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FACULTY OF COMMERCE, LAW AND MANAGEMENT

SCHOOL OF ECONOMIC AND BUSINESS SCIENCES

COURSE: CMC022– RESEACH DISSERTATION

RESEARCH TOPIC: HOW HAVE THE GROSS CAPITAL FLOWS AND SHORT-TERM PORTFOLIO FLOWS AFFECTED HOUSEHOLD WELFARE IN SOUTH AFRICA BETWEEN 1994 AND 2011?

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SUBMISSION DATE: 22 MAY 2013

WORD COUNT: 12 000

HOW HAVE THE GROSS CAPITAL FLOWS AND SHORT-TERM PORTFOLIO FLOWS AFFECTED HOUSEHOLD WELFARE IN SOUTH AFRICA BETWEEN 1994 AND 2011?

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A dissertation submitted to the Faculty of Commerce, Law and Management, University of the Witwatersrand, Johannesburg; in fulfillment of the requirements for the degree of Masters of Commerce in Development Theory and Policy.

Johannesburg, 2013

DECLARATION

*I, **Mathopane Klaas Masha,** declare that this research is my own, unaided work. I have acknowledged all the information used in the dissertation. It is submitted in fulfillment of the requirements for the Degree Masters of Commerce in Development Theory and Policy in the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in this or any other university.*

……
Mathopane Klaas Masha
22** day of **May**, year **2013

DEDICATION

To my wife Matshidiso Masha and daughter Reabetswe Mahlogonolo, thank you for enduring lonely weekends and nights so I could finish this project. To my Grandmother, Malefe Masha for teaching me perseverance, faith in God and commitment to family.

ACKNOWLEDGEMENTS

Unto him who is able to do exceedingly, abundantly more than we can think or imagine, to God, my father in heaven, i am grateful for the gift of life, for saving my life and transforming it to be what it is today, '*The stone that the builders rejected has now become the cornerstone*.'

I wish to express deep gratitude to my supervisor for the project, Doctor Rex McKenzie for his insightful inputs, constructive criticism, patience and guidance.

I also wish to thank my classmates for challenging and enriching debates and assistance. I am also grateful to friends and colleagues who prayed for me as well as assisting with this project in general.

Lastly, I am grateful to my parents for giving me the opportunity to study.

ABSTRACT

The defining features of modern capitalist economies have been regular episodes of financial crises. The global economy is now more integrated and interlinked with finance being one of the essential levers through which inter-linkages across domestic economic sectors are fortified. The linkages between real and financial accounts are established through inter-sectoral economic transactions which affects stock positions and flows.

The accounting approach to economic analysis is a useful instrument in giving a comprehensive picture regarding the performance of sectors in the economy and point where potential problems in the system could be building up and dictate the policy measures that are likely to be useful. The Flow-of-Funds (FoF) and Balance Sheet Approach are instruments through which the impact of capital flows on households is traced. The household balance sheet and FoF accounts are used to make inferences about household welfare and how they fared in the period under review.

Keywords: Accounting Approach, Flow-of-Funds, Balance Sheet Approach, Households Welfare, Financialisation

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ABREVIATIONS

BIS: Bank of International Settlement

BSA: Balance Sheet Approach

ECB: European Central Bank

FDI: Foreign Direct Investment

FIH: Financial Instability Hypothesis

FNB: First National Bank

FoF: Flow of Funds

GCF: Gross Capital Flows

GDP: Gross Domestic Product

IMF: International Monetary Fund

IO: Input -Output

MF: Money Flows

MFSM: Monetary and Financial Statistics Manual

MPC: Monetary Policy Committee

NCA: National Credit Act

NCF: Net Capital Flows

NFA: National Financial Accounts

SA: South Africa

SARB: South African Reserve Bank

STF: Short-Term Flows

SNA: Systems of National Accounting

UNISA: University of South Africa

USA: United States of America

WEO: World Economic Outlook

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Chapter 1

1.1. Introduction

South African economy consists of five main economic sectors representing two interconnected sets of accounts categorised into capital and financial accounts. The financial segment is comprised of financial intermediaries, non-financial business enterprises as well as foreign sector whilst the real sector comprises of household and government sectors. The linkages between real and financial accounts are established through intersectoral economic transactions which affects stock positions and flows. The study focuses on how household sector is affected by flows over time and the impact on stock positions. Moreover, the household balance sheet and Flow –of-Funds (FoF) accounts are used to make inferences about household welfare and how they fared in the period under review.

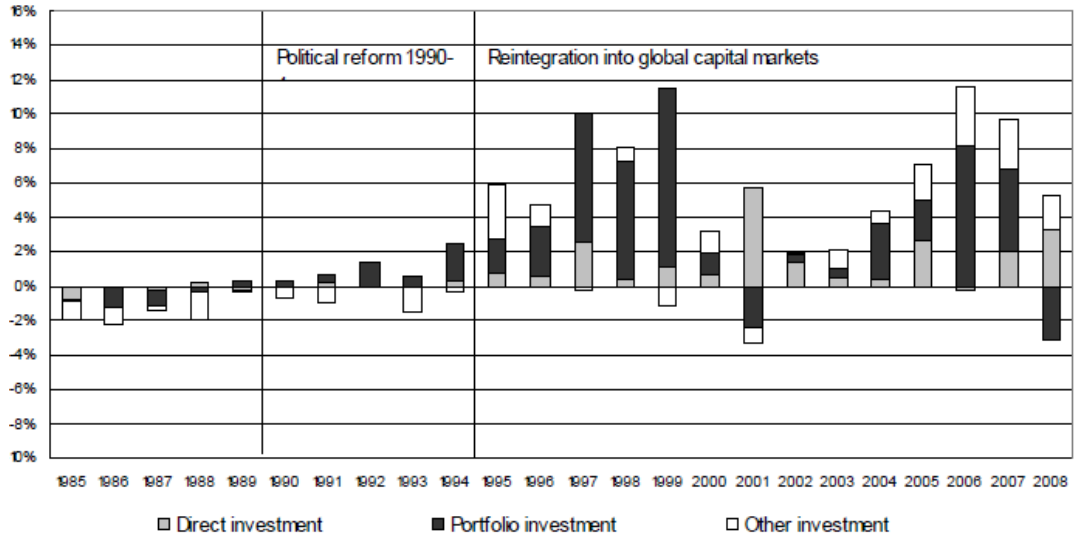
The financial accounts include measures of stocks (balance sheet positions) as well as flows from one period to another. The sectoral balance sheet shows the 'aggregate values of assets and liabilities of sectors and other sectors on which they hold residual claims'. However, the balance sheet does not show how sectoral financial positions change over time but only stock at a particular point in time. It is only by observing changes in the "intervening time, the stocks can be changed to flows" (Ritter, 1962, P.222).

The detailed breakdown of changes from one period to another are contained in the Flow-of-Funds (FoF) accounts. Changes, shifts and movements that have occurred from one period to another can be observed thereby revealing trends and patterns that may account for factors affecting household welfare. Moreover, FoF framework also provides insight into developments in "the balance sheet of the non-financial sectors (e.g. wealth and debt) which have implications for these sectors' income, spending, and saving decisions, and thus potentially affect aggregate demand and, ultimately, price developments" (BêDuc and Le Breton, 2009, p.8).Therefore whenever macroeconomic activity deteriorates the household balance sheet weakens as a result of loss of income and employment. Consequently, households defaults on their credit repayments and eventually banks incur transfer costs (BIS, 2011). Conversely, during economic boom households balance sheet tends to be stable leading to increase in consumption expenditure.

However, this time around households consumption expenditure was a result of "debt explosion" (Merola, 2012 and Kim, 2011).

The defining feature of the modern capitalist economies has been constant episodes of financial crises. The global economy has become more integrated and interlinked and finance has become one of the essential levers through which interlinkages across global economies are fortified. The implication being that a decline in one sector or a shock in one country can be transmitted to other sector or countries with lighting speed, resulting in macroeconomic vulnerabilities (Masha, 2009). The risks are often transmitted to the real economy through "indirect effects of price variables such as interest rates and real exchange rate as well as directly through changes in demand for bank deposits and government bonds" (FitzGerald, 2009). The contraction seen in the financial sector as a result of the recent financial crisis has been transmitted to the real economy and every strata of society. Readily observable effects transmitted to the real sector is "the rise in unemployment, decline in private investment, collapse of the household consumption as well as the falling asset prices exacerbated the financial positions of households and firms thereby adding a social dimension to the crisis" (Telli and Çavdaroğlu, 2011, P.4).

Figure 1: Composition of Foreign Capital Inflows



Source: SARB 2010

Significant domestic and international developments justify the choice of timespan or period under consideration. The period under review (19 years) coincided with significant developments in the domestic political and economic landscape. Firstly, the process of financialisation intensifies even more as 'the functioning of the economic systems at the macro and micro levels' is subjugated to financial sector that further exerts greater influence over domestic economic policy and outcomes (Palley, 2007, p.2). Mohamed (2006, p. 4) attributes 'exchange control liberalisation' in 1994 as part of "financialisation of the SA economy". Some of the key events that took place during the period under review include 1997 Asian financial crisis, 2001 SA currency crises, 2001 Dotcom crash, and 2008 -2010 global financial crisis. These developments provides useful lens through which financial position of households, investor behaviour as well as savings trends are traced and the probable impact on households. By 1995, the impact of the removal of the exchange controls, trade openness, and capital account liberalisation was reflected by increase in Gross Capital Flows (GCF). BIS (2009) attribute the developments to financial integration and globalisation. Broner et al (2011) observes that GCF increased substantially and became volatile relative to net capital Flows (NCFs). The NCFs have also been more biased towards private capital which led to an increase in household debt, current account deficit, and increase in imports relative to exports (McKenzie and Pons-Vignon, 2012).

SA has received its fair share of flows most of which were short-term and biased towards consumption spending. **Figure 1** shows that the substantial amount of the flows were in the form of short-term portfolio inflows which are associated with high risks exposing the domestic economy to credit booms, financial crises, currency appreciation and sudden stops and busts i.e. general macroeconomic management challenges. The impact of these risks has been evident in the domestic economy ever since. From 1994 to 2011, "the stock of foreign liabilities increased from 37% of GDP to 79% of GDP, whilst stock of foreign assets also increased from 20% to 75% of GDP. Moreover, the stock of equities held by non-residence increased from 7% to 37% from 1994 to 2007, prior to the global financial crises" (Aron, Leape and Thomas, 2010, PP, 4-10). In the course of events, FDIs usually considered stable and important source of long term investment, declined quite considerably relative to portfolio investments. **Figure 1** demonstrates three episodes of substantial surges in portfolio investment, first in 1997 to 1999 and then 2004 and 2006. The slump only occurred in 2000 to 2003 during the currency crises and 2008 during the global financial slump (Ibid, 2010).

1.2. Structure

The second chapter presents the research methodology. The chapter outlines how the investigation/exploration of the topic is undertaken and emphasise the strength of the approach chosen in relation to the topic

The third chapter focuses on the literature review to situate the discussion within existing literature and also points out existing gaps.

The fourth chapter provides an empirical analysis of the household sector by tracing the sources and uses of funds using the FoF model. The changing positions of households are easily observable through their balance sheet and therefore the Balance Sheet Approach (BSA) is used to analyse the changing positions of household from one period in time to another.

The fifth chapter presents research findings and makes policy recommendations as well as recapitulating key points from the entire discussion and makes concluding remarks as well.

Chapter 2

2. Research Methodology, Data and Analytical Framework

2.1. Research Problem

The financialisation of the global economy has entailed a huge increase in mobile finance capital. Mobility and the size of the foreign capital flows bring in their wake particular problems for policy makers. The high liquidity volumes in international markets have caused sudden surge in portfolio flows to emerging markets. Moreover, multiple credit channels and financial instruments have increased risk and funding channels. GCF has been large and volatile. Short-term Flows (STF) can be destabilising and also bring about sudden shifts in real exchange rates, domestic interest rates, asset values and domestic credit levels. These shifts and changes in key variables have an impact on the bank balance sheet and the borrowers balance sheet as well as liquidity position of banks and consequently on household incomes and expenditure (Bank for International Settlements (BIS), 2011).

2.2. Research Question

How have the gross capital flows and short-term portfolio flows affected household welfare in SA between 1994 and 2011?

2.2.1. Sub-Questions

In order to conduct the investigation in a structured manner, the following sub-questions are posed.

- What are the channels through which vulnerabilities and fragilities are transmitted to the household sector?
- What were the sources and the uses of household's funds for the period under consideration?
- What is the impact of financial liberalisation, deregulation, interest rate changes as well as wealth to income ratio on household balance sheet?

2.3. Research Objectives

- The aim of the research is to examine and investigate the impact of GCF as well as STF on household's welfare owing to changing financial positions.
- Trace the channels through which risks, vulnerabilities and fragilities are transmitted to the household sector and the overall impact on macroeconomic activity.
- Understanding the effects of the changes of the bank balance sheet as it determines the ability of the bank to extend credit to households which in turn determines the household's expenditure levels.
- Tracing the sources and the uses of funds regarding household sector and the linkages with other sectors in the economy.

2.4. Data

The study draws extensively the FoF accounts and balance sheet data produced by SARB. The household's balance sheet data is also utilised for the purpose of analysing stocks from 1994 to 2011, tracing the changing financial positions. The sources and uses of foreign sector data are useful in tracing the amount of capital flowing into the household sector through financial intermediaries.

2.5. Methodology

Given the nature of the research, both qualitative and quantitative methods are utilised. In tracing the transmission mechanism, the velocity and the volatility of flows; a quantitative analysis is conducted following both FoF accounting approach as well as the BSA. Three transmission channels through which risks, vulnerabilities and fragilities are transmitted into the household sector are investigated. BIS (2009) identify them as the borrower's balance sheet, bank balance sheet as well as liquidity channel.

FoF modelling for developing countries helps to investigate patterns of intersectoral financial flows, focusing on more disaggregated portfolio choices of households. The FoF account analysis is important as it shows an intimate link with interest rate and asset price determination, consequently incomes and expenditure in the economy. According to Telli and Çavdaroğlu

(2011, p. 8) FoF account "records transactions and changes in financial assets and liabilities of an economy". Nhleko and Monyela (2007, p.3) define the FoF account "as an integrated framework providing a summary of the transaction flows that emanates from their financial and real economic activities". FoF provides a platform for tracing the interrelationship between the financial and the real sectors in the economy. It mainly arises from the transactions that take place in the economy either in the form of sales of goods and services and exchanges of assets and liabilities. These transactional interactions generate FoF from one agent to another or from one sector to another (Copeland, 1952).

Murinde (1996, Ch. 2) indicates that FoF methods are useful in studying the "pattern of intersectoral flows in developing countries and to relate to financial flows of the overall development strategy". Financial flows have important implications for the behaviour of savings, investment, and financial markets, and the nature of development strategy (Murinde, 1996). The intersectoral financial flows framework reconciles domestic and external sources of funds and the competing sectors which use these funds.

Chapter 3

3.1. Accounting Approach to Economic Analysis

Accounting models are financial accounts showing sectoral balance sheets and their interrelations. Of importance in the model and its structure is the inherent accounting identities reflected in the sectors balance sheet including wealth and debt levels analysis which draws a clearer picture of the state of the domestic economy. There is an accounting relation between the real and the financial economy and wealth in both are financed through "credit flows with debt growth accompanying growth in financial wealth" (Bezemer, 2010, p.5). Therefore constant analysis of these accounts should show changes in wealth and debt levels and therefore the stability or fragility in the system. By studying these accounts any fragility in the system is likely to be detected and appropriate policy measures put in place.

