ANALYSING THE PREDICTORS OF FINANCIAL VULNERABILITY OF THE CONSUMER MARKET MICROSTRUCTURE IN SOUTH AFRICA

by

BERNADENE DE CLERCQ

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Supervisor: Prof JMP Venter
Co-supervisor: Prof CJ van Aardt

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“The God of all grace, Who has called you to His eternal glory in Christ Jesus, will Himself complete and make you what you ought to be, establish and ground you securely, and strengthen, and settle you. (1 Peter 5:10)

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SUMMARY

This study aimed to develop a causal chain that illustrates the path through which a variety of factors influence consumer financial vulnerability. In order to achieve the stated aim, it was necessary to firstly identify the factors that gave rise to consumers being financially vulnerable. Secondly, the nature of the causal chain between the identified factors was determined. Thirdly, the causes of consumer financial vulnerability according to key informants in the financial services industry were determined. Finally, based on the results of the first three stages, possible explanations for consumer financial vulnerability were provided.

Before the construction of the causal chain could be explored, a theoretical framework regarding household financial position as well as financial attitudes and behaviours was provided. The theoretical framework was supported by a description of the linkages through which consumers function and transact in an economy by applying chain reasoning. The chain reasoning was extended by providing financial statements reflecting the results of consumers' interactions in the macroeconomy with an extract from the national accounts of South Africa presenting the income statements, balance sheets and relevant financial ratios of consumers for the period in which the research was conducted (2008 to 2009).

For this study, the explanatory sequential mixed methods design was deemed appropriate to achieve the proposed research objectives. The research process firstly consisted of a quantitative strand where the possible causes for consumer financial vulnerability were identified after which the results were validated with data obtained in the second phase by means of four focus group discussions.

To determine the factors giving rise to and establish the causal chain of overall consumer financial vulnerability, regression analysis was conducted. Based on the results of the regression analysis, it became evident that the financial vulnerability chain is not a singular linear process but rather a non-linear process (with contemporaneous and singular linkages) with a variety of factors influencing financial vulnerability, but also influencing each other over time.

Keywords:

- Consumer financial vulnerability
- Household income
- Household consumption expenditure
- Household balance sheets
- Household income statements
- Mixed methods approach
- Chain reasoning
- Consumption theories
- System of National Accounts

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ACRONYMS

AMPS	:	All Media and Products Survey
BER	:	Bureau for Economic Research
BMR	:	Bureau of Market Research
BRICS	:	Brazil, Russia, India, China, South Africa
CATI	:	Computer-Aided Telephone Interviewing
CFV	:	Consumer Financial Vulnerability
CFVI	:	Consumer Financial Vulnerability Index
CPI	:	Consumer Price Index
ECRI	:	European Credit Research Institute
Finmark	:	FinMark Trust
FNB	:	First National Bank
GDP	:	Gross Domestic Product
HDI	:	Human Development Index
ILO	:	International Labour Organization
IMF	:	International Monetary Fund
MPC	:	Monetary Policy Committee
NCR	:	National Credit Regulator
NDP	:	National Development Plan
NGP	:	New Growth Path
NPC	:	National Planning Commission
OECD	:	Organisation for Economic Co-Operation and Development
PFRC	:	Personal Finance Research Centre
SAARF	:	South African Advertising Research Foundation
SAMRA	:	South African Market Research Association
SARB	:	South African Reserve Bank
SARS	:	South African Revenue Service
SASSA	:	South African Social Security Agency
SNA	:	System of National Accounts
SPSS	:	Statistical Package for the Social Sciences
Stats SA	:	Statistics South Africa
UN	:	United Nations
UNDP	:	United Nations Development Programme
Unisa	:	University of South Africa

GLOSSARY

Consumer financial vulnerability is the personal feeling of being in a financially unstable situation.

Causal chain analysis is a means of tracing the immediate or direct causes of an impact or problem back to its root causes. Causal chain analysis requires the development of conceptual models that represent the chain of cause-effect relationships in which *activities* lead to changes, *changes* lead to impacts, and *impacts* lead to *responses*. It is possible to trace both forwards and backwards linkages, and deeper understanding can often be achieved by doing both.

Credit active consumers are consumers obligated to pay credit providers and/or service providers, etc. These obligations result in transactional entries on the consumer's credit record at the credit bureaus.

Mashonisa loan is a loan obtained from a township moneylender who lends out his/her money for profit.

Stokvel is an informal savings club with other people.

CHAPTER 1

WHAT IS CONSUMER FINANCIAL VULNERABILITY?

1.1 INTRODUCTION

According to the South African National Credit Regulator (NCR 2011), the number of credit-active consumers with impaired records increased from 6.79 million to 8.83 million over the period June 2008 to September 2011. This translates to 46.2% of credit-active consumers having impaired records during the third quarter of 2011 compared to 39.6% during the second quarter of 2008 (NCR 2011). Concern regarding unaffordable levels of borrowing and low levels of saving as causes of consumer financial vulnerability has been the focus of discussions and research amongst various stakeholders and policy-makers throughout the world.

The international financial crisis of 2008/09 left numerous consumers across the world unemployed, over-indebted and with no savings or a low level of saving. Four years after the crisis, it appears from what is happening in Greece, Spain, a number of other European countries and the United States of America that this situation is still continuing. Large numbers of consumers remain vulnerable due to negative macroeconomic impacts resulting from fiscal constraints experienced by countries that used government spending as instruments to bail out struggling businesses – in particular the struggling financial sector – during the crisis.

The situation for South African consumers was not as severe as that of some other countries. However, on a microeconomic level, particular aspects of the financial situation of consumers still deteriorated during the period up to June 2009. This is evident from the inability of consumers to remain within their budgets, to save, and to manage their own finances, as can be seen from the fact that household consumption expenditure on nondurable goods (including foodstuffs) declined by 3.4% quarter-over-quarter during the second quarter of 2009, indicating that the financial situations of households had deteriorated to such an extent that they were cutting back even on foodstuffs (SARB 2013). The accounting framework of the System of National Accounts as depicted in chapter 2 allows economic data to be compiled and presented in a format that is designed for purposes of economic analysis, decision-making and policymaking reflecting on the actions of the various economic agents, namely domestic households/consumers, domestic businesses, the government of the specific country under review, as well as the international community via the external account (European Commission, IMF, OECD, UN & World Bank 2009). South Africa's national accounts provide a number of macroeconomic aggregates which in turn make it possible to derive several indicators that can be used to measure the financial state of the household sector and consequently the trend in consumer finances. These can be gauged from macroeconomic ratios and equations prevalent during 2009 – the period during which the consumer financial vulnerability survey (CFV) to derive data for this study was conducted – focusing on consumers' financial position since 2008, and calculations to estimate their financial position in 2010. Such measures include, *inter alia*, the debt-to-disposable income ratio of households that remained at a record level above 80% over the period July 2008 to June 2009 (SARB 2013); household consumption expenditure (R1 385 billion), which during 2008 was higher than the total disposable income of households (R1 329 billion), indicating that consumers, on average, spend more than they earn and mostly make use of debt to finance their excess spending (SARB 2013); and the household net wealth-to-disposable income ratio that declined from about 3.45:1 by mid-2007 to 2.65:1 by mid-2009, indicating declining household solvency resulting mostly from poor financial planning by households (SARB 2013).

One of the key policy objectives of the National Development Plan (NDP) is the reduction of the cost of living, especially for low-income and working-class households, in an attempt to broaden economic participation resulting in inclusive growth (NPC 2012). The South African government contributes in three ways to reduce the cost of living:

- by investing in social wage, comprising education, health services, social development, public transport, housing and local amenities;
- by supporting vulnerable households through the old age grant, child support grant and other social assistance grants; and
- contributing to social security, including unemployment insurance, injury compensation and death or disability benefits (National Treasury 2013).

Government's commitment to these initiatives is evident from the spending on social development, health, education and local amenities that have more than doubled in real terms over the past decade, with social assistance provided as a safety net for the most vulnerable by contributing to the monthly incomes of over 16 million beneficiaries in 2013, up from 2.5 million in 1998 (National Treasury 2013). However, as will become evident through the analyses conducted during the current study, the support provided through the fiscal policy is not necessarily making consumers less financially vulnerable.

In its report entitled *European trends in consumer financial vulnerability* the European Credit Research Institute (ECRI), in conjunction with the Personal Finance Research Centre (PFRC) at the University of Bristol in the United Kingdom (ECRI & PFRC 2008), defines consumer financial vulnerability as **the personal feeling of being in a financially unstable situation**, and indicates that this 'feeling' is an early indicator of financial stress in households. It is important to note that consumer financial vulnerability is not necessarily an actual state of over-indebtedness but rather the consumer's sense or experience of a state of financial vulnerability. Consumers may not currently experience financial vulnerability but could become vulnerable when they, for instance, sense the risk that they may become unemployed, unable to service debts or unable to cope with financial emergencies.

The Genworth Index, as constructed by the PFRC to determine financial vulnerability in Europe, identified several factors that could influence consumer financial vulnerability, based on the evaluation of the consumer financial vulnerability of 10 European countries during 2008 (ECRI & PFRC 2008). The purpose of the Genworth Index was to identify households finding themselves in financially fragile situations. Identifying these households sooner rather than later could assist them before they became over-indebted. Factors that were identified as influencing households' feelings of financial vulnerability include a darkening economic outlook, expected wage cuts or an increasing risk of unemployment. It is important to note that such households' financial decisions are the end result of different economic and/or or psychological factors and how these factors relate to one another (ECRI & PFRC 2008).

Similar factors that could lead to consumer financial vulnerability were also identified by Disney, Bridges and Gathergood (2008), who reported on a variety of variables that could result in consumers feeling financially vulnerable. They reported that household indebtedness, income shocks, unemployment, household structures, macroeconomic shocks, interest rates and low savings could all influence the level of consumer financial vulnerability.

In 2009, a South African study was conducted by FinMark Trust and the Bureau of Market Research (BMR) at the University of South Africa (Unisa) (referred to as the FinMark study), in which the term 'consumer financial vulnerability' referred to the **state and/or feeling of being exposed to financial insecurity, or actually experiencing financial insecurity and/or inability to cope financially** (Van Aardt & Moshoeu 2009). The purpose of the FinMark study was firstly to construct a consumer financial vulnerability index for South Africa based on the Genworth model and secondly to provide information regarding the financial vulnerability of South African consumers. The FinMark study identified that gender, age, population group, income levels as well as source of income, employment status, educational attainment and area all impact on financial vulnerability (Van Aardt & Moshoeu 2009).

Previous studies regarding consumer financial vulnerability hinted at possible factors resulting in consumers being financially vulnerable with, however, a limited review of possible causes and effects that could be identified (ECRI & PFRC 2008, Van Aardt & Moshoeu 2009). In this regard, the FinMark study identified the first level of possible predictors but since then no study has been conducted in South Africa to establish a causal chain of variables giving rise to consumers becoming or remaining financially vulnerable. The current study is an attempt to provide greater insight regarding the various layers of endogenous and exogenous variables that directly and indirectly influence the level of financial vulnerability experienced by consumers. In addition to the original FinMark study (Van Aardt & Moshoeu 2009), the current study aims to determine the specific paths of variables giving rise to higher levels of financial vulnerability by means of a causal chain analysis. Should it be possible to identify the chain of consumer financial vulnerability causation, financial service providers, policy-makers and other stakeholders could implement measures aimed at reducing consumer financial vulnerability and thereby assist consumers to hedge themselves against these causes. However, this is currently not possible due to a lack of information that is required to identify the path through which these factors exert their pressure towards making South African consumers more or less financially vulnerable.

Several of the data sources provided by the South African Reserve Bank (SARB) and Statistics South Africa (Stats SA) employed for further analyses in later chapters use only the term ‘households’ and not ‘consumers’; however, the terms ‘consumers’, ‘families’ and ‘households’ are used interchangeably in this thesis unless otherwise specified.

1.2 THE PURPOSE STATEMENT

As illustrated above, various factors that could influence the financial vulnerability of households can be found at macro and microeconomic levels, taking into account the intrinsic functioning of a household’s financial management as well as the various endogenous and exogenous factors related to the financial vulnerability of consumers. The aim of the current study was to develop a causal chain that illustrates the path through which a variety of factors influence consumer financial vulnerability. To achieve the stated aim, the questions to be addressed by the current study were:

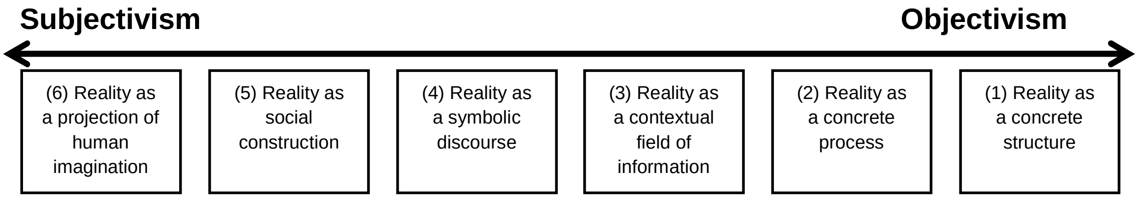
Research question 1:	What are the factors that give rise to consumers being financially vulnerable?
Research question 2:	What is the nature of the causal chain between such factors giving rise to consumers’ financial vulnerability?
Research question 3:	What do key informants in the financial services industry believe to be the causes of consumer financial vulnerability?
Research question 4:	What are the explanations for the causes of consumer financial vulnerability?

1.3 ONTOLOGICAL AND EPISTEMOLOGICAL FOUNDATIONS OF THE STUDY

The manner in which the said endogenous and exogenous variables influence consumer financial vulnerability will be provided in chapters 2 and 3. It is clear from the discussion thus far that a variety of variables at different levels could result in consumers experiencing financial vulnerability. However, before the relationship between the various variables and consumer financial vulnerability can be explored, it is important to define the ontological and epistemological foundations and assumptions underlying the examination of the way in which the said variables influence consumer financial vulnerability as this will shape the research process and the conduct of the inquiry (Creswell & Plano Clark 2011). In this regard, Morgan and Smircich (1980) identiy six alternative ways of viewing the world, namely six ontological assumptions, with (1) being the most objective and (6) being the most subjective, as reflected in figure 1.1.

FIGURE 1.1

SIX ONTOLOGICAL ASSUMPTIONS



(Adapted from Morgan & Smircich 1980)

For the purpose of the current research, the author shares the view of Creswell and Plano Clark (2011) that more than one worldview might be required in a mixed methods study for a broader perspective that cannot be achieved by a single worldview. Quantitative analyses based on the assumption that a certain relationship is expected, could have been adequate to identify potential predictors of consumer financial vulnerability, but not necessarily the causal chain. However, the research objectives of the current study were far broader. In order to determine the causal chain, it was necessary also to establish how and why the identified variables would influence consumer financial vulnerability, thus incorporating another worldview to understand the context as well as the symbolic discourse among the variables. To acquire this additional insight, the quantitative nature of the study had to be extended to include a qualitative phase as well, namely focus group discussions to clarify the results of the quantitative phase. Finally, as ‘consumer financial vulnerability’ refers to a feeling of being financially vulnerable, it is important to understand the emotional or psychological impact of these various drivers on consumers’ experiences towards their financial position, especially regarding their financial behaviour. Thus, it was also necessary to understand the way in which consumers perceive reality in their social structures and in their imagination. This added dimension further required the researcher to understand the various consumption and financial behaviours of consumers as evaluated by the survey instrument, based on the literature review and clarified by the key informants. The mixed-methods approach would be the most appropriate design to achieve the required results.

