Bank Disintermediation – South Africa

by

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Declaration

I, Kubandran Chetty declare that the research work reported in this dissertation is my own, except where otherwise indicated and acknowledged. It is submitted for the degree of Master of Management in Finance and Investments in the University of the Witwatersrand, Johannesburg. This thesis has not, either in whole or in part, been submitted for a degree or diploma to any other universities.

Signature of candidate   Date: 12 September 2011

Abstract

The conventional theory of financial intermediation suggests that banks are the main conduit between savers and borrowers however, research has shown that international banks are losing importance in intermediating i.e. mobilise savings and allocating these funds among competing borrowers - this international reality is due to a number of reasons including changes in regulation, growth in capital markets, non-bank financial intermediaries, foreign competition etc.

South Africa has a highly concentrated banking sector with the five largest banks holding more than 90% of the industry's assets however growth in non-bank financial intermediaries are threatening the intermediary role and profitability of banks - this research serves to investigate whether bank disintermediation is occurring in the South African context and whether the traditional role of banks is declining.

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Chapter 1 – Introduction

This chapter serves as the thesis proposal submitted to Witwatersrand Business School. Section 1.1 provides the context of this study by first providing an overview of bank intermediation, then bank disintermediation before discussing published international research on bank disintermediation as well as emerging South African trends. Section 1.2 highlights the purpose of this research paper with section 1.3 posing the pertinent research question and section 1.4 discussing the significance of this study. Section 1.5 covers the data and methodology that will be employed in answering the research question while section 1.6 highlights the possible limitations. Lastly section 1.7 provides an overview of the following chapters of this research report.

1.1 Context of the study

The conventional theory of financial intermediation suggests that it is a function of banks collecting deposits or funds from savers, typically households, and channelling these funds to borrowers, typically the enterprise sector and government (Gurley and Shaw, 1960; Schmidt et al, 1997). Banks exist because as intermediaries and transformers of capital they increase the social value of capital by putting it to more efficient use. In their original work, Gurley and Shaw focused primarily on banks as the only source of financial intermediation.

In the new theory of financial intermediation (Schmidt et al, 1997; Diamond, 1984) banks are said to play a special role in providing liquidity to depositors and financing investment projects of borrowers which capital markets would not be able to assess and monitor. This theory, which additionally acknowledges the existence of non-bank financial intermediaries (hereafter referred to as NBFIs), regards banks as the primary conduit between savers and borrowers for intermediation purposes. NBFIs include insurance companies; mutual and hedge funds; pension funds; finance companies and other investment companies. Financial assets used for accessing external finance are made up of three mutually exclusive subsets i.e. those held by depository institutions such as banks; assets held by NBFIs and lastly directly held assets such as stocks and bonds (Allen and Santomero, 2001).

Financial disintermediation on the other hand, (Gurley and Shaw 1960; Hester 1969), represents a movement away from using the traditional banks as intermediaries toward a system where financial transactions take place directly between savers and borrowers. With disintermediation, banks lose their importance in providing value to their customers with these customers sourcing more favourable returns and/or financial services either through NBFIs or by directly transacting in non-bank capital markets.

Merton and Bodie (1995) argued that the institutional forms through which certain financial functions are executed may not be essential to these functions hence these institutional forms

may change over time. This argument implied that even though the importance of banks may decline, this doesn't mean that intermediation declines and that these functions may well be taken over by other institutions that are NBFIs with the banks themselves expanding into other functions.

The general perception is that banking industry disintermediation is becoming a global trend and at this juncture I introduce such research and trends in the United States of America; Europe as well as South Africa.

1.1.1 International trend on disintermediation: United States of America

The trend in the loss of importance of banks was researched in the United States of America (USA) where banks have shown a declining share of assets (Kaufman and Mote, 1994). This research, which was designed to answer the question of whether banks were in a declining industry, further investigated the common view that banks were losing out to a wide range of NBFIs that, either through technological advancement or being less regulated than banks, were offering traditional types of banking products more efficiently. This report further questioned whether this measure of asset share was a true reflection of the performance of the banking industry and suggested two additional measures which are employment and financial performance (revenue; earnings and value add). These three measures will now be discussed further.

1. <u>Asset measure</u>

Banks as firms, transform inputs (deposits from savers, labour and capital) into outputs (loans and investments) hence total assets or deposits have been the most popular output measure of the size or output of the banking industry. In the USA, the core function of banks of accepting deposits and making loans and managing investments has been declining. However banks have been able to evolve by rendering additional financial services and this can be seen by the growth in banks' non-interest income activities. These services include fiduciary, investment, managerial, custodial, securities broking, underwriting services and etc.

Kaufman and Mote highlighted the following shortcomings that must be considered when using assets as a measure of output:

- The balance sheet of banks only reflect bank-owned assets which are referred to as on-balance sheet assets. However banks also manage or

service assets owned by third parties and these are referred to as off-balance sheet items.

- Output measure although considered to be a measure of output is actually a stock measure rather than a flow measure.

The report also attributed the decline in bank assets to the growth of mutual funds partly due to the introduction of money market funds in the 1970s and the sharp increase in stock and bond prices. It is interesting to note that mutual funds (with the exception of money market funds) are valued at market prices whereas assets of depository institutions, insurance and finance companies are typically measured by book value. This distinct difference in asset valuation between mutual funds and banks could explain the implied decline in banking industry assets as compared to the overall financial services industry.

2. Employment

This measure looks at the size of employment within an industry and can be viewed as a key indicator of the industry performance and growth. The empirical results of this analysis for the USA has reflected a decrease in the percentage of bank employees to that of the overall financial sector during the early 1990s hence implies a decline in performance for the banking industry. Although employment can be seen as a measure of input rather than output, it has shortcomings when measuring efficiency across industries but nonetheless may serve as a useful check on the accuracy of other measures.

3. Financial performance (revenue, earnings and value-added)

This is based on the revenue and earnings of banks and is a measure of output in the true sense, i.e. being a flow measure. The results of the analysis of these flow variables reflected that the banking industry as a percentage of gross domestic product (hereafter referred to as GDP), has grown steadily in recent decades. This again points to the fact that the nature of bank activities has changed drastically in recent decades and many of these newer activities are not reflected in the banks' balance sheets.

The conclusion of the Kaufman and Mote (1994) research did not support the widespread perception that banking had declined, either absolutely or relative to the financial services industry or the entire economy.

Further research by Allen and Santomero (2001), revealed that the USA financial system had been altered in recent decades and these changes, which are somewhat aligned to the Kaufman and Mote report, can be summarised as follows:

- The share of assets of USA banks are declining relative to NBFIs.
- There has been a shift from directly held assets towards NBFIs.
- Bank assets are not declining relative to total financial sector assets.
- The activities banks engage in have altered significantly i.e. banks have been innovative by engaging in fee-producing activities.
- Bank value added as a percentage of financial sector GDP has remained fairly constant.

1.1.2 International trend on disintermediation: Europe

In Europe (Schmidt et al, 1997), the trend toward disintermediation was researched in three major economies i.e. France, Germany and the United Kingdom. The results of the research concluded that the French financial system is in the process of transforming itself from a bank-based to a capital market-based system. Furthermore, French banks are losing their importance as non-bank intermediaries play an increasing role resulting in a lengthening of the bank intermediary chain and increased profitability pressure on French banks. Both Germany and the United Kingdom results indicate that there was neither a general trend toward disintermediation, nor a movement from a bank-based to capital market-based financial system, nor a loss of importance of banks. However the research also highlighted the lengthening of the bank intermediary chain in these two countries as well. In a traditional banking intermediation role, banks channel funds from savers to borrowers whereas lengthening of the intermediary chain refers to process where savers deposit their funds with NBFIs, this is in turn is deposited at banks by the NBFIs which is then channelled to borrowers by the banks.

1.1.3 Emerging economy trend on disintermediation: South Africa

The South African banking market had 32 registered banks including 2 mutual banks by the end of December 2009 (South African Reserve Bank, 2009).

The South African banking sector is highly concentrated with the five largest banks (namely Absa, First National Bank, Investec, Nedbank and Standard Bank) accounting for between 70% and 90% of the market share of the industry's assets (Ojah, 2005). NBFIs in South Africa are largely made up of insurance companies, pension funds and unit trusts companies (mutual funds). These intermediaries source savings in the form of premiums and contributions and purchase mostly capital assets from corporations, governments and government agencies. Leading from this statement, it is evident that

the main difference between bank intermediaries and NBFIs is that banks are able to repackage unused incomes in ways that make it possible for investable funds to be accessible to any economic agent (personal or commercial) possessing attractive production activities.

South Africa's banking sector consists of a high concentration of corporate ownership with most of the large insurance and other NBFIs being either controlled by banks or they (NBFIs) themselves having a controlling interest in banks. Ojah (2005) further highlights an observation based on the preceding point in that NBFIs such as insurance companies are channelling the pooled retirement-driven savings in their custody, into large corporations such as banks owned by them. This point may support the Schmidt et al (1997) paper in that the bank intermediation chain may also be lengthening in South Africa.

Although the former paragraphs provide the impression that disintermediation is taking place, it is not conclusive and during my research for this proposal I was unable to source empirical results to support this notion.

1.2 Problem Statement

Banks need to be fully engaged in financial intermediation that embraces most economic units in society. This will ensure that banks serve as channels through which proactive and developmental financial/monetary policies realise their full potential, thereby curbing instability and increasing the living standards of its citizens (Ojah, 2005).

The purpose of this study given the decline in importance of banks in developed economies as highlighted in the section 1.1, is to ascertain whether the South African financial system (in an emerging economy) is currently experiencing a general trend towards banking industry disintermediation due to competition from NBFIs and the growing access to and increasing size of South Africa's capital markets. Further to this and highlighted by Ojah (2005), South African banks seem to be discouraging a savings culture given the transaction fees charged to deposit and withdraw funds over customer accounts and with the banking industry being highly concentrated, are they experiencing a decrease in importance as the traditional providers of financial services?

Although the above discussion on South Africa, in section 1.1.3, reflects negatively on the banking industry and suggests that disintermediation is taking place, a further detailed research and empirical evidence is required to justify this impression and/or summation. This study is therefore designed to plug this vital knowledge gap.

1.3 **Research questions**

The key question that my research intends to answer is whether there is a general shift toward acquiring financial services from NBFIs and is disintermediation taking place in South Africa and to what extent?

From this key research question flows the following pertinent disaggregated questions:

1. What are the economic implications of financial disintermediation for the South African financial services industry?.
2. Is South Africa also experiencing a lengthening of the intermediation chain as NBFIs become more important?.
3. How can the overall financial industry better service its stakeholders (individuals, businesses and government) by effectively leveraging financial intermediation?.

I will gauge the core research question and sub questions using the literature review presented in chapter 2 as well as the implementation of the methodology briefly introduced in section 1.5.

1.4 **Significance of study**

Firstly, from a financial system perspective it would be useful to understand whether disintermediation is taking place and the extent to which it is taking place. Without the banks, it would be difficult for the South African Reserve Bank (hereafter referred to as SARB) to successfully implement monetary policy and curb inflation, for example.

Secondly, the existing South African banks need to understand whether or not they are in a declining industry and what they need to do to keep themselves relevant.

Lastly, as consumers of financial services, a study of bank disintermediation in South Africa would assist individuals, business and the government sector in understanding how they can extract more value by accessing financial services directly via non-bank capital markets. This also ties in with the disintermediation research done in France (Schmidt et al, 1997), where banks are experiencing profitability pressure due to lengthening of the intermediation process by the banks having to decrease their profit margin due to returns demanded by NBFIs.