The accounting approach, at least in the Post-Keynesian school of thought comprises of five significant descriptive features. Firstly, the approach recognises the 'circular flow of goods and services in the economy and the balance sheet identities implied'. Secondly, the approach draws a distinction between stocks, i.e. wealth and debt as well as flows i.e. goods, services and financial funds. The approach also draws a distinction between the real sector and financial sector thereby observing interlinkages between the sectors as well as analysing the effects of changes on each sector. Contrary to the mainstream theory arguments which states that agents are utility maximisers, the accounting approach indicates that in an environment of uncertainty agents behaviour is non-optimising. Moreover, the approach contrasts the mainstream theory because it recognises balance sheet of sectors whilst the equilibrium models do not (Bezemer, 2010).

3.2. Financialisation

According to Epstein (2001) Financialisation;

> "Refers to increasing importance of financial markets, financial motives, financial institutions, and financial elites in the operation of the economy and its governing institutions, both at the national and international level" (p.1)

The significance of finance relates more to the role it has played first in the transformation of the 'economic system at the micro and the macro level...and secondly as it relates to the subordination of the real economy to financial markets'. The deepening of finance is reflected by the significant transfer of capital from the productive sector of the economy to the financial sector (Palley, 2007).

Palley (2007) identifies three channels through which the effects of finance on the economic system are transmitted. First, "it manifests itself through the changes in the structure and operation of financial markets" (ibid, 2007, p.9). Tobin (1961), Tobin & Brainard, (1963) analysed the "effects of changing the menu of financial assets and liabilities as well as the effects of financial innovation on the macro economy" (cited in Palley, 2007, p. 10). As a result substantial income moved to capital due to the changing structure of the economy.

Secondly, through 'changes in behaviour of non-financial corporations'. Financial innovation, such as "leverage buyouts and private equity investing" has opened doors for nonfinancial corporations to shift their focus from their core business to financial markets where the potential of increasing profits lurks. However, in the process these corporations have become susceptible to speculative activities characterised by short-termism, herd behaviour and market booms and busts cycles. Furthermore, corporations have changed from financing their activities through traditional means by resorting to debt financing which "transforms profit streams into interest payments" (Palley, 2007, p. 2).

The third channel through which finance manifests itself is through changes in economic policy. The rise of the neoliberal agenda has liberated financial markets leading to increased profits for corporate and declined wages for labour. What this new agenda has done successfully is to usher in a new business cycle which rests on capital markets liberalisation and integration where focus is more on asset prices (Palley, 2007).

3.3. Accounting Approach in Historical Perspective

The idea that the economy is a circular flow has formed part of the classical development of monetary economic theory. Francois Quesnay in his seminal work, *Tableau Economique* (1758) shows the analysis of "economic circuit in terms of flows of value and flows of goods among different groups in society" (Vanoli, 2005, p. 12). Building on this, Adam Smith (1776) enhances

discussions quantitatively and conceptually arguing that national income comprises of the value created in the production process and that the economy is moved by a 'great wheel of circulation'.

Marx, *Capital 11* (1885) dedicates large part of his work to monetary circuit and develops arguments made by Quesnay and Smith. His work on 'Profit Puzzle' is a reflection of a flow in the circular tradition and he argued that a profit in the system was a result of 'creation of credit'. He also drew a distinction between real and financial sectors as "Money-capital and Real Capital". Schumpeter (1883 – 1950) is better known for his argument in that "the financial system can promote growth" and he placed more emphasis on credit and debt. Furthermore, he argued that the process of credit creation in the economy fuelled innovation and business expansions and therefore debt can be productive in this sense (Bezemer, 2010). Kalecki (1899 – 1970, cited in Bezemer et al) came up with the 'profit equation' as an extension of Marx's profit puzzle.

In France estimates of the nations accounts were undertaken by Lavoisier (1791) where he attempted to construct estimation of the impact of tax reform in the economy. The estimates of national income became the precursor to construction of national accounts from which the modern variants derived their form and structure (Bezemer, 2010).

Financial Instability Hypothesis (FIH)

Hyman Minsky (1919-1996) developed the FIH in which he argued that financial instability is the defining feature of the modern capitalist economy. His theoretical contribution sought to shed light on the functioning of the capitalist economy. He observed that financial markets respond procyclical to changes in the real sector as a result "amplifies swings in investment, output and employment" (Akyuz, 2008, P. 2). He argued that financial systems swing between robustness and fragility and these swings are integral part to the process that generates business cycles. Consequently, booms, busts and bubbles are inevitable in the free market economy. Minsky (1986) indicated that the capitalist economy was at best "conditionally coherent...and goes through periods of tranquillity" (p.35). The periods of coherence evince confidence in the markets which spur risk taking and innovation. Akyuz (2008) indicates that all these activities lead to a "cumulative process of credit expansion, asset-price bubbles and over-indebtedness". In

the process endogenous fragility is developed and "financing positions are translated from hedge to speculative and eventually Ponzi finance" (P.5)

In "*Stabilizing the Unstable Economy*" (1986) accounting identities are central to his analysis and as a result "the sum of all surpluses and deficits must be equal to zero across all sectors" (P.34). During tranquillity financial system undergirding the economy is robust and innovations in the system abounds. However, these periods of prosperity tends to be misleading as 'stability is destabilising'.

The most recent contribution, dating from 1970 onwards is attributed to a group of economists from both the Levy Economics Institute and the Cambridge Economics Policy Group. The group includes the likes of Godley and Wray (2000) Baker (2002, 2005), Keen (1995, 2006, 2008 & 2009) and Hudson (2006). According to Bezemer (2010) these authors were also able to correctly predict the 2007 crisis using the accounting approach in their analysis of the US economy. The result of their work saw the development of 'stock-flow consistency models' focused on the FoF and distinguished between balance sheets (stocks) and financial flows (Toporowski and Michell, 2011).

3.4. Towards an Accounting Approach

Central to the accounting approach is the observation that the monetary economy represents a circular flow where "each transaction of goods and services finds its counterpart in a flow of credit and debt instruments and these flows are integrated. Each flow comes from somewhere and goes somewhere" (Bezemer, 2010, p.8).

It was Fisher (1928) and Copeland (1932) who explored and suggested the use of accounting methods in economic analysis. To Fisher the "extension of accounting treatment of individuals and business to society thereby obtaining capital and income of society as a combination of balances of businesses and income accounts of individuals". Moreover, Copeland (1932) showed clearly the benefits of a double entry accounting system as means through which the performance and the state of the economy could be better understood (p.16).

Frisch's (1973) conceptualisation and use of the accounting methods took a different approach. His research focus was on "economic circulation and the micro/macro relationships in the

economy" amounting to the "system of economic circulation". This approach was different from methods using aggregates and showed more rigour where "logical relationship is showed through various elementary variables" (p.17). Further impetus to the analysis on intersectoral relationships was added by Gruning (1933), the *Economic Circuit* published during the Great Depression prompted by the inability of the mainstream economics to provide solutions to the problems besetting the world economy at the time.

Keynes's *General Theory of Employment, Interest and Money* (1936) presents a "theoretical construct which became the basis for measurement of income, consumption, investment as well as savings" (p. 19). It is often argued that Keynes theoretical arguments provided a platform for economic policy consideration of accounts aggregates that subsequently generated demand for national accounts data. In as much as the accounting methods and models occupied an important place in economic analysis (both by policy makers as well as central bankers) the end was nigh.

In the same classical tradition, Leontief (1931) observed that the economy worked like a circuit and developed the input-output (IO) framework showing inter-industry relationships. Like the FoF accounting approach, the use of IO techniques declined considerably and any attempts to simplify and complement them also failed in the 1970's (Bezemer, 2010, p8).

3.5. From Money flows to Flow-of-Funds

3.5.1. Moneyflows

Copeland's 1935 essays, *'National Wealth and Income –An Interpretation'* as well as well as '*Concepts of National Income'* lay the groundwork for his comprehensive work on Moneyflows (MF). His main argument is that "national income can benefit from the double entry accounting system" which became the bedrock on which his later work on MF is based (De Bonis & Pozzolo, 2012, p.18). Moreover, the development of the system is derived from the difficulties that economic analysts encountered in explaining the changes and movements observed in key economic variable (money & credit) during business cycle's downturns and expansions (*Ibid*, 2012, p.18).

Prior to Copeland seminal work on MF, Fisher (1912) had already undertaken projects in this area of study. Copeland's work in a way was an attempt to expand on the work already done by

providing a comprehensive system of the measurements of MF (De Bonis and Pozzolo, 2012, p.19).

In Copeland (1947, 1949) accounting tradition, the strict cash principle in the form of actual payments and receipts of transactions in the economy is core (***see Table 1***). His is an accounting approach based on the notion of the economy as a circuit. The difference between MF and national accounts is that whilst the former is based on cash basis the latter based on measurements on accrual basis. In the national accounts the income and production distribution of goods and services provides the lens through which the sectors in the economy are analysed. Meanwhile, through MF, at least according to Copeland's (1949) conception makes it possible to analyse the 'changes and movements in credits and debits' (p.20). The dominance of money in economic transactions prompted Copeland to argue that "because we live in money economy moneyflows plays an important role organising economic activity" (Copeland, 1949, p7). These transactions give rise to MF and therefore an observation of these flows should automatically lend themselves to a representation of a financial statement. Furthermore, he indicated that the subject of money and MF lends themselves to 'social accounting approach'.

However this period marks a conceptual and empirical shift in accounting approach, from MF as encapsulated by Copeland's cash flows to FoF (**see Table 2**). To Copeland cash payments and receipts in certain periods explains flows. This therefore necessitated a quadruple entry system because "all payments or credit flows go from one transactor to another and for the same amount" (Copeland, 1947, p.10). The actual shift came in the early 1950's when, according to Taylor (1996), instead of focusing on the money stock in accordance with Copeland's views the emphasis turned to national accounts where actual sectoral flows and transactional types of flows became more useful (Taylor, 1996).

The "new structure incorporated income, product accounts and balance of payments statements as subsystems of the main structure" (Taylor, 1991, p. 105). De Bonis and Pozzolo (2012) affirm that the Federal Reserve shifted from moneyflows funds for the purpose of differentiating between FoF, National Accounts as well as Input-Output tables. The national accounts emphasises production and distribution of goods and services; Input-Output tables the backward and forward linkages between different economic sectors and the FoF divides the economy into different sectors and financial transactions are taken into consideration alongside non-financial

transactions of the national accounts. FoF also records transaction entailing transfer of credit, taking into consideration the production of new goods (De Bonis and Pozzolo, 2012).

3.5.2. FoF in Modern Perspective

FoF accounts refers to a "financial analysis instrument used to record financial transactions and changes in assets and liabilities between different sectors of the economy'' (Telli and Çavdaroğlu, 2011). Bank of Pakistan (2009) describes the FoF accounts or framework as a system that "records and summarises financial transactions in a systematic way as well as the borrowing and lending activities of various sectors in the rest of the domestic economy and the rest of the world" (p.5).

The accounts are compiled in line with International Monetary Fund (IMF) System of National Accounting (SNA) and Monetary and Financial Statistics Manual (MFSM). Green and Murinde (1999) recognise the accounts for "providing a general framework for studying a wide range of issues concerning the financial sector and its relationships with the real economy" (p.4). The framework includes sector classification, transaction categories as well as compilation procedure in accordance with prescribed guidelines. Internationally there are two systems that are normally used in the form of 'transactional approach' and the BSA.

The FoF framework is useful because it helps one observe how "changes in financial positions affect spending positions and behaviour in the economy" (Struthers, 2010, p.64). The system is compiled within a unified system it allows for the identification of "accounting identities and serves to develop awareness of interdependencies between financial variables" (BêDuc and Le Breton, 2009). The FoF data provides a platform to analyse the interdependencies between sectors and is consistent with accounting logic of national accounts.

The FoF accounts reflect the interrelationships of balance sheets between different sectors of the nation's economy and are mostly calculated periodically. SARB identifies two types of balance sheets that form the basis of FoF accounts;

- Balance sheet reflecting assets and liabilities of financial and non-financial sectors and;
- Those showing the financial instruments held and issued by different sectors in the economy.

3.5.3. Flow-of Funds conceptual framework

Transactions in the economy, from one agent/sector to another generate FoF. These transactions involve purchase and the sale of goods or exchanges of assets and liabilities. FoF accounts shows sectoral financial flows in the rest of the economy, "tracking funds flowing from sectors that serve as resources of capital, through intermediaries to sectors that use capital to acquire physical and financial assets" (Bank of Pakistan, 2009, p. 6).

The FoF accounts reflect the financial as well as the non-financial flows, where the former describes lending and borrowing of different sectors in the economy and it is an extension of the current account. Sectors borrow by issuing or accepting claims on themselves and experience a deficit if the claims issued are more than the claims received. When a sector lends to other sectors it means it is a surplus sector. The borrowing transactions result in increase in liabilities, reduction of money balances or sale of financial assets (Green and Murinde, 1999).

The non-financial flows relate to flow of current income and expenditure, savings and investment. Savings are transferred from income to capital account and used for investment purposes. The essential feature of the non-financial account is the present savings, investments and net lending and borrowing. The surplus/deficit in the non-financial flows indicates the savings-investment gap (Nhleko, 2009).

The consolidated balance sheet of a particular sector, presenting a complete picture of its liabilities and assets, is the basis for compilation of the FoF accounts. The assets are divided into financial and non-financial while liabilities are classified as net worth and other financial liabilities. If the balance sheet of an entity shows increase in financial assets investment and lending on the uses side of the FoF accounts is positive. Conversely, if the balance sheet shows increase in reserves and liabilities then it reflects savings and borrowings on the resources side (Bê Duc and Le Breton, 2009).

Funds obtained should be equal to uses of funds in the form of financial claim, issued by one sector and held by another. For example, a non-financial flow shows the sectors current and capital receipts and payments which give rise to financial deficit. Conversely, financial flows will show increases in the sectors financial liabilities which have allowed it to finance the deficit and acquire additional financial assets, reflecting uses of funds. Therefore, in practice the sum of

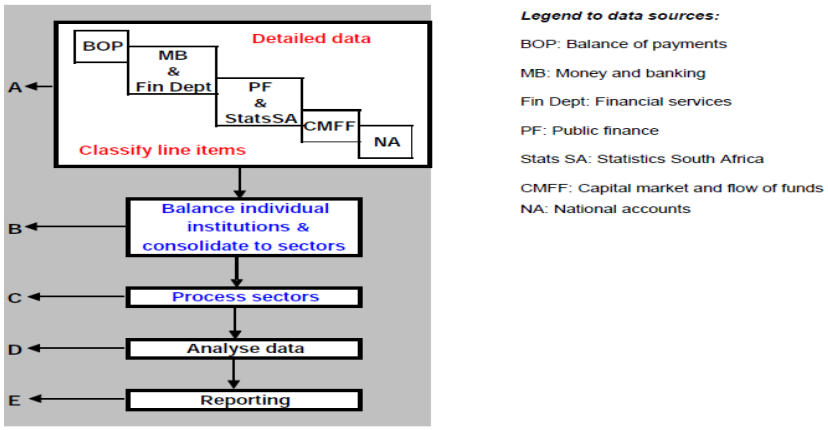
surplus/deficit across sectors should be zero as any changes in sectors financial liability should be matched by a commensurate change in another sector's financial assets (State Bank of Pakistan, 2009/2010).

3.5.4. Compilation of Flow-of-Funds Accounts in SA

The South African Reserve Bank (SARB, 2010) as the custodian of the system uses the BSA which "calculates flows based on the changes in the balance sheet" (p.1). The FoF accounts serves as an "extension of national income and production accounts, as it provides information on financial flows in relation to real economic activity" (p.1). SARB publishes FoF quarterly and uses only the flow data as opposed to stock data. Economic activity and transactions between residents and non-residents are recorded. A contra-entry method is used to record transactions of the twenty-two institutions (De Beer, Nhleko and Nhlapo, 2010).

