firm level data for NFCs between 1973 and 2003 in the USA and finds that real investment slowed down as non financial businesses used more of their surpluses for financial payouts and also investment in financial products. This will be tested for South Africa to see how this experience compares with the South African case. Stockhammer (2004) uses data for the period between 1963 and 1997 for the USA, UK, France and Germany to test the impact of financialisation on aggregate business investment and finds with the exception of Germany, strong links between financialisation and weak capital accumulation. It is believed that Germany did not support the thesis due to the nature of its corporate governance structure where the shareholder value orientation was new and not yet fully established. The findings of the study provide support for the argument that the shareholder valuation wave which started in the 1980s encouraged NFCs to focus more on increasing firm value than other considerations including real investment.

Mainstream economic theory finds no problem with NFCs investing in financial products as they say it is the general profitability of the firm that matters and thus all viable investments whether real or financial ultimately be funded. The problem with this argument is that should financial sector profits continue to be higher than those in the real economy, it is likely that investors will continuously invest in financial products and continue to defer investment in long term capital. Also, as explained above, the evidence suggests that fewer investments are being made in the real economy as a result of increased investment in financial assets. This means increased investment in financial products limits the funds available for real investment is supported by Tobin (1965) who argues that financial and real investment could be substitutes meaning lesser funds will be available for real investment if they are being directed to finance. This causation between financial investment and weak real investment casts doubt on the notion that investment in financial products is a transfer of assets and not use of income as funds (Orhangazi 2007). Also, continuous movement of liquid funds from one economic agent to another encourages what Stockhammer (2004) labels a rentier status. Investors shy away from committing to long term capital investment and instead continuously make multiple short term investments.

A rentier orientation is however just one facet of financialisation process. The next section puts financialisation more into perspective by discussing some the changes that led to the recent hegemony of finance. These include a shareholder value movement wave which began in the 1980s, changes in regulation that favoured finance and changes in attitude of households and private businesses. All these changes whether deliberate or otherwise, conspired to create an environment which made it easier for finance to continue to perform well while the real economy struggled.

2.3 Changes that led to growth in finance

This section looks at some of the changes in the global economy that encouraged the unprecedented growth of finance seen in the last three decades. Three main changes include the maximising shareholder value orientation started in the 1980s, change in regulations and increased financial activity of institutional investors and change in attitude of various players in other sectors especially households and NFCs.

2.3.1 Maximising shareholder value orientation

The shareholder value orientation is a system of corporate governance whereby the interests of shareholders are put above every other consideration (Lazonick and O'Sullivan 2000). It means that business entities should make value creation for owners their top priority no matter the consequences for all other stakeholders. Before the wave of neo-liberal policies that hit the global economy starting in the 80s, the practice was for NFCs to retain and invest surpluses in the real economy. This was the foundation of the growth that occurred throughout the golden era (ibid). As huge conglomerates expanded and it became ever more difficult for owners to control managers and align their interests in what became known as the principal-agent problem, perceptions on the concept of reinvesting most surpluses began to change. The need for shareholders to exert more control over the firm was exacerbated by the fact that unemployment was low putting considerable powers in the hands of workers.

This was the basis for the owners of businesses to begin to fight back for more control. The shareholder valuation orientation was aided by the Washington Consensus neoliberal policies which became rampant in the 1980s (ibid). Thus instead of NFCs seeking longer lasting solutions to the problems they were faced with, they chose for short term and the short termism of finance. Other short term solutions to prevailing problems firms faced included massive downsizings which included the selling of assets and also laying off of workers in order to cut cost. Firms that were seen to be selling off assets were seen by the markets as more investible and thus more valuable. In order to satisfy shareholders, executive managers began to engage in massive dividend payouts that were funded by investment in financial products (Orhangazi, 2007).

The result of this was a business environment in which NFCs increasingly became financialised through increased financial investment and higher financial payouts. NFCs also became shorter term focused through increased casualisation of labour and selling off of physical assets (Lazonick and O'Sullivan (2000).

2.3.2 Change in regulation and investment pattern of institutional investors

The increase in the role and importance of finance has also been encouraged by the deregulation of the business environment that came with the neoliberal policies of the

Washington consensus. Corporate governance rules changed greatly in the US starting in the 1970s and such changes were tilted in favour of the financial sector (Orhangazi, 2007; Lazonick and O'Sullivan, 2000) making it easier for institutional investors to invest in a wider range of financial products and also for much larger amounts. One of the consequences was that the share of direct household ownership of corporate stock decreased from 90% in 1950 to just 42% by the year 2000 although indirect ownership remained high through institutional investors who took up most of the space created (Crotty, 2005).

Two key changes took place in the US that led to the explosion of the financial sector including enactment in the US of the Employee Retirement Income Security Act (ERISA) in 1974 and and the Garn-St. Germain Act of 1982 (Lazonick and O'Sullivan, 2000). One key aspect of ERISA was the expansion of the range of financial products institutional investors could invest in. This was in response to the high level of inflation and generally low profitability levels in the 1970s. The other major change was the institution of the Garn-St. Germain Act which was meant to give banks the opportunity to better compete with the largely unregulated money market sector. The new law also extended the variety of activities banks could engage in, a move which increased the flow of funds into finance.

Another important change was the collapse of the Bretton Woods economic order in the 1970s (Orhangazi, 2011). The Bretton Woods economic order was instrumental in stabilising global macroeconomic fundamentals like exchange and interest rates and hence underlying commodity prices (McKenzie, 2011). It limited the way in which currencies could be converted, meaning cross boarder activities were also limited. Its collapse meant the conversion of public risk to private risk and thus the creation of a whole new industry focused on the management of financial risk (ibid). This would have had enormous implications for the expansion of the financial sector as financial institutions moved from their role of providing support to the real economy to one of wealth creation through speculation.

These changes created an environment in the global economy for finance to establish hegemony and what emerged was a financial sector that was emboldened in terms of the range and riskiness of the products available. As finance exerted more control over NFCs and the private sector depended more on the financial sector for profits, more power was tilted towards finance which has a shorter planning horizon. Lazonick and O'Sullivan (1996) support this by arguing that when the control of an enterprise falls into the hands of those who prefer liquidity to financial commitment then an environment which fosters innovation

and investment will be lost. The outcome is that finance has grown faster than the other sectors over the last few decades.