1.5 Highlights of data and methodology

I intend to answer the questions raised in section 1.3 as well as prove that this study has significance for the South African financial services industry by:

- Carrying out a review of extant research on this topic both in the international and South African contexts – this will constitute the basis of my literature review in chapter 2 of this thesis.
- Providing an overview of the most pertinent industries that make up South Africa's financial sector – this will be covered in chapter 3.
- Measuring the change in output of banks over time using Kaufman and Mote's (1994) three measures (asset, employment and value-added) as a starting point.
- Extracting relevant data and analysing trends in the financial services industries' data reported to the SARB and other regulatory bodies by banks and NBFIs to identify key relationships that could aid in answering my research question.

1.6 Limitations

Generally I do not foresee any hinderance in answering the questions set out in section 1.3 however the following may limit the conclusions reached:

- access to intermediation and/or disintermediation research previously conducted on the South African banking industry.
- access to NBFI and company specific data.
- access to consistently prepared data for a long enough period that can be used for trend analysis purposes.

Neverthless, given that the majority (in terms of market share) of banks and NBFIs are listed on the JSE, the results will be strong enough to answer the questions that I have posed in section 1.3 and the methodology that I have highlighted in section 1.5.

1.7 Outline of the report

The preceding sections have covered chapter 1 being the introduction and proposal of the study. Chapter 2 will be the literature review which will discuss previous related research around the thesis topic including further work done on international markets. Chapter 3 will provide an overview of the South Africa financial sector. Chapter 4 will expand on the methodology discussed in section 1.5 and will contain the data analysis and empirical results of this analysis. Lastly, chapter 5 will be the conclusion of the study.

Chapter 2 - Literature Review

This chapter is broken down into three sections covering international literature on the research topic. Section 2.1 provides a further understanding, in addition to chapter 1, on banks as financial intermediaries followed by section 2.2 which discusses the link between financial development and economic growth and lastly section 2.3 discusses disintermediation and further financial sector research done on the United States of America, India as well as Australia.

2.1 Financial Intermediation and the role of banks

According to Van Damme (1994), banks perform three main functions namely:

1. Asset Transformers

Banks purchase the financial claims issued by corporations/borrowers (example: equities; bonds and other debt claims) called primary securities and finance these purchases by selling financial claims to household investors and other sectors (lenders) in the form of deposits; insurance policies etc. The financial claims of banks can be considered secondary securities because these are backed by the primary securities issued by corporations who in turn purchase real assets.

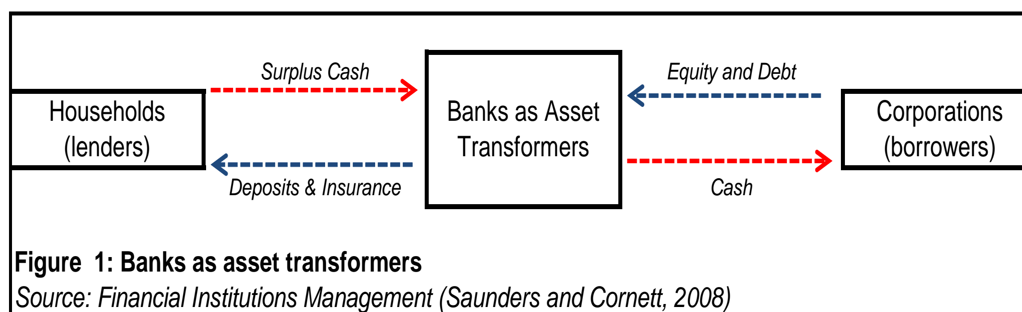

Figure 1: Banks as asset transformers
Source: Financial Institutions Management (Saunders and Cornett, 2008)

In playing this role, banks provide certain cost advantages to savers in the reduction of information costs; they provide liquidity and protection against price risk; they provide relatively cheaper transaction costs and also bear the risk of maturity mismatching.

2. Delegated Monitors

Banks as lenders of funds are delegated the task of monitoring these loan contracts. A bank has cost advantages in collecting this information compared to the alternative where there is either a duplication of effort if each lender monitors directly or a free-rider problem where no lender monitors.

3. Payment Services

Banks facilitate payments between customers by providing payment systems that directly benefits the economy.

In addition to the above, banks are economically important and provide the following special services which include (i) the transmission of monetary policy by acting as conduits through which central banks' monetary policy actions impact the rest of the financial sector and the economy in general, (ii) playing a major role in credit allocation to particular sectors of the economy pre-identified as being in special need of financing, (iii) providing the ability for savers to transfer wealth across generations through the management of wills and trusts, (iv) making investments more accessible to individual investors; (v) managing the risk of maturity mismatching which results from lending longer term loans and issuing shorter term financial claims (Saunders A and Cornett MM, 2008).

In summary, the primary function of banks is to mobilise savings and allocate these funds among competing users on the basis of expected return and risk trade-offs. By efficiently mobilising and allocating funds, banks lower the cost of capital to firms and other economic agents, thereby acting as catalysts for economic growth (Pati and Shome, 2006). Banks play a key role in the economy and their failure has far reaching repercussions on economic development as experienced by the global financial crisis of 2007.

2.2 Financial development and economic growth

Levine (2002) supports the view that financing, both bank-based and market-based, is essential for economic growth and that financial development enhances efficiency in the allocation of resources, thus stimulating the growth process. In this literature, banks which are unhampered by regulation restricting their activities are in a position to (i) exploit scale economies in information processing, (ii) ameliorate moral hazard through effective monitoring and (iii) form long-run relationships with firms to ease asymmetric information distortions thereby boosting economic growth. On the other hand, capital markets (i) provide a greater incentive to research firms because it is easier to profit from big/liquid markets, (ii) enhance corporate governance by easing take-overs thereby aligning managerial compensation to firm performance and (iii) facilitating risk management. Overall, Levine was unable to prove whether either a bank-based or market-based finance system were better at promoting long-run economic growth. It is financial services and the role that both banks and markets play in researching firms, exerting corporate control, creating risk-management devices, facilitating portfolio diversification and mobilising savings that is crucial for economic development. This view is also supported by King and Levine (1993), where empirical analysis prove that financial services stimulate economic

growth by increasing the rate of capital accumulation and through delegated monitoring, improves the efficiency at which economies employ capital.

In their work, Rajan and Zingales (1998), investigate whether there is a link between financial development and economic growth, specifically looking at whether financial development facilitated economic growth by reducing the costs of external financing and whether industrial sectors which are needy of external financing develop faster in countries with more developed financial markets. Their research results, which are summarised below, prove that financial development influences economic growth:

- Financial development influences economic growth by reducing external financing costs and largely benefits start-up firms and those heavily reliant on research and development.
- Financial market imperfections impact investment and growth.
- Financial market development is determined by historical accident or government regulation.

Based on the preceding chapters, it is evident that financial development is vital in economic development.

2.3 Financial disintermediation

Financial disintermediation is properly defined as a move from the intermediated provision of financial services via banks to direct financial relations between borrowers and lenders thereby eliminating the need for financial intermediaries. In the context of my research however, financial disintermediation can be defined as a loss of importance of traditional banking activities i.e. collection of deposits from households and the provision of bank loans to households and firms. Bank disintermediation does not necessarily imply an overall decrease in financial intermediation however can imply that the role of banks shifts to the provision of financial services on a fee basis rather than the traditional interest earning basis (Pati and Shome, 2006).

2.3.1 Further international research on disintermediation – United States of America

In the US, the importance of commercial banks as a source of funds to nonfinancial borrowers has shrunk dramatically over recent decades (Edwards and Mishkin, 1995). According to this paper, this decline in traditional banking can be attributed to the following factors:

- Regulation Q and the introduction of interest rate ceilings on bank deposits. This gave rise to NBFIs that were not subject to restrictive bank regulation which also led to the creation of money market mutual funds.

- The growth in commercial paper and junk bond markets and the increased securitisation of assets which undercut the banks' traditional advantage in providing credit.
- Improvements in information technology made it easier for business firms to borrow directly from the public by issuing securities (commercial paper).
- The growth in finance companies offered direct competition to banks as they provided credit to the same businesses that banks traditionally served.
- The ability of NBFIs to securitise assets transforming loans to marketable securities.
- International competition from Japan where the savings rates were typically higher than the US hence these Japanese banks have access to cheaper funding.

US banks were faced with two alternatives in order to main their profit levels i.e: they could maintain their traditional lending activity by expanding into new, riskier areas of lending or pursue off-balance sheet activities.

In his 'New Economics of Banking', Llewellyn (1999) acknowledged that US banks are experiencing a relative decline in total financial assets and to a large extent agrees that the above factors, as discussed by Edwards and Mishkin (1995), are responsible. He additionally cites the below factors contributing to the loss of importance of US banks:

- The decline of US personal sector savings flows going to banks.
- The emergence of a new set of non-financial companies (such as supermarkets) in the markets for retail and wholesale financial services.
- NBFIs offering payments facilities; and
- The development of in-house company banks.

2.3.2 Further international research on disintermediation – India

Due to liberalisation of the Indian economy and increased importance of capital markets, the share of bank assets in India has been declining since the 1980s (Pati and Shome, 2006). In response to the financial crisis of 1991 the Indian government, in an attempt to strengthen the financial system, deregulated financial markets and a system concentrating on four distinct financial sectors was borne namely banking, insurance, capital and money markets and lastly specialised institutions of lending. This resulted in additional competition for banks and ultimately a decline in the traditional activities of Indian banks. Further to the above, public sector agencies such as the post office and certain insurers were given tax concessions thus making it much more difficult for banks to mobilise household savings. From the data analysed by Pati and Shome (2006), it

was evident that the share of bank liabilities decreased in comparison to that of small savings institutes (like the post office); mutual funds and insurers. Similarly, there was a significant shift in banks assets from traditionally granting loans toward capital market investments (mostly government securities) but this can also be attributed to the fact that firms and households were finding other means of acquiring capital funding either through institutional investors or capital markets. This research also found that the traditional banking activity of granting loans was no longer yielding profitable returns that were sufficient to compensate lenders hence the shift toward risk-free investments.

2.3.3 Further international research on disintermediation – Australia

Allen and Parwada (2004) conducted a study of the Australian banking industry looking at the claim that bank deposits were declining due to the increased activities of money market mutual funds. The paper specifically looked at two issues (i) whether the importance of bank deposits declined and, (ii) banks participation in the mutual fund industry.

On the first issue, trend data for fourteen years was analysed to evaluate the performance of bank deposits in relation to managed and pension funds. The data revealed that bank deposits as a percentage of GDP actually increased however the share of bank deposits compared to that of mutual and pension funds decreased but this was largely due to a change in legislation and the introduction of a compulsory pension scheme.

On the second issue and to compete with other mutual funds, banks established their own fully-fledged mutual fund subsidiaries. The reason, according to the paper, why banks established their own mutual fund subsidiaries instead of creating mutual fund type products was largely due to the deposit insurance requirements which mutual funds did not have to comply with.

The key finding of the research was that bank deposits and mutual funds were not close substitutes and in fact complemented each other.

Chapter 3 - Overview of South African Financial sector

This section provides an overview of the South African financial sector which includes its capital markets, the banking sector and NBFIs. A brief overview of the sector is provided in section 3.1 followed by a discussion on the banking sector in section 3.2. Section 3.3 discusses economic growth in South Africa and highlights the contribution of the financial sector to GDP. Section 3.4 discusses access to capital with section 3.5 discussing bank disintermediation and lastly section 3.6 providing an overview of NBFIs.