Given that more than one worldview is required to fully address the complexity of consumer financial vulnerability, more than one theoretical lens was employed in the development of the current study. The theoretical framework will be provided in chapter 2, which first describes the application of chain reasoning to determine the influence of the international trade channel of consumer financial vulnerability. To interpret the actual global and local macroeconomic conditions prevailing in 2009 when the fieldwork to the study was conducted, the necessary macroeconomic components as reported in South Africa's national accounts will be provided in section 2.3, describing through chain reasoning the concrete process of reality. To contextualise the information provided in section 2.3 at a lower level, namely the consumer level, the discussion will extend to section 2.4, which incorporates the financial statements as well as key financial ratios of consumers for the period under review. Following the actual financial position of consumers, the discussion will move to report on some of the consumption theories, developed over time, that provide some insight into the actual consumption patterns of consumers relevant to their income, assets and liabilities. These theories, discussed in section 2.5, include the absolute income hypothesis, the permanent income and life-cycle hypothesis, conspicuous consumption, and the relative income theory. These theories will shed some light on the way in which consumers see reality through social construction by providing some understanding of the manner in which consumers make consumption decisions that influence their financial position. Finally, the theoretical discussion will conclude with section 2.6, which reports on some of the behavioural finance theories that provide the theoretical foundation regarding the way consumers make certain decisions as well as their consumption modes, namely 'to have or to be' and objectification. Section 2.6 will provide more insight into the subjective lens of the reality of consumers in the manner in which they absorb a host of information and translate the information to levels of financial vulnerability.

1.4 A BRIEF INTRODUCTION TO POSSIBLE CAUSES OF CONSUMER FINANCIAL VULNERABILITY

It is evident from the brief discussion that the financial vulnerability of consumers depends largely on the state as well as the future prospects of the local economy underpinning the standard objectives of macroeconomic policy, as discussed by Fourie and Burger (2010), namely:

- economic growth and increasing employment (namely low unemployment);
- stability of output and employment levels;
- stable and low inflation;
- distributional and equity objectives; and
- economic development and poverty reduction.

These objectives were highlighted by the South African government in various policy documents released since 1994. One of the most recent policy documents with short- to medium-term targets is the New Growth Path (South African Government 2010). In essence, the New Growth Path framework proposes the creation of five million net new jobs by 2020 by elevating annual real economic growth to a level of 7% through the use of more workers in the production process. This should simultaneously reduce the official unemployment rate to 15% (South African Government 2010). The New Growth Path framework proposes that the required employment growth be driven by investments in energy, transport, communication, water and housing infrastructure, whilst specific policies are required to encourage labour absorption in various sectors, subsectors and cross-cutting sectors, namely the green economy, agriculture, mining, manufacturing and tourism (Van Tonder, Van Aardt & Ligthelm 2011).

The value of economic growth as an important source of poverty reduction and better income distribution as identified by the World Bank (World Bank 2001) has also identified in its comprehensive analysis of poverty reduction proposals. Chaudhuri (2003) argues that poverty reduction research should not be limited to the measurement of poverty or wellbeing, but emphasises that for policy purposes, it is important to determine *ex ante* which risks could result in consumers falling below the poverty line or remaining in poverty. The poverty risk therefore necessitates an understanding of which factors cause or contribute to financial vulnerability. An identification of factors that could result in consumers becoming or remaining financially vulnerable could assist in the creation of preventative measures.

The World Bank (2001) identified policy measures that are successful in creating sustained and sustainable economic growth as the first step in developing strategies to address poverty, improve income distributions, and create employment. Based on the World Bank's research published in 2001, the following factors were identified to drive economic growth and reduce existing levels of consumer financial vulnerability:

- Growth depends on education and life expectancy, particularly at lower incomes.
- Rapid population growth is negatively associated with per capita gross domestic product (GDP) growth.
- The changing age structure of the population can also effect growth.
- Economic policies, such as openness to international trade as well as sound monetary and fiscal policies (reflected in moderate budget deficits and the absence of high inflation) contribute to economic growth.
- A well-developed financial system is strongly conducive to economic growth.
- Both domestic and external shocks matter as well.
- Wars, civil unrest and natural disasters all lower growth rates.
- Macroeconomic volatility, adverse terms of trade shocks and slower growth among trading partners will also result in slower growth rates.
- Poorly sequenced and badly implemented reforms can lead to sudden reversals in capital flows or other macroeconomic disruptions, also slowing growth.
- Institutional factors, namely strong rule of law and the absence of corruption, contribute to growth by providing a fair, rule-based environment in which firms and households can invest and grow.
- Other exogenous factors, such as geography and initial incomes, matter as well.
- Finally, initial inequality can influence later growth, with implications for how growth translates into poverty reduction (World Bank 2001).

In addition, the Genworth Index (ECRI & PFRC 2008) identified several factors that could influence consumer financial vulnerability, based on several evaluations of consumer financial vulnerability during the period 2007 to 2010. The purpose of the Genworth Index was to identify countries with consumers in financially fragile situations. By identifying these financially fragile consumers sooner rather than later, they could be assisted before they become over-indebted.

The Genworth Index (ECRI & PFRC 2008) reported on financial vulnerability scores from 2007 until the latest report in 2010. Originally in 2007, the financial vulnerability of 10 European countries revealed that the southern part of Europe had higher levels of financial vulnerability than the northern part (ECRI & PRFC 2008). The study was repeated in September 2008 – for the first time also including Finland and Poland (PFRC 2008), again in September 2009, now extending the number of countries to also include Greece and Turkey (PFRC 2009), and at the end of 2010, spanning 18 countries (PFRC 2010). The Genworth Index (ECRI & PFRC 2008) classifies individuals on the basis of their perceptions of financial vulnerability into four clusters, namely:

- **Group A: 'Financially vulnerable'** is composed of financially vulnerable persons who tend to have experienced financial difficulties often in the preceding 12 months and who feel that their situation is unlikely to improve.
- **Group B: 'Strivers'** is a group of persons who tend to have experienced financial difficulties relatively frequently in the preceding 12 months but who now feel more confident (namely they are expecting their financial situation to improve). These individuals are neither financially vulnerable nor financially secure.
- **Group C: 'Circumspect'** is a group who have not often experienced difficulties, if at all, and who tend to expect their situation to remain the same. These individuals are again neither financially vulnerable nor secure.
- **Group D: 'Financially secure'** comprises financially secure persons who have rarely or never experienced financial difficulties in the preceding 12 months, and who expect their financial situation to improve. (ECRI & PFRC 2008).

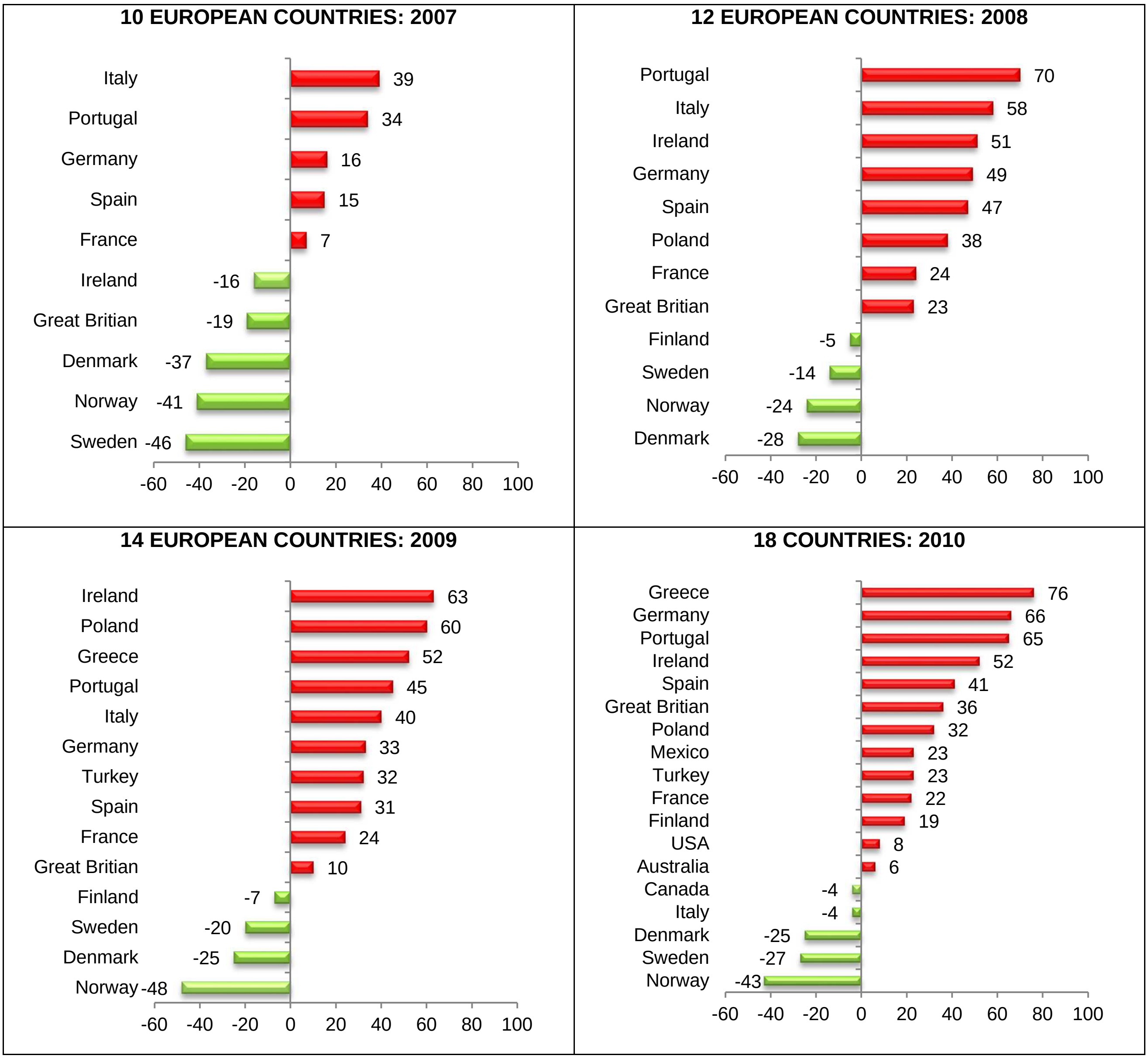
The Index does not simply reflect the percentage of those who fall into the financially vulnerable Group A (with regard to the overall number of consumers), but a ratio of the percentage of persons in Group A relative to the percentage in the financially secure Group D:

$$\frac{\text{\% Persons falling into Group A}}{\text{\% Persons falling into Group D}} \Rightarrow \text{Ratio rescaled from -100 to 100}$$

Furthermore, an Index score of 100 denotes the maximum possible financial vulnerability while a score of -100 signifies the minimum possible financial vulnerability. A score of 0 indicates that a country has equal proportions of those who are vulnerable and those who are secure (ECRI & PFRC 2008). The Index scores since inception for the various countries are reflected in figure 1.2.

FIGURE 1.2

GENWORTH INDEX SCORE FROM 2007 TO 2010



(ECRI & PFRC 2008; PFRC 2008; 2009; 2010)

The countries with the lowest financial vulnerability in the first survey during 2008 were Ireland (-16), Great Britain (-19), Denmark (-37), Norway (-41) and Sweden (-46). On the other side of the spectrum were France (7), Spain (15), Germany (16), Portugal (34) and Italy (39) (ECRI & PFRC 2008) (figure 1.2). An analysis of the numbers reveals that although Denmark was the country with the lowest financial vulnerability index score during the second survey at the end of 2008, its decline between 2007 and 2008 was not as severe as that of other countries. Denmark's score declined by 24% from the middle of 2007 to the end of 2008 (from -37 to -28) (ECRI & PFRC 2008; PFRC 2008). However, the decline in Germany was 206%, in Spain 243% and in Great Britain 221%. The country with the largest decline was Ireland with 419%. This clearly indicates the expectations of the looming effect of the global recession, as well as the impact on the citizens of countries around the world exposed to all the news regarding the global negative economic outlook (ECRI & PFRC 2008; PFRC 2008).

Consumers were adjusting to the negative global economic outlook by the end of 2009, as the differences in the vulnerability scores were not as acute as during the second and fourth quarters of 2008. Norwegian consumers' sentiment improved; hence their index score improved from -24 to -48, illustrating that they were feeling financially more secure than the year before. Residents from Portugal were also feeling financially less vulnerable in 2009 than in 2008, while residents in Ireland experienced the highest levels of financial vulnerability at the end of 2009 (see figure 1.2) (ECRI & PFRC 2008; PFRC 2009).

Greece's economic problems in 2010 are clear from figure 1.2, with Greece being the country with the highest financial vulnerability score of 76 out of 100. This was the highest score any country reported since the inception of the Index in 2007. Norway was still the country with the lowest financial vulnerability score at -43 at the end of 2010 (PFRC 2009; 2010). From the analyses conducted by the Personal Finance Research Centre (PFRC 2009; 2010), several indicators of consumer financial vulnerability were identified based on the perceived economic outlook of the residents of the various countries sampled. Consumers felt financially vulnerable or financially secure based on the information they digested about the economic prospects of a country, as reflected in figure 1.2.

More details regarding the way in which the identified factors influenced financial vulnerability will be discussed in chapters 2 and 3 alongside the relevance of the World Bank factors. However, the Genworth Index studies highlighted the following factors:

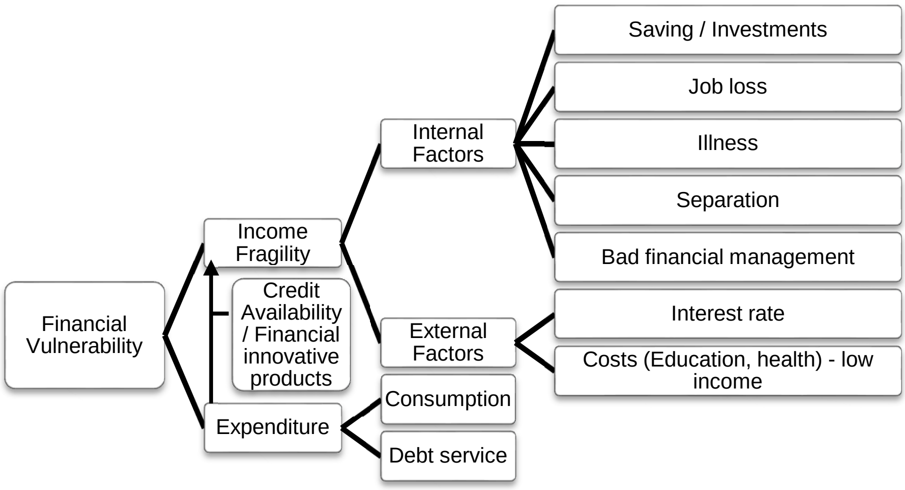
- the global economic outlook at the time of the study;
- the trends and level of interest rates as well as inflation rates of the various countries;
- the state of consumers' financial position as represented by their assets and liabilities;
- the labour market environment, reflecting unemployment levels as well as employment prospects for the residents of the various countries;
- the current and expected economic growth rates of the individual countries;
- the income distribution of each of the countries;
- the financial attitudes of the consumers of the various countries;
- the consumption patterns and levels of the consumers;
- several demographic factors, such as age, gender and household structures; and
- the level of consumer confidence reported.

(ECRI & PFRC 2008; PFRC 2008; 2009; 2010)

To construct a consumer financial vulnerability index for South Africa, the FinMark study identified a range of variables that appear to be strong predictors of financial vulnerability (Van Aardt & Moshoeu 2009). These variables are shown in figure 1.3.

FIGURE 1.3

CAUSE AND EFFECT CHAIN WITH REGARD TO FINANCIAL VULNERABILITY

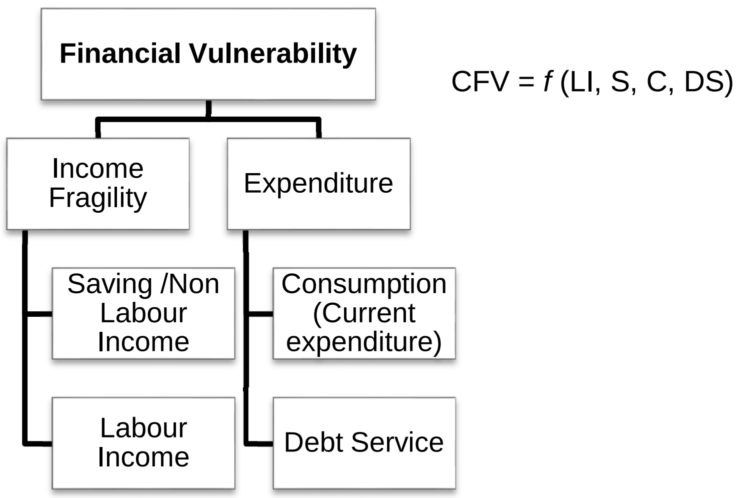


(Van Aardt & Moshoeu 2009)

Based on the consumer financial vulnerability cause and effect chain shown in figure 1.3, a heuristic consumer financial vulnerability model was created that could be used as a basis for the construction of the South African consumer financial vulnerability index. The heuristic model according to the FinMark study (Van Aardt & Moshoeu 2009) is shown in figure 1.4.