2.3.3 Households turn to financial sector as a solution to falling wages

In order to fully understand the process of financialisation and the problems associated with it, it is important to not only look at changes in the financial sector but to take a more holistic look at other sectors. As Lapavitsas (2010) states, it is important to study how consumers have changed individually as well as jointly. Looking at how each sector has evolved since the commencement of the financialisation process gives a more holistic perspective both in terms of understanding the concept and seeking solutions.

As Orhangazi (2010) explains, one reason that led households to become financialised was the falling wages which fell way behind productivity and also loss of other benefits. Workers were laid off, made to work fewer hours and casualisation increased all combining to put workers in a worse state. Credit became one of the options available to households to close the gap between their income and spending levels. Household debt as a percentage of disposable income in the US rose sharply from 70% to about 130% between 1980 and 2007 while income of shareholders as a percent of disposable income increased from just over 2% in 1991 to a peak of 10% in 2004. This indicates that credit became a way out of the declining incomes households were faced with.

Credit was made possible and sustained by a number of factors. First deregulation meant financial institutions were able to grant more credit to consumers than before. Second, rising asset value due to the shareholder value orientation made households feel wealthier which provided higher collateral for more credit. Third, deregulation also increased the range of financial products available to households, causing investment in financial assets by households to rise. The result was a household that both received more of its income from the financial sector through its rising personal investment and also institutional investments, and also increased payments to finance due to the massive level of indebtedness. This is reflected in figures from the US economy which show that household financial assets as a proportion of GDP increased from just fewer than 250 in 1973 to about 325 in 2000.

2.3.4 Increased financial activity by NFCs

After the successes of the Golden Age when shareholders of NFCs had enjoyed sustained profitability, most private sector firms began to enter a period of financial difficulty with

falling profits. This was caused primarily by low demand and increased competition in the global economy with the rise of developing powers like China. In the past, NFCs could have responded to profitability problems by persisting due to what Crotty (2005) called 'coercive investment' – where businesses are forced to continue investing in order to limit loss of already invested funds - until such a time that things got better and profitability improved. They could also seek alternatives in the real economy in order to stay afloat while waiting for better outlook in their core business areas. A combination of deregulation, rise of the shareholder value movement orientation, high profitability of the financial sector and increased activity of institutional investors led NFCs to turn to the financial sector for a reversal of the shape they found themselves.

Also, Crotty (2005) argues that large conglomerates react to periods of low profitability by investing through what he calls a price-profit model in which they would increase capital investment in areas where labour and other inputs were cheaper. These corporations were motivated to continue operating even in very difficult times due to the huge sunk costs they usually incurred. Extra motivation to keep going was the fact that the few corporations that survived such torrid times would then reap huge rewards when profit levels improved. Such coerced investment would only begin to decline as well if profit levels did not recover for long periods. Crotty argues that finance now presents private businesses with an alternative way to boost profit levels when their core business activities were not performing well.

Another reason NFCs turned to the financial sector was the huge rise in financial asset prices partly caused by increased demand for these products from institutional investors. The euphoria caused by the strong demand for financial products led to a feeling that the trend was going to continue unabated, sustaining the stock market's record levels throughout most of the period between 1970 and 2000 (Crotty, 2005). This sustained rise in the stock market turnover led to huge profit opportunities in the financial sector just as profit levels in the real productive sectors were continuously falling. As already stated, profits in the productive sector remained in poor condition due to the pressure of the financial sector and institutional investors on the productive sector to cut their workforce and other inputs. With little hope of profitability returning to the real economy, NFCs continued to seek better outcomes in finance.

Orhangazi (2007) discusses how private businesses increased their participation in the US by increasing the amount of financial assets in their portfolio and also the share of their income

from finance. While the ratio of financial assets to tangible assets was just about 30 in 1952 it had increased to about 110 by 2002, indicating financial assets had outgrown real investment by nearly four to one in that time. The story is completed when the income generated by NFCs from the financial sector is studied. Total interest and dividend income as a percentage of internal funds for NFCs increased from just 15% in 1958 to a peak of about 55% in 2000, meaning over half of the income of private businesses were being generated outside of the real economy.

This section looked at some of the changes that led to growth in finance over the past three decades. Most of the literature on the subject available is on the West with very minimal work done on the economy of South Africa. We however in the next section do a brief review of financialisation in South Africa. We'll present a brief history of financialisation trajectory in SA before conducting an empirical analysis of growth in finance, with a focus on the non-financial private business sector.

2.4 South Africa's Financialisation trajectory

2.4.1 Introduction

This section presents the case of South Africa's financialisation path, where a brief history of the financialisation process will be presented, before empirical evidence of financialisation of the South African economy is discussed. Empirical data of the non-financial private sector will be used to analysed how the relationship between the real economy and finance has changed over time.

2.4.2 A brief history of financialisation in South Africa

South Africa's developmental path has so far for the most part been embodied in what Fine and Rustomjee (1996) call the Minerals-Energy Complex (MEC) which is a system of development whereby focus is mainly placed on sectors and industries closely linked to the extraction of minerals by giant, mostly foreign multinational corporations. Thus growth in one MEC sector has strong positive effect on other MEC related sectors but little or no real effect on other industries and sectors not strongly connected to MEC activities (Ashman et al 2013). In other words both old and new investments are focused on already established areas around the extraction of minerals generally seen as safe, with little effort or interest to expand to other areas of the economy or further downstream development.

Since the discovery of minerals in the 1870s and their subsequent development, mining became a huge contributor to the economy of South Africa accounting for up to 60% of exports during the early developmental years (ibid). Mining was the driving force of the economy and determined the way in which accumulation took place. Due to the isolated nature of the economy during the apartheid years plus the macroeconomic structure during the Bretten Woods era, it was difficult for domestic investors to move capital overseas. Local investors thus invested in sectors related to the MEC since they were rather profitable with guaranteed returns (ibid). The MEC therefore became the area of choice for most investors and continued to lead the economy in a developmental path that was continuously tilted towards few industries with little attention accorded the rest of the economy.

South Africa subsequently embarked on a series of policy measures in the 1980s geared towards the opening of the local economy, upheld by the new government after the collapse of apartheid. Notable among these changes was the fact that there was relaxation of capital controls on non-residents giving them the opportunity to move their investments overseas if they wanted. As Ashman, Mohamed and Newman (2013) argue, the liberalisation and deregulation of the South African economy was done in line with common global practices and also due to the long standing ties South Africa enjoyed with countries like US and Britain. The consequences of deregulation and liberalisation have been quite serious and substantial. There was massive outflow of long-term capital and inflow of short-term capital inflows (Ashman, Fine and Newman, 2011) due to the high interest rates that had been put in place as part of the neoliberal polices being pursued. Household debt also increased significantly as consumers borrowed to maintain their standard of living while investing their current income in financial products (Ashman, Mohamed and Newman, 2013).