3.1 The financial sector in South Africa

South Africa has an established, well regulated and sophisticated financial sector which is made up of banking; insurance and securities industries. Financial service providers can be categorised by intermediaries which constitute banks; insurance companies; pension funds; unit trusts (mutual funds); fund managers and by facilitators which constitute securities trading firms; underwriters and investment banks (Hawkins, 2001). These industries are regulated by an independent authority - in the case of the banks, it is the Registrar of Banks (which is comprised of the Bank Supervision department of the SARB) whilst the insurance, unit trust and securities industries are regulated by the Financial Services Board (hereafter referred to as FSB).

The securities markets where capital can be raised is made up of the Johannesburg Stock Exchange (JSE), for mostly equity issuance, and the Bond Exchange of South Africa (BESA), for debt issuance however during 2009 the JSE acquired BESA and therefore the exchange accounts for all security market issues in South Africa. The total number of companies listed on the JSE main board, amounted to 410 with the Altx (the JSE Alternative Exchange which lists smaller businesses which do not meet the qualifying criteria for the main board listing) having 76 companies listed as at December 2009. The total market capitalisation of the JSE (including Altx with its market capitalisation of just over R10 billion) amounted to R5.9 trillion and BESA totalling R1.02 trillion as at December 2009 (World Federation of Exchanges, 2009). Figure 2 below reflects the change in market capitalisation for both the JSE and BESA between 2000 and 2009 – these markets are respectively ranked 18th and 22nd largest in the world (World Federation of Exchanges, 2009).

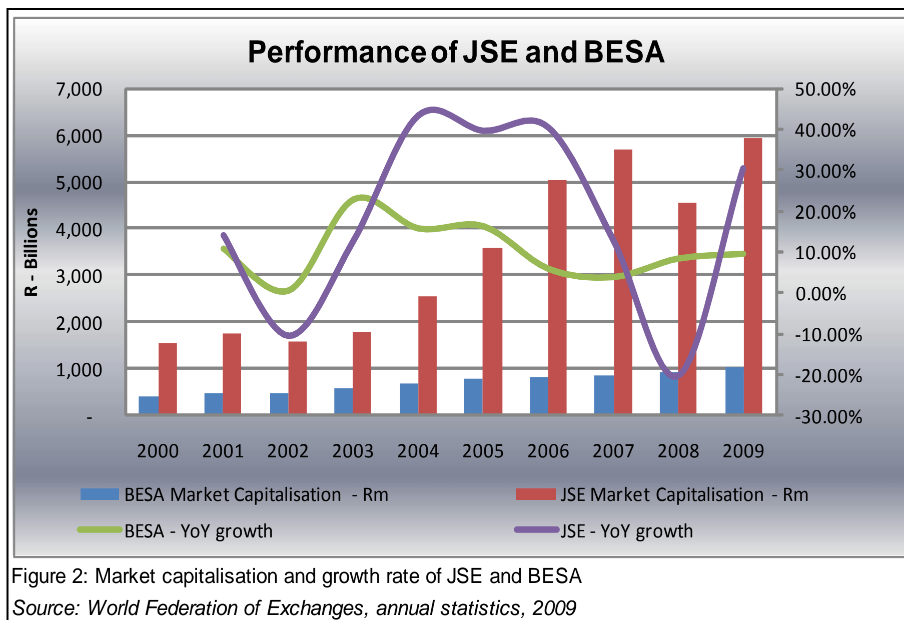

Figure 2: Market capitalisation and growth rate of JSE and BESA

Source: World Federation of Exchanges, annual statistics, 2009

3.2 Banking Sector

The definition of banks, according to the SARB, includes local banks, mutual banks and local branches of foreign banks registered under the Banks Act, act no.94 of 1990. According to the Banking Act, all banks should report their activities and their balance sheets to the SARB on a monthly basis.

South African commercial banks provide four core financial services to its consumers namely transacting, savings, credit and lastly insurance services (FinScope, 2009). Traditional banking intermediation involves the channelling of savings from surplus savings units to deficit savings units - the following discussion provides some insight into the size and performance of this commercial banking service in South Africa.

Figure 3 below provides a graphical representation of the growth in bank assets and liabilities from December 1994 to December 2009. With the exception of 2009 (largely driven by the global financial crisis and the tightening of credit policies), both assets and liabilities have shown an increasing trend over the past sixteen years - in fact, on average bank assets and liabilities have grown by 16% each year. As depicted by the year on year growth, it is evident that there is a strong correlation between the growth in bank assets and liabilities. Bank assets consist mostly of loans and advances to customers whereas bank liabilities consist mostly of deposits due to customers.

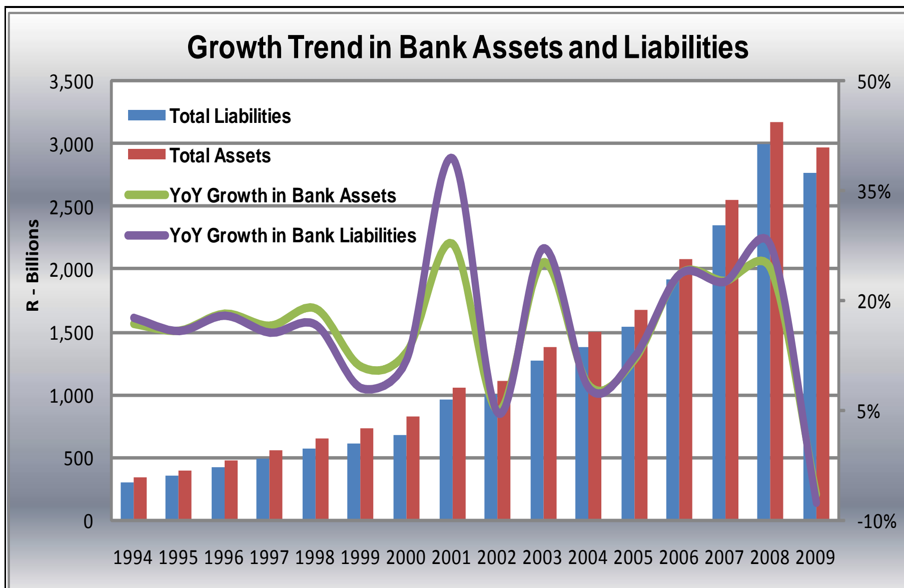

Figure 3: Growth in bank assets and liabilities (1994 to 2009)
Source: SARB Bank Supervision department, annual reports

Figure 4 below provides a graphical representation of South African bank loans and advances to customers split per relevant category – it is clear that residential and commercial mortgage advances make up 45% of total loans and advances to customers.

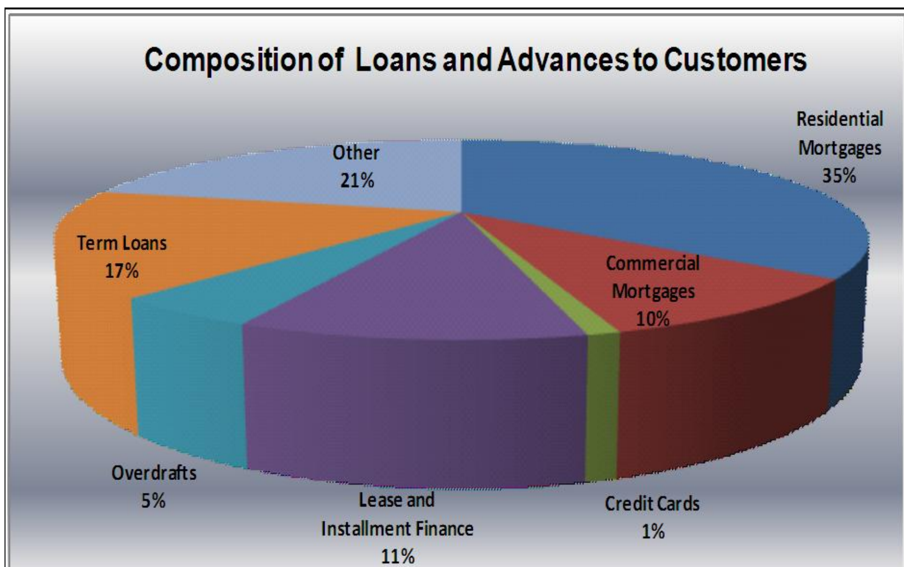

Figure 4: Category split of bank loans and advances
Source: SARB, Bank Supervision department, annual report, 2009

Figure 5 below provides a graphical representation of South African bank deposits from customers, split per relevant loan category. From the pie graph it can be easily deduced that at least 40% of deposits mature in less than a day (by adding the cheques, savings and call account percentage splits) which aligns to the maturity intermediation role of banks i.e. lending long (given the mortgage share above) and borrowing short.

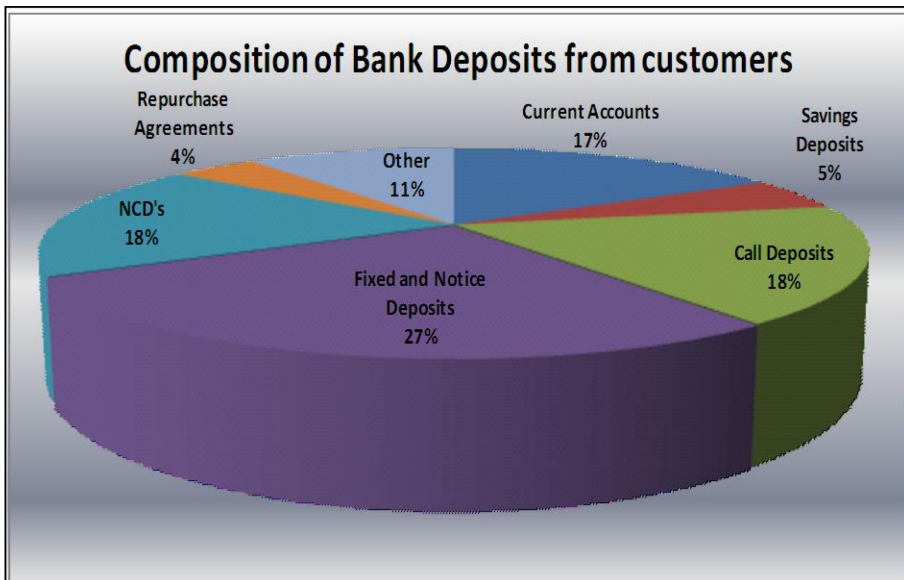

Figure 5: Category split of bank deposits

Source: SARB, Bank Supervision department, annual report, 2009

3.3 Economic growth

The South African economy has grown positively over the 10 years (from 2000 to 2009), with the exception of 2009 which was a recessionary period. On average, this growth as measured through a country's GDP has been 4% per annum over this period (refer to Figure 6 below).