FIGURE 1.4

HEURISTIC CONSUMER FINANCIAL VULNERABILITY MODEL



(Van Aardt & Moshoeu 2009)

By means of the heuristic model shown above, the cause and effect chain (figure 1.3) was reduced to its basic elements, namely income vulnerability and expenditure as the main drivers of consumer financial vulnerability, with saving and non-labour incomes (namely inter-household wealth transfers and social grants) and labour incomes as the main drivers of income vulnerability, while consumption expenditure and debt servicing are the main drivers of expenditure vulnerability. This model proposes that consumers who have little savings to draw on, little or no labour income, high consumption expenditure and a high debt servicing burden would experience high levels of financial vulnerability. Conversely, consumers who have ample savings to draw on, have a high labour income, do not experience problems in paying for the things they need and have low debt servicing burdens, will be relatively financially secure. An equation showing this relationship between consumer financial vulnerability, income fragility and expenditure as shown in figure 1.4 is as follows:

CFV = f (LI, S, C, DS)

where:

LI	=	Labour income
S	=	Saving/non-labour income
C	=	Consumption expenditure
DS	=	Debt servicing

The FinMark study (Van Aardt & Moshoeu 2009) identified a range of variables that appear to be predictors of consumer financial vulnerability. These factors include: over-indebtedness (in situations where consumers have high consumption expenditure as well as high debt servicing). Expenditure can also be constrained by income fragility leaving even less money available for consumption expenditure and to spend on debt servicing. Income fragility in turn is brought about by a range of endogenous and exogenous factors. Endogenous factors include insufficient savings and/or investments, becoming unemployed, ill health, separation/divorce and bad financial management. Exogenous factors, on the other hand, include higher interest rates, price inflation and adverse economic conditions, which were identified as possible factors influencing the feeling of being financially vulnerable (Van Aardt & Moshoeu 2009).

To determine the causal path of consumer financial vulnerability, it is necessary to extend the previous research with the compilation of a heuristic model. For purposes of developing the heuristic model, a potential causal path was explored through application of chain reasoning (of which more detail is provided in chapter 3). Section 3.2 in chapter 3 describes a possible causal chain by means of the international trade channel, because South Africa is an open economy; the country is heavily influenced by its dealings with the international community via international trade (imports and exports), international capital flows (the performance of international markets especially the share and bond markets, but also fixed investments) and currency movements. Thus, economic stakeholders across the world will become risk averse or risk friendly depending on the state of the international economy, where weak or contracting economic growth gives rise to risk aversion and strong economic growth spurs more risk. Should any of South Africa's main trading or financial flow partners experience economic problems, it would significantly affect the country's production output, job creation, and magnitude of expenditure. As will be shown in chapter 3, this, in turn, will affect consumers' feeling of financial vulnerability, as the international trade channel is one of the mechanisms that would lead to economic growth in South Africa and ultimately to lower levels of consumer financial vulnerability. The international trade channel and its relationship to consumer financial vulnerability are illustrated in figure 1.5.

FIGURE 1.5

CONSUMER FINANCIAL VULNERABILITY CHAIN BASED ON THE INTERNATIONAL TRADE CHANNEL

International trade channel components	**Potential influence of international trade chain components on consumer financial vulnerability**		**More detail provided in:**
	Conducive to low levels	Conducive to high levels	
International economic environment	Upswing phase	Contracting phase	section 3.2.1
Domestic macroeconomic environment	Affluent	Poor	section 3.2.2
Labour market dynamics	Elastic with growth to create employment	Low elasticity with growth – unemployment	section 3.2.3
Consumer income	High income	Low income	section 3.2.4
Consumption expenditure	Medium spending	Under pressure	section 3.2.5
Savings / Assets	Lots of savings	Little savings	section 3.2.6.1
Debt / Liabilities	Manageable debt	Sizable debt	section 3.2.6.2
Consumer financial vulnerability	Low levels of consumer financial vulnerability	High levels of consumer financial vulnerability	section 3.2.7

(Source: Author's own compilation)

Similar to being affected via the international trade channel, consumers' level of financial vulnerability could also be influenced via the development channel. Section 3.3 of chapter 3 describes the influence via the development channel and focuses on the demographics and development of consumers themselves as economic growth does not have the same effect on all consumers. It is thus important to contextualise the influence of a variety of development factors and their relationship with consumer financial vulnerability. More specifically, it is necessary to explore how socioeconomic factors such as the size and age distribution of the population, income inequality, education and health could result in consumers feeling financially vulnerable, as illustrated in figure 1.6.

FIGURE 1.6

CONSUMER FINANCIAL VULNERABILITY CHAIN BASED ON DEVELOPMENT FACTORS

Development factors	**Potential influence of development factors on consumer financial vulnerability**		**More detail provided in:**
	Conducive to low levels	Conducive to high levels	
Living standards	Income equality	Income inequality	section 3.3.2
Educational attainment	High levels of educational attainment	Low levels of educational attainment	section 3.3.3
Health	Good health	Bad health	section 3.3.4
Geographical location	Urban	Rural	section 3.3.5
Household structure and support	Two earners	One earner	section 3.3.6
Gender	Male	Female	section 3.3.7

(Source: Author's own compilation)

1.5 RESEARCH DESIGN

Over time, because of criticism about the limited scope of empirical research in the field of mainstream accounting and finance, alternative research methodologies have been introduced in this field. The hermeneutic circle emerged from critiques of the limited approach, resulting in a far broader approach of research in accounting and finance. Although hermeneutics originated as a theological research method encompassing the interpretation of the spiritual truth of religious writing, the concept was transferred to social sciences relating to the interpretation of intentional human behaviour, language and institutions. The new dimension to social sciences (that includes accounting and finance research) extended on hermeneutics and created another research dimension, namely interpretive accounting research (Ryan, Scapens & Thoebald 2002).

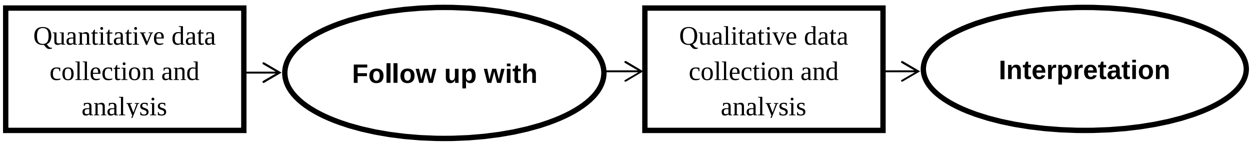
Ultimately, researchers argued that limiting the research to only one perspective would not necessarily provide the required results, which gave rise to the development of a third approach, namely the mixed methods approach. In addition to broadening the research scope by combining the research methods and data sources by means of triangulation, the results of one method could be informed by another method (Creswell 2003). Several strategies and variations of mixed methods of inquiry developed, with sequential procedures, concurrent procedures and transformative processes the most dominant strategies (Creswell 2003).

Sequential procedures relate to a situation where a researcher wishes to elaborate on or expand the findings of one method with another. For example, a researcher will embark on a quantitative method, namely a survey, and follow that up with a qualitative method to provide more insight into the phenomenon being observed. Concurrent procedures are applied when the researcher simultaneously conducts quantitative and qualitative studies and integrates the information in the interpretation of the overall results. Finally, during transformative procedures the researcher uses a theoretical lens as an overarching perspective within a design that contains both quantitative and qualitative data (Creswell 2003).

As very little is known regarding the causes of financial vulnerability of South African consumers, this study followed sequential procedures, firstly to identify the causal chain of consumer financial vulnerability by means of a quantitative strand, followed by an analysis of the qualitative data obtained via the various focus group interviews to provide a more holistic understanding of the drivers of consumer financial vulnerability. The research design is schematically illustrated in figure 1.7.

FIGURE 1.7

EXPLANATORY SEQUENTIAL DESIGN



(Creswell & Plano Clark 2011)

Chapter 4 provides more information regarding each step of the mixed methods approach illustrated in figure 1.7, for example the population, survey instrument, quantitative data analysis techniques, key informants' information and qualitative data analysis techniques. Because the research was implemented in two distinct phases, with the collection and analysis of the quantitative data (survey) occurring before the collection and analysis of the qualitative data (focus groups), the research method approach is referred to as a **two-phased, sequential mixed methods approach**. The purpose of this approach was to obtain statistical quantitative results from a sample followed by focus group discussions involving key informants in order to explore the results in more depth. During the first quantitative phase, a causal chain analysis was conducted to identify the factors that stakeholders should consider through the international trade channel as well as the development channel in their respective quests to assist consumers in managing their financial wellbeing successfully. This should contribute towards reducing consumer financial vulnerability.

In the second phase, qualitative interviews in the form of four focus groups were conducted at neutral premises (the Unisa campus) with experts in the field of consumer income, consumer expenditure, consumer debt and consumer saving. These focus groups were used to probe for causes of consumer financial vulnerability identified in the first phase by exploring the views of key informants from the regulatory domains, policy makers and other stakeholders' views regarding the accuracy and relevance of the identified paths derived from the first phase of the study. The views of such experts were obtained to arrive at an intuitive understanding of consumer finances and possible causes of financial vulnerability. The results of both these phases are reported in chapter 5 prior to some concluding remarks provided in chapter 6.

To expand on the purpose of the research and address the research questions stated above, the research objectives of the various components of the study were as follows:

1.5.1 The literature review

In the literature review, the research objectives were to:

- identify and discuss the various theories that could assist in understanding the endogenous and exogenous factors resulting in consumers experiencing financial vulnerability (chapter 2);
- describe the factors or events that would influence consumer financial vulnerability through the international trade channel (section 3.2);
- portray the various development factors that would lead to differences in the level of consumer financial vulnerability (section 3.3); and
- discuss the financial attitudes that would result in differential levels of consumer financial vulnerability (section 3.4).

1.5.2 The quantitative strand

Cognisant of the theories and potential drivers identified in the literature review, the quantitative strand aimed to construct a causal chain[1] based on the empirically derived factors that are predictors of:

[1] In terms of research conducted by Spencer, Zanna and Fong 2005 and Belausteguigoitia 2004, causal chains consist of a variety of endogenous and exogenous predictor variables jointly constituting antecedents with respect to outcome criterion variables. Therefore, predictor variables jointly have a multiple causative impact on outcome variables.

- the overall financial vulnerability index as one of the four sub-indices of the overall consumer financial vulnerability index (section 5.2);
- the income vulnerability index as one of the four sub-indices of the overall consumer financial vulnerability index (section 5.3);
- the saving vulnerability index as one of the four sub-indices of the overall consumer financial vulnerability index (section 5.4);
- the expenditure vulnerability index as one of the four sub-indices of the overall consumer financial vulnerability index (section 5.5); and
- the debt servicing vulnerability index as one of the four sub-indices of the overall consumer financial vulnerability index (section 3.1.1.5).

1.5.3 The qualitative strand

In the qualitative strand, the causes of consumer financial vulnerability were identified based on information obtained during the four focus groups conducted for this study, by:

- confirming the possible predictors of the income vulnerability index as one of the four sub-indices of the overall consumer financial vulnerability index (section 5.3);
- defining the possible predictors of the saving vulnerability index as one of the four sub-indices of the overall consumer financial vulnerability index (section 5.4);
- identifying the possible predictors of the expenditure vulnerability index as one of the four sub-indices of the overall consumer financial vulnerability index (section 5.5); and
- describing the possible predictors of the debt servicing vulnerability index as one of the four sub-indices of the overall consumer financial vulnerability index (section 3.1.1.5).

1.6 ETHICAL CONSIDERATIONS

Ethical approval was obtained when the original fieldwork was conducted in 2009 by the Bureau of Market Research. Furthermore, FinMark Trust approved the use of the secondary data for the current study. At the time of the study, ethical approval was obtained in accordance with Unisa's research and ethics policies.

1.7 STRUCTURE OF THE STUDY

This thesis consists of two parts: first, a literature review setting out the theoretical framework for identifying possible predictors of consumer financial vulnerability (Chapters 2 and 3), and second, a presentation of the findings of the statistical analyses (Chapters 4 and 5).

Chapter 1: What is consumer financial vulnerability?

This chapter introduces the concept 'consumer financial vulnerability' and provides a brief review of previous research conducted to determine the predictors of consumer financial vulnerability. The aim of the research is stated and, based on the research objectives and the ontological assumptions relevant to the study, the mixed methods approach is described as the appropriate method.

Chapter 2: Theoretical lenses and financial accounts

This chapter describes the application of chain reasoning as a mechanism to construct a heuristic model for a consumer financial vulnerability causal path. Based on the chain reasoning, the international trade channel and the development channel are discussed. In the application of chain reasoning, a set of financial accounts of South African consumers based on the national accounts of South Africa formed the platform for further analysis to identify the possible predictors of consumer financial vulnerability. Such analyses are also provided in this chapter. Chapter 2 concludes with a brief discussion of the various consumption theories and behaviour finance theories that could shed some light on the more psychological attitudes and consumption patterns that could lead to consumers becoming financially vulnerable.

Chapter 3: Identification of factors that could influence consumer financial vulnerability

In support of the concrete process that expects direct relationships between several independent variables and consumer financial vulnerability based on the international trade channel as well as the development channel, this chapter consists of a detailed literature survey to identify the possible predictors of consumer financial vulnerability as well their possible influence on one another. The literature survey is, however, extended to provide more context information on the actual financial position of consumers in South Africa (based on the national accounts of South Africa) before concluding with some of the attitudinal beliefs and actions of consumers. Chapter 3 spans several ontological assumptions, beginning with an objective description of reality as a concrete process of expected relationships between several variables and consumer financial vulnerability before concluding with a subjective description of reality based on consumers' own perceptions.

Chapter 4: Research methodology and design

This chapter discusses the research methodology, incorporating the ontology and epistemology relevant to the study, as well as the relevance of mixed methods for this study. This is followed by a description of the design and implementation of the two strands (i.e. quantitative and qualitative) of the research method.

Chapter 5: Discovering the causal chain of consumer financial vulnerability

This chapter presents the results of the inferential analysis conducted by means of categorical regression analyses. The results of the categorical regression analysis of the predictive relationships between variables will be explained based on the causal chain structure. The causal chain structure will be supported by visual aids depicting the causal chains identified and the predictive relationships. These results are supported by the information obtained from the focus groups interviews.

Chapter 6: Conclusion and recommendations

This chapter provides a summary of the most pertinent results and policy implications as well as some areas for future research.

1.8 CONCLUDING REMARKS

This chapter has illustrated the need to understand the causes of consumer financial vulnerability in order to provide policy-makers and stakeholders, in particular the financial services sector, with information that might assist them in ensuring the financial wellbeing of South African consumers. The chapter has further identified the mixed methods approach as appropriate for this study, given that more than one worldview is required to grasp the complex phenomenon of consumer financial vulnerability. Chapter 2 embarks on a discussion of the linkages through which consumers function and transact in an economy by means of chain reasoning. The discussion is supported by a brief explanation of the national accounts of South Africa supported by financial statements of consumers, prior to concluding with a theoretical discussion of a variety of theories on consumption and behavioural finance that are relevant to the study.