The SA FoF structure **(figure 2)** consist of five main economic sectors i.e. foreign sector, financial sector, general government, corporate business enterprises and households. The main economic sectors are subdivided into 22 institutional groupings.

Figure 2: Five steps involved in the compilation of the FoF account.

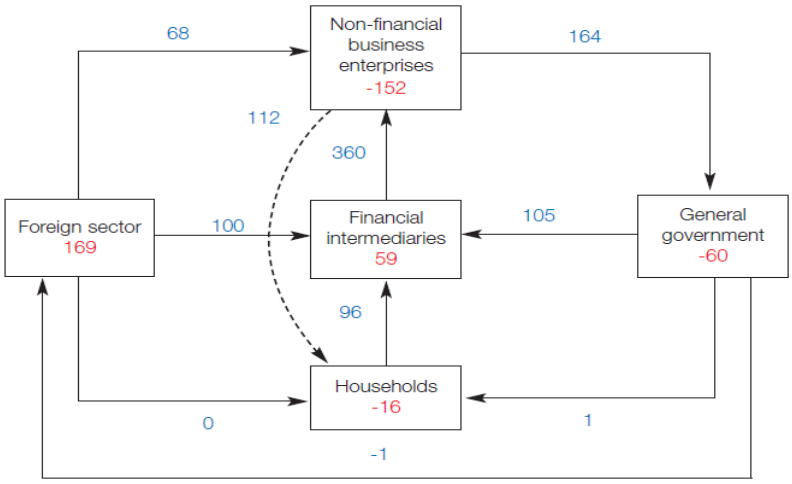


Source: Irvin Fischer Committee on Central Bank Statistics

The **figure (3)** summarises the interactions between five sectors in the economy according to the FoF system and it shows each sector's lending and borrowing activities. As sectors acquire financial assets (uses) and incur liabilities (sources) their financial positions changes. Where the domestic sectors are not able to finance their acquisition of assets through savings and retained

earnings, the foreign sector is likely to bridge the savings-investment gap i.e. the process of financial intermediation between surplus and deficit sectors. The foreign sector channels funds through financial intermediaries to the domestic sectors. Some of the instruments used by non-residents include buying of shares as well as short and long term loans. Financial intermediaries relay the funds from surplus sectors to deficit sectors (Kock and Meyer, 2001). Therefore any disruption in the system like the 2007 financial crisis is likely to affect sectoral balance sheets negatively. Therefore, FoF accounts are helpful in detecting unsustainable financial developments in the economy.

Figure 3: Net Intersectoral FoF



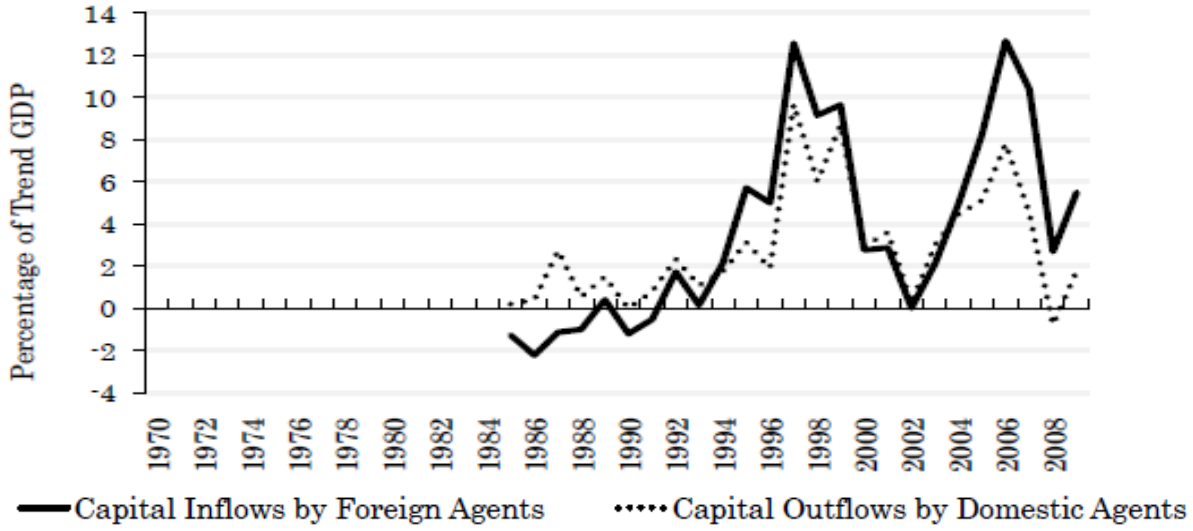
Source: SARB 2008

3.5.5. Capital Flows

3.5.5.1. Gross Capital Flows (GCF)

The period under review has seen a substantial increase in gross capital flows to emerging economies generally. In the period 2006 to 2007, "Gross private capital inflows to emerging economies surpassed the 1 trillion dollar relative to 300 billion a decade earlier" (BIS, 2009, P.5). The BIS (2009) attributes the increase to financial integration and globalisation. GCF refers to the capital inflows by non-residents as well as capital outflows by domestic agents. In the case of SA, GCF did show an upward trend as shown of ***Figure 4*** below.

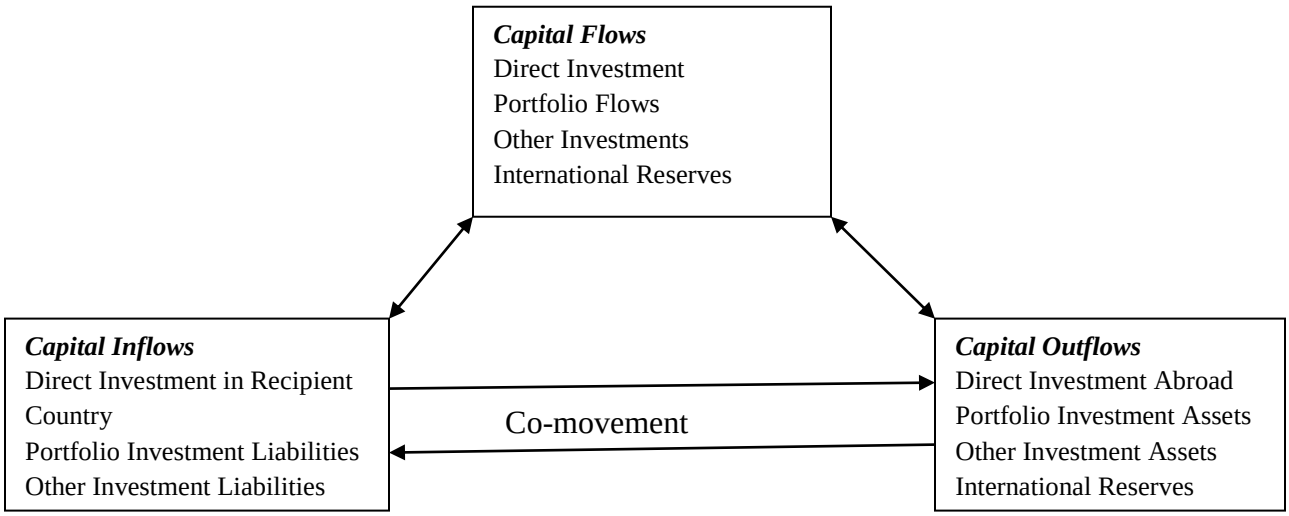
Figure 4: Gross Capital Flows



Source: Broner *et al* (2011)

There are different types of flows and some may be harmful to the domestic macroeconomic conditions whilst others have the potential to 'smooth out domestic consumption'. **Figure 5** shows a classification of GCF according to inflows and outflows as follows;

Figure 5: Classification of Capital Flows



Source: Own adaptation of Broner *et al* (2011)

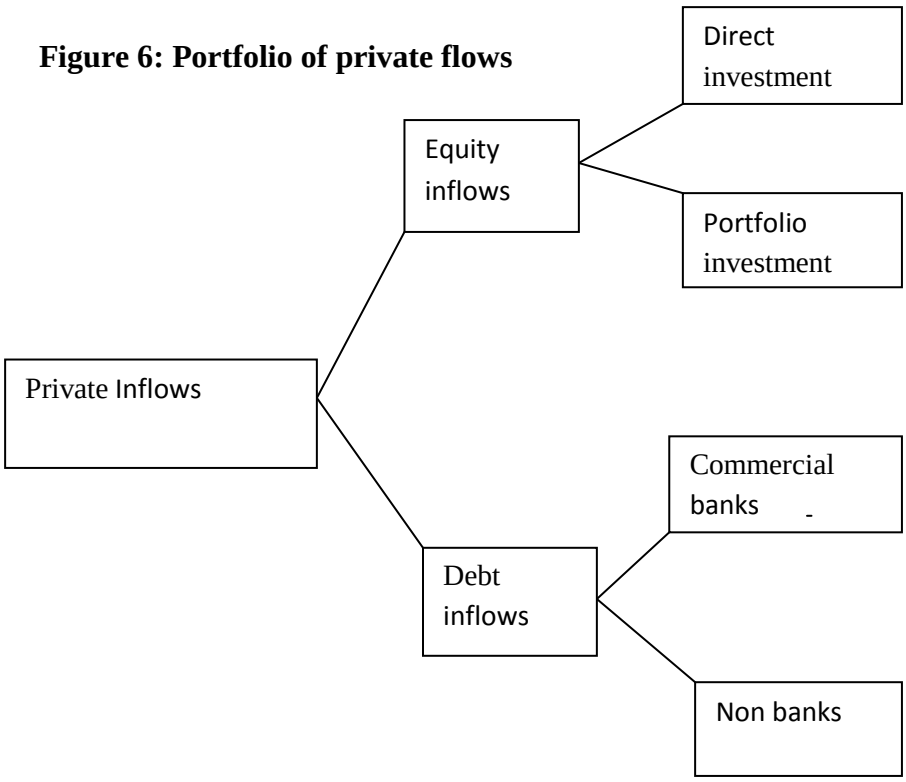
There is general acknowledgement that GCFs have been increasing and therefore has become more volatile than the net capital flows (NCF) (Broner, Didier, Erce and Schmukler, 2011). However, not all types of flows are to the detriment of the recipient economies. Broner *et al* (2011) observes the behaviour of GCF in periods of crises and tranquillity and concludes that GCF are pro-cyclical as they tend to increase during periods of economic boom and decline during economic recession. Moreover, there is a co-movement between the non-residents and residents in acquiring and disposing of assets and liabilities across borders as "capital inflows by non-residents and outflows by domestic agents move in tandem" (p.12). **Figure 4** also confirms Broner *et al* (2011) assertion that as non-residents invests in the domestic economy; domestic agents tend to invest abroad.

3.5.5.2. Capital flows and the volatility of the short-term portfolio flows.

Khan and Reinhart (1995, PP.15-16) defines capital inflows as "an increase in net international indebtedness of the private and public sectors measured by the deficit on the capital account of balance of payments". Therefore, an increase in capital inflows is often identified with larger current account deficits or accumulation of reserves and in SA this is affirmed by episodes of sustained expansion of the current account deficit (Mabunda, 1999, p.7). Although the deficit was momentarily punctuated in 2001 and 2002 it has been on an upward trend ever since.

Portfolio flows **(see figure 6**) include "portfolio debt flows i.e. domestic bonds purchased by foreign investors, debt equity flows such as country funds, depository receipts and direct purchase of shares by foreign investors" (IMF, 2011 and FitzGerald, 2009).These assets are naturally liquid and can easily be disposed of in periods of uncertainty. Acquisition of domestic financial assets by non-residents affects the real economy (inclusive of households) through output, wages, and investment *inter alia*. FitzGerald (2009) indicates that short-term capital has a "marked effect on credit availability….inflows affect deposit base of banks through direct deposits, payments of proceeds to non-residents" (p.14). Rodrik and Velasco (1999) observed that most countries affected the most in previous episodes of financial crises "had large ratios of short-term foreign debt" (p. 1).

Figure 6: Portfolio of private flows

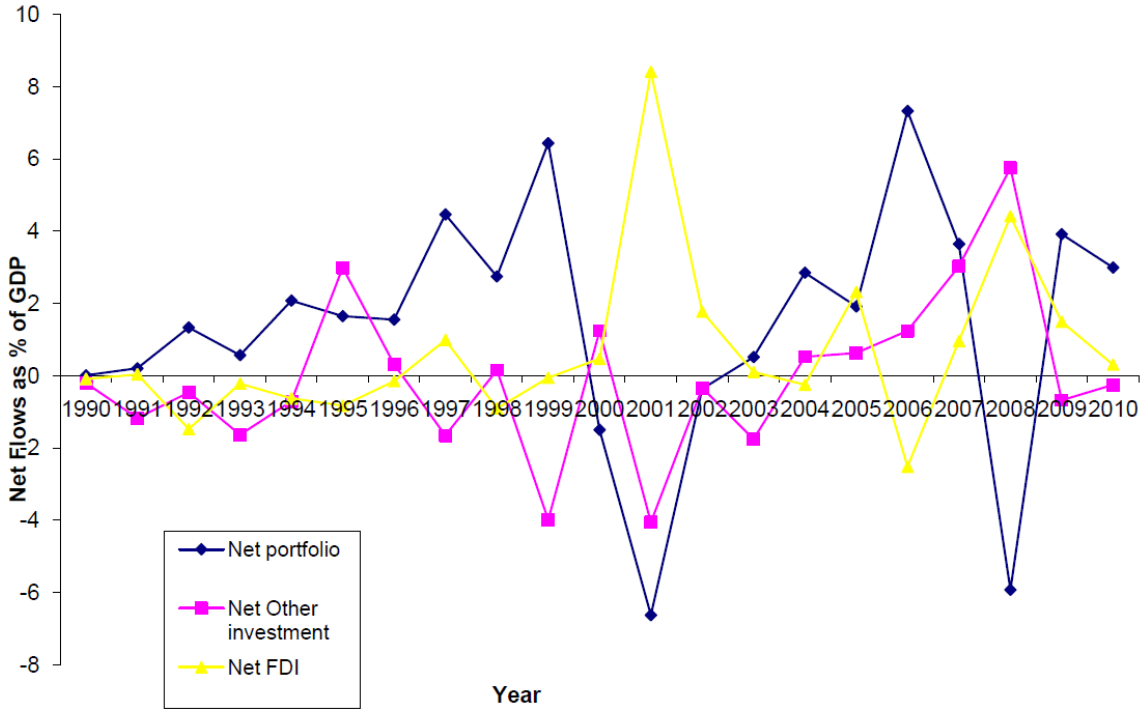


Source: Own adaptation of Suttle *et al* 2013

SA has seen an avalanche of short-term portfolio flows (**see figure 7**) and very little of foreign direct investment (FDI) in the period under review (McKenzie and Pons-Vignon, 2012). The capital account liberalization of the domestic financial markets opened gates for foreign capital to enter the country.

The savings-investment gap in the current account has attracted considerable foreign capital. The IIF 2012 report on '*Capital Flows to Emerging Economies'* attribute the bias towards STF in SA mainly to the reasonable yields in the domestic equities and bonds (**figure 7**). According to IMF report (2005) on SA, during the period 1994 to 2004 STF outstripped FDIs, which constituted 3.5% of the GDP whilst the latter constituted a paltry 1.5% of the GDP (Ahmed, Arenzi and Funke, 2005).