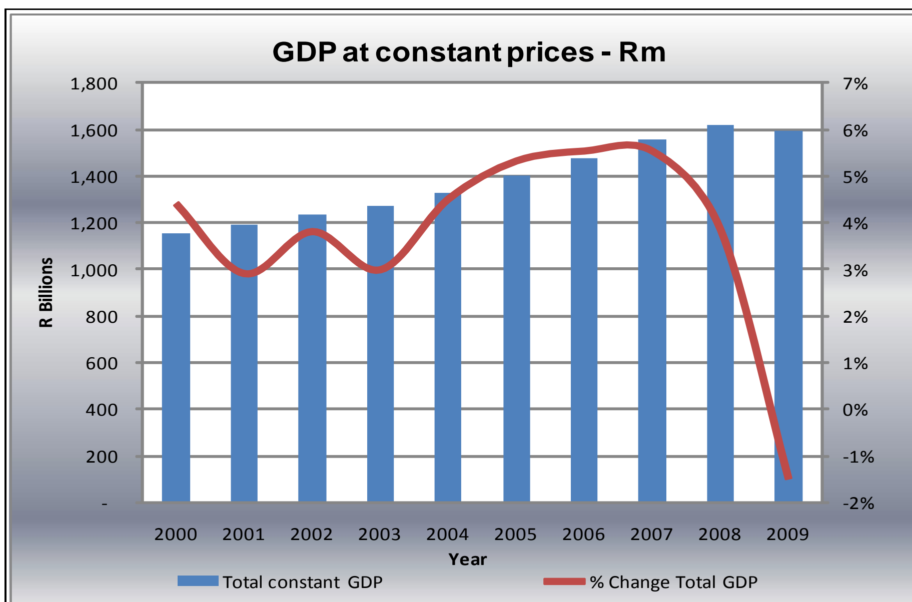

Figure 6: GDP for South Africa - 2000 to 2009

Source: Statistics South Africa

As at 2009, the majority of country's GDP is accounted for in the finance, real estate and business services sector comprising 24% of GDP and this is followed by the manufacturing sector accounting for 17% of GDP. Refer to Figure 7 below for a more comprehensive split of the country's GDP.

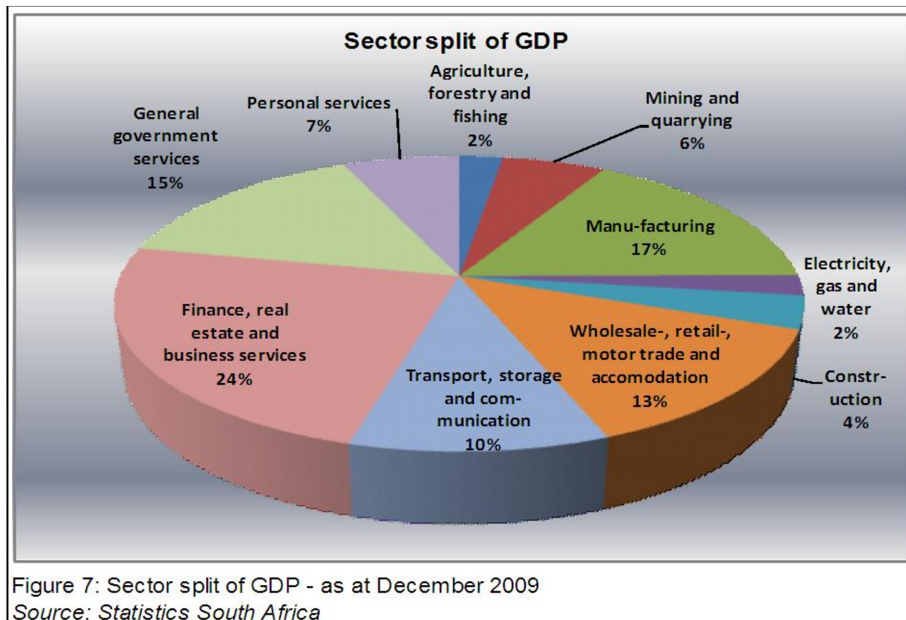

Figure 7: Sector split of GDP - as at December 2009
Source: Statistics South Africa

3.4 Access to capital

Ojah and Pillay (2009) set out to research a firm's choice of public versus private debt and the impact of debt issuance on the firm's risk and cost of capital. In relation to my research topic, I will provide the key findings from this study of the firm's choice of debt. With the introduction of BESA in 1987, this led to the availability of more diversified debt contracts, an increase in debt supply and lastly increased competition amongst suppliers of debt.

It is interesting to note that banks were early supporters to the bond market even though this posed direct competition. Ojah and Pillay (2005) highlight the factors below as determinants of firm's choice of public versus private debt:

- Information asymmetry between firm and lenders.
  - Private lenders are more effective at monitoring firms.
  - Firm's susceptibility to moral hazard problems, more importantly those of asset substitution (taking on riskier investments) and underinvestment (ignoring value adding projects for those yielding cash flows that cover debt repayment).
- The quality of a firm's investment projects and credit rating.
- The efficiency of renegotiation and liquidation of debt contracts.
- Hold-up problems where private lenders exploit firms for share of profits.
- The degree of managerial discretion.

- Floatation cost of public debt.

The research finds that the issuance of public debt is associated to firms which are larger; have a longer operating history; are more profitable; have a higher credit rating; lucrative investment projects and who are less likely to experience financial difficulties. In contrast, private debt is pursued by firms that are smaller, who have growth opportunities, a shorter operating history, who more than likely cannot afford the floatation costs of issuing public debt. It is worth noting that companies with private debt are more susceptible to moral hazard and hold–up problems.

Based on the above discussion, it is evident that public debt issuance is a choice for larger firms. In addition to debt issuance, Annexure 1 (situated at the end of this research report) has been sourced from the JSE and contains the requirements for raising equity capital on both the main board as well at Altx. As can be seen, the requirements are quite onerous so again it is larger firms that are likely to meet these requirements to raise equity capital. So this poses the question, given the above information, are South African banks losing importance in their role as financial intermediaries? The next section focuses on disintermediation and a paper done on South Africa that focused on deposit disintermediation.

3.5 Is disintermediation taking place?

Based on the work done on the Australian banking sector by Allen and Parwada (2004), Mpako (2007) researched whether the significance of South African banks as financial intermediaries were declining based on the growth and substitutability of bank deposits by money market mutual funds or more commonly known as money market unit trusts in South Africa.

Money market unit trusts are specialised money market intermediaries that purchase money market instruments by pooling funds from investors thereby enabling investors to earn more favourable yields from money market instruments as opposed to deposits at banks. Unit trusts are also not required to report their activities to the SARB however the bank does conduct quarterly surveys on unit trust activities and balance sheets which provides a good indication of the sector’s performance. The key difference between the performance of banks and unit trusts is that banks report their performance based on book value whereas unit trusts report on market value.

Mpako (2007) concluded the following key trends and empirical results on banks deposits:

1. Bank deposits as a ratio of total bank assets had been declining over the period 1997 to 2007 however this decline was also attributed to the currency crisis experienced during 2001 as discussed in Knedlik (2006).

2. Near-money bank deposit products (easily accessible) are complementary to money market unit trust deposits and this can be seen through their positive relationship i.e. an increase in money market unit trusts for these maturities also results for an increase in bank deposits with similar maturities.
3. Long-term and other short-term deposits have a negative relationship with money market unit trusts and are therefore substitutes.

Although the research was unable to empirically validate that disintermediation is taking place in South Africa, the regression relationships provide a good forecasting tool for bank deposits. Mpako (2007) also focused specifically on bank deposits and thus did not test whether the traditional role of banks are declining. Besides Mpako (2007), disintermediation has not been extensively researched in South Africa or if it has, this work has not been published for public consumption. This research report will investigate both sides of the banks' balance sheets and highlight the key sector trends experienced in South Africa over the past years.

The level of concentration in the banking sector can be measured using the Herfindahl–Hirschman Index (HHI) which is a commonly accepted measure of market concentration in terms of number and relative size of players in a banking system. The index is calculated by summing the squares of the market shares of each of the firms in an industry so if an industry consists of a monopolist then the HHI = 100^2 = 10000 or if it is a competitive market with 100 firms and each has a share of 1% then the HHI = 1^2 +...+ $1(100th)^2$ = 100, hence the higher the value, the less competitive the industry is. Generally, the HHI can be divided into three categories:

- Un-concentrated industry where the HHI < 1000
- Moderately concentrated industry where the HHI lies between 1000 and 1800
- Concentrated industry where the HHI > 1800

In South Africa, the SARB calculates the HHI for the banking industry in the conventional way but then divides the result by 10000 – as at December 2009, the HHI for the South African banking sector stood at 0,189 which shows that the banking sector is concentrated. The HHI has remained high due to the continued dominance in terms of market share by the five largest banks in South Africa which held 90,7% of the banking sector assets at the end of December 2009 (see Table 1 below).

Bank	Assets - Rbn	Market Share	Cumulative Market Share
The Standard Bank of South Africa	R 803	27.1%	27.1%
Absa Bank Limited	R 649	21.9%	48.9%
FirstRand Bank Limited	R 548	18.5%	67.4%
Nedbank Limited	R 510	17.2%	84.6%
Investec Bank Limited	R 182	6.1%	90.7%
Other	R 276	9.3%	100.0%
	R 2,967	**100.0%**	

Table 1: Market share of total assets
Source: *SARB Bank Supervision department, annual report, 2009*

This level of concentration can also be deduced from the decline in registered banks, which were 61 in 2000 and have since declined to 32 by December 2009 – see figure 8 below.

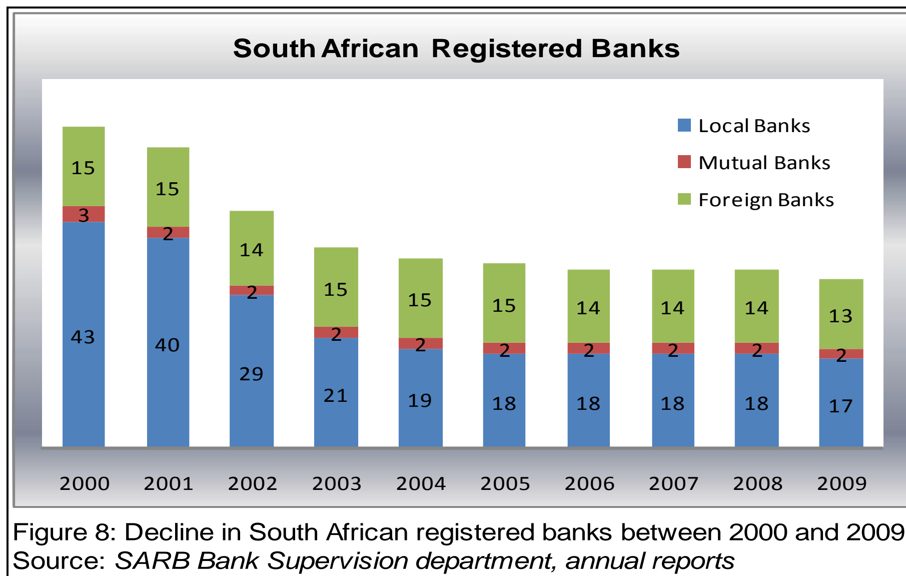

Figure 8: Decline in South African registered banks between 2000 and 2009
Source: *SARB Bank Supervision department, annual reports*

Although the level of banking concentration is a good indicator of the competition within the banking sector, it does not provide conclusive proof that disintermediation is taking place in South Africa.

3.6 Non-banking financial intermediaries

This section provides an overview of the most prominent segments that make up the NBFIs in South Africa namely unit trusts, short-term insurers, long-term insurers and retirement funds. The discussion will however exclude other finance companies due to lack of availability of performance data however the above can be deemed the majority of the NBFI sector. This NBFI sector is very similar to that of banks in that their customers are willing to defer their income consumption for the future in terms of unit trust and retirement funds and to cover against risk in terms of short-term or long-term insurance. The information for the following discussions has been largely sourced from the FSB which is the body regulates the NBFIs. As at November 2010, the unit trust and retirement fund data for 2009 had not been published so the below includes the period between 1999 and 2008.