CHAPTER 2

THEORETICAL LENSES AND FINANCIAL ACCOUNTS

2.1 INTRODUCTION

In chapter 1, a variety of factors were identified that may affect the financial vulnerability of consumers. It is clear that the prevalence of harmful events and/or conditions will cause consumers to become financially vulnerable. These events/conditions include, but are not limited to, the following: random and unpredictable events, economic shocks (international and domestic), uncertainty, volatility, disorder, and factors such as a lack of skills. Before the construction of the causal chain can be explored, chapter 2 provides the theoretical framework and financial information necessary to interpret the causal chain before the factors influencing consumer financial vulnerability are discussed in more detail in chapter 3. The theoretical framework and financial information are provided in the following manner:

- Linkages through which consumers function and transact in an economy by applying chain reasoning are provided in section 2.2.
- Based on the foundation of the chain reasoning, the necessary macroeconomic components to construct such a chain by means of the national accounts of South Africa are provided in section 2.3.
- The chain reasoning is extended by providing, in section 2.4, the financial statements reflecting the results of consumers' interactions in the macroeconomy with an extract from the national accounts of South Africa that presents the consumers' income statements, balance sheets and relevant financial ratios for the period in which the research was conducted.
- Some of the more pertinent income, consumption and saving theories are discussed in section 2.5 to provide more insight regarding the financial actions of consumers as reflected in their financial statements.
- Certain financial behaviour theories as a final component supporting the causal chain are explored in section 2.6.

Based on the heuristic model and financial accounts provided in this chapter, chapter 3 will expand on applying the chain reasoning to a variety of factors that could affect consumer financial vulnerability.

2.2 CHAIN REASONING

The linkages through which consumers function and transact are evident from the heuristic model provided in chapter 1. The linkages can be described by applying economic chain reasoning as proposed by Fourie and Burger (2010). In order to identify the causal chain of consumer financial vulnerability, it is necessary to determine the chain through which, for instance, international economic events affect both the domestic economy via the trade channel, and ultimately also consumer financial vulnerability. The extent to which the different economic variables in the chain will be influenced depends on various factors such as elasticities, multipliers, accelerators and marginal propensities. The international trade is but one channel through which economic chain reasoning can determine the effects of the causal chain of international economic events on consumers. For instance, international events can also affect consumers via the financial markets channel. In this thesis, the focus of the chain reasoning will not be so much on the macroeconomic chain, but rather on the consumer financial vulnerability chain that is denoted in red in brackets below. This type of chain reasoning will be applied throughout the thesis. The example below shows the chain (illustrated in figure 1.3 and described in detail in chapter 1) via the trade channel assuming the world economy enters a recessionary period:

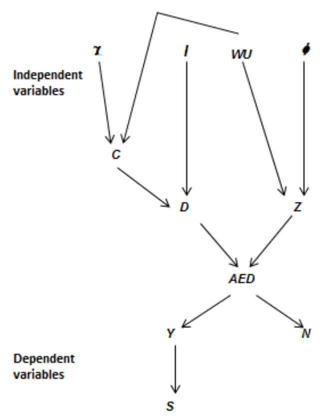
International economic production ↓; → international income ↓; → international spending ↓; → international imports ↓, which means that South African exports will decline; → South African inventories ↑, incentive to produce less; → if production ↓; → income earnings down which means that profits and remuneration decreases due to among others an increase in unemployment; (real consumer income experiences pressure to ↓; → consumers experience pressure to maintain their real expenditure commitments; → experience pressure to maintain their real saving; → experience pressure to maintain their real debt servicing; → if they can't, they default on servicing their debt) → demand for money ↓; → pressure on interest rates to ↓; → if interest rates ↓; → incentive to produce more; → incentive to invest more; → if investment ↑; → pressure on total spending to ↑; → if total expenditure ↑; → total production ↑; → incentive to employ more; → if employment increases; → consumer income ↑.

The logic of the chain reasoning is also evident from Keynes' General Theory (Keynes 2008), according to which income is the main determinant driving saving ability, namely if consumers' income stream is insufficient they will not be able to save. It is therefore important to understand what could result in income changes (based on wage units) including (un)employment. Having less money but still the same amount of liabilities could make consumers vulnerable. The same is true for those who become, or are already, unemployed. The various relationships between the components of the macroeconomic environment are illustrated in figure 2.1.

FIGURE 2.1

A CAUSAL MAP OF KEYNES' GENERAL THEORY MODEL EXCLUDING EMPLOYMENT

χ	Propensity to consume
I	Expected aggregate investment spending
WU	Wage unit
ϕ	Stable aggregate supply relationship
C	Level of nominal consumption expenditure
D	Nominal aggregate demand price
Z	Nominal aggregate supply price
AED	Nominal aggregate effective demand
Y	Nominal aggregate income
S	Nominal aggregate saving
N	Employment of labour units



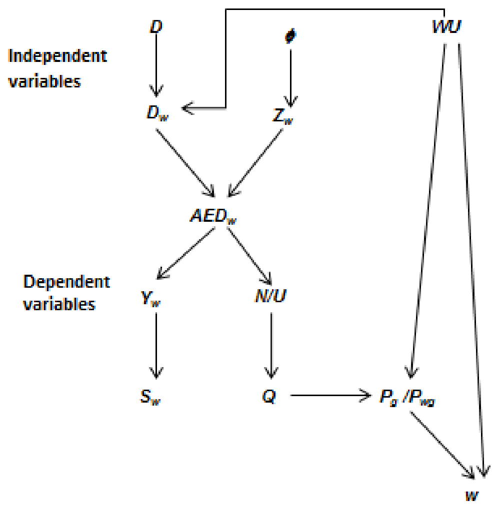
(Sheedan 2009)

As can be seen in figure 2.1, the independent variables in Keynes' model consist of the propensity to consume (χ), expected aggregate investment spending (*I*), the wage unit (*WU*) and the stable aggregate supply relationship (ϕ). The level of nominal consumption expenditure (*C*) is dependent on the propensity to consume (χ) combined with the wage unit (*WU*) at a given time. Nominal consumption and investment spending together determine the level of the aggregate demand price (*D*). On the other hand, the wage unit (*WU*) and the aggregate supply relationship (ϕ) define the nominal aggregate supply price (*Z*). The aggregate effective demand (*AED*) is determined at the level where aggregate demand price (*D*) and nominal aggregate supply price (*Z*) are equal. Based on the aggregate effective demand (*AED*), the three dependent variables, namely nominal aggregate income (*Y*), nominal aggregate saving (*S*) and employment of labour units (*N*) are calculated. From this description, the influence of the propensity to consume based on a certain wage is clear. Changes to any of the independent variables will have an effect on consumers' ability to save. As income is dependent on employment or entrepreneurial resources, the effect of employment in Keynes' General Theory model is illustrated in figure 2.2.

FIGURE 2.2

A CAUSAL MAP OF KEYNES' GENERAL THEORY MODEL INCLUDING EMPLOYMENT

D	Nominal aggregate demand price
WU	Wage-unit
ϕ	Stable aggregate supply relationship
D_w	Aggregate demand price measured in wage units
Z_w	Real aggregate supply price
AED_w	Real aggregate effective demand
Y_w	Aggregate real income
S_w	Real aggregate saving
N	Total employment of labour units
Q	Volume of total output
P_g	General price-levels
P_{wg}	Wage good price-levels
W	Wage rate per labour unit



(Sheedan 2009)

As illustrated in figure 2.2, the aggregate effective demand (*AED*) is determined at the level where aggregate demand price (*D*) and nominal aggregate supply price (*Z*) are equal. Although figure 2.2 is reported in nominal terms, the same is also true in real terms. The real aggregate demand price (D_w) is based on the levels of *D* and *WU.* Based on the equilibrium achieved among the variables a given level of output (*Q*) will be achieved. Based on this level of output (*Q*) product prices (P_g) and wage unit price-levels (P_{wg}) will be determined resulting in real wages per labour unit for workers. Changes in any of the independent variables could result in changes in the wages for employees and workers, namely a decrease in demand would result in lower levels of employment but could result in wage increases. Lower levels of employment would result in consumers feeling more vulnerable as they realise their income sources may be under threat, placing stress on their financial situations.

Turning to more recent developments, the relationship between real gross domestic product (GDP) growth and financial vulnerability (as illustrated above) is reflected in the Genworth studies conducted from 2007 to 2010 by the Personal Finance Research Centre in the United Kingdom (ECRI & PFRC 2008; PFRC 2009; PFRC 2010). The relationship between the lower annual real GDP growth rates and even contracting GDP, and the financial vulnerability scores of the various countries surveyed by the Personal Finance Research Centre is reflected in table 2.1. This combines the real GDP growth rates with the Genworth financial vulnerability index scores through colour coding. The real GDP growth rates are coloured red if the country registered a financially vulnerable score according to the Genworth research, while the real GDP growth rate is coloured green should a country have registered a financially secure index score.

TABLE 2.1

REAL GROWTH IN GDP (% CHANGE ON PREVIOUS YEAR)

	2002	2003	2004	2005	2006	2007	2008	2009	2010
Denmark	0.5	0.4	2.3	2.4	3.4	1.6	-1.1	-5.2	1.7
Finland	1.8	2.0	4.1	2.9	4.4	5.3	1.0	-8.2	3.6
France	0.9	0.9	2.5	1.8	2.5	2.3	-0.1	-2.7	1.5
Germany	0.0	-0.4	1.2	0.7	3.7	3.3	1.1	-5.1	3.7
Greece	3.4	5.9	4.4	2.3	5.2	4.3	1.0	-2.0	-4.5
Ireland	5.9	4.2	4.5	5.3	5.3	5.2	-3.0	-7.0	-0.4
Italy	0.5	0.0	1.5	0.7	2.0	1.5	-1.3	-5.2	1.3
Norway	1.5	1.0	3.9	2.7	2.3	2.7	0.7	-1.7	0.3
Poland	1.4	3.9	5.3	3.6	6.2	6.8	5.1	1.6	3.8
Portugal	0.7	-0.9	1.6	0.8	1.4	2.4	0.0	-2.5	1.3
Spain	2.7	3.1	3.3	3.6	4.0	3.6	0.9	-3.7	-0.1
Sweden	2.5	2.3	4.2	3.2	4.3	3.3	-0.6	-5.3	5.7
Turkey	6.6	4.9	9.4	8.4	6.9	4.7	0.4	-4.5	8.9
United Kingdom	2.1	2.8	3.0	2.2	2.8	2.7	-0.1	-4.9	1.4
United States	1.8	2.5	3.5	3.1	2.7	1.9	-0.3	-3.5	3.0

(Adapted from ECRI & PFRC 2008; Eurostat 2011; PFRC 2009; PFRC 2010)

According to the Genworth studies (ECRI & PFRC 2008; PFRC 2009; PFRC 2010), countries indicated as being relatively financially vulnerable since 2007 (France, Germany, Portugal and Spain) were all victims of a steep decline in the average GDP growth rate over the period 2008 to 2009. Although the annual real GDP growth rate for these countries increased from 2009 to 2010, consumers were still cautious regarding the sustainability of the positive real economic growth rates. Although the annual real GDP growth rate for Norway and Sweden declined over the period, the economic outlook for these countries was less dire compared to their European counterparts, as reflected in the Genworth score, thus remaining relatively financially secure for the duration of the survey period. This could be attributed to the low levels of unemployment and overall positive economic situations in these countries (ECRI & PFRC 2008; PFRC 2009; PFRC 2010).

Given the potential relationship between real GDP growth and consumer financial vulnerability, as illustrated via economic chain reasoning by Keynes and the Genworth studies, the international factors that could potentially influence real and nominal GDP growth in South Africa will be discussed in chapter 3. However, it is first necessary to understand the composition of GDP, as changes in its subcomponents will affect economic growth and thus its relationship with consumer financial vulnerability. The national accounts of South Africa, as compiled by the National Accounts Division of the Reserve Bank, provide for the compilation of accounts for each subcomponent of GDP, thereby making it possible, among other things, to determine the magnitudes of the said changes, as well as the trends in the subcomponents.

2.3 NATIONAL ACCOUNTS OF SOUTH AFRICA

The national accounts of South Africa allow for the calculation of GDP from the production, income and expenditure sides of the economy, using a myriad of smaller accounts. These smaller accounts are organised and summarised, which allows for the eventual culmination in three major accounts, namely the production, income and expenditure accounts of the economy. These three accounts are used to determine, among others, the strength or vulnerability of the economy as a whole and of each separate economic agent, including consumers.

To arrive at these three accounts, it is necessary to turn to basic economic equations. Economic theory dictates that in economies without deficits or surpluses, total production should be equal to total income, which should be equal to total expenditure. This can be expressed by way of the following equation/identity:

$$\boxed{\text{Total production} \equiv \text{Total income} \equiv \text{Total expenditure} \equiv \text{GDP}}$$

As is the case with total production and total income, total expenditure can be broken down into subcomponents (by economic agent) and can be written in the following format:

GDP ≡ Household consumption expenditure (C) + Investment expenditure (I) + Government expenditure (G_c) + (Exports (X) – Imports (M)) + residual. (Keynes, 2008).

For South Africa, the subcomponents of GDP as organised in the production, income and expenditure sides of the economy via the national accounts of South Africa (constructed by Statistics South Africa and the South African Reserve Bank) are reflected in table 2.2. Table 2.2 will form the basis of the majority of discussions that follow in this and other chapters in order to show the numeric impact of economic events on consumer financial vulnerability via the economic chain reasoning method. As this study was conducted in 2009, the focus will be on factors that could have influenced consumer financial vulnerability for the period 2008 to 2009; however, these factors could still be relevant today. Unless otherwise stated, the discussion will focus on the period 2008 to 2009 as reflected in table 2.2.

Table 2.2 also shows that economies seldom are in balance but either in a surplus or deficit situation as expenditure can exceed income and production and vice versa. In this context, it is clear that the national accounts of South Africa enable users not only to determine the value of the subcomponents of GDP, but by using the heuristic model the national accounts also allow analysis as to whether the economy is in a surplus/deficit position. On this basis, chapter 3 presents further analysis to determine how each subcomponent contributes to such a surplus/deficit position and the effect thereof on consumer financial vulnerability.

TABLE 2.2

NATIONAL INCOME AND PRODUCTION ACCOUNTS AT A GLANCE (2008 & 2009, R BILLION, CURRENT PRICES)

A) NATIONAL PRODUCTION, INCOME AND EXPENDITURE: $Y = C + I + G_c + (X - M)$

Account 1: Production	**2008**	**2009**
Primary sector	257.1	260.2
Secondary sector	458.7	478.6
Tertiary sector	1 311.9	1 439.5
Gross value added at basic prices	**2 027.7**	**2 178.3**

Account 2: Income	**2008**	**2009**
Compensation of employees	991.9	1 081.6
Net operating surplus	708.0	736.4
Consumption of fixed capital	302.1	332.3
Gross value added at factor cost	**2 002.0**	**2 150.3**
+ Other taxes on production	36.2	40.9
- Other subsidies on production	(10.5)	(13.0)
Gross value added at basic prices	**2 027.7**	**2 178.3**
+ Taxes on products	242.5	237.1
- Subsidies on products	(13.7)	(9.0)
GDP at market prices	**2 256.5**	**2 406.4**
Primary income from the rest of the world	48.2	4.1
- Primary income to the rest of the world	(122.1)	(87.6)
GNI @ market prices	**2 182.6**	**2 352.9**
Current transfers from the rest of the world	11.5	10.3
- Current transfers to the rest of the world	(30.4)	(32.8)
GNDI @ market prices	**2 163.7**	**2 330.4**

≡

Account 3: Expenditure	**2008**	**2009**
Final consumption expenditure by households	1 393.0	1 460.8
Final consumption expenditure by government	420.2	507.3
Gross fixed capital formation	520.7	518.8
Changes in inventories	(8.3)	(48.5)
Residual	(0.0)	(10.9)
Gross domestic expenditure (GDE)	**2 325.6**	**2 427.5**
+ Exports of goods and services	809.6	657.2
- Imports of goods and services	(878.7)	(678.3)
Expenditure on gross domestic product	**2 256.5**	**2 406.4**

B) SECTORAL BALANCE IDENTITIES

Account 4: Saving and Investment	**2008**		**2009**	
	Net	**Gross**	**Net**	**Gross**
Saving by households	(16.9)	24.0	(12.1)	33.7
Saving by the corporate sector	25.1	247.4	119.6	350.6
Total private saving	**8.2**	**271.4**	**107.5**	**384.3**
Saving by general government	40.1	80.0	(66.5)	(10.3)
Total saving	**48.3**	**351.4**	**41.0**	**374.0**
- Total capital formation	(210.1)	(512.4)	(138.0)	(470.3)
SAVING-INVESTMENT BALANCE	**(161.8)**	**(161.7)**	**(97.0)**	**(97.1)**