The fact that no real policies were put in place to develop other sectors or diversify the economy during the period of isolation meant it was going to be even more difficult after the opening up of the economy as more options became available to investors to make meaningful returns in other areas besides long term capital investment. The opening of the economy with the easing of exchange controls meant investors, domestic and foreign could easily move their funds abroad by divesting from activities that were not their core business. This means they could focus on their core MEC areas while investing the rest of their funds in finance. This would have further exacerbated the unbalanced nature of the economy where

interest continued to be on minerals extraction, increased investment in finance and continuous lack of sufficient investment in other real sectors as shown in the section below.

2.4.3 Empirical analysis of the NFC sector using the balance sheet approach[2]

We now turn to some empirical data which shows how the South African economy has changed in recent decades. We also attempt to show the kind of effect growth in finance has had on the real economy. Orhangazi (2011) argues that in order to fully understand the role of finance and how it has changed recently, it is important to look at it in relation to the real economy. We do this by analysing the non-financial private business sector which plays a key role in the real capital accumulation process. We use the South African flow of funds (FoF) tables in our analysis.

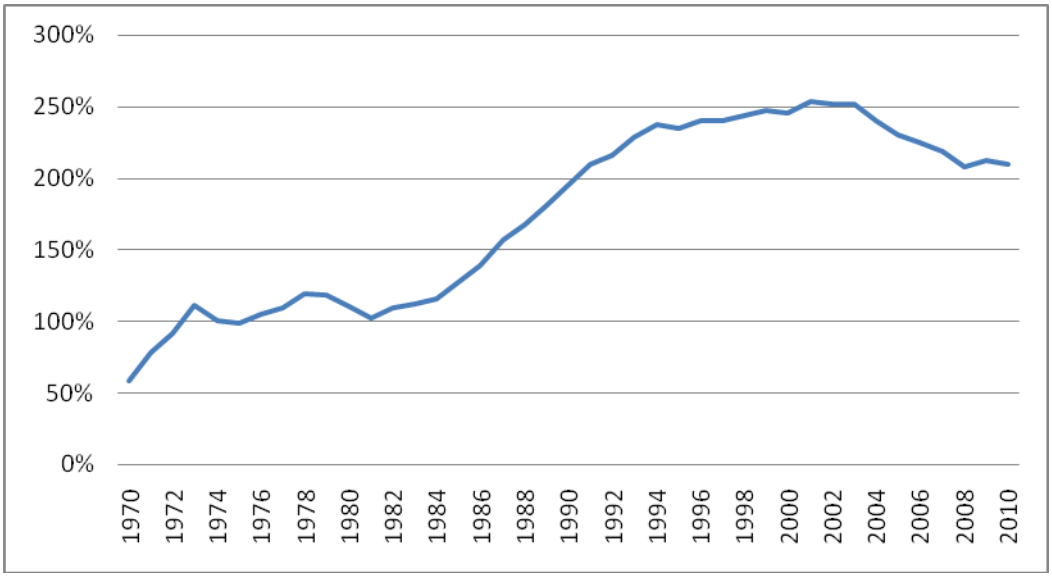
FoF is a financial analysis account which shows how different sectors and institutions source and make use of funds whether in real investment or financial products (Nhleko, 2009). It shows the movement of funds across deficit and surplus units across the economy, thus indicating how various sectors rely on others for sources of funds. It can be very important for analysis of financialisation as it shows at the aggregate level the types of investments that various sectors are making thus indicating the direction the economy is taking. We are also able to show change in behaviour of NFCs by studying how their investment patterns and sources of funds change over time. For example, NFCs would show signs of financialisation if they moved from funding real investment overtime to investing more in financial products.

There are two main types of approaches to FoF compilation: the transactions approach and the balance sheet approach. The transactions approach is presented based on detailed information of various transactions meaning it is more detailed and gives full information on where funds come in from and move to. The balance sheet approach provides balance sheet positions of various sectors or institutions but not what accounts for such changes making it less detailed. South Africa uses the balance sheet approach. Both systems however are structurally identical comprising five major sectors including the foreign sector, financial intermediaries, general government, non-financial private businesses and households. We only make use of the non-financial private business sector as it is at the centre of real investment in any economy.

[2] This section generally follows the approach of McKenzie, (2013).

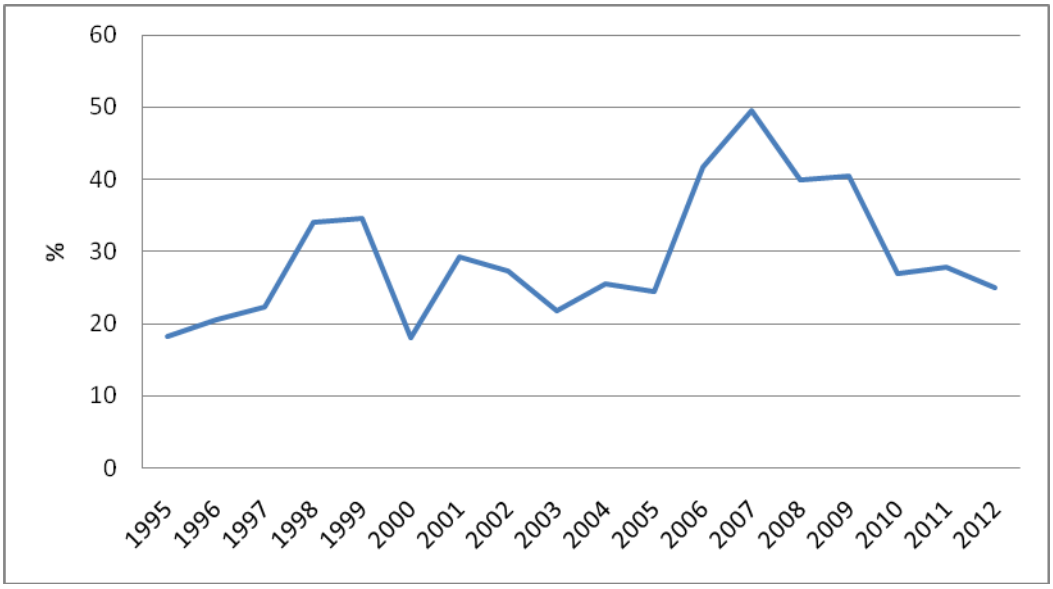
The activities of non-financial business organisations are crucial for the growth path of any economy due to the fact that traditionally, the nature of their investments tend to be long-term in nature and where most capital formation takes place. It is for this reason that this research project focuses mainly on the activities of NFCs in order to gauge the effects of financialisation on real investment in South Africa. We analyse how the investment patterns of private non-financial businesses have changed over the last few decades and the impact such changes have on real investment. We show that South Africa seemed to follow the global trend where NFCs shifted more funds to the financial sector due to its high relative profit levels.