3.6.1 Unit trusts

Unit trusts pool the financial resources of individuals and companies and invest in diversified portfolios of assets (Saunders A and Cornett MM, 2008). Unit trusts offer small investors the opportunity to invest in capital market securities thereby diversifying their risk and at the same time incurring lower transaction costs due to economies of scale. Unit trusts can either be open-ended, where the fund stands ready to sell new shares to investors and to redeem outstanding shares on demand at fair market value, or closed-ended, where the there are a fixed number of shares/units in issue and the unit price is determined by both fair market value as well demand for the units themselves. The preceding statement highlights that unit trusts are valued at market prices and this is done by the fund assets being marked-to-market on a daily basis. Unit trusts invest in both domestic and foreign securities which may include equities, bonds, money market, property and other instruments.

Figure 9 below provides a graphical illustration of the growth in size (market value) and number of unit trust funds in South Africa. On average, the growth in unit trust assets under management has been 23% per year over the period between 1999 and 2008.

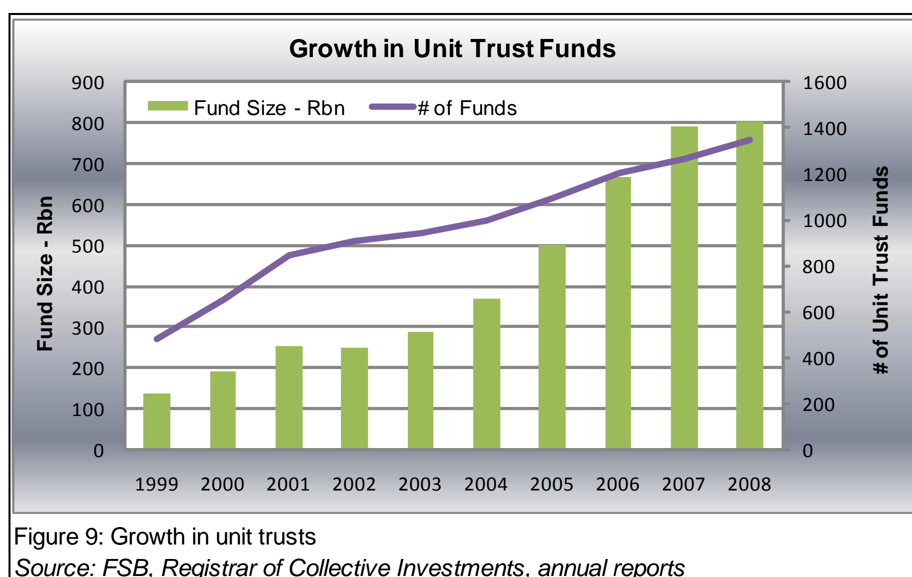

Figure 9: Growth in unit trusts

Source: FSB, Registrar of Collective Investments, annual reports

Table 2 below provides the market shares of the domestically invested South African unit trust funds by assets under management. Looking at the names of the funds, it is evident that banks have also followed the same approach as the Australian banks as discussed in Allen and Parwada (2004) i.e. South African banks have established their own unit trust subsidiaries.

Fund Name	Fund Size - Rbn	Market Share	Cumulative Market Share
Stanlib Collective Investments Limited	R 91.5	14%	14%
Allan Gray Unit Trust Management Limited	R 79.7	12%	26%
Absa Fund Managers Limited	R 76.7	12%	38%
Prudential Portfolio Managers Unit Trust Limited	R 63.1	10%	47%
Investec Fund Managers SA Limited	R 62.0	9%	56%
Old Mutual Unit Trust Managers Limited	R 44.8	7%	63%
Sanlam Collective Investments Limited	R 43.8	7%	70%
RMB Unit Trust Limited	R 31.0	5%	75%
Nedgroup Collective Investments Limited	R 28.0	4%	79%
Coronation Management Company Limited	R 23.3	4%	82%
Other	R 117.2	18%	100%
	R 661.2	100%	

Table 2: Market share of domestically invested South African unit trust funds as at December 2008
Source: *FSB, Registrar of Collective Investments, annual report, 2008*

3.6.2 Short-term insurers

The short-term insurance industry partially satisfies a basic human need, namely the need to protect one's possessions and self against uncertainties (Van Zyl et al, 2003). Short-tem insurers are prepared to provide this protection in return for a premium. Short-term insurance broadly covers loss or damage to motor vehicles and property (movable and immovable), accident, health, personal items, transportation of goods etc.

Figure 10 below provides a graphical illustration of the growth in size (market value) and number of short-term insurers in South Africa. On average, the growth in short-term insurer's assets has been 10% per year over the period between 1999 and 2008.

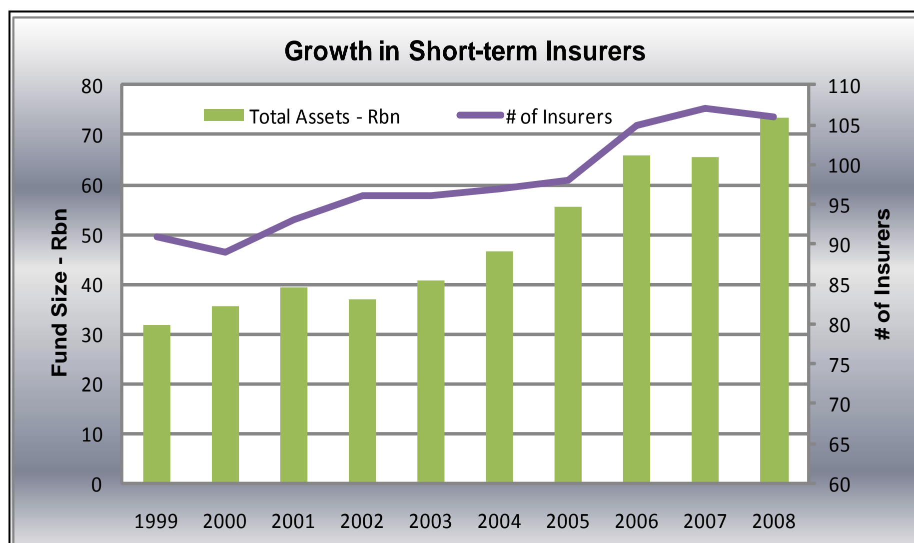

Figure 10: Growth in short-term insurers
Source: FSB, annual reports

3.6.3 Long-term insurers

As discussed in the previous section short-term insurance deals with uncertainties whereas on the other hand, long-term insurance deals with events that are certain or highly likely such as death, old age and to some extent also covers events that less certain such as disability or sickness (Van Zyl et al, 2003). Broadly speaking, products that are normally sold by long-term insurers include life insurance, annuities, credit life insurance, medical insurance, disability insurance and etc.

Figure 11 below provides a graphical illustration of the growth in size (market value) and number of long-term insurers in South Africa. On average, the growth in long-term insurer's assets has been 10% per year over the period between 1999 and 2008.

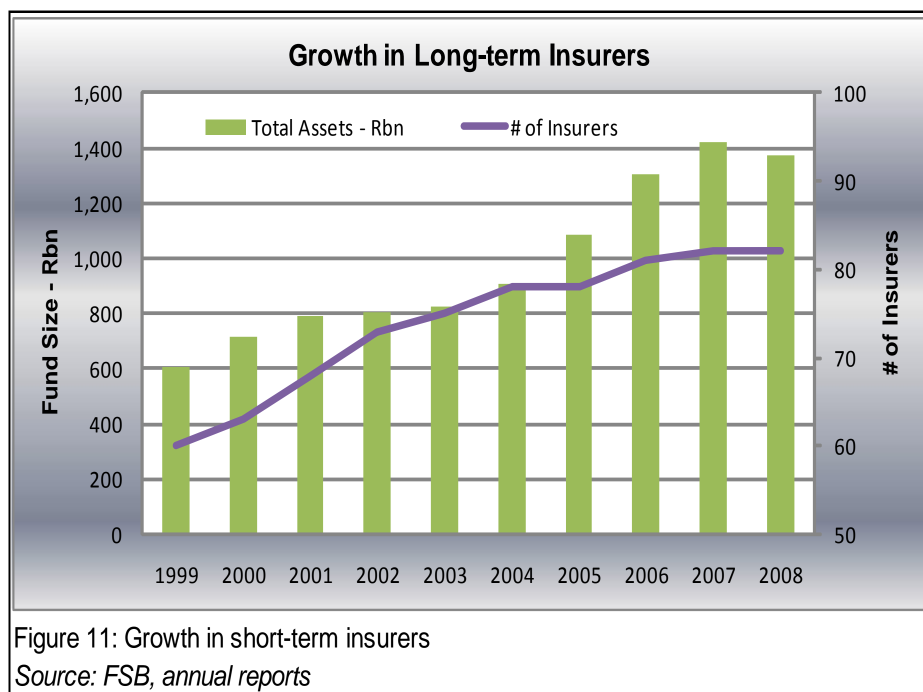

Figure 11: Growth in short-term insurers
Source: FSB, annual reports

Table 3 below, provides a view of the market share within the long-term insurance sector and it is worth highlighting that majority of these companies were also represented earlier in the unit trust table of market shares.

Insurer	Market Share	Cumulative Market Share
Old Mutual	26.6%	27%
Sanlam	15.7%	42%
Momentum	13.0%	55%
Liberty Life	11.3%	67%
Investment Solutions	9.4%	76%
Metropolitan Life	4.5%	81%
Allan Gray Life	3.0%	84%
Investec Assurance	2.9%	86%
Capital Alliance Life	1.4%	88%
Coronation Life	1.2%	89%
Other	11%	100%
	100%	

Table 3: Market share of long-term insurers as at December 2008
Source: *FSB, annual overview of long-term insurance market, 2008*

3.6.4 Retirement funds

Retirement funds are non-profit institutions that collect, invest and administer monies of individuals and companies. Their main purpose is to provide retirement benefits to participating members on retirement or to their dependants on the death of the member (Van Zyl et al, 2003).

Figure 12 below provides a graphical illustration of the growth in size (market value) and number of retirement funds in South Africa. On average, the growth in pension fund assets has been 13% per year over the period between 1999 and 2008.

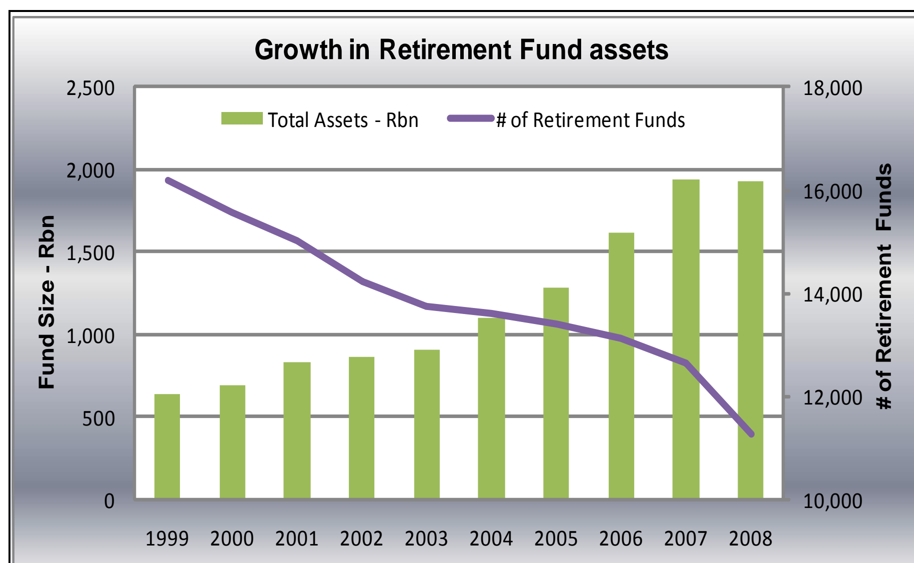

Figure 12: Growth in retirement fund assets
Source: FSB, annual reports

3.7 Summary of chapter

This chapter provided an overview of the South African financial sector including its banking sector, capital markets, most pertinent NBFIs and contribution to the economy. The data presented in the preceding sections will be used in testing for bank disintermediation in the following chapter.