Figure 7: Net portfolio flows as % of GDP

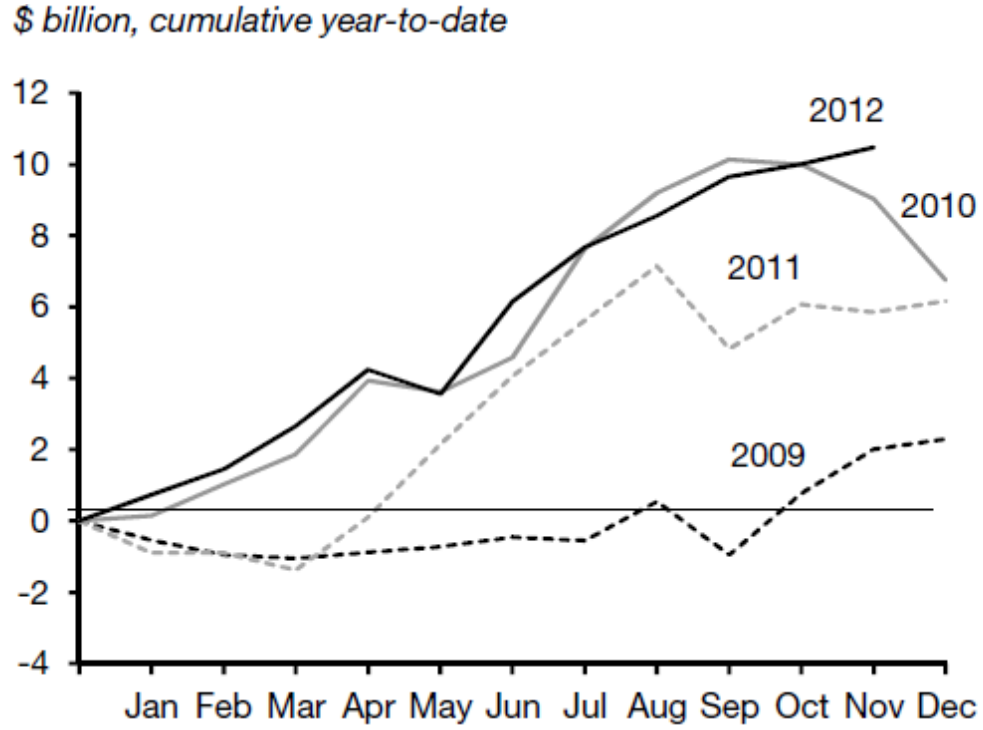


Source: McKenzie and Pons-Vignon (2012)

Wesso (2001) indicates that investors coming to invest in the country are more inclined towards short term portfolio investments. In SA most of the flows attracted were absorbed and channeled into speculative activities and therefore tends to volatile and risky (Ncube, 2011). However, STF are not in and of themselves negative but of more significance is their volume as well as their destination in recipient country and their final use.

In SA, for example, the majority of the private flows were "absorbed by the private sector in the form of easy credit…led to equity price inflation, build up of household debt and consequently led to financial fragility which weakened the country's ability to withstand external shocks" (McKenzie and Pons-Vignon, 2012, p.9). Moreover, FitzGerald (2009) is more concerned with the scale of the flows in relation to domestic markets which, he asserts determines the volatility of flows.

Figure 8: Non-Residents Purchase/sales of bonds



Source: IIF 2013

The effects of these flows are transmitted to the balance sheets of sectors in relation to their changing financial positions**.**

3.5.6. Balance Sheet Approach (BSA)

Mishkin's (1977) study of the household balance sheets during shocks and/ or insecurities remains significant in providing a context for understanding household's behaviour in different periods. The net worth of households changes as a result of changes in the economy and has a direct impact on aggregate demand and subsequently consumption expenditure. Cozzi and Toporowski (2006) argue that it is important to analyse the balance sheet of non-financial sectors given the interrelated nature of the economic sectors.

Masha (2009) indicates that the usefulness of the approach is its ability to pick up early signs of vulnerabilities, consequently deterioration of sectoral financial positions (p. 15). The balance sheet reveals the impact of changes in the economy on a sector (s). Contrary, to flow variables which are usually assessed on a long term basis, BSA provides a short-run picture of changes in sectoral balance sheet.

The BSA "examines the stocks variables of a country financial balance sheet and the balance sheet of key sectors" (Amo-Yartey, 2012). Cozzi and Toporowski (2006) indicates that the approach "investigates the impact of disturbances on the assets, liabilities, and net worth of households, firms, governments and the economy as a whole and on the consequent impact on growth and stability" (p.2). By analysing the balance sheet any mismatches can be easily detected. BIS (2010, 2011) identifies three possible mismatches that can happen to sectors balance sheet. The first is the maturity mismatch between long term and short term debt structures. The second mismatch relates to currency mismatch where borrowers assets are denominated in foreign currency and thereby exposing borrowers to external shocks. The third mismatch is capital structure mismatch where debt and equity does not balance. Allen *et a*l (2002) identify one more mismatch in the form of solvency mismatch where assets and liabilities do not match resulting in negative net worth of households.

The approach takes the economy to be representative of sectors and the analysis of the economy is sectoral. Each sector's balance sheet is analysed and any mismatches are identified. The approach looks takes the economy to be a "system of balance sheets of all its agents and examines stocks of assets and liabilities at a certain period in time" (Allen, Rosenberg, Keller, Setser and Roubini, 2002, p 1). BSA approach is therefore useful as it helps one understand how shocks in the broader economy incorporating all sectors can 'affect liquidity and solvency of one sector' and be propagated to all sectors and eventually affecting the economy as a whole. Therefore, "the resilience of the economy to shocks depends on aggregate balance sheet as well as intersectoral financial positions" (Masha, 2009, p.2).

The linkage between sectors is amplified by the reciprocal transactions between them which engender claims from each other. An asset of one sector is by definition a liability for another sector. The rest of the world may also have claims and the extent of a capital account liberalisation may at times expose domestic sectors to contagion risks. This argument aligns with Shretha, Mink and Fassler (2012, p.14) assertion that "financial difficulties for the debtor represents financial difficulties for its creditors". Therefore sectoral vulnerabilities may lead to a failure to honour the claims made and may cause the balance sheet of the recipient to deteriorate. It is important to fully analyse the balance sheet of sectors, in this case household sector as it gives one an indication of the weakness in one sector as the aggregate financial accounts are

unlikely to reveal any fragilities in the system given its aggregation of the entire economy (Shretha, Mink and Fassler, 2012).

3.5.7. Transmission Channels between Real and Financial Sectors

The BIS (2011) identifies three transmission channels through which risks and vulnerabilities in one sector can be propagated to the entire sectors in the economy. The first channel is the borrower's balance sheet channel. The failure to fully assess borrower's credit worthiness (information asymmetry), solvency as well as enforcement of credit repayment means that lenders require collateral. Clearly collateral considerations increase the cost of borrowing and have a dampening effect on economic activity. Since borrowers credit worthiness is related to their net worth, any changes on the net worth of households affects their access to credit and eventually consumption expenditure and aggregate demand.

The second channel is the bank balance sheet channel. The modern day bank still plays an important intermediation role in the economy and the deterioration of their balance sheet affects households and firms through the restrictions on credit extension and eventually economic activity. Moreover, whenever banks face high cost of capital the costs or consequences are borne by borrowers including households.

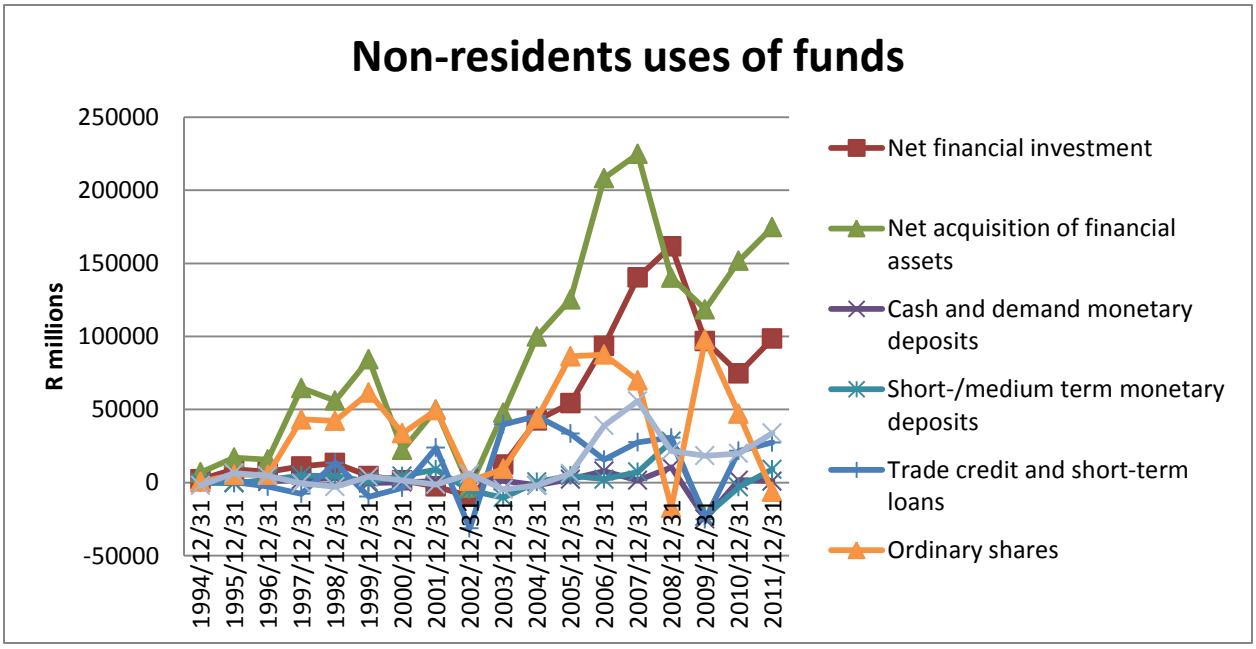
Last is the liquidity channel in relation to the financial intermediation role played by banks as well as the impact of changes in liquidity on households. By linking and studying the domestic FoF account it becomes possible to track and trace the performance of the borrowers and bank balance sheets as it relates to its impact on households as well as tracing the destination of the flows, their composition and source. FoF account is important in the analysis as well as capturing the interrelations between real economy and financial economy and the transmission channels thereof (BIS, 2010).

Chapter 4

4.1. Changing Household Financial Positions: Empirical Analysis

Non-residents participate in the domestic economy in many ways one of which is through the purchase of shares, loans as well as assets. Households do not have a direct access to these external capital inflows, but transact through financial intermediaries as well as non-financial business enterprises (**Figure 3**). In turn, households as deficit units in the economy incur liabilities by acquiring credit, short to long-term loans from banks as well as other financial institutions acting as intermediaries (SARB, 2009).

Figure 9: Non-residents Uses of Funds



Source: SARB own calculations

Figure 9 above indicates that non-residents have been transacting with domestic units at a higher rate. The figure indicates that non-residents have increased their transaction in the financial sphere as reflected by upward trend in net financial investment as well as their acquisition of financial assets. However, the trend seems to have moderated from 2007 and 2009 before resuming in the latter part of 2010 mainly due to the impact of the financial crises. Therefore it is not a coincidence that households also increased their interest in financial assets through

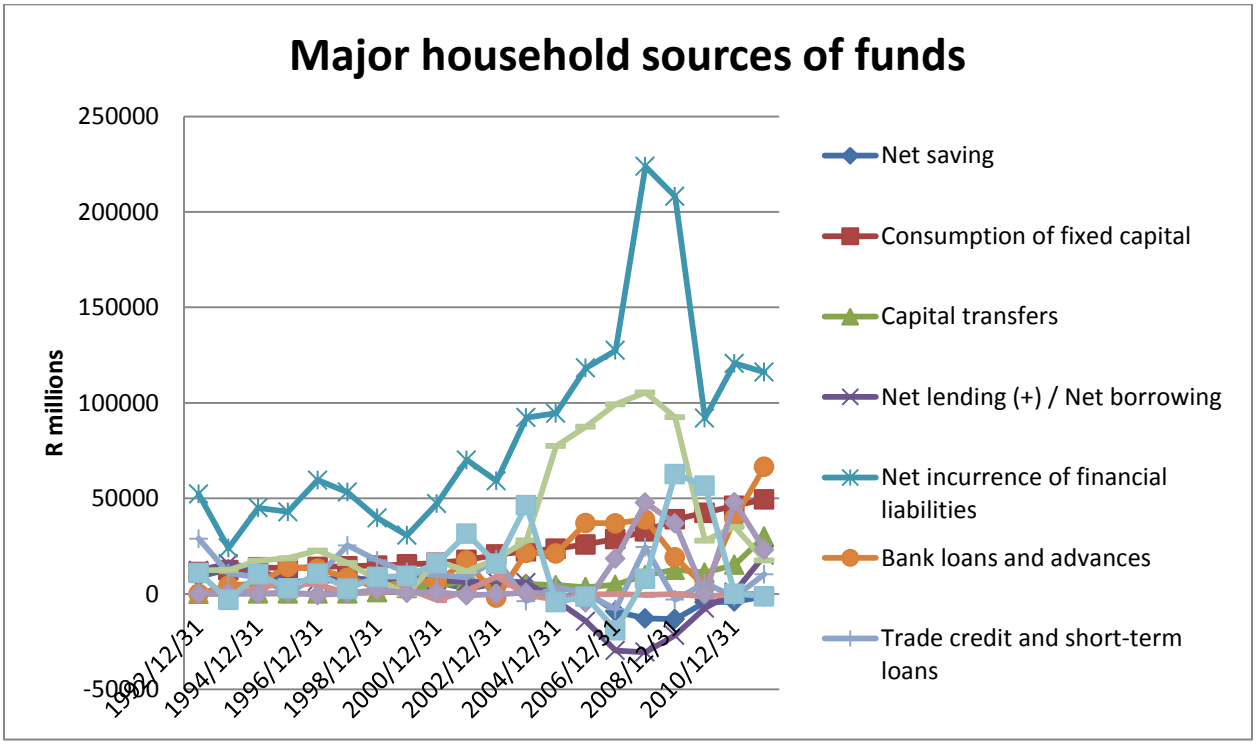
incurrence of financial liabilities as reflected in the **Figure 10** below. From 1994 right up to the 2007 crises, household's net acquisition of financial assets remains high. However, interest in retirement and life funds shows resilience moving in the same direction as acquisition of financial assets. This means some of their financial liabilities are held in retirement and life funds **(Figure 13**).

4.2. Household Sources and Uses of Funds: Reflections on the Flow-of-Funds Accounts

Modern economies depend on the movement of funds from surplus units in the economy to deficit units (economic units constantly make lending and borrowing decisions). Therefore, FoF is "the linchpin that keeps economy functioning smoothly maintaining full employment of resources" (Nawrocki, *unpublished*).

The period under review, i.e. 1994 -2011 has witnessed unparalleled increase in the financial assets and liabilities. **Figure 13** shows the upward trend in the net acquisition of financial assets in the balance sheet activities of agents and the share of household sector has always been significant, accounting for one-third of such activities. This observation confirms the trends picked up in the balance sheet analysis that during periods of economic boom there tends to be an increase in financial activities. The consequent slump in 2008 and 2009 can be attributed to the depressed economic conditions that beset all countries. However, the magnitude of the expansion in more recent years marks the resumption of a long established tendency by the sector.