Figure 1: Financial assets as a percentage of fixed capital for NFCs



Source: Ashman et al, 2013

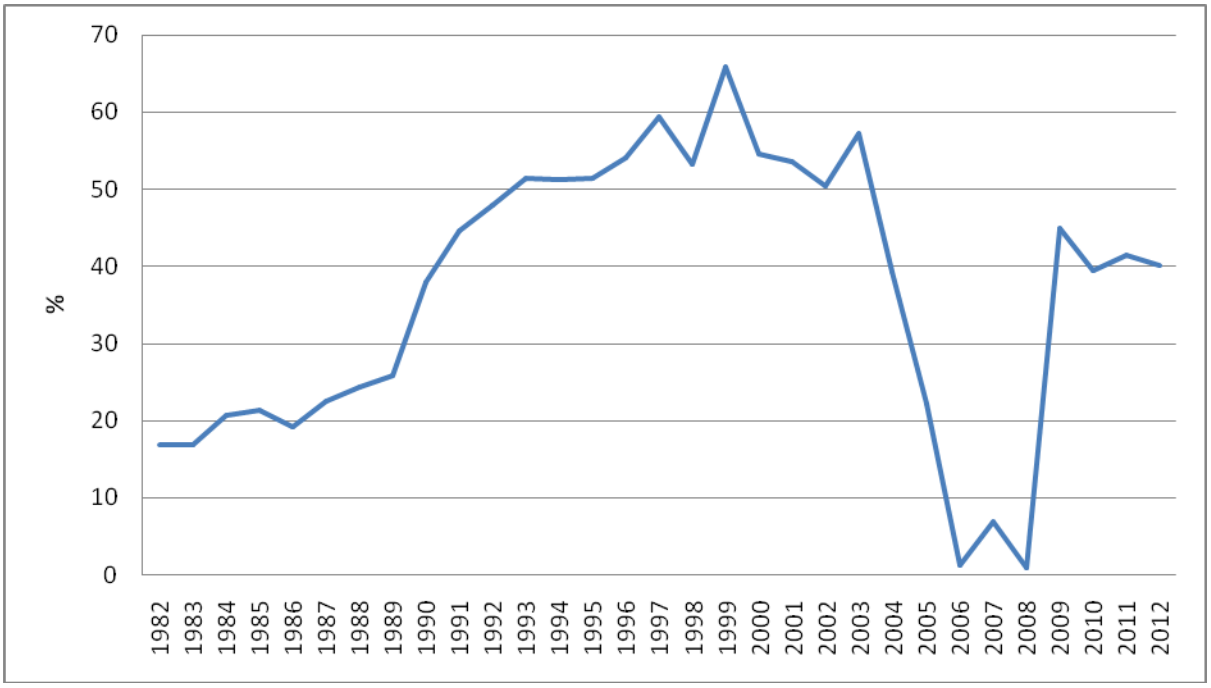
Figure 2: Financial income as a percentage of gross operating surplus for NFCs



Source: own calculations from SARB, 2013

Figure 1 shows financial asset as a percentage of real investment for NFCs between 1970 and 2012 and indicates that non-financial private businesses have been increasing their stake in the financial sector. There is clear indication that investment in financial assets surged from the mid 1980s as investors sought to take advantage of South Africa's new neo-liberal stance which had let to rising interest rates and thus sharp increase in short term inflows (Ashman, fine and Newman, 2011). The picture is made clearer when the uses of funds by NFCs is considered, which reveals that net acquisition of financial assets has not only seen a huge increase since 1992 but also very high levels of volatility (McKenzie, 2013). Rising investment in the financial sector also meant increasing contribution of financial profits to the operating surplus of NFCs as indicated by figure 2. Orhangazi (2007) identifies two channels through which funds could be transferred from the real economy to the financial sector. These include increased financial incomes as NFCs invest more in financial assets and rising levels of financial payments to due to increased obligations to finance. This seems to hold for South Africa over the last few decades as NFCs increase their stake in finance in order to take advantage of the relatively high profit levels of the financial sector as shown below.

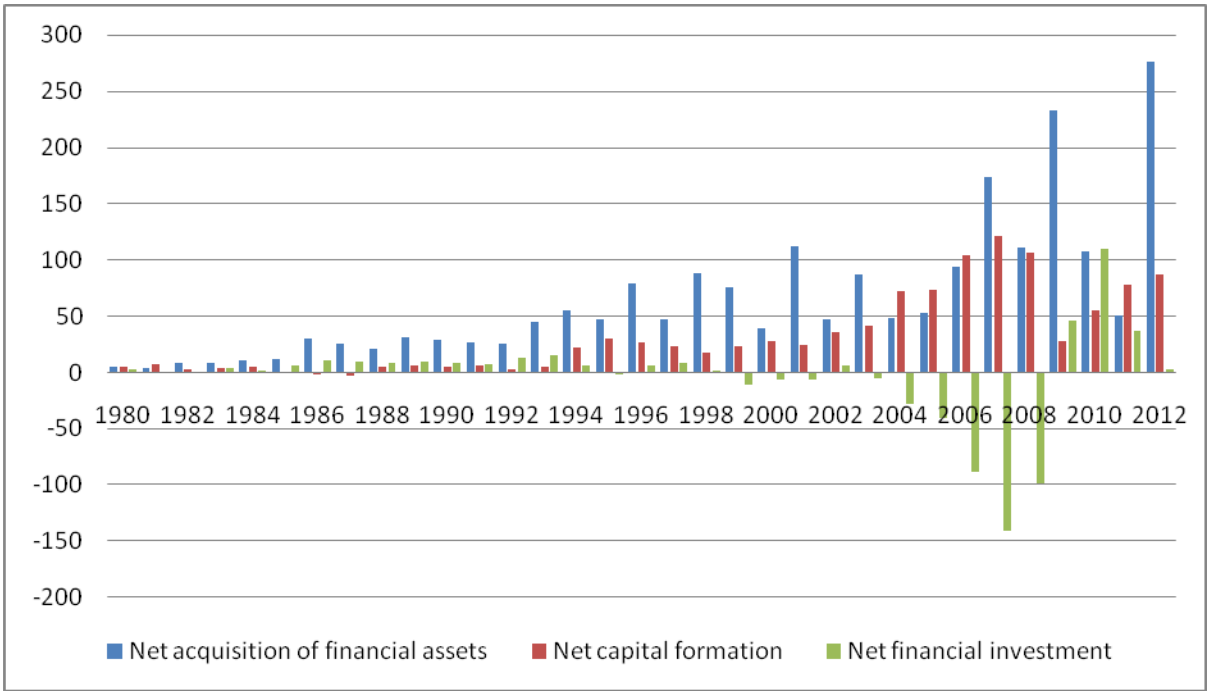
Figure 3: Financial sector profit as a percent of total profit