≡

Account 5: External account	**2008**	**2009**
Merchandise exports	655.8	503.7
Net gold exports	48.5	52.8
Service receipts	105.4	100.8
Income receipts	48.3	34.1
- Merchandise imports	(739.9)	(554.2)
- Payments for services	(138.9)	(124.2)
- Income payments	(122.1)	(87.6)
Net current transfers	(18.9)	(22.4)
CURRENT ACCOUNT	**(161.8)**	**(97.0)**
Capital transfer account	**0.2**	**0.2**
Direct investment	100.3	35.7
Portfolio investment	(134.9)	93.8
Other investment	130.7	(16.3)
FINANCIAL ACCOUNT	**96.1**	**113.2**
Unrecorded transactions	91.6	0.7
BALANCE OF PAYMENTS	**26.1**	**17.1**
Special capital flows	66.6	(41.3)
Change in gross reserves	**92.7**	**(24.2)**

TABLE 2.2 (continued)

NATIONAL INCOME AND PRODUCTION ACCOUNTS AT A GLANCE

C) SECTORAL PRODUCTION, DISTRIBUTION AND ACCUMULATION ACCOUNTS					
Account 9. Households	**2008**	**2009**	**Account 9. South Africa: Total domestic economy**	**2008**	**2009**
Gross value added	389.9	435.3	**Gross value added at basic prices**	**2 027.8**	**2 178.3**
			Taxes on production	242.4	237.1
			- Subsidies on production	(13.7)	(9.0)
			Gross domestic product at market prices	**2 256.5**	**2 406.4**
- Compensation of employees	(96.9)	(115.2)	- Compensation of employees	(991.9)	(1 081.6)
- Other taxes on production	(12.4)	(14.5)	- Taxes on production and imports	(278.6)	(278.0)
Other subsidies on production	1.4	2.4	Subsidies	24.2	22.0
Gross operating surplus	**282.0**	**308.0**	**Gross operating surplus / mixed income**	**1 010.2**	**1 068.8**
Compensation of employees	**989.1**	**1 079.3**	**Compensation of employees**	**989.1**	**1 079.3**
			Taxes on production and imports	278.6	278.0
			- Subsidies on products	(24.2)	(22.0)
Net property income	**220.9**	**188.6**	**Net property income**	**(71.1)**	**(51.2)**
Gross balance of primary income	**1 492.0**	**1 575.9**	**Gross national income**	**2 182.6**	**2 352.9**
Social benefits received	155.5	192.2			
Other current transfers received	106.2	127.8	Other current transfers received	30.1	37.1
- Current taxes on income and wealth	(181.2)	(210.7)			
- Social contributions paid	(173.4)	(164.0)			
- Other current transfers paid	(86.3)	(101.9)	- Other current transfers paid	(49.0)	(59.5)
Gross disposable income	**1 312.8**	**1 419.3**	**Gross disposable income**	**2 163.7**	**2 330.5**
- Final consumption expenditure	(1 393.0)	(1 460.7)	- Final consumption expenditure	(1 813.2)	1 968.1
+ Adjusted for change in net equity of households in pension reserves	102.9	69.9			
- Residual	(0.1)	2.6	- Residual	(0.0)	(10.8)
Gross saving	**22.6**	**31.1**	**Gross saving**	**350.6**	**373.2**
- Consumption of fixed capital	(39.5)	(43.2)	- Consumption of fixed capital	(302.1)	(332.3)
Net saving	**(16.9)**	**(12.1)**	**Net saving**	**48.4**	**40.9**

(Fourie & Burger 2010, SARB 2013)

Note that the figures in table 2.2 are in nominal terms (current prices), which in a separate exercise are converted into real terms (constant prices) using appropriate price deflators as developed by SARB and Stats SA. Real figures, where the impact of price increases (or decreases) have been removed, are normally used to determine percentage changes in volume terms, which in turn provide a better idea of trends. Included in table 2.3, an amended Account 3 is provided after deflating the nominal amounts into real terms using constant 2005 prices as the base year. For instance, although final consumption expenditure by households shows an increase in current prices from R1 393.0 billion in 2008 to R1 460.8 billion in 2009, such expenditure actually declined by 1.6% in constant price (real) terms. This shows that final consumption expenditure by households actually decreased in unit terms (fewer units were purchased) although their spending on such units increased (as a result of the prices of such units increasing between 2008 and 2009).

TABLE 2.3

ACCOUNT 3: TOTAL EXPENDITURE (2008 & 2009, R BILLION, CURRENT AND CONSTANT 2005 PRICES)

Account 3: Expenditure	**2008**		**2009**		**Constant**
	Current	Constant	Current	Constant	% change
Final consumption expenditure by households	1 393.0	1 157.7	1 460.8	1 139.6	-1.6
Final consumption expenditure by governments	420.2	348.9	507.3	365.7	4.8
Gross fixed capital formation	520.7	380.9	518.8	364.6	-4.3
Changes in inventories	(8.3)	(8.3)	(48.5)	(24.0)	
Residual	(0.0)	6.6	(10.9)	(10.6)	
Gross domestic expenditure (GDE)	**2 325.6**	**1 885.9**	**2 427.5**	**1 856.5**	**-1.6**
+ Exports of goods and services	809.6	501.2	657.2	403.3	-19.5
- Imports of goods and services	(878.7)	(572.5)	(678.3)	(472.9)	-17.4
Expenditure on gross domestic product	**2 256.5**	**1 814.6**	**2 406.4**	**1 786.9**	**-1.5**

(SARB 2013)

2.4 CONSUMERS' FINANCIAL STATEMENTS

As already mentioned, the national accounts of South Africa can be broken down into smaller accounts that enable an understanding of the drivers of consumer financial decisions and the dynamics concerning the financial management and accounting of a household that could result in a financially vulnerable situation. The result of these decisions could directly influence the financial vulnerability of a household as the decision-making process of the household does not occur in a vacuum of the present but is influenced by what occurred in the household's past and the household's expectations for the future (Bryant & Zick 2006). The financial microstructure dynamics of households in South Africa, namely the net wealth position (as the residual after income, expenditure, assets and liabilities were recorded) – as compiled applying the System of National Accounts (SNA) prescriptions (SNA 2008) – and the effect thereof on a household's financial vulnerability are summarised in figures 2.3 and 2.4. Figure 2.3 reports on the financial position of consumers having sufficient income to finance their level of consumption expenditure, service their debt commitments and to save. This translates into growth in the consumer's balance sheet with reducing debt levels and increasing savings levels. In contrast, figure 2.4 reflects on the situation where consumers' income is insufficient to service their debt commitments and maintain their consumption levels. This position forces consumers to dis-save or incur new debt to finance the deficit. Consumers who are faced with the situation as depicted in figure 2.4 will feel financially much more vulnerable compared to consumers reflected in figure 2.3.

FIGURE 2.3

SCENARIO 1: SUFFICIENT INCOME

PAST

BALANCE SHEET

	R
TOTAL ASSETS (A)	**xxx**
Other assets	**xx**
Saving (S)	**xx**
TOTAL LIABILITIES (L)	**xxx**
All liabilities	**xx**
NET WEALTH (N_w) ((A) – L))	**100 000**

PRESENT

INCOME STATEMENT

	R	% of salary
Labour income / saving income (I)	**100 000**	
Saving (S)	**(20 000)**	20%
Debt servicing (DS)	**(20 000)**	20%
Consumption (C)	**(60 000)**	60%
Surplus / (deficit)	**Nil**	

FUTURE

BALANCE SHEET

	R
TOTAL ASSETS (A)	**xxx**
Other assets	**xx**
Saving (S)	**20 000**
TOTAL LIABILITIES (L)	**xxx**
All liabilities	**xx**
Debt servicing (DS)	**(20 000)**
NET WEALTH(N_w) ((A) – L))	**140 000**

FIGURE 2.4

SCENARIO 2: INSUFFICIENT INCOME

PAST

BALANCE SHEET

	R
TOTAL ASSETS (A)	**xxx**
Other assets	**xx**
Saving (S)	**xx**
TOTAL LIABILITIES (L)	**xxx**
All liabilities	**xx**
NET WEALTH (N_w) ((A) – L))	**100 000**

PRESENT

INCOME STATEMENT

	R	% of salary
Labour income / saving income (I)	**50 000**	
Saving (S)	**0**	0%
Debt servicing (DS)	**(20 000)**	40%
Consumption (C)	**(60 000)**	120%
Surplus / (deficit)	**(30 000)**	
Dissaving (S)	**30 000**	
New debt	**30 000**	
Adjusted deficit	**Nil**	

FUTURE

BALANCE SHEET

	R
TOTAL ASSETS (A)	**xxx**
Other assets	**xx**
Saving (S)	**xx**
Saving (S)	**(30 000)**
TOTAL LIABILITIES (L)	**xxx**
All liabilities	**xx**
Debt servicing (DS)	**(20 000)**
New debt (DS)	**30 000**
NET WEALTH (N_w) ((A) – L))	**90 000**

(Source: Author's own compilation)

The deficit can be financed either by dissaving or new debt

The way in which the past affects a household's consumption is reflected in the net wealth position of the household as reported in a household balance sheet at a specific point in time. Debts incurred in the past need to be repaid with current income resources and / or other resources accumulated in the past with the aim to utilise them in the future, for example financial assets such as bank deposits or other non-financial assets, for example houses or other durable assets. For households that are not under income duress, their positive future consumption expectations are reflected in figure 2.3, Scenario 1. For illustration purposes, this household's annual labour income (I) amounted to R100 000. Due to the household's past consumption and future expectations, the household was in a net wealth (NW) situation of R100 000 at the end of the previous year (PAST). The net wealth (NW) is the surplus residual of the household calculated by reducing the value of the total assets (A) of the household by the value of the total liabilities (L) for the specific period in time, namely ((A) – (L)) = (NW). In the present year (PRESENT), the household earned a total gross income (GI) of R100 000 that originated either from labour income or saving income (I). This income of the household was utilised to save for FUTURE consumption, to repay debt commitments from the PAST, whilst the remainder of the disposable income was consumed by the household in the PRESENT time. The net result of this behaviour of the household was an increase of R40 000 in the net wealth (NW) of the household as the total asset value (A) of the household increased by R20 000 and the total liabilities (L) of the household decreased by R20 000, namely R100 000(NW_{PAST}) + R20 000 (A) – (R20 000) (L) = R140 000 (NW_{FUTURE}).

Households that are negatively affected by a slowdown in economic growth as described in the chain reasoning, namely becoming unemployed, having less income and struggling to maintain the pressure on their consumption, may be in an insecure financial position. Furthermore, the result of their past behaviour, and taking into account their current situation, could lead to the household becoming financially vulnerable. Should this situation continue, it could ultimately lead to the household becoming over-indebted and eventually insolvent. This situation is depicted in figure 2.4. In comparison to Scenario 1, this household's labour income (I) amounted to R50 000 per annum due to various reasons, for example retrenchment and ill-health, but due to past debt commitments, it was obliged to repay PAST consumption, was not able to save for FUTURE consumption and still had PRESENT consumption of R60 000 that had to be financed out of the PRESENT year's labour and / or saving income (I). The net result for the PRESENT time is that the household had a deficit of R30 000 for the PRESENT year and had to utilise sources from FUTURE consumption to finance the CURRENT year's consumption.

Funding of the CURRENT year's deficit can be made either by incurring new debt (DS) (should the household qualify) or by realising some of the household's assets (A) that were saved for FUTURE consumption. Whichever mechanism the household selects, the net result is a reduction in the net wealth (NW) position of the household by R10 000 namely (NW_{FUTURE}) = ((A) – (L)):

- Option 1 – the deficit of the PRESENT is funded by the realisation of assets: the PAST asset value (A) is reduced by R30 000 and the PAST liabilities are reduced with the compulsory repayment of R20 000 due in the PRESENT, thus reducing the NW_{FUTURE} from R100 000 to R90 000.
- Option 2 – the deficit of the PRESENT is funded by the incurrence of new debt: the PAST asset value (A) is not affected, the PAST liabilities are reduced with the compulsory repayment of R20 000 due in the PRESENT and new debt of R30 000 is incurred, thus reducing the NW_{FUTURE} from R100 000 to R90 000.

As illustrated in figures 2.3 and 2.4, income (I), saving and investments (A) (namely assets), debt (L) (namely liabilities), and consumption expenditure (C) influence the household's net wealth (NW) position and thus could have an impact on its level of financial vulnerability. To reflect consumers' interaction in the macroeconomy, Account 9 of the National Income and Production Account (table 2.2) is expanded in table 2.4 to provide households' income statements for 2007 to 2009 based on the prescriptions of the SNA.

TABLE 2.4

HOUSEHOLDS' INCOME STATEMENTS FOR THE PERIOD 2007 TO 2009 (CURRENT PRICES)

INCOME STATEMENT 31 December	2007 R millions	2008 R millions	2009 R millions
Gross operating surplus/mixed income	253 036	282 017	308 003
Compensation of employees	879 714	989 102	1 079 310
Net property income received	212 594	220 866	188 571
GROSS BALANCE OF PRIMARY INCOME	**1 345 344**	**1 491 985**	**1 575 884**
Social benefits received	134 221	155 451	192 221
Other current transfers			
Non-life insurance claims	69 656	81 135	95 002
Miscellaneous current transfers	21 492	25 045	32 821
Total income	**1 570 713**	**1 753 616**	**1 895 928**
Less:	**(363 528)**	**(440 858)**	**(476 604)**
Income tax	(153 025)	(181 210)	(210 703)
Social contributions paid	(137 709)	(173 385)	(163 992)
Other current transfers paid			
Net non-life insurance premiums	(69 656)	(81 135)	(95 002)
Miscellaneous current transfers	(3 138)	(5 128)	(6 907)
GROSS DISPOSABLE INCOME (GDI)	**1 207 185**	**1 312 758**	**1 419 324**
Adjustment for change in net equity of households in pension reserves	75 087	102 851	69 941
Less: Residual	-383	4	-2 609
Total available households' resources	**1 282 655**	**1 415 605**	**1 491 874**
Less:			
FINAL CONSUMPTION EXPENDITURE	**(1 264 726)**	**(1 392 983)**	**(1 460 746)**
Durable goods	122 363	114 108	101 870
Semi-durable goods	119 002	130 114	134 714
Non-durable goods	484 685	559 644	596 996
Services	538 676	589 117	627 166
GROSS SAVING	**17 929**	**22 622**	**31 128**
Less: CONSUMPTION OF FIXED CAPITAL	**(32 784)**	**(39 525)**	**(43 280)**
NET SAVING	**(14 855)**	**(16 903)**	**(12 152)**
GROSS SAVING	**17 929**	**22 622**	**31 128**
Capital transfers, receivable	9 753	13 744	11 532
Capital transfers, payable	(61)	(74)	(77)
Less: Changes in assets	60 246	59 913	57 136
Gross fixed capital formation	58 725	62 479	59 446
Change in inventories	1 521	(2 566)	(2 310)
NET LENDING (+)/BORROWING (-)	**(32 625)**	**(23 621)**	**(14 553)**

(Adapted from SARB 2013)

In addition, following the prescriptions of the SNA, the National Accounts Department of the South African Reserve Bank compiles annual household balance sheets that are provided in table 2.5. Given the actual performance of the international and domestic economies between 2007 and 2009, the income received and consumption incurred by households translated to the net wealth position of households as reported in table 2.5.