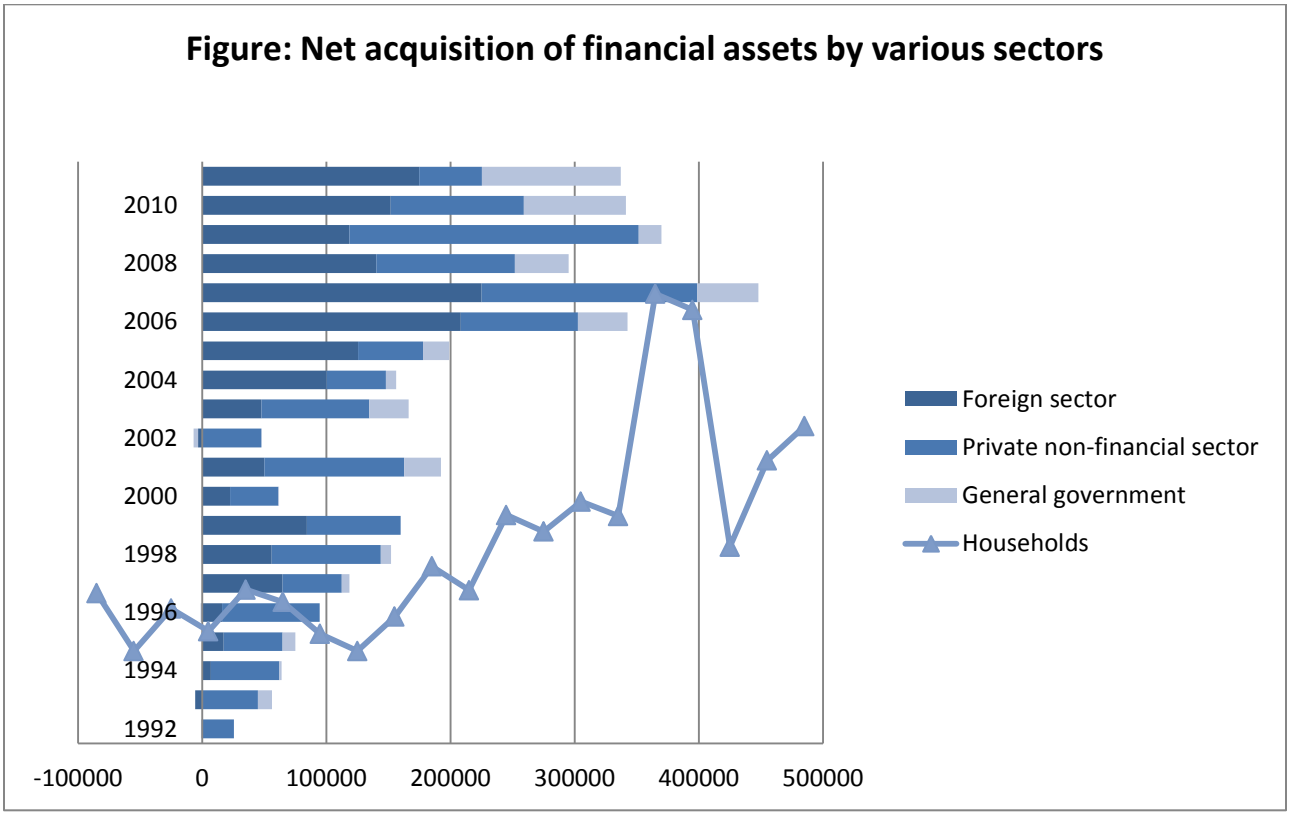
Figure 10: Major household sources of funds



Source: SARB own calculations

Domestic saving has remained low more so in the household sector despite improvements in income partly due to interest rate decline. By 2010 liabilities stood at 7% whilst assets stood at 5.7% meaning that liabilities exceeded assets that households acquired. Moreover, approximately 94.3% of household income was used to finance consumption expenditure meaning that consumption expenditure exceeded income. There was saving-investment gap which led to the foreign sector playing a much more pronounced role in the domestic economy by increasing domestic deposits to monetary institutions. In 2008 the domestic economy had a shortfall of approximately R169 million. In 2010 disposable income comprised 93% of sources of funds whilst liabilities formed only 7% (MOMEMTUM/UNISA 2011).

Figure 11: Net acquisition of financial assets by sectors.

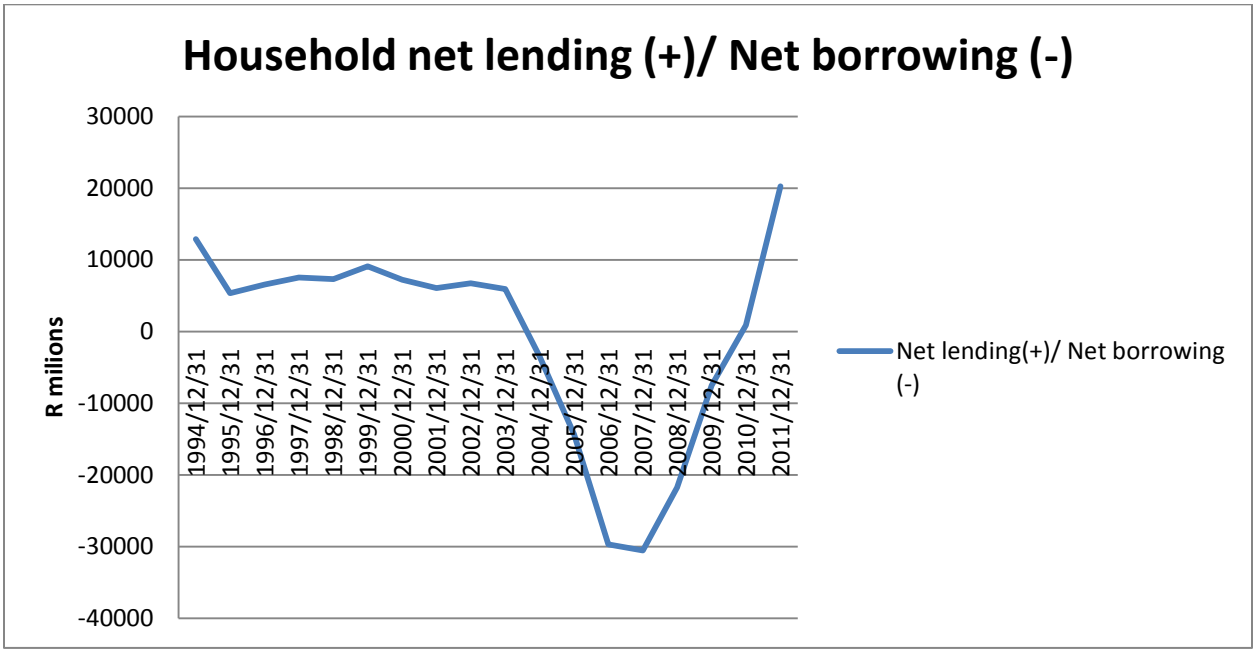


Source: SARB own calculations

4.2.1. Net Borrowing/Lending

By definition a financial source for households represents an increase in liabilities since sectors can also obtain funds by borrowing. The converse of it is true that a sectors use of borrowed funds represents creation of financial assets. The lending and borrowing between sectors represents 'sources and uses of funds statement' (Ritter, 1962). Between 1992 and 2001 the FoF show that SA ran small net borrowing/positions. Since 2002 the local economy has become increasingly reliant on foreign capital inflows to fund its net borrowing positions. Indeed in the entire period under review there have only been three surplus current account positions. Also noteworthy is the share in NFA held by the foreign sector. Staring at nothing at 1994, the foreign sectors now contributes close to forty percent of all such activity (McKenzie, unpublished).

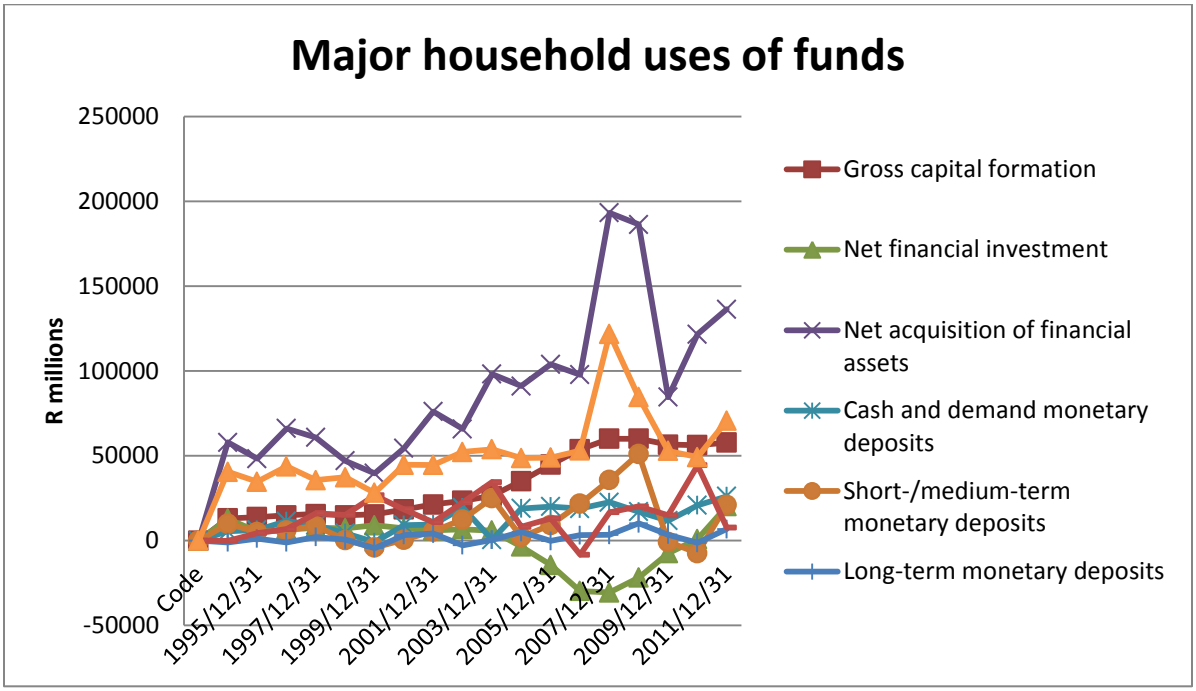
Figure 12: Total net borrowing/Lending 1994-2011



Source: SARB own calculations

Since 2003, widening deficits on the current account of the balance of payments have been funded by an increase in net foreign liabilities. In part, the deficits on the current account should be seen as a fairly natural outcome of liberalisation and deregulation policies aimed at opening up the local economy. These would include, market entry of foreign banks, global participation of local banks and other financial intermediaries, the relaxation of exchange controls and a reduction in the budget deficit (De Beer et al. 2010).

Figure 13: Households uses of funds

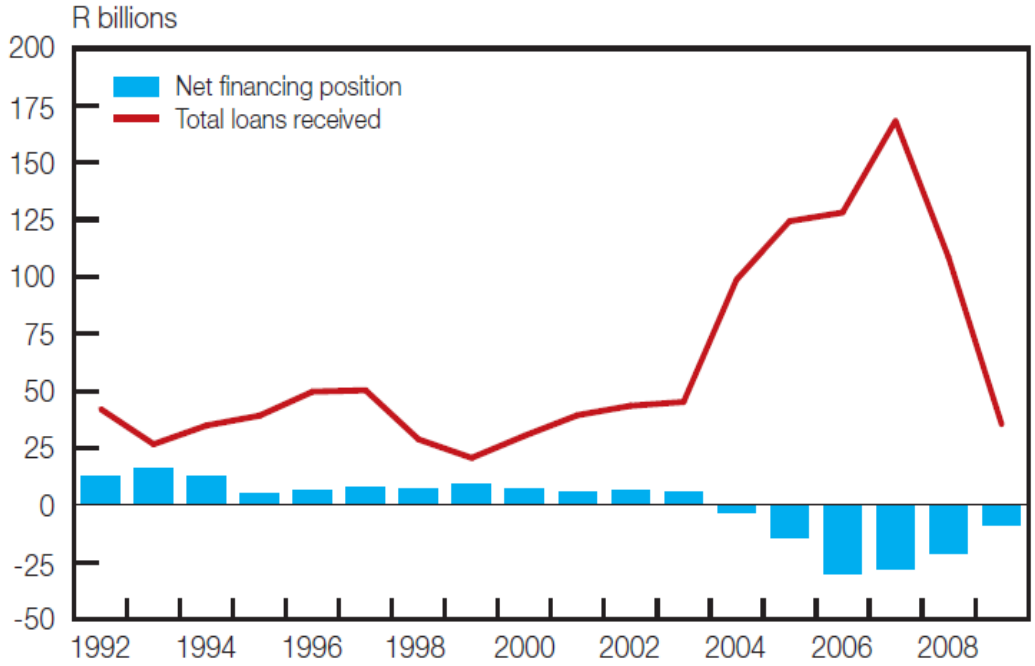


Source: SARB own calculations

Households increased their financial interest as reflected by increase in bank deposits, interest in retirement and life funds mainly due to financing surplus, access to bank loans as well as mortgage loans (Meyer and Nhleko, 2001). Household consumption growth during 1990-99 periods was 1.4% but during 2000-09 periods it increased to over 4%. The other side of the coin is the savings story; gross domestic savings declined from 23% in early 1990s to 16% in 2010. Evidently, SA experienced a consumption boom funded by dis-saving and a huge increase in personal debt. In the years between 2006 and 2011, it appears that higher asset prices supported wealth effects that have encouraged increased consumer borrowing. In the period, total household debt (mortgages and consumer loans) increased from Rand 7 trillion in 2006 to Rand 1.3 trillion in 2011. In the same period, household mortgage debt also nearly doubled (McKenzie, unpublished).

Financial Assets as a composition of assets has averaged 70.2% from 2000 to 2011 (see **Table 3**). Interest in retirement and long term insurers continuously constitute larger percentage of financial assets, averaging 37 % for the period under consideration relative to 9.4% of deposits at monetary institutions and 23.7% for other financial assets. Financial assets are volatile and more susceptible to external shocks (MOMENTUM/UNISA, 2011).

Figure 14: Financing Positions of households

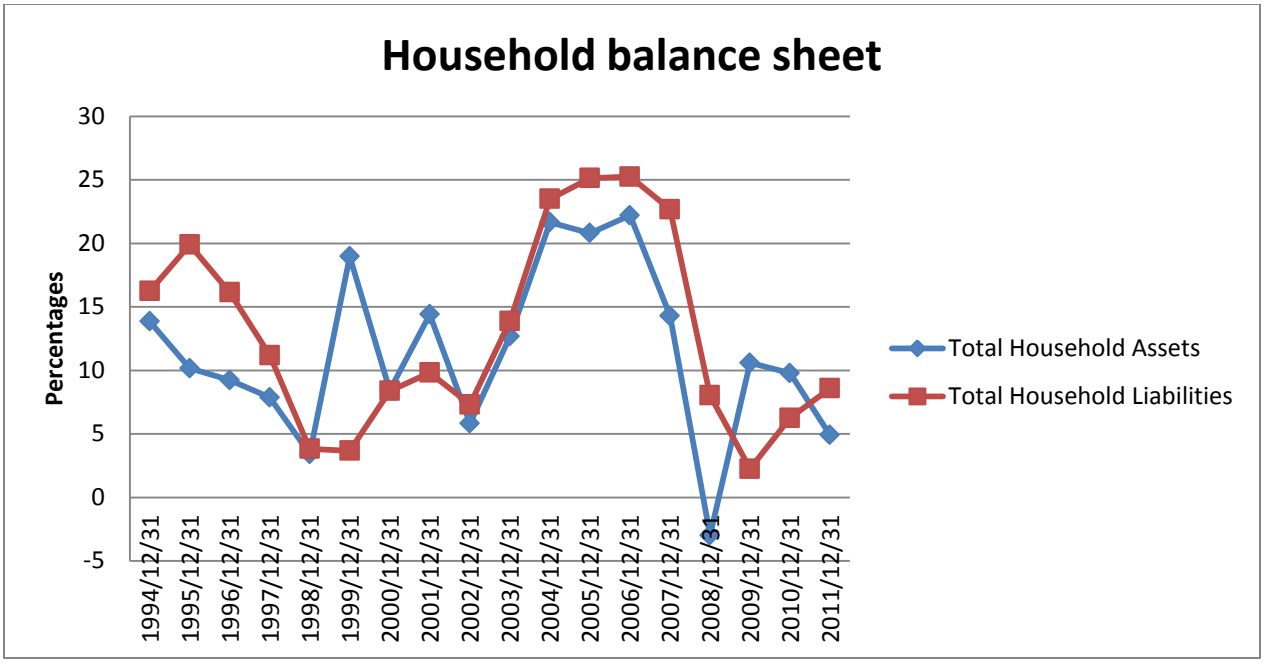


Source: SARB 2010

4.3. Household Balance Sheet

The balance sheet of household is an essential consideration for assessment of wealth distribution and liquidity. As balance sheets changes from one period to another and the following scenario is likely to emerge; Whenever balance sheet decreases households are exposed to financial fragility, sudden economic shocks like changes in interest rate. Conversely, an improvement of the balance sheet reflects positively on the net wealth of households. Moreover, the capacity to borrow is negatively affected as credit profiles and decisions are determined by the interplay between assets and liabilities. Net worth position of households determines their ability to borrow and spend (Aron, Muellbauer and Prinsloo, 2006).