Source: own calculations from Inet BFA 2013

Mainstream economic theory posits that financialisation has a positive effect on the economy as profits earned from the financial sector could be used for investment in viable projects in the real economy. Figure 3 shows that financial sector profits increased rapidly from the early 1980s before dropping sharply mid 2000s and recovering quickly just before the 2008 financial crisis. However, rather than invest their profits in the real economy, figure 4 shows that even more funds have been put into financial products with the hope of reaping even higher profits. When net capital formation is pitted against net acquisition of financial assets and net financial investment (figure 4) it suggests that the financial sector in South Africa has grown at the expense of the real economy. It shows 1981 was the last time net capital formation outflanked net acquisition of financial assets with net acquisition of financial assets much higher in every single year except 2008, when both were almost equal. Thus one may conclude that liberalisation of the economy led to promulgation of financial products, high profits for the financial sector and weak real investment.

Figure 4: Major NFC investment by type (R billion)



Source: own calculations from SARB 2012

2.4.4 Conclusion

This section used quantitative data to analyse how the South African economy has changed in recent decades. The non-financial private business sector was studied closely since it is the sector most linked with real capital accumulation. Financial income and payments by NFCs were analysed in order to study the relationship between finance and the real economy. It was shown that NFCs have increased their stake in finance in recent decades due to low profit levels in the real economy, the shareholder value movement orientation amongst other reasons. Capital and investment levels in both the real and financial sectors were analysed and it was established that financial investment increased much faster than real investment. Finally it was shown that the financial sector's share of total profit has increased substantially, which has enticed non-financial private businesses to be part of. The next section takes analysis of the relationship between the real economy and finance further by presenting a model which shows how investment is related to a number of financial and real variables.

CHAPTER THREE: RESEARCH APPROACH AND METHOD

3.1 The model theoretically explained

The method used in this project is borrowed from Orhangazi (2007) who uses a number of both real and financial determinants of investment to econometrically test the investment decisions of non-financial corporations in the US. He finds that between 1973 and 2003 capital accumulation slowed down for two reasons: first, increased investment in financial assets crowded out real investment and second, the increased stake in NFCs by finance put pressure on NFCs to increase financial payments in the form of dividend and interest payments, limiting investment in fixed capital. The variables used include profits, sales, long-term debt, financial payments (dividends and interests paid) and financial income (dividend and interest received) of NFCs. This implies there are two real determinants (profit and sales) of investment and two financial determinants (financial payments and financial profit). Financial income is used as a proxy for investment in financial assets as higher financial income would imply higher levels of financial investment. The level of indebtedness of the firm indicates whether its expansion would be constrained by leverage or not and higher levels of debt could mean the firm was closer to its borrowing limit.

Investment is estimated using the following equation and a discussion of each variable follows:

$I/K = f (¶/K, S/K, D/K, P/K, ¶^F/K)$……..(1)

Where:

I = investment

K = capital stock

¶ = profit

S = sales to capacity

D = is long term debt

P = financial payments

$¶^F$ = financial income

Real determinants of investment: Profit and sales

Profitability and sales can be used to predict investment behaviour as they act as incentives to investors and influence investment outcomes as investors tend to invest if they judge new projects to be profitable (Organgazi 2007). Given that profit and sales affect investment decisions the signs are expected to be positive meaning high profitability and sales will induce further investment. In order to take into consideration the fact that past profit may not always mean future projects would also be profitability, sales to capacity is used in order to give an indication of the need for new investment (ibid). High capacity usage signifies that new projects will be profitable while low past capacity use indicates that new investments may not be profitable. Sales are used as a proxy for capacity utilisation, giving an indication of how new investment in capital would perform. If sales figures are robust it signals to investors that their investment will yield desired returns, so it is expected that sales and investment should have a positive relation. Profit like sales, gives investors an indication whether to continue to invest or to slowdown. Thus it is expected that profit should move in the same direction as real investment

Financial determinants of investment: financial payments and financial income

The signs for financial payments and financial income are expected to be negative since increased flow of funds to finance could mean fewer funds available for investment in real capital. The possibility exists that paying dividends could make it easier for firms get credit as they are seen as conforming to shareholders' wishes. However, investors could also simply maintain the current firm size and continuously extract surpluses (Orhangazi 2007). That is, as long as the financial sector continues to be more profitable than the real productive sector, profit from the financial sector will simply be used to acquire more financial products and not used for real investment. This is consistent with figure 1 above which shows non-financial private businesses in South Africa have increasingly invested in financial assets.

Debt level

The sign for debt will depend on both the already prevailing debt situation and also how risk averse the firms in the sector are. If the firm is already over indebted, it will be difficult for it

to engage in even more debt financing since it increases its obligations, taking it closer to a point where it could lose its autonomy (ibid).

The table below shows the variables and their expected signs:

Table 1: Expected impact of variables on real investment

Variable	**Expected sign**
Sales	+
Profit	+
Debt	+/-
Total financial payments	-
Total financial income	-

The central thesis from Orhangazi (2007) and Stockhammer (2004) is that growth in finance has led to the slowdown in real investment. The following specification for the model is proposed:

$I/K_{t-1} = \pm_0 + \pm_1 ¶/K_{t-1} + \pm_2 S/K_{t-1} + \pm_3 D/K_{t-1} + \pm 4\ P/K_{t-1} + \pm_5 ¶^F/K_{t-1}$ .....(2)

Where

± represents the parameters

t is the time period at each point

We use Ordinary Least Squares (OLS) in our regression analysis. Two conditions should be met for the OLS regression method to be applicable. First, the error terms of the variables should be linear and second, there must be no heteroskedasticity – differences in variability of the variables. In order to eliminate any traces of heteroskedasticity, all variables are divided by lagged capital stock after which the Breusch-Pagan test is conducted to confirm homoskedasticity. In order to test for linearity of the data, all the variables are plotted over time and the shapes of the graphs analysed. A variance inflation factor (VIF) test is also

carried out in order to check for multicollinearity. Multicollinearity should not be present as it increases the variances of the variables over time thus increasing the chance of heteroskedasticity. OLS is also used because it is a simple method which can be used to show basic relationships between regressors and regressands with easy to understand and analyse outputs. Since our aim is simply to establish links between investment and the chosen variables at an aggregate level, it was decided OLS would be adequate if the data met the two main criteria for the OLS method.