TABLE 2.5

BALANCE SHEET OF THE HOUSEHOLD SECTOR: 2007 TO 2009

	2007	**2008**	**2009**
Non-financial assets	2 100	2 187	2 314
Residential buildings	1 449	1 495	1 601
Other tangible assets	276	294	310
Durable goods	375	398	403
Financial assets	3 859	3 623	4 087
Assets with monetary institutions	463	546	563
Interest in pension funds and long-term insurers	1 969	1 927	2 126
Other financial assets	1 427	1 151	1 399
TOTAL ASSETS (A)	**5 959**	**5 810**	**6 401**
TOTAL HOUSEHOLD LIABILITIES (L)	**1 071**	**1 157**	**1 189**
Mortgage advances	658	731	752
Other debt	413	426	437
NET WEALTH (NW) = ((A) – (L))	**4 888**	**4 653**	**5 212**

(Adapted from SARB 2012)

Finally, several financial ratios can be calculated to assist in gauging the state of consumer finances, indicating possible areas that could result in households being financially vulnerable. The following financial ratios could assist in this regard and are calculated in section 3.2.6 of chapter 3:

- The **liquidity ratio** that determines a household's ability to satisfy its financial obligations in the short term is calculated by the **current asset ratio** that indicates the ability of the household to meet its current obligations from current assets.

$$\text{Current asset ratio} = \frac{\text{Current assets}}{\text{Current liabilities}}$$

- **Solvency ratios** determine the ability of the household, even when there is no income and the household needs to sell assets, to settle all its debts. If the household's assets exceed its debt, the household is solvent. These ratios include:

    - The **debt / net wealth ratio** that indicates the relationship between debt and net wealth in the composition of the household balance sheet.

$$\text{Debt / Net wealth ratio} = \frac{\text{Total debt}}{\text{Total net wealth}}$$

    - The **debt / asset ratio** that measures the extent to which the household's total assets are financed by debt.

$$\text{Debt / Asset ratio} = \frac{\text{Total debt}}{\text{Total assets}}$$

    - The **solvency ratio** that indicates the ability of the household to meet its obligations, should the household go into liquidation.

$$\text{Solvency ratio} = \frac{\text{Total assets}}{\text{Total debt}}$$

- Additional ratios of selected data from the national accounts of South Africa at current prices that provide some further insight into the health of consumer finances from a macroeconomic perspective:

    - Final consumption expenditure by households to GDP as South Africa is a consumption-driven economy (SARB 2012), and this ratio provides some insight into the appetite for consumption by households.

$$\text{Final consumption expenditure by households to GDP} = \frac{\text{Household consumption expenditure}}{\text{GDP}}$$

    - Net saving by households to disposable income of households indicate to which extent income levels of households compare to their saving levels.

$$\text{Net saving by households to disposable income of households} = \frac{\text{Net saving by households}}{\text{Household disposable income}}$$

- o Household debt to disposable income of households indicates to which extent households' income levels compare to their debt levels.

$$\text{Household debt to disposable income of households} = \frac{\text{Household debt}}{\text{Household disposable income}}$$

- o Household net wealth to disposable income of households indicates to which extent households' income levels compare to their net wealth.

$$\text{Household net wealth to disposable income of households} = \frac{\text{Household net wealth}}{\text{Household disposable income}}$$

- o Debt-service cost to disposable income of households indicates which percentage of household income is used for servicing their debt.

$$\text{Debt-service cost to disposable income of households} = \frac{\text{Debt-service cost}}{\text{Household disposable income}}$$

- o Total household debt to final consumption expenditure gives an indication of the relationship between household consumption and household debt.

$$\text{Total household debt to final consumption expenditure} = \frac{\text{Household debt}}{\text{Final consumption expenditure}}$$

2.5 CONSUMPTION THEORIES

The interaction of consumers in the economy has resulted in the formulation of numerous theories by researchers in a variety of disciplines attempting to understand and explain the reasons behind consumers' actions.

From the discussions regarding the various consumption theories, the relationship between income, consumption expenditure, saving and debt and the influence thereof on consumer financial vulnerability will become evident. As to the linear relationship depicted between international growth and consumer income as illustrated through the chain reasoning described earlier, the relationship regarding the sub-components of the consumers' financial statements can also be explored through application of the various consumption theories. It will become clear from the following discussions that where consumers' income streams are under pressure (namely economic growth is depressed) resulting in unemployment, or where consumers do not have the necessary skills to participate in the market to enable them to reduce the pressure on their consumption, higher levels of consumer financial vulnerability will be experienced. To sustain the pressure, the permanent income and life-cycle hypotheses state that consumers access debt or dis-save to ensure that their consumption patterns are supported in times when they experience low levels of income. Should this continue for a long time, it could ultimately result in consumers' over-indebtedness. During this period, consumers could experience high levels of financial vulnerability as they struggle to relieve the financial stress.

However, the pressure on consumption could also result from consumers spending on the wrong items – as described by the conspicuous consumption (Veblem 1994) as well as relative income (Duesenberry 1949) theories. Consumers' decisions about the selected consumption items may not necessarily be due to need but rather to wants, thereby falling victim to their own actions. These actions are also described by some of the behavioural finance theories (section 2.6) that firstly report on the loss aversion nature of consumers, resulting in high levels of consumer financial vulnerability as consumers internalise their potential, for example losing their jobs during an economic slowdown although they have not actually lost their jobs.

Furthermore, it is also important to take note of the decisions based on consumers' perceptions that their financial wellbeing and substance are reflected in what they have or own and not in what they are. This behaviour also translates into consumers' spending on items they do not necessarily need and even incurring debt to finance these unnecessary items. This behaviour could result in consumers being unable to sustain the pressure on their minimum consumption items, such as food, clothing and transport and could lead to higher levels of financial vulnerability (Fromm 1976).

The literature review in the following section will include a brief survey of some of the more pertinent consumption theories in the field of macroeconomics and consumer finance. Some of the theories relevant to consumer psychology will be discussed in section 2.6 in relation to consumers' financial behaviour and attitudes and the potential influence on consumer financial vulnerability. Consumers' financial behaviour can be ascribed to an interaction of a variety of attitudes, and the potential reasons for financial vulnerability are located at the convergence of these attitudes.

The financial vulnerability/security of consumers has been on the minds of influential philosophers and economists for many centuries. Indeed, Adam Smith, deemed the father of modern economics by especially neoclassical economists, coined the metaphor of an 'invisible hand' which was to improve the outcome for consumers. In his famous *An Inquiry into the Nature and Causes of the Wealth of Nations* (2003), Smith argued that each individual will, by employing his/her capital and/or labour, strive towards maximising his/her own security and by doing so, it will increase the revenue of society.

According to Smith (2003), the pursuance of self-interest by each individual is the mechanism that can earn a decent living for society: "It is not from the benevolence of the butcher, the brewer, or the baker, that we can expect our dinner, but from their regard to their own interest." Put differently, one benefits oneself from one's own labour; unknowingly, one also benefits society, because to earn income on labour or capital, one must produce something others value (Smith 2003).

However, Smith (2003) was aware of the probable conundrum such activity of pursuing only self-interest could cause: the resultant greed could very well lead to merchants pricing their goods very high – which would make it very difficult for the ordinary consumer to both afford such prices and make a decent living. The solution, according to Smith (2003), was competition. In an environment of healthy competition, retailers who inflated their prices would lose their customers to competitors who maintained their prices at affordable levels. Competition would therefore act as a force to reduce the financial vulnerability of consumers because of access to more affordable prices (Smith 2003).

Smith (2003) also argued against central planning and advocated a free market. He maintained that two opposing forces, namely pursuance of self-interest and competition, offered sufficient regulation to create stability in the market place. This was Smith's 'invisible hand' – a free market where self-interest and competition would render order.

Although not stated specifically by Smith (2003), it can be deduced that he also had the financial vulnerability of consumers in mind when coining the 'invisible hand' theory. In Smith's lifetime, the reigning king favoured aristocrats and taxed the common consumer. Smith (2003) believed that the 'invisible hand' of a free market regulated by competitive forces would be a better outcome for consumers. By pursuing their self-interest they would be able to become financially secure, and competition in the market place would prevent exorbitant pricing, thereby protecting consumers from becoming financially vulnerable.

This thesis is not about arguing the merits of Smith's (2003) reasoning, but rather shows that the financial vulnerability/security of consumers is a centuries-old phenomenon that has been debated widely among philosophers and economists.

Smith (2003), however, also touched on another subject closely related to consumer financial vulnerability, namely the ability of skilled labourers to earn more than unskilled labourers. He proposed that wage rates should be higher for occupations requiring a high skills level as individuals would not be willing to learn these skills if they were not compensated with a higher wage. This thought gave rise to the modern term of 'human capital'.

Smith (2003), however, also argued that wages should be higher for those occupations delivered in dirty or unsafe environments, such as coal mining, butchering and ... the hangman. It all boils down to differences in work being mirrored by differences in pay. This proposition of Smith is known as the theory of compensating wage differentials and it suggests that consumers with skills in high demand should be able to earn comparatively higher incomes that could ensure their financial security. The opposite also holds true then – consumers with skills not in demand could mostly earn a low income, thereby rendering such persons prone to financial vulnerability.

Several other economists such as Keynes (2008), Duesenberry (1949), Friedman (1957), Ando and Modigliani (1963) and Veblen (1994) and psychologists such as Fromm (1976) and Kahneman and Tversky (1979) also studied consumer behaviour over time, resulting in numerous theories explaining the relationship between income, consumption, debt and saving, as well as possible reasons behind consumers' actions. Although these theories do not specifically mention consumer financial vulnerability, they all propose how such vulnerability could be affected via different types of consumer behaviour.

In this respect the 'absolute income hypothesis' as developed by Keynes in 1936 as a theory of consumption will be discussed in section 2.5.1, incorporating the 'marginal propensity to consume'. In addition, Keynes' (2008) eight motives why people save will also be reviewed as the marginal propensity to save is the opposite of the marginal propensity to consume.

In contrast to the absolute income hypothesis, Ando and Modigliani (1963) developed the life cycle hypothesis, which is discussed in section 2.5.2. According to this hypothesis, individuals consume a constant percentage of the present value of their life income, whereas the absolute income hypothesis assumes that consumption is based entirely on current income (Bryant & Zick 2006). This is the major difference between the two hypotheses. Furthermore, according to the life cycle hypothesis households plan their consumption over the expected pattern they believe they will be earning their income over their lifetime. Younger people with lower incomes will finance their consumption levels with debt in the expectation that they will be able to service the debt later in life when their income levels have increased. Saving will also only happen at a later stage in life when their income levels have increased significantly. Saving and wealth creation will need to take place in order to finance the gap later in life at retirement age again when income is decreasing but consumption is still high. Consumption is thus dependent on both income and assets. In terms of the life-cycle hypothesis, consumption is therefore smoothed out over the life cycle (Fourie & Burger 2010).

The third theory relating to consumption, income and saving that will be discussed in section 2.5.2 is Friedman's (1957) permanent income hypotheses. Unlike Keynes, Friedman believed that consumption expenditure depended on the level of 'normal' income that the household expected to earn in future and was not a function of a household's current income levels, as people were more concerned about their long-term consumption than about their current income.

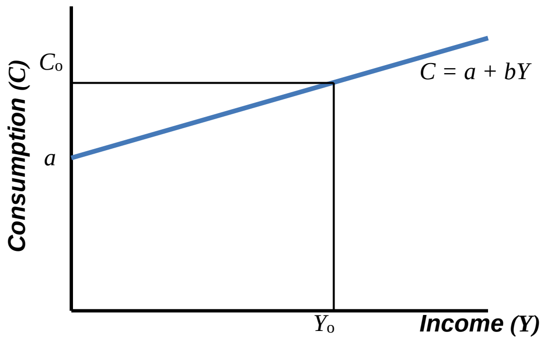
Finally, Veblen's theory (1994) regarding conspicuous consumption is discussed briefly in section 2.5.3 before concluding with Duesenberry's (1949) relative income theory in section 2.5.4. Both these theories strive to provide some insight into possible consumption behaviour of consumers that the authors believe were not addressed by previous theories.

2.5.1 **Absolute income hypothesis**

Keynes (2008) referred to the relationship between income and consumption as the consumption function (C = a + bY), where there is a positive relationship between real consumption and real income, namely as income (Y) increases, an increase in consumption (C) is induced. The opposite is also true. Should income (Y) decrease, consumption (C) decreases as well (see figure 2.5). Keynes (2008) proposed that there is a direct relationship between absolute income and consumption (Fourie & Burger 2010; Keynes 2008).

FIGURE 2.5

KEYNESIAN CONSUMPTION FUNCTION



(Fourie & Burger 2010)

According to Keynes (2008), the basis of the relationship between consumption and disposable income is referred to as the marginal propensity to consume. The marginal propensity to consume represents the proportion of an aggregate raise in salaries and wages that is spent on the consumption of goods and services, as opposed to being saved (Keynes 2008). The marginal propensity to consume would differ per income level as illustrated in table 2.6:

TABLE 2.6

MARGINAL PROPENSITY TO CONSUME

	High income	Low income
Current monthly disposable income	100 000	5 000
Receive a 10% bonus	10 000	500
Decide to spend the bonus as follows:	10 000	500
- Clothing	5 000	-
- Saving	1 000	-
- Food	4 000	500
Marginal propensity to consume		
Consumption/aggregate raise	9 000/10 000	500/500
Marginal propensity to consume	0.9	1

Behavioural studies such as those of Engel, Blackwell and Miniard (1995) suggest that lower-income groups tend to spend most of their additional income on basic necessities and they will not immediately be in a position to save, as reflected in table 2.6. For the lower-income group, the additional R500 was spent on necessities such as food with no surplus funds available for saving; thus, their marginal propensity to consume is higher (namely 1) compared to the higher-income group who spent less and were able to save (0.9). As a result of the bonus, the lower-income group might therefore feel less vulnerable in terms of income and expenditure, but not so in terms of saving and debt servicing.

Keynes (2008) also identified six principal objectives that influence the propensity to consume and, as explained above, should affect consumer financial vulnerability:

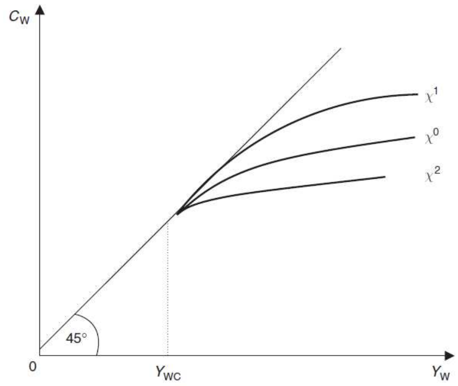
- A change in the wage unit: real income will fluctuate based on the amount of income measured in wage units; thus, expenditure on consumption (given a specific employment level) will change proportionally to the change in income. As illustrated in table 2.6 the marginal propensity to consume will also differ among income groups.
- A change in the difference between income and net income: changes in the propensity to consume will depend on net income rather than on income, as net income is normally the amount available to consume that is the ‘take - home pay’ whereas ‘income’ is not such a clear concept.

- Windfall changes in capital-values not allowed for in calculating net income: the consumption of the wealth-owning class can be influenced by the consumption of money value of wealth over the short term. Realised gains that are not part of the normal income could be consumed as items not normally part of the household's consumption expenditure.
- Changes in the rate of time-discounting (namely the ratio of exchange between present goods and future goods): by taking the time-value of money into account the marginal propensity to consume may also differ over time. Future changes in the purchasing power of money, future risks, such as the prospect of death, would also influence consumption. The influence of changes of interest rates should also be taken into account; however, the changes may not lead to a short term change in propensity to consume. For example, if interest rates decrease from 5% to 4% but income levels remain the same, people will not necessarily change their way of living.
- Changes in fiscal policy: the future expectations regarding rate of return will largely influence individuals' appetite to save. Should taxes negatively affect these future benefits, it might influence the individual to consume more and save less. In addition, fiscal policy used as a deliberate instrument for more equal distribution of income may also result in an increase in the propensity to consume.
- Changes in expectations of the relation between the present and the future level of income: on an individual (or household) level but not necessarily in society as a whole, changes in expectations of present and future income levels will influence the marginal propensity to consume (Keynes 2008).

Changes in these influences would also have an effect on the propensity to consume, as illustrated in figure 2.6.

FIGURE 2.6

THE INITIAL AND AFFECTED PROPENSITY TO CONSUME



(Sheedan 2009)

Figure 2.6 shows the results of the objective motivations to save on consumption function χ^0. An increase in the motivation to spend (or to save less) will result in the consumption function moving to χ^1. A decrease in the motivation to spend (or to save more) will result in the consumption function moving to χ^2. Keynes believed that these changes would only occur over long periods of time (Sheedan 2009).