Figure 15: South African household balance sheet



Source: SARB, own calculations

Figure 15 reflects increase in household's liabilities over the period under review. Liabilities grew faster than assets between 2003 -2011 by an average of 15,8 % per annum whilst assets grew by 13.4% per annum reflecting declining net wealth of households. The figure shows only two periods where assets outstripped liabilities albeit for a short period of time (1999/2002 and 2009/2010). This period saw household debt outpacing assets thereby increasing the ratio of debt to total assets by approximately 19.1 % by the end of 2010. In the same period household spending grew faster than income meaning that the gap had to be financed through debt and consequently led to an increase in household indebtedness (Walters, 2011). This situation reflect declining households balance sheet and therefore increases their vulnerability to economic shocks, income as well as interest rate changes.

The high level of household indebtedness is the distinguishing factor when compared to previous episodes of financial crisis and economic contraction. In the past episodes of financial crisis household debt was lower than the levels it were when the 2007 crisis hit the financial markets. In the US for example, household debt to GDP ratio stood at 45% in 1985 (when they were hit by a crisis) and at 113% prior to 2007 crisis. This picture is consistent across the world hence

governments are having difficulty stimulating depressed economies. In 1985 households could still spend compared to 20007 (Klein, 2011).

4.3.1. Household Debt

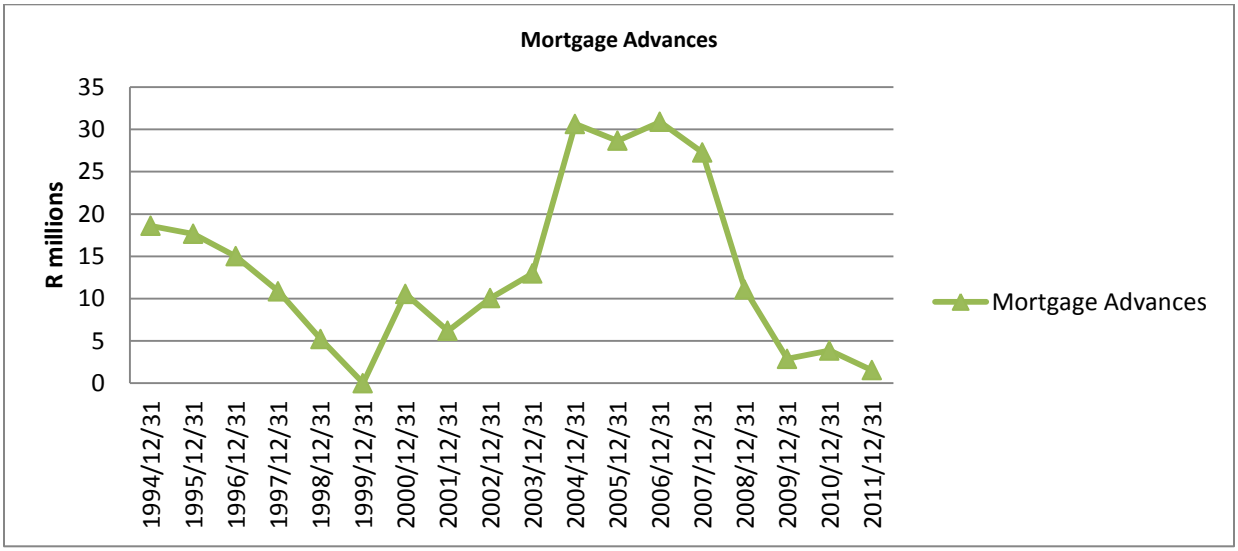
Financial innovation has broadened consumer choices and lowered the cost of borrowing and created multiple channels through which households could access debt finance. Evidence suggests that during the credit boom household tends to borrow indiscriminately, at times for capital formation or investment in financial assets, sometimes to finance consumption expenditure. At the global level household debt increased rapidly prior to the 2007 financial crisis.

4.3.3. Mortgage Loans

The impact of changes in house prices is significant for understanding household consumption expenditure trends. Changes in net wealth are an important consideration as changes in house prices affects the collateral against which borrowing from financial institutions is weighted. Decline in house prices means less collateral, less collateral constrains borrower's ability to access funds from financial institutions.

The decline in house prices in certain periods also had a negative impact on household expenditure as their net wealth declined thereby constraining their ability to borrow. The "Slump in house prices may have induced households to hold back on consumption to focus on debt repayments and financial institutions may not be willing to lend to highly leveraged households" (Dynan, 2012, P.39). When the global economy fell into recession constraining economic activity, households who borrowed voraciously during the credit boom had problems meeting their debt repayments obligations. Mortgage advances forms the largest component of household debt and constitute approximately 60% of the total household debt, increasing from 56.7% in 2005 to 63.5 % in 2007 (SARB, 2011).

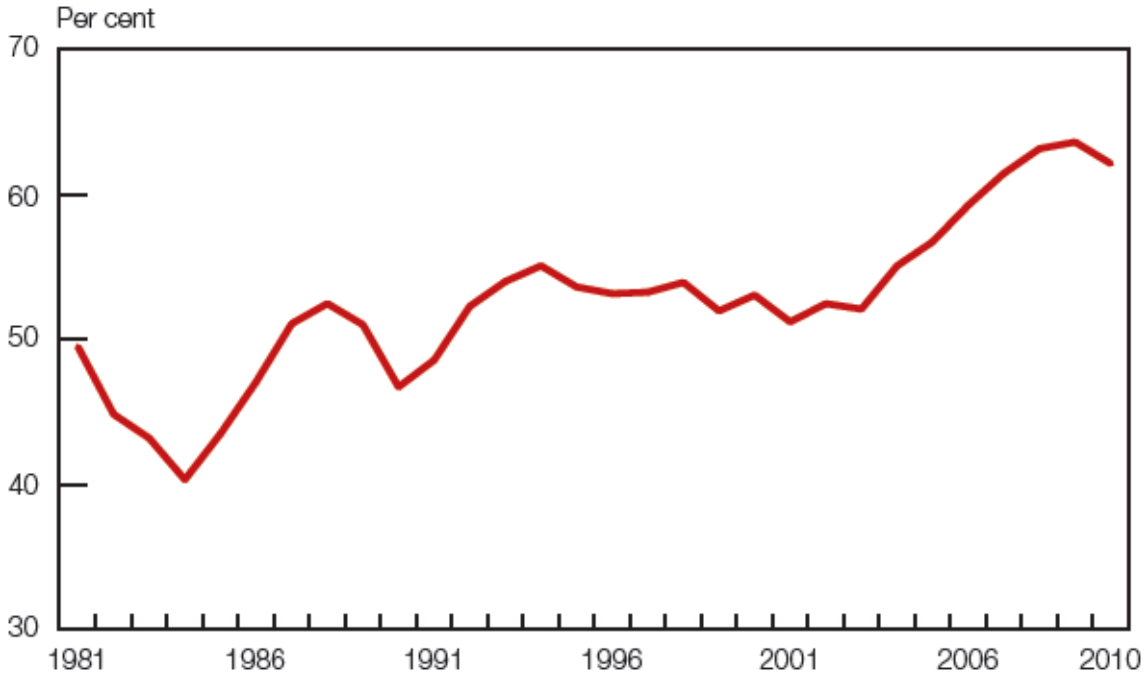
Figure 16: Household mortgage advances



Source: SARB, own calculations

Figure 16 above shows uneven mortgage growth for the period under consideration. The advances stabilised for while from 1994 but immediately show a dip, almost getting into the negatives in 1999. From 1999 onwards the figure shows a steady recovery up until 2004 to 2007 after which they decline considerably. By 1998 mortgage advances stood below 10% mainly due to interest rate hikes which reduced the affordability of households (SARB, 1999). The decline in 2001 is attributed to the currency crisis that the country experienced. The sudden dip as shown from 2007 is a result of the global financial crisis which led to lending constraints by banks mainly due to their decline in banks balance sheet and restrained liquidity positions. Household liabilities as a percentage of disposable income increased considerably in the period leading to 2007 financial crisis (Walters, 2011). General debt accumulation was dampened by the introduction of the National Credit Act (NCA) but it looks like it had a limited effect on mortgage advances as they continued on an upward trend in the period under consideration.

Figure 17: Mortgage debt as percentage of household debt



Source: SARB quarterly bulletin (2011)

Figure 17 shows a decline in mortgage debt as percentage of household debt in 2011 mainly because mortgage advances which declined as shown in figure 17. Mortgage advances constitute large percentage of household debt. The figure shows an increasing trend of mortgage debt from 2005 to 2010. The picture drawn here shows that mortgage debt continued for most of the time to form large percentage of household debt but "the value of mortgage advances relative to household debt receded from "63, 5% to 60%" between 2010 and 2011(SARB Quarterly Bulleting (2011).

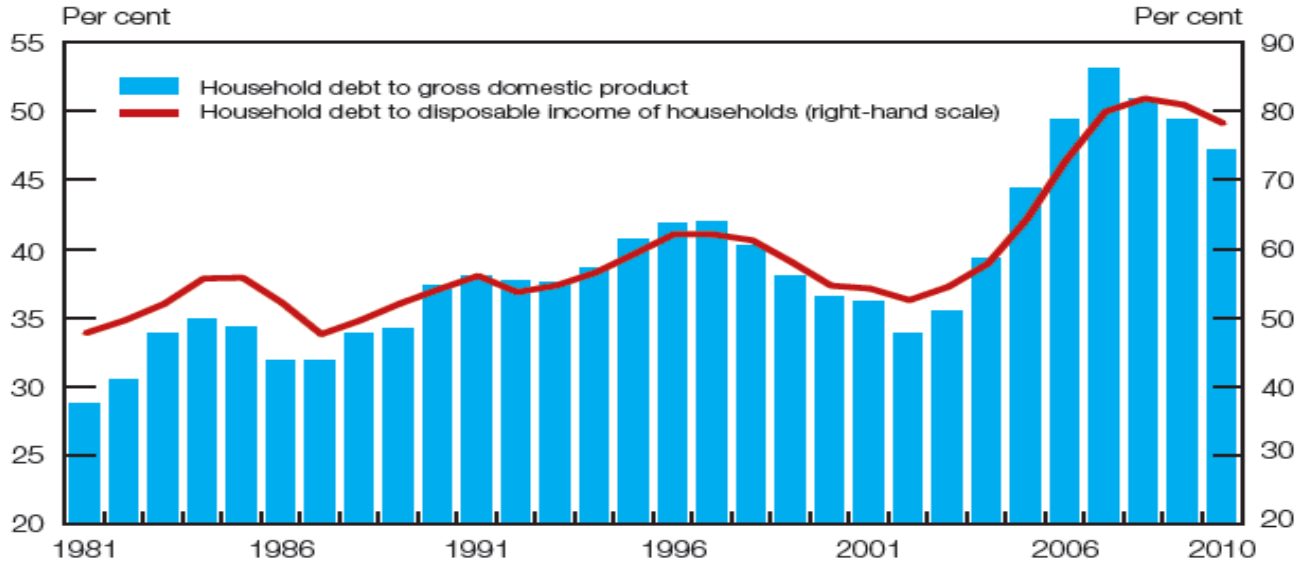
4.3.4. The Ratio of Household Debt to Disposable Income

Households in SA significantly increased their debt relative to their disposable income and GDP. High levels of debt can have a negative impact on the economy and may at times lead to recession as evidenced by the US Sub-Prime crisis. Van Der Walt and Prinsloo (1995, p. 1) describe household debt as "all the debt that households owe to financial institutions and it includes consumer debt (credit cards), short-term loans and mortgage loans". Therefore it is of primal necessity that household debt is always measured to understand the level of indebtedness in the domestic economy.

There are various measures in place to appraise the financial wellness of consumers in the form of UNISA/Momentum Financial Wellness Index, Quantec Vulnerability Index, and FNB household debt risk measure. All these instruments are meant to understand the financial stability of consumers, their level of indebtedness, and their ability to services current dent which has a depressing impact o the overall macroeconomic activity, production and wages. The burden of debt is also measured by the amount of interest that the borrower has to pay in servicing their debt relative to the income earnings.

In the last decade, SA has experienced an increase in consumer spending. However, close analysis of the spending patterns reveals disturbing trends as well. The debt levels has also increased significantly over the same period leading one to assume that part of the spending was fuelled by debt. This period coincided with SA's political transformation (1994) and increased participation on the domestic economy by foreign capital. Moreover, portfolio inflows increased 7% to 10% as a percentage of GDP. Very little of these flows were used for productive purposes and therefore fuelled speculative acquisition as well as feeding into the debt consumption frenzy. The domestic credit to private sector as a percentage of the GDP increased quite significantly from 1980 to 1990 (25% relative to GDP). From 1990 to 1995 domestic credit as a percentage of GDP grew by 18% from 119% to in 1998 to 137% in 1999 and then peaked to 147% by 2001 (Mohammed, 2006, p. 17).

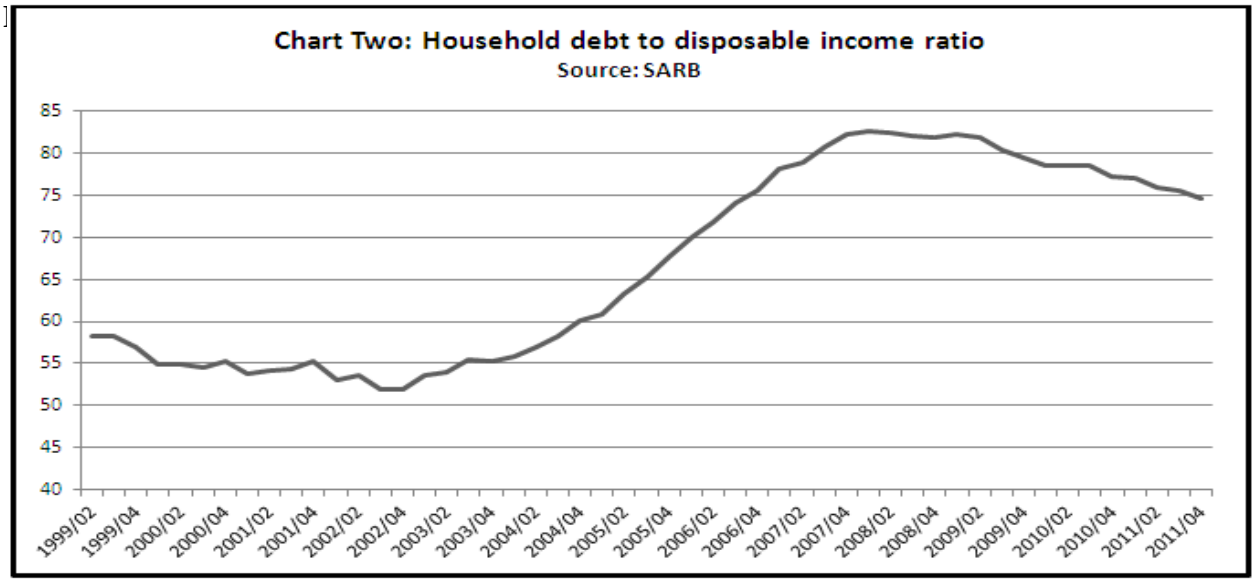
Figure 18: Household debt as a percentage of GDP and disposable income



Source: SARB 2011

Figure 18 shows that there was a decline in fixed investment in the domestic economy from 1980 to 1985 mainly due to political instability in the country but also due to debt crisis which constrained flow of fixed investments. Investment as a percentage of GDP remained low throughout the period. The period also saw a surplus on the current account (Mohammed, 2006, p. 19) . The other significant developments as captured on the figure are traced to the period 2003 to 2005 which shows slight recovery of the fixed investment as the domestic economy continued its recovery from the 2001 currency crisis.