3.2 Data source

Data for the study was collected from the Inet BFA research domain which provides both aggregated and individual company data for all companies listed on the Johannesburg Stock Exchange (JSE) from 1971 to 2012. Since this study is concerned with macroeconomic analysis, it focused on the aggregated data which is organised in the following major industrial categories: all companies, basic materials, consumer goods, consumer services, financials, healthcare, industrials, oil and gas, telecommunications and utilities. Inet BFA provides a full set of financial statements for all firms and aggregates for each sector. From these financial statements, data on selected variables can be extracted and analysed. The two key statements of interest for our purposes are the statement of financial position and the income statement from which all the relevant variables needed for the study including sales (turnover), profit (EBIT), debt (total long term borrowing), financial payment (interest and dividends paid) and financial income (interest and dividend received) were extracted.

With Inet BFA, it is possible to extract information on the entire non-financial private sector by checking all others with the exception the financial institutions. The system then generates financial statements that aggregate information on all JSE listed firms except financials. Although several studies on real investment focus on the manufacturing sub-sector since it is the sector most associated with capital accumulation, we will include the entire economy with the exception of the financial sector in order to analyse the effect of increased financial investment on all non-financial businesses. Orhangazi (2007) carries out a similar study where he includes all non-financial companies and not only manufacturing firms.

The database has two issues that need further explanation. First, gold and non-gold products are presented separately so in order to get a full picture of the non-financial corporate sector, the gold and non-gold datasets had to be summed up. This had little effect though as the non-

gold products tended to be over 95% of total value for most variables. Second, the data is provided in two formats including 'as published' annual data and standardised versions. With 'as published' annual data, the information is presented as obtained from individual firms which makes comparison between firms difficult as firms sometimes report in different ways. As published goes as far back as 1988. The standardised version is data that has been presented in a particular format with individual firm data changed to suit the chosen format. With standardised data, cross comparisons can be made as all variables would represent the same thing. The standardised data is presented as far back as 1971. Thus standardised data has been chosen because it makes it possible to compare different firms and sectors plus the longer range makes it better suited to regression analysis.

The project makes use of aggregate data as opposed to firm level data chiefly in order to avoid some of the problems encountered at firm level. These include missing values, problems around new entrants and exits in the period under consideration and with outliers that are common when firm level analysis is conducted (Organgazi 2007). Using aggregated data also poses its own challenges however. First, such data cannot be used to study size effect and second, it cannot assist with analysis of how individual firms have evolved with financialisation. Aggregated data has been chosen for this study due to the fact that individual firm level data in South Africa is not as concise and available as it is in other parts of the world. Also, aggregate data is deemed more appropriate for this project as we seek to analyse the macroeconomic effects of financialisation on the economy and not how it affects individual firms. Also it makes it easier to find consistency in the data which limits the instances of occurrence of heteroskedasticity. This difference with Orhangazi (2007) is taken into account in the construction of the model.

A further issue with the dataset is the fact that only listed firms on the JSE are considered meaning only part of the non-financial private business sector is analysed. This is potentially a problem as the JSE accounts for fewer than 30% of economic activity (market capitalisation divided by GDP). While the results from the study may thus be treated with caution, they are given credence by the fact that most major corporations in South Africa, which are most likely linked to the financial sector, are listed on the JSE. All variables are deflated in order not to over state the effects of the variables on investment due to inflation. Real investment and fixed capital are deflated using the manufacturing price index since most goods in these

categories would be manufacturing in nature. While all other variables are deflated using the GDP deflator.

CHAPTER FOUR: EMPIRICAL RESULTS AND ANALYSIS

The main purpose of this project is to study the relationship between financialisation and real investment in South Africa. The simple investment model presented below which has both real (sales and profit) and financial (financial payments and financial income) variables has been specified in a way that suits the method of analysis being used. Real investment which is the regressand, is estimated using the statistical software package STATA using Ordinary Least Squares (OLS). Two key conditions for OLS are that the variances of the error terms be constant and that the variables be linear in nature. In order to correct for heteroscedasticity all variables are divided by capital stock, lagged by a year in order to account for the dynamic nature of the model. After dividing by lagged capital, in order to ensure homoskedasticity, the Breusch-Pagan test is carried out and the results analysed. The Breusch-Pagan test produced a Chi-Square of 0.07 which is quite satisfactory given that Chi-Square values range between 0 and 1 with low values indicating no heteroskdasticity and values close to 1 indicating high probability of heteroskedasticity.

In order to test for linearity of the variables, all variables were plotted over time and the results showed that with the exception of real investment which was slightly non-linear, all other variables were linear. We decided to proceed with the method as it is only an estimate plus the results obtained were robust and most variables had the expected signs. Tests for correlation and multicollinearity were also carried out. In order to test for multicollinearity, the VIF test was conducted. The generally accepted cut off for low levels of multicollinearity is 10 with higher values indicating high multicollinearity. The VIF test had an outcome of 3.3 indicating that the difference in variances of the variables would not increase over time. The results of the correlation test presented in table 2 show high levels of correlation between most of the variables, with debt especially strongly correlated with investment. This is to be expected as all the variables are closely linked with real investment and would thus exhibit similar characteristics. Correlation values range between -1 and 1 indicating a situation of strong negative correlation to one of complete positive correlation respectively. Thus debt would be most correlated with real investment with a value of 0.56 indicating that higher

levels of debt usually lead to higher real investment. This means most businesses borrow in order to increase their investment in long term capital. Financial income has the weakest correlation with real investment amongst all the variables. It is a small but positive correlation which shows that there is a weak positive relationship between increased financial income and real investment. It is not surprising that debt also has a strong correlation with sales as it is logical to think that higher real investment will lead to increased turnover. The financial variables (financial income and financial payment) are also highly correlated (0.9773) indicating a high involvement of non-financial private businesses in the financial sector increases their financial income. Because of this high level of correlation, a second regression is run excluding debt and the results are presented in table 4. The results for all variables are discussed below.