Chapter 4 - Testing for Disintermediation in South Africa

4.1 Introduction

The data covered in this section will be largely based on data previously presented in this paper however the data will be combined and used to identify/test relationships using trend analysis in order to prove whether bank disintermediation is a reality for South Africa.

4.2 Testing for disintermediation using Kaufman and Mote (1994) measures

4.2.1 Asset measure

In their paper, Kaufman and Mote (1994) highlighted the various measures of bank disintermediation however, according to them the most commonly used are bank assets and bank deposits. Figure 13 below shows the growth in bank assets and deposits between 1994 and 2009 – both bank assets and deposits have grown positively over this period with the exception of 2009 mainly due to the global financial crisis which was also a recessionary period.

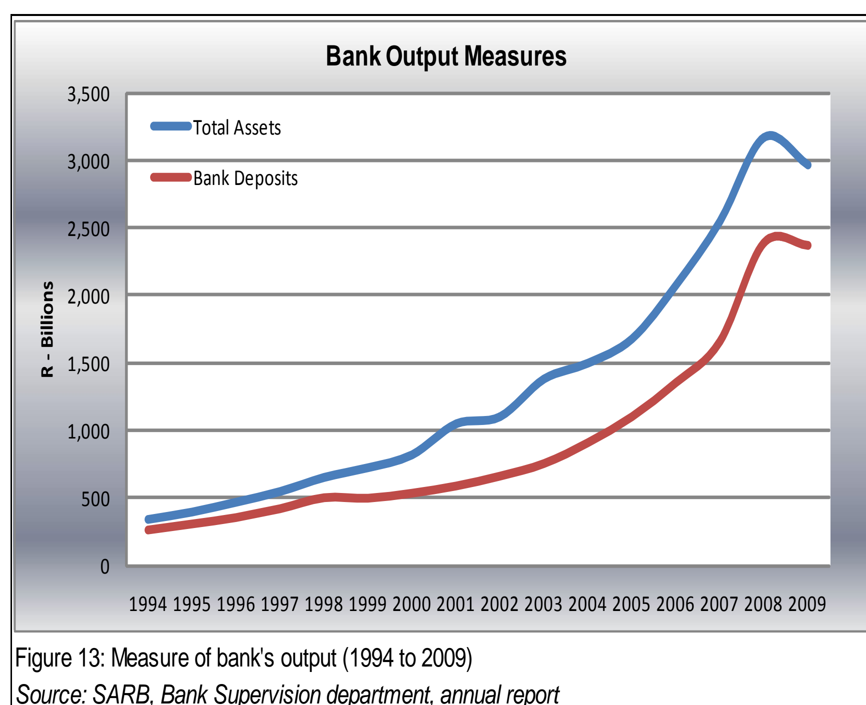

Figure 13: Measure of bank's output (1994 to 2009)
Source: SARB, Bank Supervision department, annual report

Based on this trend, bank disintermediation cannot be empirically proved in the context of the South African market.

4.2.2 Employment measure

Statistics South Africa produces quarterly employment statistics for each sector identified according to the System of National Accounts (SNA), however this data has

been produced since December 2004 due to the move from reporting based on companies registered for value added tax to employees registered for income tax which provides a more realistic view of employment per sector. Information from the individual banks were not consistently available and due to differences in financial year ends, the quarterly employment statistics is a better, standardised source for this information but this represents the finance, real estate and business services sector.

Figure 14 provides a graphical representation of the growth in employment for this sector and as indicated, this growth has been volatile but it is interesting to note that it has grown from the 2004 levels even though it has tapered off in 2009 but this could largely be related to the global financial crisis and associated decrease in bank assets. By the end of 2004, 1.6 million people were employed in this sector and this has grown to 1.8 million by the end of 2009.

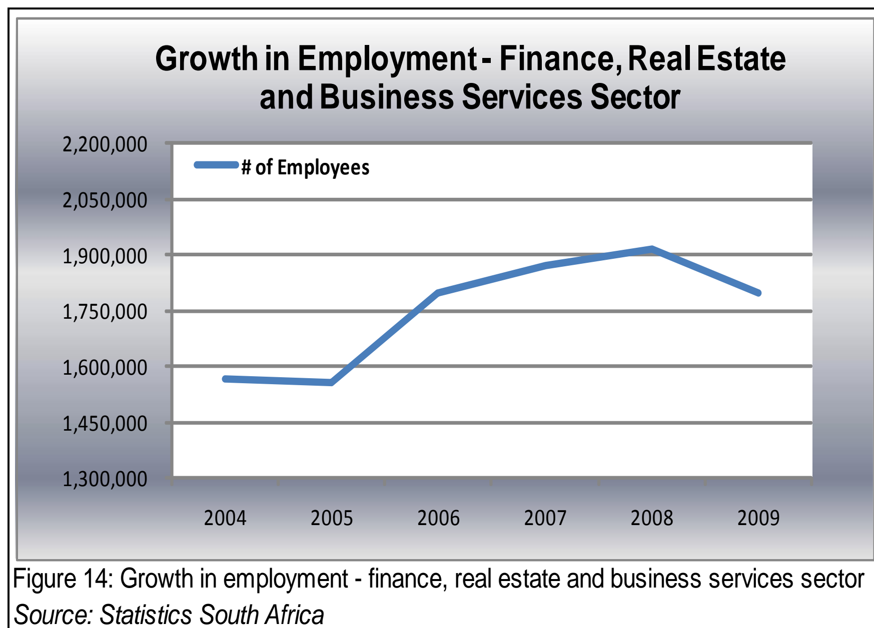

Figure 14: Growth in employment - finance, real estate and business services sector
Source: Statistics South Africa

4.2.3 Financial performance measure

Based on the GDP data per sector produced by Statistics South Africa, figure 15 provides the percentage contribution of the finance, real estate and business services sector to GDP between 2000 and 2009.

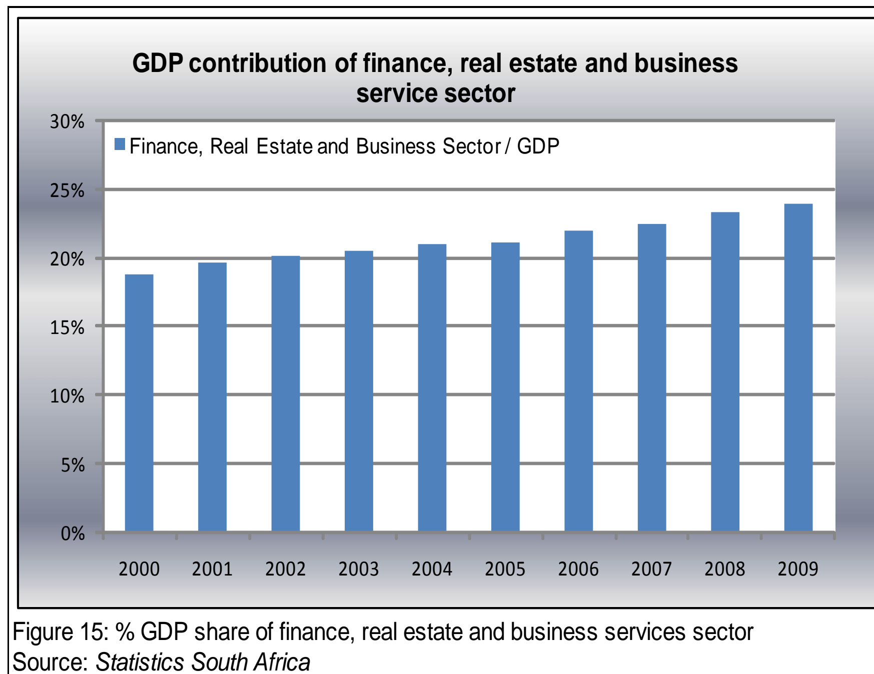

Figure 15: % GDP share of finance, real estate and business services sector
Source: *Statistics South Africa*

In 2000, the finance, real estate and business services sector contributed 19% of South Africa's GDP and this contribution has grown steadily to 24% by 2009. The data reveals that this particular sector has become more prominent in the economy however a more focused analysis of the banking sector's share of GDP is required and table 4 below provides just that.

Extracting data from the SARB Bank Supervision department's annual reports and analysing bank revenue being made up of interest income and non-interest income, it is evident from Table 4 below that banks' share of GDP has decreased from 8.6% in 2000 to 6.2% in 2009. However during the same time banks' interest income contribution to total income has grown so pointing towards the fact that the traditional role of banks has been sustained or in fact improved.

Year	Net Interest Income - Rm	Non-Interest Income - Rm	Total Bank Revenue - Rm	GDP at Current Prices - Rm	Total Bank Income / GDP	Net Interest Income / Total Income
2000	R 21,747	R 57,900	R 79,647	R 922,147	8.6%	27.3%
2001	R 30,019	R 66,132	R 96,151	R 1,020,008	9.4%	31.2%
2002	R 30,361	R 38,240	R 68,601	R 1,171,085	5.9%	44.3%
2003	R 31,890	R 49,300	R 81,190	R 1,272,537	6.4%	39.3%
2004	R 34,963	R 67,422	R 102,385	R 1,415,273	7.2%	34.1%
2005	R 38,616	R 51,836	R 90,452	R 1,571,082	5.8%	42.7%
2006	R 52,252	R 84,451	R 136,703	R 1,767,422	7.7%	38.2%
2007	R 67,645	R 93,275	R 160,920	R 2,017,102	8.0%	42.0%
2008	R 77,757	R 71,448	R 149,205	R 2,283,822	6.5%	52.1%
2009	R 74,074	R 75,641	R 149,715	R 2,407,689	6.2%	49.5%

Table 4: Bank income share of GDP
Source: *SARB, Bank Supervision department, annual reports*

This output measure has clearly yielded mixed results and even though banks' contribution to GDP has decreased, they have continued growing their interest income.

The results of the disintermediation test using Kaufmann and Mote (1994) output measures does not provide any conclusive proof on whether disintermediation is taking place in South Africa. In summary:

(i) The growth in bank assets and deposits has been remarkably strong.

(ii) Employment in the finance, real estate and business services sector has shown positive growth.

(iii) The overall finance, real estate and business services sector has increased its share of the country's GDP however, the GDP contribution of banking income/value added has declined.

4.3 Testing for disintermediation tests using other methods

4.3.1 Bank and NBFI assets share of GDP

The below figure 16 shows the ratio of bank and NBFI assets to GDP between 1999 and 2008 (up until November 2009, the FSB had not yet published pension fund and unit trust data for 2009).