The democratic government had also started investing in the domestic economy and the results were beginning to tell. Conversely, greater percentage of the investment was in finance and retail sectors and not in the real and productive sectors of the economy. The period is mainly referred to as jobless growth period mainly due to increase in speculative portfolio flows into non-productive and real estate sectors. This led to rapid growth in household consumption and debt as well as an increase in household debt and consumption which was a result of external supply rather than domestic demand. However, there were high levels of currency mismatches as the less percentage of domestic debt was denominated in foreign currency. Trade deficit was perched at 4% of the GDP due to consumption and imports of consumer goods (Mohammed, 2006, p. 20).



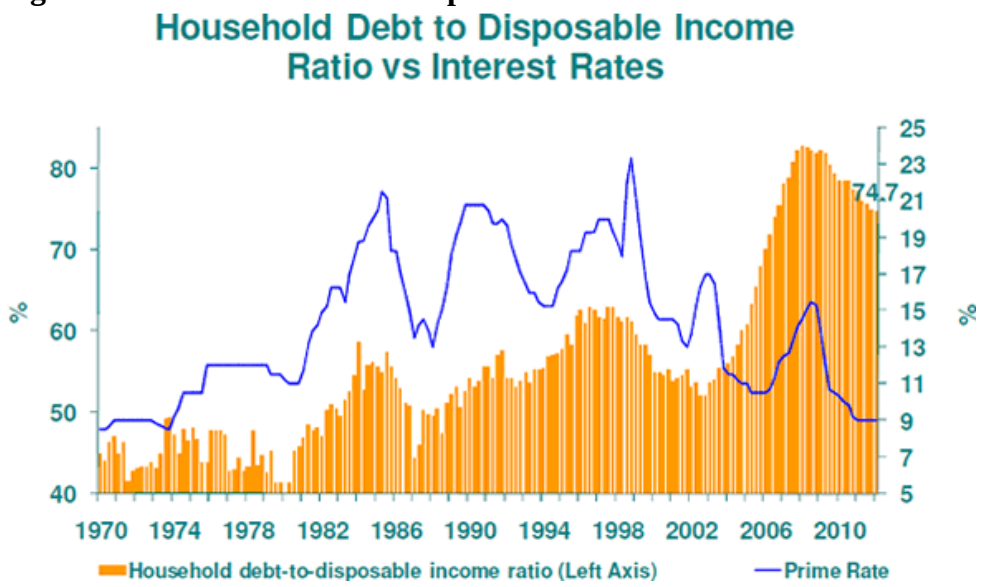
Source: SARB 2012

According to SARB (2012) the ratio of household debt to disposable income has declined from the high of 82.7% in 2008 to approximately 74.85 in the Q4 2012. However, "the moderation in household debt to disposable income is more a function of rising income than falling debt" (Duncan, 2012, p.1). Household income is rising at faster rate than debt. The reduction of interest rates has also significantly reduced the cost of servicing household debt. In July 2012, SA's Monetary Policy reduced repo rate by 50 basis points to prime lending rate of 8.3% (MPC, 2012).

Declining household debt to disposable income reduces consumer vulnerability, so the lower the ratio the lower the risk. "A lower debt-to-disposable income ratio, accompanied by no movement in interest rates, implies a further mild reduction in the debt-service ratio meaning the cost of servicing the household sector debt burden (interest plus capital) expressed as a percentage of disposable income" (Loos, 2012). Household savings has declined, meaning that households are taking more debt. Unsecured loans accounts for 8% of the total household debt and the pattern is increasing as more mainstream banks enter this lucrative market. Most analysts attribute increase in unsecured lending to increasing unemployment (NCA, 2011). However, increasing household consumption means that the surplus income is being spent on consumption

and even luxury imported goods. According to BNP Paribus Cadiz Securities[1] 2.5 million credit active consumers were registered from 2008 to 2012. More than a million jobs were lost in the same period leading one to conclude that credit is being extended to consumers without formal jobs.

Figure 20: Household debt to disposable income

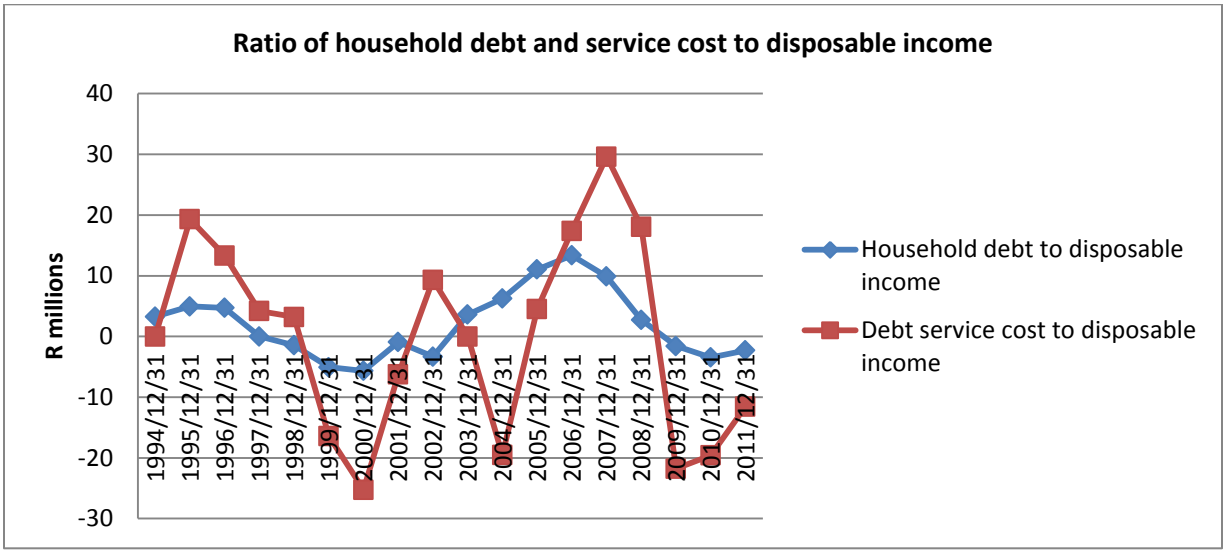


Source: First National Bank (2012)

According to Loos, the "low interest rates often masks household financial fragility. A sudden increase in interest rate has the potential to plunge the household sector into crisis and eventually the rest of the economy. Low interest rates paints a skewed picture of households whose level of indebtedness is declining whilst in reality income is increasing at faster rate than debt and the cost of debt has also declined. Household sector is more vulnerable to interest rate hike than any period in history. Non-mortgage household sector borrowing growth is near to 20% year-on-year, and rising. Net household saving remained at zero percent of disposable income. (Loos, 2012)

[1] Shamil Ismail, Analyst at BNP Paribus Cadiz Securities

Figure 21: Ratio of household debt and service cost to disposable income



Source: SARB, own calculations

The debt service cost dropped to 6, 9% by the second quarter of 2011 which represents a meaningful drop from the level of more than 12% which prevailed during much of 2008 and 2009. Debt service ratio measures, "the proportion of disposable income that households must devote to servicing their debt obligation" (Faraqui, 2008, p.4). Drechman and Juselius (2012) observes in their study that debt tends to be higher during periods of economic prosperity as agents seek to maximise on capital gains as well as smoothing out consumption. Even though the numbers only approximate interest costs and not principal repayments on debt they are still a good indicator of the level on household indebtedness.

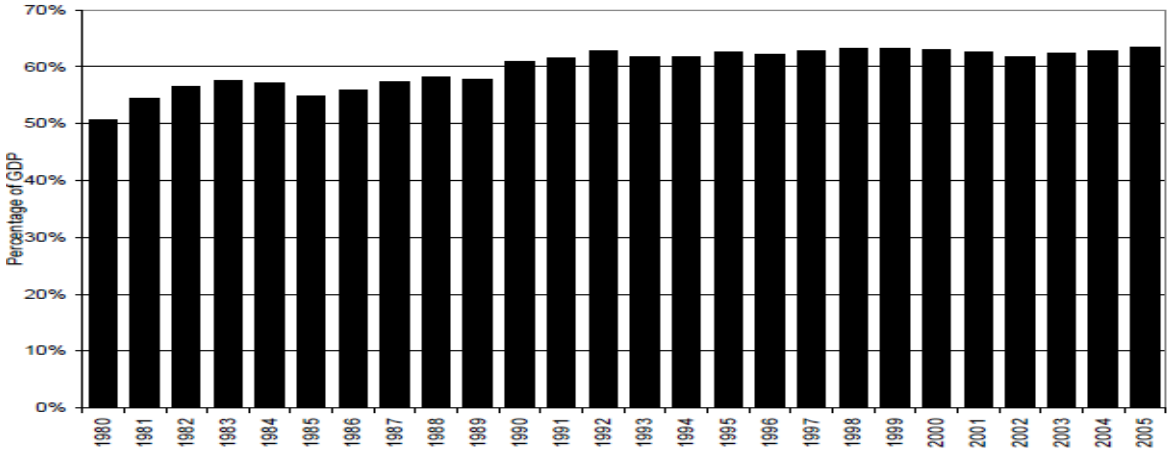
The improved debt servicing cost ratio is a result of the decline in interest rates since the end of 2008. The ratio is bound to show some further improvement in the latter half of 2011 as the Reserve Bank is not expected to raise interest rates any time soon. In addition, disposable income growth should show further advances in the wake of above-inflation wage increases in many sectors"[2].Debt service cost has important implications for households as it tends to constrain households ability to smooth out consumption. The higher the levels of indebtedness the higher the service cost. If households default on debt obligations due to changes in interest rates, they become worse off as future cost of debt worsens as credit profile declines (BIS, 2011).

[2] Quantec, 2011 – Consumer Vulnerability Index

4.3.5. Household Consumption Trends

Household consumption expenditure as a percentage of GDP has remained steady over time affirming the importance of the sector in the economy **(Figure 22**). From 2003 to 2008 spending by household sector increased at a faster rate than their income. The gap had to be filled through taking of more debt meaning that the consumption expenditure was a result of what Merola (2012) and Kim (2011) has aptly titled "debt financed expansion". During the same period household holdings of deposits and interest bearing assets declined leading to a situation where interest receipts by households were lower than payments (SARB Quarterly Bulletin, 2011).

Figure 22: Final Household Consumption Expenditure as percentage of GDP

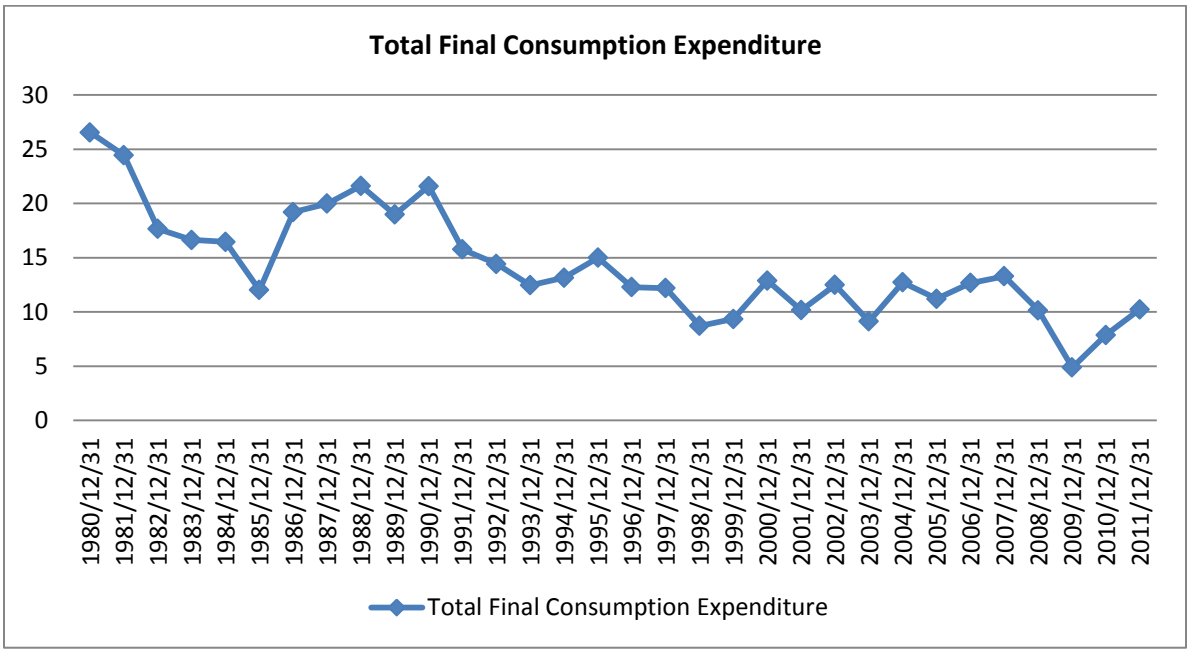


Source: SARB 2006

Figure's 22 and 23 shows upward trend in consumption expenditure in consumption expenditure for the period under review. For example from 1993 to 2005 consumption expenditure grew at an annual rate of 4.7%. Moreover, from 2005 to 2008 expenditure increased at an annual rate of 13% but began to peter out as the effects of global financial crisis began to bite. However, consumption spending recovered slightly in the last quarter of 2011 by approximately 5.4%. SARB (2012) attribute the recovery to declining ratio of household debt to disposable income. Most notable development relates to declining service cost due to low interest rate. However, Loos (2012) observed that household debt remained high nonetheless but a combination of declining service cost a well as growth in income relative to debt created a skewed picture of household out of the debt trap. Most worryingly though is that savings rate to

disposable income continued on a downward spiral declining from 4.5% to 0.2% (SARB, 2006, 2009, 2010).