In addition to the objective motives that would affect the amount of consumption given a certain income level, Keynes (2008) identified eight main motives of a subjective character that would lead individuals to refrain from spending out of their incomes and as such would influence consumer financial vulnerability. The motives are reproduced below with one addition by Browning and Lusardi (1996):

- to build up a reserve against unforeseen contingencies (*the precautionary motive*);
- to provide for an anticipated future relationship between the income and the needs of the individual or his/her family, which is different from that which exists in the present, as for example, in relation to old age, family education, or the maintenance of dependants (*the foresight life-cycle motive*);
- to enjoy interest and appreciation, mainly because a larger real consumption at a later date is preferred to a smaller immediate consumption (*the intertemporal substitution motive*);
- to enjoy a gradually increasing consumption, since this gratifies a common instinct to look forward to a gradually improving standard of life rather than the

contrary, even though the capacity for enjoyment may be diminishing (*the improvement motive*);

- to enjoy a sense of independence and the power to do things, though without a clear idea or definite intention of specific action (*the independence motive*);
- to secure a *masse de manoeuvre* to carry out speculative or business projects (*the enterprise motive*);
- to bequeath a fortune (*the bequest motive*);
- to satisfy pure miserliness, namely unreasonable but insistent inhibitions against acts of expenditure as such (*the avarice motive*); and
- to accumulate deposits to buy houses, cars and other durables (*the down payment motive*) (Browning & Lusardi 1996; Keynes 2008).

2.5.2 **Permanent income and the life-cycle hypothesis**

Several alternatives to the absolute income hypothesis were formulated over time, including the permanent income hypothesis by Friedman (1957) and the life-cycle hypothesis by Ando and Modigliani (1963). Originally the two hypotheses were deemed to be different, but over time more and more similarities have become evident. The most notable difference from Keynes' absolute income hypothesis is the fact that according to Ando and Modigliani (1963) income is measured by total resources rather than only current income, as done by Keynes (Bryant & Zick 2006). According to Friedman's (1957) permanent income hypothesis, a household would consider its 'normal' income as the permanent income it expects to earn with a certain degree of certainty and is distinguished from unexpected volatile income. The household then manages its consumption in times when actual income decreases to below the 'normal' level by substituting the shortfall with new debt or realisation of past savings. In situations where the actual income exceeds 'normal' or permanent income levels, households will postpone their consumption to stabilise their consumption at normal levels and will save the excess income for future use (Fourie & Burger 2010). The utilisation of other sources is also evident from figure 2.4, which shows that households rely on past savings or debt to maintain their consumption levels.

Based on the permanent income and life-cycle hypotheses, the long-term expectations of households regarding their financial situation are evident. Households not only expect a stream of income in future (often funded by past savings) but also expect this income stream to vary over their expected lifetime

(Bryant & Zick 2006). As people start working, they expect to earn a lower income for the interim but have realistic expectations that the income level will increase over time due to education and enhanced skills levels. Additional income sources may also become available over time, should investments be made in income-generating activities. On the other hand, retrenchments or unemployment are two situations that could occur, resulting in fluctuating income streams.

Although households expect their income levels to fluctuate over time, less fluctuation is expected regarding the level of consumption, as basic essentials still need to be addressed (for example food, clothes, housing) regardless of the income earned. This results in consumers re-arranging their income from periods of high income to periods of lower income to address these needs. This re-arrangement is funded by either debt in periods of low income or savings in periods of high income with surplus funds (Bryant & Zick 2006).

According to Bryant and Zick (2006), both the permanent income and life-cycle hypotheses formulate the reason for saving and borrowing to balance out the variations in a person's income stream over time to make the income stream match a relatively constant demand for goods and services through time.

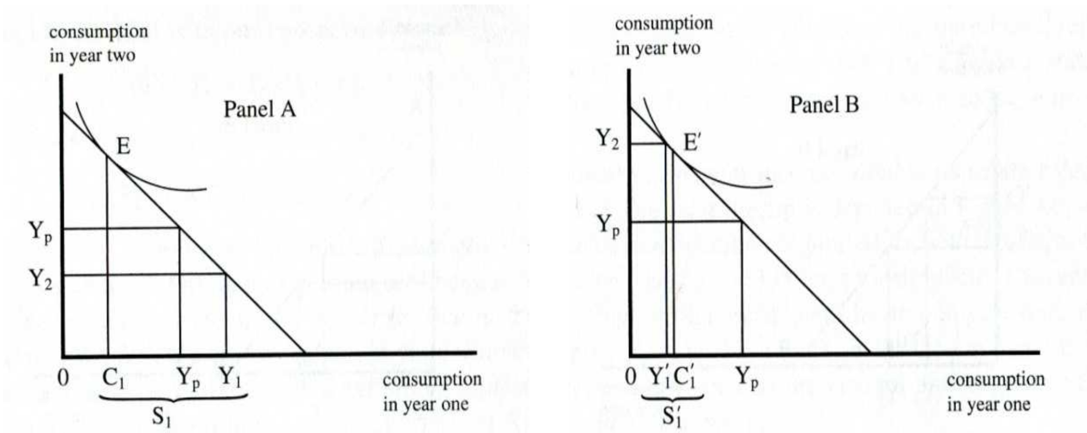
It is important to note that households with different income streams will have different consumption streams, but regardless of income, all households will aspire to have constant consumption streams over their lifetime.

In figure 2.4, total household resources are reflected as the present value of the family's net assets plus current income plus future expected income (thus a stock of wealth). In terms of the permanent income consumption function, income should rather be seen as an annual flow of income (referred to as permanent income) (Bryant & Zick 2006). Permanent income is defined as the constant annual income (at present value) that is equal to household wealth in terms of Modigliani's 'life-cycle income' hypothesis (Bryant & Zick 2006). This differs slightly from Friedman's (1957) 'permanent income', which defines permanent income as the constant annual income the family's net worth would yield if invested at the market rate of interest in perpetuity, implying a bequest by the family to the heirs (Bryant & Zick 2006).

The application of the hypotheses can best be illustrated by means of figure 2.7 and further explained by an example. The example will clearly indicate the difference between permanent income (Y_p) and current income (Y_1), where the difference is called the 'transitory income' (Y_t) and the influence on saving (or net-saving) of the consumers (Bryant & Zick 2006).

FIGURE 2.7

PERMANENT AND TRANSITORY SAVING



(Bryant & Zick 2006)

For the example in table 2.7 below (based on figure 2.7), the following assumptions are made:

- consumers are not planning to leave any bequests to their beneficiaries;
- net assets are assumed to be R0;
- the price per unit (p_c) = R1/unit for simplicity;
- in panel A, current income in year one (Y_1) is higher than permanent income (Y_p) in year one;
- in panel B, current income in year one (Y_1) is lower than permanent income (Y_p) in year one;
- time pattern of income differs from panel A to B: current income (Y_1) is higher than future income (Y_2) in panel A and future income (Y_2) is higher than current income (Y_1) in panel B;
- consumers have a fixed budget; and
- the only other difference between the two panels is the lifetime patterns of income; thus, total resources, prices and interest rates are the same.

TABLE 2.7

AN EXAMPLE OF PERMANENT AND TRANSITORY SAVING

	Panel A	**Panel B**
Current income (Y_1)	100 000	30 000
Permanent income (Y_p)	80 000	80 000
Transitory income (Y_t)	20 000	(50 000)
Future income (Y_2)	70 000	75 000
Consumption (C_1)	40 000	40 000
Saving (S_1) = $Y_1 - C_1$	60 000	(10 000)
Saving as a fraction of Y_p		
Total saving:		
$S_1 = (Y_1 - Y_p) + (Y_p - C_1)$	60 000	(10 000)

Both calculations arrive at the same answer, thus savings consist of two components, i.e.: saving from permanent income (S_p) + saving from transitory income (S_t)

thus, $S_1 = S_p + S_t$

(Constructed from Bryant & Zick 2006)

Although the consumption levels as illustrated in table 2.7 are the same in both panels, the original saving levels differ due to the difference in current and expected future income. Facing high current levels of income and lower future income, the consumer in Panel A saves Y_1(R100 000) – C_1(R40 000) = S_1(R60 000). In contrast, the consumer in Panel B has lower current income but higher expected future income, and therefore has to borrow in the current period to finance the level of consumption. In Panel B, the consumer thus borrows Y_1(R30 000) – C_1(R40 000) = S_1(R10 000). In Panel A, the consumer has a positive saving of R60 000 compared to negative saving (or borrowing) of R10 000 in Panel B (Bryant & Zick 2006).

According to Bryant and Zick (2006), it is however also necessary to further determine the fraction of permanent income that is saved and how much of the transitory income is saved. In Panel A, total saving amounts to:

$$
\begin{aligned}
S_1 &= (Y_1 - Y_p) + (Y_p - C_1) \\
&= (\text{R}100\ 000 - \text{R}80\ 000) + (\text{R}80\ 000 - \text{R}40\ 000) \\
&= \text{R}20\ 000 + \text{R}40\ 000 \\
&= \text{R}60\ 000 \text{ (which amounts to } Y_1 - C_1\text{)}
\end{aligned}
$$

All the transitory income (Y_t) (R20 000) and some of the permanent income ($Y_p - C_1$) (R80 000 – R40 000) is saved.

In Panel B, total saving amounts to:

$$S_1 = (Y_1 - Y_p) + (Y_p - C_1)$$
$$= (R30\ 000 - R80\ 000) + (R80\ 000 - R40\ 000)$$
$$= (R50\ 000) + R40\ 000$$
$$= (R10\ 000) \text{ (which amounts to } Y_1 - C_1\text{)}$$

In Panels A and B the same amount of the permanent income (R80 000 – R40 000 = R40 000) is saved and all the transitory income is saved or borrowed. From this it can be deduced that regardless of the time pattern of income, given the same total resources, prices and interest rates, consumers will consume the same fraction of permanent income and save the same fraction of permanent income as well as all the transitory income (whether positive saving or borrowing).

Consumers readily expect that their income streams will accrue in future periods, making them eligible to obtain credit in the current period, should their current income stream be less than their consumption expenditure. Alternatively, consumers also expect to finance current levels of consumption expenditure with net assets saved in previous periods. The permanent or life-cycle income hypothesis therefore postulates the following:

- In the absence of changes in prices and interest rates, consumers consume a constant fraction of their permanent income.
- Given that consumption is a constant fraction of permanent income, permanent savings also comprise a constant fraction of permanent income.
- All transitory income is saved (Bryant & Zick 2006).

In terms of the permanent income and life-stages hypotheses, consumers save a portion of their permanent income (transitory) over their lifetime to finance their consumption in times when income is low but consumption remains the same (Bryant & Zick 2006). However, these hypotheses have been criticised for not taking into account that consumption is more tightly related to income as peoples' spending increases when they have children and this normally occurs in periods in which they have higher income. After the children have left home, consumption should decrease. However, it is believed that these hypotheses explain the financing of saving more clearly than the absolute income hypothesis (Bryant & Zick 2006).

2.5.3 Conspicuous consumption

Another theory formulated to explain consumer behaviour was the microeconomic theory of conspicuous consumption developed by Veblen (1994). Veblen stipulated that consumption patterns are based on a consumer's wish to portray his or her wealth through the acquisition of luxury items and spending on expensive services as well as extensive leisure activities. Veblen (1994) held that people's consumption patterns were largely influenced by the way in which society evaluates them, thus laying the foundation for their perceived status in society. In this regard, inherited wealth resulted in people being placed higher in the social hierarchy than with wealth created by a new generation. The more the wealth was consumed and appeared to be never-ending, the higher the status of the consumer (Trigg 2001; Veblen 1994). This theory could result in consumers spending on items that they in fact cannot afford and are not saving, thereby making them financially vulnerable when the source of income is no longer guaranteed and no savings are in place to support future consumption.

2.5.4 Relative income theory

Similar to Veblen's (1994) conspicuous consumption theory, Duesenberry (1949) formulated a consumption theory which differs from the theories by Keynes (2008), Ando and Modigliani (1963) and Friedman (1957) by focusing on the human side of the consumer. Duesenberry argued that consumption is not based on Keynes' absolute level of income, but rather on the income of the household relative to that of friends or neighbours, or relative to higher levels of their own income at an earlier stage. According to Duesenberry's relative income theory, households are reluctant to scale down or are not able to scale down their consumption if income decreases after a period of higher levels of consumption (Fourie & Burger 2010). Once again, logic does not necessarily prevail when consumers decide what to spend their limited resources on and 'keeping up with the Joneses' could result in consumers not making the best decisions regarding their financial situations, which could ultimately place the household's financial situation under strain and lead to feelings of financial vulnerability.

2.6 BEHAVIOURAL FINANCE

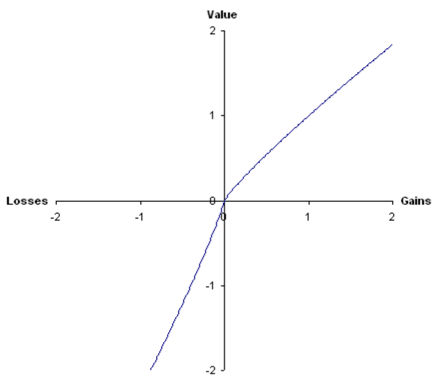
The psychological factors inherent in consumers are subjective aspects of reality relevant to consumer financial vulnerability that could result in and cause disparity among levels of consumer financial vulnerability. Consumers applying prudent saving behaviour would feel financially less vulnerable than consumers spending without thinking about the future. In addition, consumers with high levels of confidence would feel financially less vulnerable than those with low levels of confidence. Before the financial attitudes of consumers are discussed, a brief overview regarding the most pertinent financial behaviour theories is required.

2.6.1 Prospect theory

In an attempt to understand the decisions people make in times of uncertainty, Kahneman and Tversky (1979) developed the well-known ‘prospect theory’ to describe the mechanisms that people use to attribute value to potential gains or losses. In terms of the prospect theory, people will attribute a larger value to a potential loss than to a potential gain and are therefore, in essence, more loss averse than gain maximising (see figure 2.8) (Kahneman & Tversky 1979). When confronted with two potential situations, expressed in terms of either a possible gain or a possible loss, people tend to select to secure either a smaller guaranteed gain than an alternative option of a potentially higher gain but not guaranteed, even though the end result of both options could be financially the same. People feel more emotional regarding a potential loss than regarding a similar potential gain (Pompian 2006).

FIGURE 2.8

THE VALUE FUNCTION AS DEFINED IN THE PROSPECT THEORY



(Phung n.d.)

Phung (n.d.) describes the application of the prospect theory in the financial behaviour of people quite adequately in the following examples:

- Due to the increase in the amount of income tax payable, people will not invest in interest-earning investments or work overtime. Although their after-tax income might have increased, in terms of the prospect theory, the increase is not sufficient to compensate them for the feeling of the loss 'suffered' by paying the additional taxes.
- People also tend to hold on to losing stocks for too long in the hope that the stocks will regain the losses incurred, but instead they only lose more. Conversely, when making a gain on winning stocks, people tend to sell too soon, before the maximum gain can be achieved. The risk of losing the actual gain is too high for them to wait and therefore they act too quickly. In terms of the prospect theory, people will rather settle for a lower guaranteed gain of R5 000 compared to holding on to the stock/asset and potentially have a gain of R10 000.

Due to people's loss aversion as posited in the prospect theory, consumers tend to feel financially more vulnerable with the likelihood of job losses, unemployment or sickness, although such situations may not yet have occurred, bearing in mind that financial vulnerability only refers to the 'state' of feeling financially vulnerable and not to the actual financial situation (Van Aardt & Moshoeu 2009).

2.6.2 'To have or to be' modes

Another perspective that could assist in understanding what drives consumers' feelings of financial vulnerability could be obtained from the consumption modes as described by Fromm (1976). Fromm reflects on human nature and refers to two consumption modes, namely the 'having' compared to the 'being' mode, and briefly describes the difference in the meaning of having and being as follows:

- In the 'having' mode of existence, the relationship to the world is one of possessing and owning, one in which the aim is to transform everybody and everything, including the personal self, into that person's property.
- There are two forms in the 'being' mode of existence. In contrast to *having*, *being* refers to aliveness and authentic relatedness to the world. The other form of being is in contrast to appearing and refers to the true nature, the true

reality of a person or a thing in contrast to deceptive appearances as exemplified in having (Fromm 1976).