The result of this ratio indicates that bank assets have grown from 66% of GDP in 1999 to 196% by the end of 2008, similarly unit trust assets have grown from 12% of GDP to just over 49%. During the same time total insurance assets grew from 57% to just over 89% with pension fund assets growing from 58% to just over 104% and combining NBFIs data, their assets to GDP ratio has grown from 128% to 258%. Although bank assets are by far the single largest in terms of value, it is worth noting that unit trust assets have grown at a faster pace over the period under review.

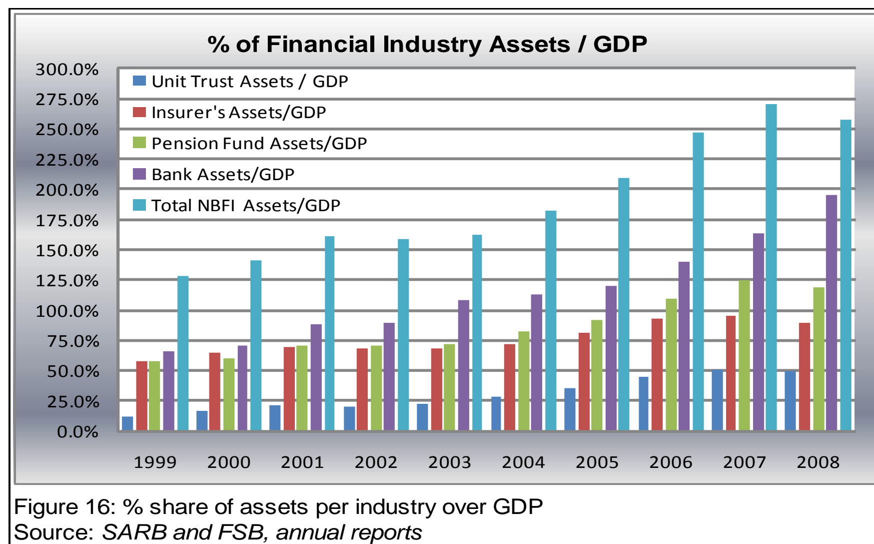

Figure 16: % share of assets per industry over GDP
Source: *SARB and FSB, annual reports*

The above analysis has highlighted the importance and growth of the unit trust industry however benchmarking the different sector's assets to GDP, the banking sector still accounts for the bulk of assets. However, it must be noted that collectively the NBFIs have greater asset share but this is inconclusive in proving whether disintermediation is taking place in South Africa.

4.3.2 Bank loans and advances per segment

The analysis below looks at the growth and contribution of the loans and advances, issued by banks to individuals (households), corporate and NBFI's and reflects the change in these segments between 2001 and 2007 – unfortunately the SARB has not followed a consistent approach in categorising bank loans and advances between the sectors hence this is the only comparable period.

Figure 17 provides a view of the size of the loans and advances issued to individuals (households), corporate and the NBFIs segments– the trend analysis clearly indicates that the individual and corporate sector makes up the lion's share of bank loans and advances. These segments have shown strong growth over the period analysed and in fact have grown on average 20% and 19% respectively over the 7 year period. As per the data, the loans and advances to NBFIs by banks can be considered insignificant.

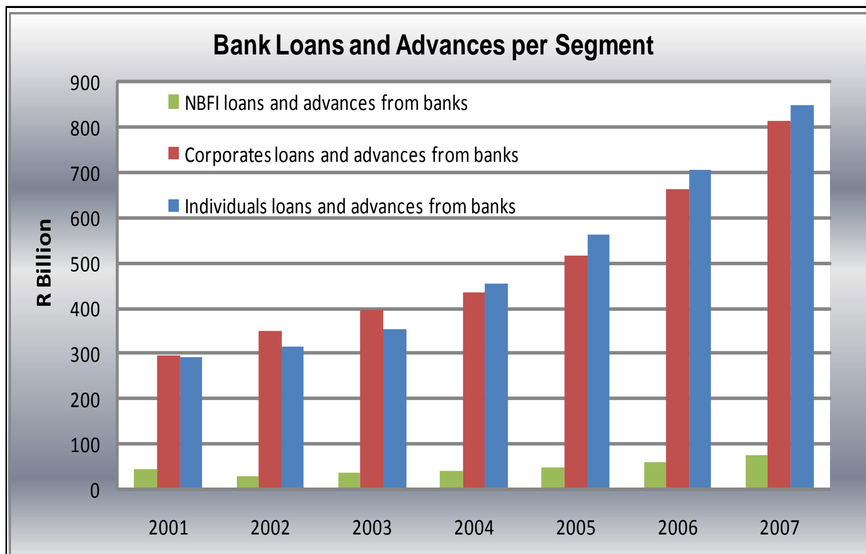

Figure 17: Bank loans and advances per segment
Source: SARB Bank Supervision department, annual reports

The share of individual, corporate and NBFI loans and advances compared to total bank loans and advances is represented by figure 18 and although there has been some movement over the years, individuals accounted for 37% of bank loans and advances while the corporate sector constituted 35% by the end of 2007.

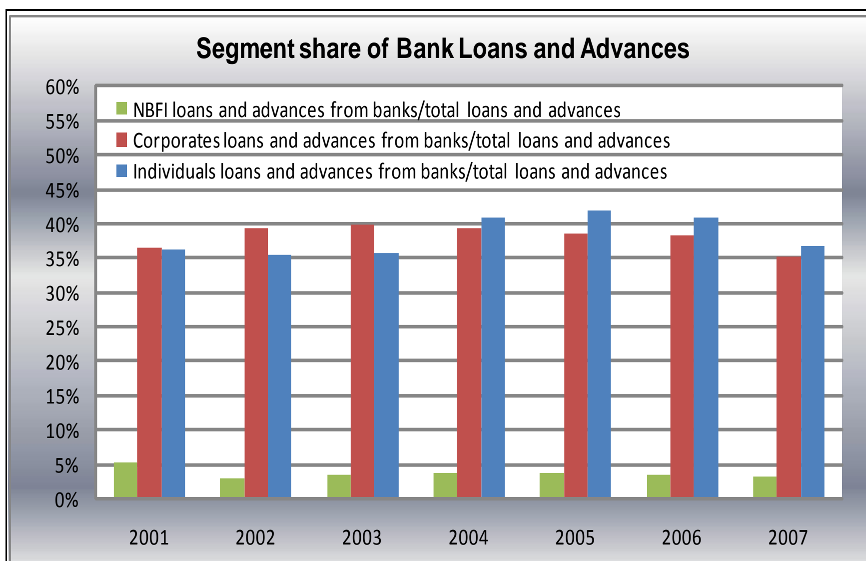

Figure 18: Share of bank assets per segment
Source: SARB, Bank Supervision department, annual reports

Given the growth in banks loans and advances to individuals and the corporate sector, this analysis does not indicate disintermediation in the banking sector.

4.3.3 Bank deposits per sector

Figure 19 below shows the trend in bank deposits from the individual (households), corporate and NBFI sectors. As at December 2009, these segments combined

accounted for 73% of bank deposits held in local currency and this share has grown from 65% since 2001. From the graph, NBFI's show substantial growth since 2001.

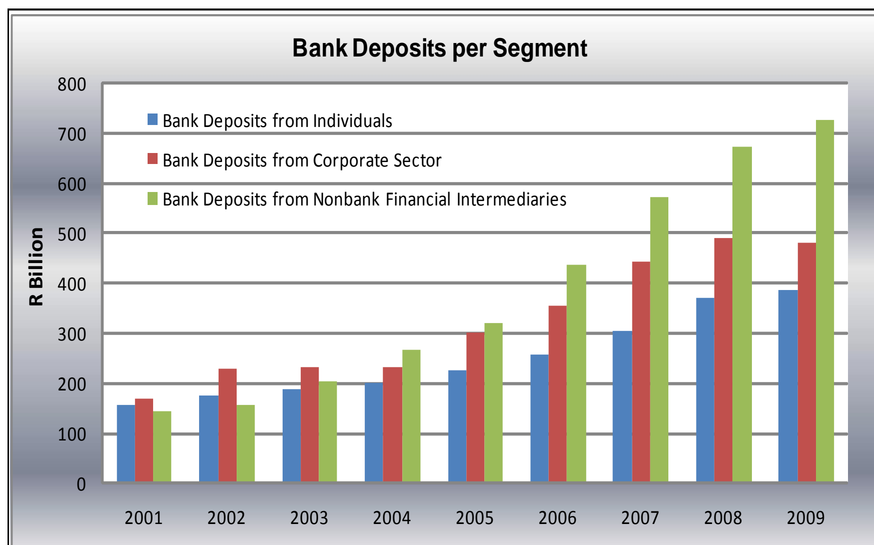

Figure 19: Bank deposits per segment

Source: SARB Bank Supervision department, annual reports

Looking at the each of the segments change in share of total bank deposits (figure 20) since 2001, the share in individual deposits has decreased from 22% to 18% with the corporate segment share decreasing slightly from 23% to 22% and lastly the NBFIs share has increased from 20% to 33%. This suggests that the bank intermediation chain may be lengthening in South Africa however, this will also be further tested in the section to follow.

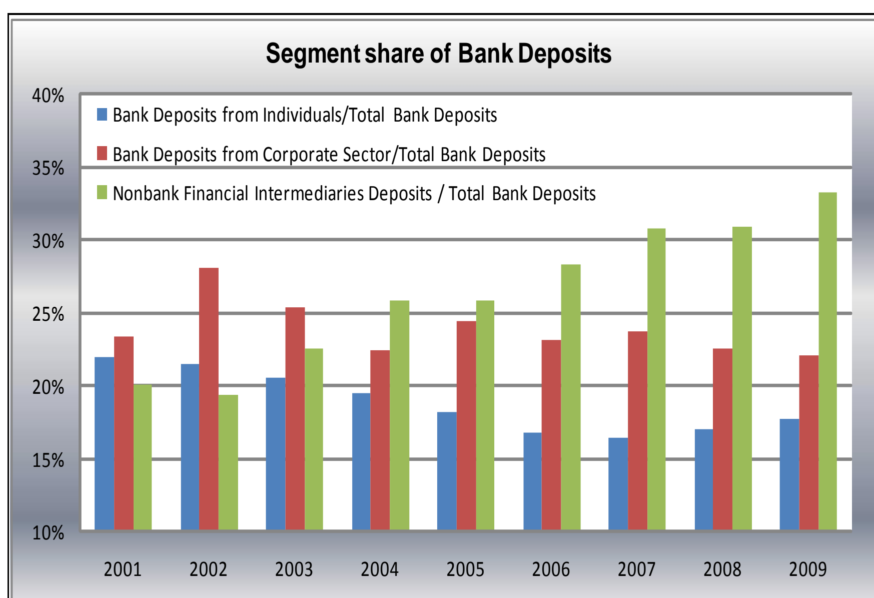

Figure 20: Share of bank deposits per segment

Source: SARB Bank Supervision department, annual reports

4.3.4 Change in share of NBFI assets deposited at banks

Another informative intermediation ratio employed by Schmidt et al (1997), is to trend the change in NBFI assets deposited with banks compared to NBFI total assets. Per the total NBFI assets provided in section 4.3.1 and using bank deposit data from section 4.3.3, the table below provides a view of the change in NBFI assets held at banks.

NBFI asset data - Rbn	2001	2002	2003	2004	2005	2006	2007	2008
NBFI deposits at banks	157	205	267	321	435	574	672	726
NBFI total assets	1,924	1,957	2,059	2,421	2,926	3,655	4,216	4,175
Ratio of NBFI deposits at banks / NBFI total assets	8%	10%	13%	13%	15%	16%	16%	17%

Table 5: NBFI asset data
Source: *SARB Bank Supervision department and FSB annual reports*

This analysis clearly indicates that 17% of NBFIs assets were deposited at banks during 2008, up from 8% since 2001. The results further points to a possible lengthening of the bank intermediation chain in South Africa.