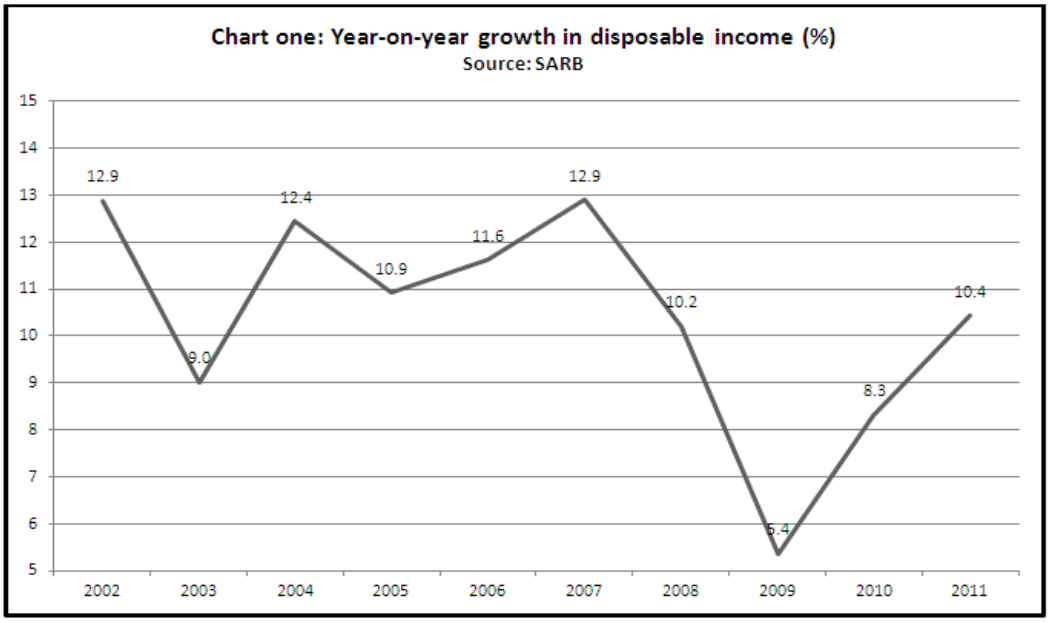
Figure 23: Total final consumption expenditure by households –year on year change



Source: SARB/ Quantec EasyData own calculations

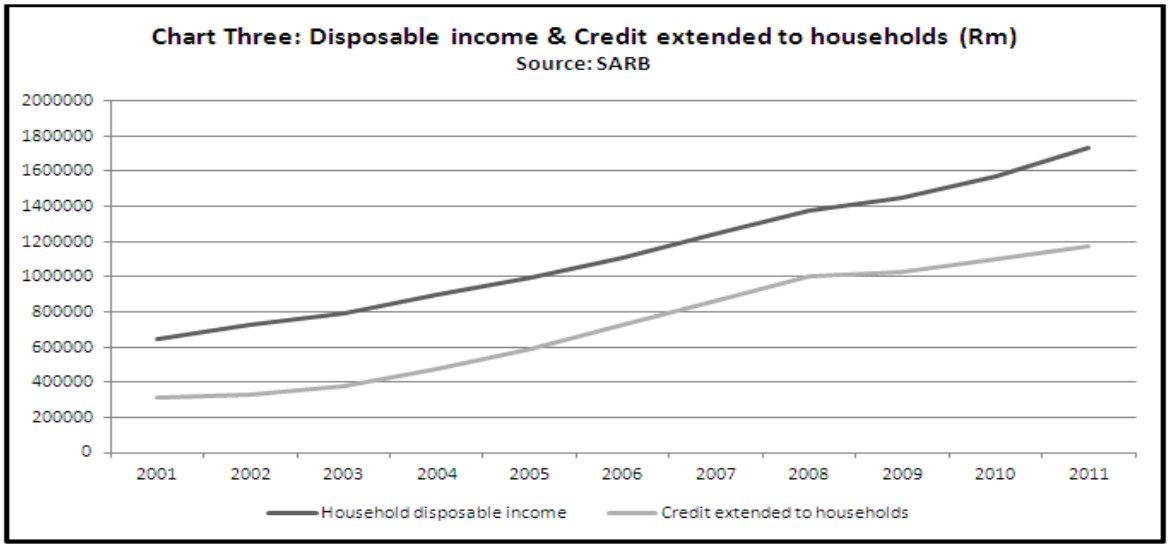
Gross capital flows as well as portfolio flows increased considerably in the period under review although occasionally they did decline albeit temporarily. Non-residents increased their holdings of financial assets through shares and long-term loans. These flows mainly fuelled speculative activities in the marked and were not used productively in the real economy. Most notably, the portfolio flows became a channel through household accessed financial instruments hence an increase in indebtedness. Mohamed (2006) attribute the housing price bubble during 2002 – 2005 to increase in portfolio flows, low real interest rates as well as credit extension to private sector.

Figure 24: Disposable income (%) year on year growth



Source: SARB 2012

Household disposable income has increased as shown as **figure 24** attests. The dip around 2009 is attributable to financial crisis which depressed domestic markets. Household expenditure patterns are largely influenced by income levels. By 2010, income growth had resumed and stood at 8.3% maintaining the upward trend by 2011 and 2012. However, the figure does not reveal the relationship between income and debt (Project Provide, 2003, p.1).



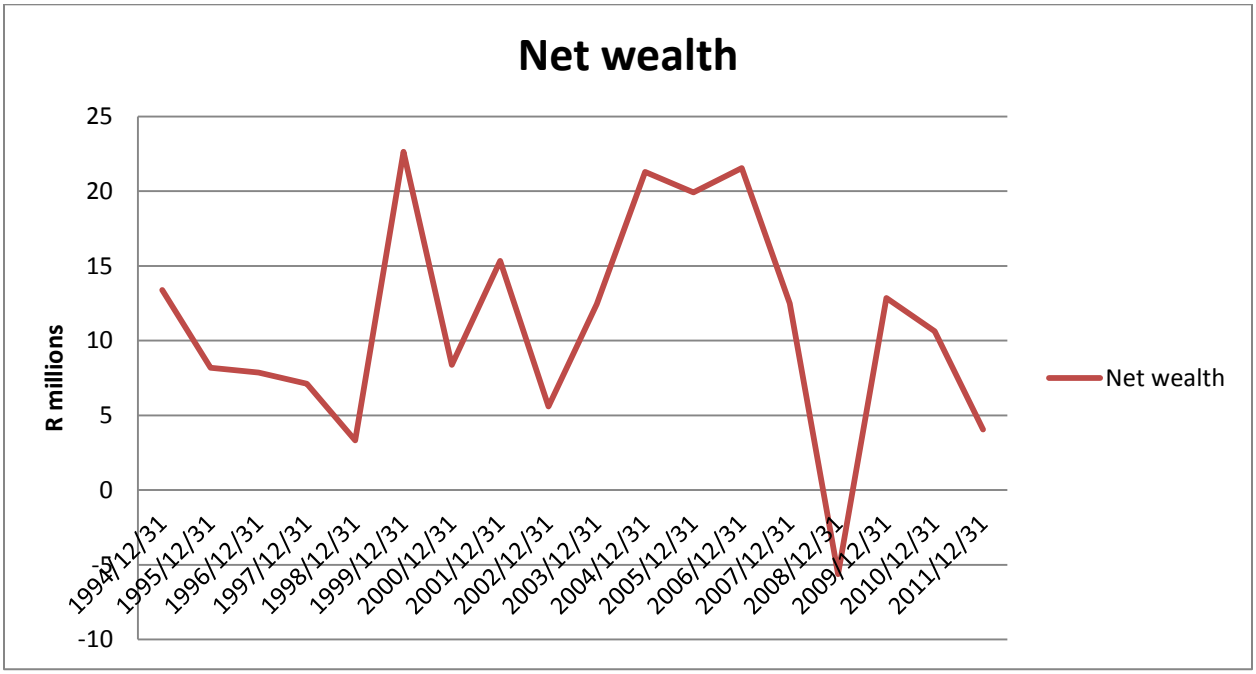
Source: SARB 2012

Income is rising but debt is also rising albeit at a faster rate than debt. Unemployment rate has not changed from the 2008 dip. According to National Credit Regulator (2012) approximately 6000 consumers apply for debt consolidation or counselling every month. Consumer credit accounted for approximately 35% of the total Household debt in 2009. Credit to non-incorporated business enterprises formed only 2% of the overall household debt (SARB, 2010, Quarterly Bulletin).

4.3.6. Household Wealth

The macroeconomic effects of changes in the net wealth of households are direct impact on the final consumption expenditure and final demand in the economy (Aron and Muellbauer, 2006). In the period under review household net wealth vacillates quite considerably as shown on **figure 26** below. According to SARB net wealth comprises of total tangible and financial assets less household liabilities. The aftermath of the 2007 financial crisis was declining net wealth of households. For example, in 2008 total household debt level matched the total value of assets held by households. The effects of the crisis saw household net wealth eroding relative to total liabilities as shown in **figure 26**.

Figure 26: Household net wealth



Source: SARB, own calculations

In the same period the property values that earlier propped up the net wealth of households began to wane as the effects of the global financial crisis spread through all sectors of the economy. Household wealth began to recover in the last quarter of 2009 mainly due to resumption of global and domestic economic activities. SARB (2011) attributes source of the household sector net wealth between 2005 and 2007, "holdings of residential properties, pension funds and directly held securities" (P.70).

Chapter 5

5.1. Findings and Policy Options

The analysis of the changing position of households reveals the following observations;

Financial integration and globalisation has led to a larger GCF which tends to be more volatile relative to net capital flows. Capital inflows show an upward trend after democratic elections in 1994. However, the behaviour of GCF in tranquil and turmoil periods is driven by different components of flows. Consequently, short-term portfolio flows have proven to be the most problematic component of flows and they tend to decline during crises periods. Conversely, FDIs are more stable even during time of turmoil.

The period under review (1994 to 2011), saw non-residents increased their interest and participation by acquiring shares as well as loans. Although foreign sector or non-residents play a crucial role in closing the savings-investment gap any shocks or decline in asset prices in the foreign country can negatively affect domestic household's balance sheet (BIS, 2011). In the same vein household's interest in retirement and life funds increased considerably.

During the period under review non-residents increased their holdings of domestic financial assets in the form of shares, deposits with financial institutions and short-term loans with a maturity of less than a year. This assertion is affirmed by an observation by IIFs 2012 Research Note that "non-residents bought a record $10.5 billion worth of bonds in the first 11 months of 2012, far more than the previous 12-month records in 2010 and 2011 of $6.7 billion and $6.2 billion" (p.27).

Financial liberalisation opened more channels through which households could access debt. High indebtedness of a sector during economic boom correlates with larger contraction and in the case of households dampened consumption spending. This observation affirms Palma (2002) Route 1 that these flows lead to increase in private debt and tend to shorten the term structure of debt. In a period of uncertainty non-residents sell off their holdings sparking a massive outflow of capital.

High household debt tends to amplify recessions and downturns and prolongs recovery (IMF). Increased household consumption expenditure between 1994 and 2007 was 'debt financed expansion'. SA households accumulated more debt during 2002 and 2007 economic boom period, and as a result the

downturn was protracted and complicated. Approximately 1 million jobs were lost in the process which further constrained recovery as well as consumption expenditure and output (Makgetla, 2010).

Evidence shows that capital inflows into the SA domestic markets tend to be procyclical. Whenever capital inflows increase, net worth of households improves which spur extra spending. Sudden reversal or capital outflows also has a contractionary effect on the domestic economy, reducing the net worth of households and eventually dampening consumption spending.

Jobs lost during recessions are never fully recovered especially when the slump is financed induced. The corporate sector focuses more on improving their balance sheet, restructuring rather than business expansion. South Africa Lost approximately 1million jobs during the 2007 recession and has been battling to regain them ever since.

Although the moderation of household debt relative to disposable income seem to suggest that household balance sheet is improving, but data indicates that the moderation is more a result of rising income and lower interest rates than falling debt. The low interest rates have also reduced the cost of servicing debt leaving households with surplus income. However, a sudden increase in interest rates has the potential to plunge the sector into crises and eventually the rest of the economy.

5.2. Policy Options

5.2.1. Countercyclical Macroeconomic Policy

Instead of implementing monetary policy which uses interest rates and credit creation as levers to manage fluctuations in the economy, policies that manage flows during and even after expansion are ideal for lessening the impact of balance sheet imbalances and excessive inflows as well as outflows.

Capital controls - Private sector use capital inflows to fuel consumption spending and does not use improved access to credit for productive investment. The excessive capital inflows, more so short-term flows of foreign capital leads to appreciation of the real exchange mechanism and the over evaluation of the domestic currency, inflationary pressure, increase in imports Capital Controls can help to manage inflationary pressure, reduce financial instability by changing the composition of capital inflows, restricting foreign ownership of foreign assets, ensuring domestic utilisation of national savings by restricting outflows" (Crotty and Epstein, 1996).

5.2.2. Financial Regulations

Financial regulations can either be administrative or market based but in most instances they are used to complement each other. Minsky preferred establishment of financial institutions to manage domestic intermediaries and maintain stability by controlling bank assets through capital adequacy requirements. Malaysia used Unremunerated Reserve Requirements (URR) with positive effect even though their impact was short-lived due to the changing nature of finance. URR are non-interest bearing and increase the cost of borrowing from bank and as a result is one of the best tool for managing credit expansion in the domestic economy (Akyuz, 2008). These measure as well as prudential regulations can also be designed in such a way that they stabilise, smooth and reduce the cyclicality of the system and don't over-expose the domestic markets to the vagaries of international capital flows.

6. Concluding Remarks

The volatility of GCFs during the period under review was exacerbated by financial liberalisation. Although they tend to be large and volatile relative to net-capital flows some components of the flow proved problematic for macroeconomic management. Short term flows (STF) are unstable, prone to reversal and are subject to sentiments of investors as well as sudden and unexpected reversal. The instability brought by finance capital has had a negative impact on the real economy as investors become unsettled and are not willing to invest in long term productive sectors.

The instabilities and shocks related to STF tend to affect the borrowers and the bank balance sheet negatively and subsequently real economic activities. The bank's ability to extend credit to consumers is constrained and the cost of credit also increases. Moreover, the shocks in the economy also affect borrowers net worth leading to defaults on loans. The sharp contraction in credit availability coupled with households defaulting on their loans has magnified effects on economic activity (BIS, 2011).

The accounting approach to economic analysis is a useful instrument in giving a comprehensive picture of the performance of sectors in the economy and point where potential problems in the system could be building up and dictate the policy measure that are likely to be useful

The 2007 global financial crisis originated from the housing sector in the US but spread throughout the economy and the rest of the world. This has affirmed the need for better "understanding of financial interconnectedness among various sectors in the economy, between them and their counterparts in the rest of the world" (Shrestha *et al*, 2012, p.1). The Whom-to-Whom framework developed by IMF (2012) provides an opportunity to fill the gaps identified in this study. The use of the framework will better answer questions like, "*who is financing whom, in what amount, and with which type of financial instruments (Shrestha et al, 2012, p.4)",* that instruments used in this study could not account for.

South Africa continues to experience high levels of inequality among its households. However, the impact of capital flows among different income groups is not directly addressed as it is beyond the scope of this study. Further research is required in this area to fully understand the impact of capital flows on households.

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Table 1: Copeland's motivations of Moneyflows

Origins of Money flows	Types of money flows per origin
Household distributive shares	Wages and salaries, cash dividends, cash interest, net owner take-outs
Household product transactions	Customer payments for goods and services, rents, instalments to contractors, payments for real estate sales
Transfer payments	Insurance premiums, insurance benefits, tax collected, tax refunds, public expenditures
Flows through financial channels	Financial transactions

Source: Own adaptation of Copeland's Framework

Table 2: Intersectoral flows

Sector	Sources	Payments(Uses)
Households	Wages and salaries	Payments of customer goods
Industrial Corporations	Payments by customers for goods and services	Wages and salaries

Source: Own interpretation of inter-sectoral flows

Table 3: Composition of Households Financial Assets: % Share of Components

Year	Financial	At Monetary Institutions	Retirement funds and long term insurers	Other financial
2000	74.41	10.19	40.54	23.68
2001	74.87	9.74	39.91	25.26
2002	72.48	10.48	39.62	22.38
2003	70.72	10.48	37.29	22.99
2004	68.47	9.49	36.70	22.28
2005	68.57	8.81	35.29	24.47
2006	69.65	8.19	36.08	25.37
2007	69.15	8.30	35.28	25.57
2008	66.92	10.08	35.59	21.26
2009	68.26	9.40	35.51	23.37
2010	70.06	8.78	36.60	24.68
2011	69.88	9.30	36.60	23.97

Source: SARB 2012 March *Quarterly Bulletin*