Table 2: Correlation matrix: all variables

	Real investment	**Sales**	**Profit**	**Debt**	**Financial payment**	**Financial income**
Real investment	**1.0000**					
Sales	**0.3048**	**1.0000**				
Debt	**0.5607**	**0.9335**	**1.0000**			
Profit	**0.2572**	**0.8195**	**0.7207**	**1.0000**		
Financial payment	**0.2755**	**0.9974**	**0.9251**	**0.8267**	**1.0000**	
Financial income	**0.1066**	**0.9730**	**0.8343**	**0.8462**	**0.9773**	**1.0000**

Sales and profit

Sales and profit are two variables that regularly feature in models that test for change in real investment. Sales, which is a proxy for capacity utilisation is expected to have a positive relationship with real investment, as is profit. Table 3 shows that higher sales and profit lead to increased levels of real investment. The coefficients for both variables are both positive

and highly statistically significant (0.000) which is a strong indication that the model is correctly specified and adequate for testing the profit and sales variables. The coefficient for sales is 0.11 meaning a one rand increase in sales leads to an 11 cent increase in real investment. The coefficient for profit is .05 meaning a one rand increase in profit leads to a 5 cent increase in real investment. The findings are also in line with financialisation theory and other studies that have been undertaken using similar analysis. Orhangazi (2007) on whose model this study is based finds positive coefficients between these real variables and real investment for all non-financial and manufacturing sectors with most statistically significant at various levels. In a similar study to test for financialisation in Germany, France, United Kingdom and the US, Stockhammer (2004) uses profit and capacity utilisation as real variables and with the exception of capacity utilisation in the US, all variables have the right signs and are statistically significant. In order to limit the effect of high levels of correlation among the explanatory variables, a second regression was run excluding debt as it is especially correlated with real investment. The results don't change much as the signs for both profit and sales are still positive and highly statistically significant.

Debt

The sign of the debt coefficient as shown in table 1 could be positive or negative depending on already existing debt burden. If the debt-capital ratio is already very high, more debt would hamper real investment and a very low debt-capital ratio will have little or no effect as it does not affect borrowing capacity. Table 3 shows the debt coefficient is positive but insignificant meaning it cannot indicate the impact of debt on investment in this particular model. This finding is however in line with similar studies on financialisation. In Orhangazi (2007) the debt coefficient is insignificant for most variables and especially for large firms where it is positive but highly insignificant. The coefficients of the other variables improved only slightly when debt was removed in the second regression as shown in table 4.

Financial payout

The two financial variables included in the model to account for the effects of increased financial activity by non-financial organisations are financial payments and financial income. The central focus of this study is to show that increased investment in financial assets and higher financial payout by non-financial private businesses could dampen real investment. The hypothesis of this study is that increased financial activity by non-financial private

businesses weakens real investment. There is a potential crowding out effect of real investment due to the fact that fewer funds are available for long term capital investment. Table 3 presents the results for the financial payment variable and shows the coefficient has a negative sign and although not significant at the 10% level, it is significant at the 20% level. The coefficient shows that for every one rand increase in financial payments there is a 49 cents decrease in real investment. The results mean there is a possibility that 20% of the time our findings may not be correct and may be right 80% of the time. Although this puts a caution on our findings, we still think it is sufficient to show a link exists between increased financial payout and weaker investment in long term capital. There is thus support for the second hypothesis which states that increased financial payout weakens investment in real capital. The findings are also supported by Orghanzni and Stockhammer who also find that increased financial payments lead to weaker real investment.

Financial income

In this study, financial income is used as a proxy for financial investment due to the fact that more income from finance indicates higher investment in financial assets. The results for this variable in Table 3 show the coefficient has a negative sign and is highly statistically significant (0.000). The coefficient of 0.65 indicates that for every one rand increase in financial investment made by NFCs, there is a 65 cent decrease in real investment. Even when results of the second regression are considered (table 4) where debt is excluded, the outcome is not much different with a negative coefficient that is still highly significant. The results found here may suggest that increased profits from financial investments are used for further investment in financial products. And further, NFC preference for financial investment suggests lower appetite for real investment. This is trend has been described by Lazonick and O'sullivan (2000) as NFCs moving from patient to impatient finance. This result may indicate that for South Africa, the financial income channel is stronger than the financial payout channel.

The aim of this study was to attempt to show whether links found in other places between increased financial activity by non-financial private businesses and weakened real investment hold for South Africa. Following Orhanzani (2007) we have shown that there is a possibility that increased financial payments by NFCs divert funds to the financial sector leaving fewer available for long term real capital investment. Our results also indicate a link between increased financial income and decreased levels of real investment for NFCs. This could be

due to the fact that non-financial private businesses are beginning to prefer financial assets to long term fixed investment which may be an indication that the planning horizon in South Africa is also becoming shorter.

Table 3: Regression results including all five variables

	Coefficient	Standard error	t	P>Z	Expected sign	Estimated sign
Constant	**4.17315**	**1.618789**	**2.58**	**0.017**		
Sale	**0.1121956**	**0.0267471**	**4.19**	**0.000*** **	+	+
Profit	**0.0540508**	**0.010668**	**5.07**	**0.000*** **	+	+
Debt	**0.0180018**	**0.1402375**	**0.13**	**0.899**	+/-	+
Financial payment	**-0.4924742**	**0.356563**	**-1.38**	**0.180**	-	-
Financial income	**-0.6448759**	**0.1285871**	**-5.02**	**0.000*** **	-	-
*significant at 10% level **significant at 5% level ***significant at 1% level R-square = 0.8960						

Table 4: Regression results for all variables excluding debt

	Coefficient	Standard error	t	P>Z	Expected sign	Estimated sign
Constant	**4.099838**	**1.484604**	**2.76**	**0.011**		
Sale	**0.1143702**	**0.0202871**	**5.64**	**0.000*** **	+	+
Profit	**0.0544136**	**0.0100825**	**5.40**	**0.000*** **	+	+
Financial payment	**-0.4779091**	**0.331312**	**-1.44**	**0.162**	-	-
Financial income	**-0.6598372**	**0.0532392**	**-12.39**	**0.000*** **	-	-
*significant at 10% level **significant at 5% level ***significant at 1% level R-square = 0.8959						

CHAPTER FIVE - CONCLUSIONS

The purpose of this study was to analyse the relationship between financialisation and the real economy in South Africa. We did this by attempting to show whether results found elsewhere which suggest that increased financial activity by NFCs weakens real investment, hold for SA. Businesses can either use their surpluses for reinvestment in long term capital, investment in financial assets or financial payout. The two latter uses were the subject of this research project and we sought to establish whether by using their surpluses for such purposes, non-financial private businesses inhibit growth in real investment. Orhangazi (2007) finds that as non-financial private businesses transfer more of their internally generated funds to the financial sector, there is a crowding out effect as fewer funds are available for real investment.