A similar analysis on the individual and corporate sectors would have been valuable and key in highlighting any bank disintermediation trends however the data for both sectors' assets are not available or cannot be easily quantified.

4.3.5 Loans and advances to bank deposits/liabilities

Measuring the ratio of loans and advances to bank deposits or liabilities, we can deduce whether banks are fully engaged in financial intermediation i.e. actively collecting funds from households and providing loans to both households and the corporate sector.

Referring to figure 21 below, banks' loans and advances have been on average 110% of bank deposits between 2001 and 2009 indicating that banks are lending more than the amount funded by customer deposits. On the other hand banks' loans and advances have been on average 86% of bank liabilities over the same period, indicating that banks are borrowing to fund other investments however it must be noted that this may not necessarily relate to financial investments and could relate to real investments in the form of banking infrastructure.

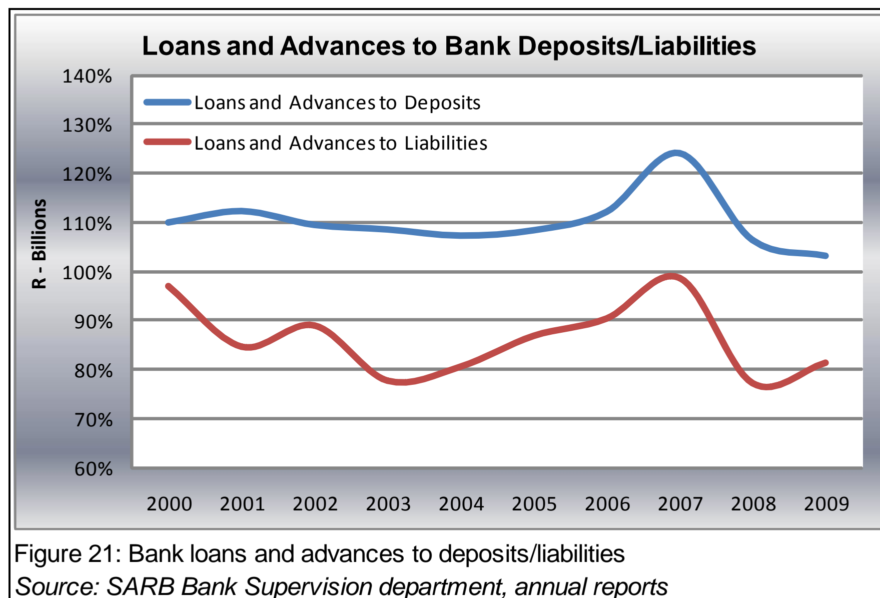

Figure 21: Bank loans and advances to deposits/liabilities
Source: SARB Bank Supervision department, annual reports

Again, this trend analysis does not provide any conclusive findings on whether disintermediation is occurring in the South African banking sector.

The next section will provide a summary of the results of the tests employed in sections 4.2 and 4.3.

4.4 Summary of empirical results

The trend analysis covered in sections 4.2 and 4.3 provided the following key conclusions for the South African banking sector:

- The growth in bank assets and deposits still reflect a general upward trend.
- Although employment data has been trended for only a six year period, it reveals a volatile movement of employment in the finance, real estate and business services sector but nonetheless, it is an upward movement since 2004.
- Banks' share of GDP has decreased however banks have managed to increase their contribution of net interest income to that of total bank income.
- The assets of the NBFI sector have been growing rapidly over recent years especially that of unit trusts, which suggests a movement toward investment in securities markets either for reasons of diversification or better returns.
- Loans and advances to customers have continued to grow with the individual and corporate sector constituting the bulk of bank loans and advances.
- NBFI account for the major share of bank sources of funds in the form of deposits from customers which suggests that the bank intermediation chain is lengthening.
- Analysing the ratio of bank loans and advances to bank deposits and liabilities, it is evident that banks are playing their role as asset transformers however the loans and

advances to liabilities ratio indicates that banks are engaged in other investments which might not necessarily relate to financial investments.

The next chapter will provide an overall summary of this research report.

Chapter 5 – Discussion and Conclusion

This paper set out to find empirical results as to whether bank disintermediation is taking place in South Africa. This conclusion will be split into two sections with section 5.1 providing a summary of financial intermediation in South Africa with some key financial sector developments and trends, continued by the results of the empirical analysis on whether bank disintermediation is taking place and section 5.2 will summarise the findings and will answer the research question and objectives set out in section 1.3.

5.1 Discussion

South Africa has a stable financial sector which actively aids and contributes to economic development and can be split into banks, capital markets and non-bank financial intermediaries (NBFIs). South Africa has well established capital markets which are ranked favourably internationally, however the information gathered in section 3.5 indicates that it is the large corporations and the government sector that are likely to raise capital through these markets either due to costs of going public or stringent listing requirements. The banking sector performance is recorded under the finance, real estate and business services sector, in accordance with the System of National Accounts (SNA) devised by the United Nations, and contributes to the majority of GDP.

As at December 2009, the sector had 32 registered banks with the products and services generally offered by commercial banks ranging from transacting, savings, credit to insurance services. Banking sector assets and liabilities have shown a positive growth trend with the exception of 2009 which is largely due to the global financial crisis which negatively impacted banks' credit losses and therefore resulting in stringent credit policies. Mortgage loans make up 45% of bank loans and advances which is largely funded by shorter-term deposits hence confirming the maturity intermediation role of banks as discussed by Saunders and Cornett (2008). Roughly 72% of bank loans and advances are advanced to individuals and the corporate sector and these are funded by deposits largely from NBFIs which constitutes up 33% of total bank deposits, followed by the corporate sector at 22% and individuals at 18%.

The paper then went on to analyse bank and NBFI data to identify key trends. It must be noted that the analysis specifically excluded bank disintermediation relating to capital markets because, as highlighted in the previous section, it is likely only large corporations and the government that raise capital in these markets.

In South Africa, the Herfindahl–Hirschman Index is used to measure banking sector concentration and as at December 2009, this stood at 0,189 showing that the sector is highly concentrated due to the five largest banks holding just over 90% of the industry's assets.

Looking at the change in the number of registered banks, the sector has experienced a decline from 61 banks in 2000 to 32 banks by 2009 hence the number of banks has halved over the recent decade.

An overview of the NBFIs sector showed that the overall sector has experienced radical growth in recent years especially unit trusts and retirement funds. It was interesting to observe that banks have set up their own NBFI subsidiaries and also dominates the unit trust and insurance sectors in terms of market share of assets – this aligns to the Australian banking sector and the research done by Allen and Parwada (2004).

The report then looked at the disintermediation measures employed by Kaufman and Mote (1994) which show that, using the asset measure, bank assets and deposits have continued to grow. Looking at the employment with the finance, real estate and business services sector, this has also grown in nominal terms over time but a sizeable drop has been experienced during 2009 which could be related to the global financial crisis and decrease in bank assets. The value add measure, specifically looking at the contribution of banks' net interest and non-interest income to GDP showed that this contribution has been decreasing however it is interesting to note that bank net interest income has grown over the period under review aligning to the asset growth mentioned above. This finding differs from Allen and Santomero (2001) in that South African banks' net interest income is still growing compared to non-interest income which is contrary to that of the USA banks.

Analysing the assets and liabilities data for banks and NBFIs, the following interesting observations were made:

- NBFI assets have grown in relative size compared to bank assets and represent 258% of annual GDP by the end of 2008 with the growth in NBFI assets largely attributable to unit trust and retirement funds.
- Bank assets have however grown at a faster rate than that of the collective NBFIs assets when comparing the percentage contribution to GDP however the collective NBFI assets are much larger in nominal size. This empirical finding aligns to the research done by Allen and Santomero (2001) where USA bank assets are also found to be growing relative to total financial sector assets.
- Bank loans and advances to NBFIs can be considered insignificant however it is worth noting that bank loans and advances to both individuals and the corporate sector has continued to grow by double digit rates between 2001 and 2007.
- NBFIs constitute the major share of bank deposits or bank funding thereby pointing towards the lengthening of the intermediation chain which coincides with the study done by Schmidt et al (1997) of the banking sectors in France; Germany and United Kingdom.

- The previous point has been confirmed by measuring the percentage change in NBFI assets held at banks as deposits and this analysis has shown that 17% of NBFI assets are deposited at banks, this ratio has increased from 8% in 2001.
- Measuring the bank loans and advances to bank deposits, it is evident that banks are advancing more loans than the amount funded by deposits thereby playing their role as asset transformers. However the ratio of loans and advances to liabilities is below 100% indicating that banks have engaged in other investments however not necessarily financial and could relate to real investment due to the normal operations of banks.

Overall this analysis has not provided any empirical results to prove or disprove that bank disintermediation is taking place in South Africa. The various trend analysis employed has yielded fairly mixed results suggesting that banks are still relatively important from an asset perspective and are still the primary source of loans to households and the corporate sector. However, banks are not actively sourcing deposits from surplus savings units given that the bank intermediation chain is lengthening due to the growth in NBFI assets held with banks.

5.2 Conclusion

This research has not found conclusive proof that the role of South African banks are declining from an asset side perspective however there is a notable increase in the assets of NBFIs and especially their share of bank deposits which highlights that there is a lengthening of the bank intermediation chain hence suggesting that disintermediation is taking place from a liabilities/bank deposit perspective. This previous point suggests that banks are not actively sourcing deposits from surplus savings units and the financial implication of this could result in either a decrease in traditional bank profitability as NBFIs demand greater returns for holding their deposits at banks or alternatively, this could lead to banks charging absurd interest rates on the loans being advanced to households and the corporate sector. In the previous point, I used the term traditional bank profitability because this research has found that banks are establishing their own NBFIs so although their traditional profitability may be affected, they are finding new ways of earning income by actively engaging in the NBFI sector which is seen to cater for different needs to that of the products and services offered by traditional banking.

Based on the results of this research banks can be more effective at leveraging financial intermediation and given the rate of unemployment in South Africa, banks need to actively engage in providing financial services to particular sectors that will boost economic growth and development. Also, given that banks potentially offer a full range (as discussed above) of financial services, banks can actively cater for consumers needs by offering products and services that meets these particular needs so there should definitely be a move from shorter term profitability to longer term sustainability of the financial sector.

This research has looked at some of the key relationship and trends in bank and NBFI data but it is not all at exhaustive. Going forward, it would be interesting to gather more years of data to identify a change in these trends especially to understand the aftermath of the global financial crisis and its impact on NBFI's assets. As an aside, it would also be interesting to measure the impact of South Africa's established capital markets on banks traditional intermediation role.

Annexure 1 – JSE listing requirements

Listing requirements	Main Board	AltX
Share Capital	R25 million	R2 million
Profit history	3 Years	None
Pre-tax Profit	R8 million	N/A
Shareholder spread	20%	10%
Number of Shareholders	300	100
Sponsor/DA	Sponsor	Designated Advisor
Publication in the press	Compulsory	Voluntary
Number of transaction categories *	2	2
Special Requirements	N/A	Appoint Financial Directors
Annual listing fee	0.04% of average market capitalisation with a minimum of R26334 and a maximum of R121700 (including VAT).	R22 000 (including VAT)
Education Requirements	N/A	All directors to attend Directors Induction Programme
Source: *JSE*		

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