We analysed two major channels (financial payout and financial income) through which funds flow from the real economy to the financial sector and sought to establish a link between these two channels and slower growth in fixed capital investment. In order to investigate these two channels, two hypothesis were formed, the first being that increased financial investment by NFCs crowds out real investment and the second that higher levels of financial payout dampen investment in real long term fixed capital. We used aggregate level data for the non-financial private business sector over the period 1971 to 2012, a period which is deemed appropriate since financialisation is generally thought to have fully commenced around 1980. We used a basic OLS regression model that included both real and financial variables similar to that used by Orhangazi (2007).

Our results show that increased NFC involvement in financial activities may lead to slower growth in real investment. Both financial payout and financial income had negative coefficients with financial income significant at the 1% level and financial payout significant at the 20% level. The robust results for financial income show that increased investment in financial assets by NFCs may be more responsible for weakened real investment than increased financial payout for South Africa. The second regression where debt is excluded also presents results consistent with Orhangazi (2007) and Stockhammer (2004) who also found links between increased financial activity by NFCs and weakening real investment.

The real issue is what these findings mean for South Africa and how things can be managed in a way that a healthy financial sector exists side by side a strong and growing real economy. Although the results of this study are not conclusive and do not draw a line on the financialisation question in South Africa, it adds to the growing voice that the continuous deindustrialisation of the economy is partly caused by liberalisation and deregulation of the financial sector. In a cross-country study by Stockhammer (2004) for Germany, France, the US and the UK strong evidence is found that financialisation accounts for the entire slowdown in France and about one third in the US. Although he does not find strong support for financialisation in the UK, it may be because the results were overshadowed by the fact that the UK had already been in decline since the end of the Golden Age. Germany which had been slow to adopt the shareholder movement value orientation showed financialisation actually increased real investment. Thus the results for Germany indicate that financialisation may be beneficial if a right balance is struck between shareholder interest and the general health of the economy.

Perhaps there is a lesson here for South Africa. The only country that had not fully adhered to the shareholder valuation doctrine nor fully liberalised her economy at the levels of the others, did manage to grow both her financial sector and real economy at the same time. It could be beneficial if both regulation of the financial sector and corporate governance for private businesses were reworked in a way that would strengthen the financial markets since there are clear benefits to having a thriving financial sector but also encourage businesses to have a wider view than just creating value for shareholders. Further research on how changes in corporate structure affect accumulation would help formulate better policy in this regard.

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Appendix

Regression outputs

```
. sum  investment sales debt profit tfinpayments finincome
```

Variable	Obs	Mean	Std. Dev.	Min	Max
investment	30	21.75481	13.61927	.0031514	59.91189
sales	30	307.9274	601.7991	.0423122	3373.086
debt	30	33.77676	44.03219	.0080048	223.8958
profit	30	73.46184	164.2869	.0072015	800.7977
tfinpayments	30	18.65788	40.06648	.002133	222.4787
finincome	30	19.16124	82.40164	.000475	452.8073

```
. corr  investment sales debt profit tfinpayments finincome
(obs=30)
```

	invest~t	sales	debt	profit	tfinpa~s	fininc~e
investment	1.0000					
sales	0.3048	1.0000				
debt	0.5607	0.9335	1.0000			
profit	0.2572	0.8195	0.7207	1.0000		
tfinpayments	0.2755	0.9974	0.9251	0.8267	1.0000	
finincome	0.1066	0.9730	0.8343	0.8462	0.9773	1.0000

```
. regress  investment sales debt profit tfinpayments finincome
```

Source	SS	df	MS		
Model	4819.6511	5	963.93022	Number of obs =	30
Residual	559.403767	24	23.3084903	F(5, 24) =	41.36
				Prob > F =	0.0000
Total	5379.05487	29	185.484651	R-squared =	0.8960
				Adj R-squared =	0.8743
				Root MSE =	4.8279

investment	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
sales	.1121956	.0267471	4.19	0.000	.0569922	.1673989
debt	.0180018	.1402375	0.13	0.899	-.2714342	.3074377
profit	.0540508	.010668	5.07	0.000	.0320331	.0760685
tfinpayments	-.4924742	.356563	-1.38	0.180	-1.228384	.2434356
finincome	-.6448759	.1285871	-5.02	0.000	-.9102668	-.3794851
_cons	4.17315	1.618789	2.58	0.017	.8321328	7.514167

```
. regress investment sales profit tfinpayments finincome
```

Source	SS	df	MS		
Model	4819.26703	4	1204.81676	Number of obs =	30
Residual	559.787842	25	22.3915137	F(4, 25) =	53.81
				Prob > F =	0.0000
Total	5379.05487	29	185.484651	R-squared =	0.8959
				Adj R-squared =	0.8793
				Root MSE =	4.732

investment	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
sales	.1143702	.0202871	5.64	0.000	.0725882	.1561522
profit	.0544136	.0100825	5.40	0.000	.0336482	.075179
tfinpayments	-.4779091	.331312	-1.44	0.162	-1.160259	.2044408
finincome	-.6598372	.0532392	-12.39	0.000	-.7694854	-.5501889
_cons	4.099838	1.484604	2.76	0.011	1.042239	7.157438

```
. corr investment sales profit tfinpayments finincome
(obs=30)
```

	invest~t	sales	profit	tfinpa~s	fininc~e
investment	1.0000				
sales	0.3048	1.0000			
profit	0.2572	0.8195	1.0000		
tfinpayments	0.2755	0.9974	0.8267	1.0000	
finincome	0.1066	0.9730	0.8462	0.9773	1.0000

```
Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
         Ho: Constant variance
         Variables: fitted values of investment

         chi2(1)      =     0.07
         Prob > chi2  =   0.7894
```

```
. vif
```

Variable	VIF	1/VIF
tfinpayments	**6.47**	**0.154538**
profit	**3.74**	**0.267457**
debt	**2.67**	**0.373837**
finincome	**2.10**	**0.476821**
sales	**1.68**	**0.596367**
Mean VIF	**3.33**	