The influence of the two fundamental modes on the attitudes of consumers is reflected in consumers' consumption that is driven by various sources, for example advertising that promotes the ambiguous message of 'I am = what I have and what I consume' (Fromm 1976) and thereby reinforcing the 'have mode' but not necessarily to the benefit of the consumer. The two modes could also be described as the instrumental reason, in other words, the practical reason for making certain decisions, compared to the pure reason, which refers to the right reason for the specified actions (Fromm 1976). Both these modes of reason will be discussed in more detail below.

What is the 'having' mode? (or the Instrumental reason)

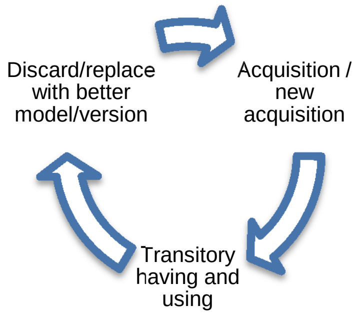
Fromm (1976) describes people's behaviour and judgements as extremely biased and forced by a society which values a successful person on the basis of what he or she owns, the profit made or the power he/she has in society. Fromm (1976) describes the characteristics of the having mode as:

- Owning fixed property – the norms of society define that, to be successful, one must aspire to acquire property, keep it and make a profit from it and to be admired for having property and to be envied as a superior being by others not in a similar position.
- Although some consumers may be property-poor, they still own *something* – these individuals treasure their possessions as much as those who own fixed property, and wish to preserve what they have and increase its value if at all possible.
- Enjoyment is not always derived from owning material things, but also from 'owning' humans, for example, in a patriarchal society, having children is usually a way to 'own' persons without having to work to attain ownership.
- Someone's ego is also one of his/her most important possessions – it reflects that person's body, name, social status, possessions (including knowledge), self-image and the image others have of him/her. Every person has an ego that forms the basis of the sense of identity. It will thus influence consumption as the ego needs to be nurtured by what is seen from the outside rather than from the inside, and will be enhanced by spending habits. Consumption is

further advanced by the 'discard' notion as the emphasis is on consumption rather than preservation. The consumption circle is illustrated in figure 2.9.

FIGURE 2.9

CONSUMPTION CIRCLE



(Compiled from Fromm 1976)

- Another indication of the 'having' mode is private vehicles – for many people a vehicle is a symbol of contentment and status. However, although more expensive than most of the other items referred to in the above consumption circle, it appears that there is a contradiction between ownership (of owning a new vehicle) and interest (in the new vehicle) (albeit normally very short-lived). A major ego builder is the acquisition of a new car and the ability to replace it every two years. Selling the old car every two years will increase the opportunities of making a profit and finally, the need to experience new stimuli will be addressed with the recurring replacements of vehicles.
- The 'having' mode is not limited to objects, but also includes relationships. For example, towards doctors, lawyers – being expressed as '*my* doctor', '*my* lawyer', reflecting ownership of the relationship.
- People experience numerous objects, even feelings, as property. When discussing their health, people refer to *their* ailments, *their* medicines, *their* treatments, thereby taking ownership of their health and ailments.
- Consumption behaviour also changes over generations, with the newer generation consuming for the pleasure of consumption with no lasting expectation (almost just *being*) compared to older generations who needed to accumulate (for *having*) (Fromm 1976).

In conclusion, the ‘having’ mode can be summarised as the belief that one’s property constitutes oneself and one’s identity – “*I am because I have X”* (Fromm 1976).

What is the ‘being’ mode? (or the Pure reason)

Fromm (1976) distinguishes between having and being as: “Having refers to things and things are fixed and describable. Being refers to experience, and human experience is in principle not describable. What is fully describable is our persona – the mask we wear, the ego we present – for this persona is in itself a thing.”

In understanding the ‘being’ mode, the character, orientation to life, own psychical structure, and whole individuality are explored but will not be fully described. As with the ‘having’ mode, certain characteristics of the being mode (as described by Fromm (1976)) can be highlighted to cast further light on the personal finance behaviour of consumers:

- Independence, freedom and the presence of critical reasoning are prerequisites of the being mode – one should be able to experience inner activity and the productive use of one’s own powers.
- ‘To be’ reflects the ability to find security and identity no longer by what one owns, but rather by what one can be. For example, should I lose my job I am able to get another job or become an entrepreneur, as my identity is not fixated on my current job but on what I am.
- Another key component of the ‘being’ mode is the productive activity capacity of a person. Productive activity refers to the ability to create something from nothing; thus, the person is in charge of his/her own destiny and he/she is therefore not limited to what is being done for him/her but what he/she is willing to do for himself/herself.
- Being should also be contrasted to appearing – the actual behaviour of a person is different from his/her character, but the true motivation for the behaviour constitutes the true being (for example the person appears to be kind but has a hidden agenda).
- In a given situation, society has a ‘normal’ view of a situation that assumes people are rational, but given one’s own conscious motivations, ideas and beliefs based on available information (which may even be false), biases, irrational passions, rationalisations and prejudices, an individual may have a

completely different view from the 'normal' view of society. Based on his/her own view, someone can make a decision that, for the outsider, does not seem to be the correct decision, but does so for the individual, for example incurring additional debt although the person may already be over-indebted. Unbeknown to others, there may be other factors influencing the decision to incur the debt (Fromm 1976).

In conclusion, the 'being' mode can be summarised as the belief that one's identity is defined by what one can be – "*I am because I can X*" (Fromm 1976).

The main difference between the 'having' and 'being' modes is a person's belief in what it is that creates one's identity; that is, do I need possessions to define myself and am I thus vulnerable due to circumstances beyond my control (should I lose my job/house/car), compared to I am what I am because of what I can be (if I lose my job, I will find something else).

2.6.3 **Objectification**

Confirming Fromm's 'having' mode the concept of 'objectification' is defined by Nussbaum (1995) "as the way one is treating as an object something that is not an object, what is in fact, a human being". According to Nussbaum, seven notions are involved when treating a person as an object:

- Instrumentality: the objectifier treats the object as a tool for his or her own purposes.
- Denial of autonomy: the objectifier treats the object as lacking in autonomy and self-determination.
- Inertness: the objectifier treats the object as lacking in agency, and perhaps also in activity.
- Fungibility: the objectifier treats the object as interchangeable (a) with other objects of the same type, and/or (b) with objects of other types.
- Violability: the objectifier treats the object as lacking in boundary-integrity, as something that is permissible to break up, smash or break into.
- Ownership: the objectifier treats the object as something that is owned by another and which can be bought or sold.
- Denial of subjectivity: the objectifier treats the object as something whose experience and feelings (if any) need not be taken into account.

Nussbaum's seven notions regarding objectification in financial behaviour terms, as supported by Fromm (1995), reveals that women and children in several cultures are seen as instrumental in creating wealth; however, in the tribal structure the women do not have any autonomy or self-determination but should abide by the rules determined by society. Women and children are therefore seen as assets and not as persons. Fromm (1995) also reports on moulding the social characters of members of society, defining those who are being envied as superior beings by, for example, what they own and the amount of money they have. For the section of the population that does not own assets, their empire consists not of the material things they own, but of owning living beings, in other words, people are transformed into things (Fromm 1995). In the state of objectification, people lose their identity and become 'the Doctor' or 'the Lawyer' as if they are an object and part of the persona. Thus, should that person no longer be 'the Doctor', living at 'the Address', driving 'the Car', such a person is nothing in his/her own eyes and sometimes even less in the eyes of the community around them.

Combining both Fromm's 'having' mode and Nussbaum's concept of objectification, it is clear that people tend to objectify in an attempt to create substance and financial wellbeing for themselves. Women or children are seen as assets in an attempt to create wealth, and the status of a car and the area where the house is situated are necessary to classify the person as successful. Such a person converts everything around him/her into objects as a means to an end. Being financially vulnerable would be significantly influenced by the 'mode' of existence of consumers. Those living in the 'having' mode will experience dire levels of financial vulnerability in situations where their 'objects' or possessions are under threat. Examples include that their employment is under threat, that they do not 'own' enough children, or that their standard of living is inadequate from their own perspective. In comparison, consumers living in the 'being' mode will be far more resilient in times of potential hardship as they have other capabilities or coping mechanisms that will sustain them, for example, believing in their own abilities to create employment opportunities for themselves.

2.7 CONCLUDING REMARKS

By means of chain reasoning, this chapter reviewed the ways in which international and domestic economic events filter down to consumers. Furthermore, the effect of these events on consumer financial vulnerability was discussed with reference to the trade channel. Consumers could be subjected to an economic downturn whereby their income streams become strained, placing pressure on their ability to consume, save and service their debt commitments, resulting in feelings of financial vulnerability. Given the state of world and domestic economies at the time of the study (2009), the financial position of both the South African economy and consumers were provided in the national accounts of South Africa as prescribed by the System of National Accounts. In this respect, the national accounts of South Africa make it possible to measure the effects of events on consumers via chain reasoning. This will form the basis for further analysis and discussions in relation to the state of consumer finances in chapter 3. The chapter concluded with a discussion on various consumption and financial behaviour theories that aim to describe the means and possible reasons for consumers' actions as depicted in the financial statements provided. Chapter 3 will provide a detailed discussion of various factors that could affect the level of financial vulnerability, based on the financial information provided in chapter 2.

CHAPTER 3

IDENTIFICATION OF FACTORS THAT COULD INFLUENCE CONSUMER FINANCIAL VULNERABILITY

3.1 INTRODUCTION

In chapter 1, a host of factors that can affect the financial vulnerability of consumers were identified. Chapter 2 introduced the concept of economic chain reasoning and showed how this could be applied to identify the path through which these factors influence consumers' financial vulnerability. Chapter 2 also showed the importance of the national accounts of South Africa in the chain reasoning exercise as the national accounts put numbers to factors such as household income, consumption expenditure, saving and debt, enabling the calculation of magnitudes of change and trends, which, in turn, can be used by economic agents for various purposes, including the way in which consumer financial vulnerability is affected. The chapter concluded with a broad discussion of certain consumption and behavioural theories which provide an insight into some trade-offs in consumer decision-making that affect consumer financial vulnerability. From the above, it is evident that the prevalence of harmful events and/or conditions will cause consumers to become financially vulnerable. These events/conditions include, but are not limited to, the following: unpredictable events, economic shocks (international and domestic), uncertainty, volatility, and factors such as a lack of skills and sub-optimal financial decision-making.

Given the trade channel depicted in chapter 2, section 3.2 of this chapter will focus on how South African consumers' financial vulnerability can be affected by events in the international economy, specifically via the international trade channel. Although this is only one of many ways through which consumer financial vulnerability can be affected, international events are responsible for the broadest path of impact. Consequently, other events affecting consumer financial vulnerability (such as monetary and fiscal policies) will include most of the variables mentioned in the chain. Therefore, before turning to a more detailed discussion regarding the effect of international economic events on domestic consumer financial vulnerability, it is necessary to repeat the chain mentioned in chapter 2.

International economic production ↓; → international income ↓;→ international spending ↓;→ international imports ↓, which means that South African exports will decline; → inventories ↑; incentive to produce less →; if production ↓;→ income earnings down which means that profits and remuneration decreases due to among others an increase in unemployment (consumer income experiences pressure to ↓; → consumers experience pressure to maintain their expenditure commitments; → experience pressure to maintain their saving; → experience pressure to maintain their debt servicing; → if they can't they default on servicing their debt; → consumer financial vulnerability ↓); → demand for money ↓;→ pressure on interest rates to ↓;→ if interest rates ↓;→ incentive to produce more; → incentive to invest more; → if investment ↑;→ pressure on total spending to ↑;→ if total expenditure ↑;→ total production ↑;→ incentive to employ more; → if employment increases; → consumer income ↑; → consumer financial vulnerability↓.

Section 3.3 will be devoted to the socioeconomic demographic channel that could also influence consumer financial vulnerability. However, in this respect it is important to note that,

- whereas the factors in section 3.2 will trigger a change in consumer financial vulnerability,
- the socioeconomic demographic factors, although also being able to trigger consumer financial vulnerability through, for example, a sudden deterioration in a consumer's health status, play a prominent role in the magnitude of the change in consumer financial vulnerability.

The socioeconomic demographic factors provide a description of the consumers, where some socioeconomic demographic factors limit damage and others aggravate such damage. For instance, an international economic recession will cause South African consumers to become financially vulnerable, but the magnitude of such vulnerability will be affected by factors such as the state of education and health. A country with weak levels of education and health is prone to higher levels of vulnerability compared to a country with strong socioeconomic systems, as for instance, the inhabitants of a country with weak socioeconomic demographics do not have the necessary social security network to take care of them.

Furthermore, higher employment levels resulting from a prosperous international and domestic economic environment would enable improved health, higher levels of education, and sound psychological fitness, eventually resulting in lower levels of financial vulnerability. In contrast, a stagnant or declining world economy would negatively influence local economic growth and may even increase unemployment, giving rise to lower levels of real consumer income and unaffordable consumption expenditure commitments in an environment where some members of the household could be either Human immunodeficiency virus (HIV)-positive or ill, or have little or no education, with a strong external locus of control. These consumers would in all likelihood become financially vulnerable.

3.2 THE INTERNATIONAL TRADE CHANNEL AND CONSUMER FINANCIAL VULNERABILITY

The effect of the international trade channel on consumer financial vulnerability can be described as follows: during times of sluggish international growth and contracting levels of international development, fewer production opportunities would be available through the international trade channel. Fewer production opportunities result in lower levels of international income and thus lower levels of international spending and, for example, less appetite for South African commodities resulting in lower exports of commodities. Due to lower exports, South African producers have excess stock levels and therefore have to reduce their production output. Being unable to sell the same number of products, producers' income earnings decrease, which translates into lower profits and decreased consumer remuneration due to, among others, an increase in unemployment. Consumers are then exposed to feelings of financial vulnerability as their income faces downward pressure, so that they also experience pressure to maintain their expenditure commitments. This situation puts further pressure on consumers to maintain their saving. In addition, consumers also experience pressure to maintain their debt servicing responsibilities. Defaulting on their debt servicing responsibilities could lead to a reduction in the demand to hold money. The lower money demand puts pressure on interest rates to decrease. The decrease in interest rates, however, encourages producers to produce and invest more. Increased levels of investment put pressure on total spending to increase. If total expenditure increases, total production follows suit, which provides an incentive to producers to employ more workers, ultimately resulting in higher levels of consumer income and lower levels of consumer financial vulnerability. This relationship was illustrated in figure 1.5 but is repeated in figure 3.1 for convenience's sake.

FIGURE 3.1

CONSUMER FINANCIAL VULNERABILITY CHAIN BASED ON THE INTERNATIONAL TRADE CHANNEL

International trade channel components	Potential influence of international trade chain components on consumer financial vulnerability		Discussed in section:
	Conducive to low levels	Conducive to high levels	
International economic environment	Upswing phase	Contracting phase	section 3.2.1
Domestic macroeconomic environment	Affluent	Poor	section 3.2.2
Labour market dynamics	Elastic with growth to create employment	Low elasticity with growth – unemployment	section 3.2.3
Consumer income	High income	Low income	section 3.2.4
Consumption expenditure	Medium spending	Under pressure	section 3.2.5
Saving/Assets	Lots of saving	Little saving	section 3.2.6.1
Debt/Liabilities	Manageable debt	Sizable debt	section 3.2.6.2
Consumer financial vulnerability	Low levels of consumer financial vulnerability	High levels of consumer financial vulnerability	section 3.2.7

(Source: Author's own compilation)

3.2.1 International economic environment

By applying economic chain reasoning, it is apparent that weakening or contracting international economic growth will exert a significant negative effect on the South African economy. Even though the effect can be calculated via the trade, financial market as well as currency channels, the current example will focus on the trade channel. Weaker or contracting international economic growth reflects a slowing or shrinking in the international demand for goods and services. This will negatively affect production in South Africa, which will be reflected by lower exports. Lower production also means that fewer production factors are needed, which, in turn, will lead to job losses. As this will have a negative real effect on consumer income, consumers will not be able to continue their expenditure (reflected in South Africa's imports), saving and credit behaviour, making them financially more vulnerable. A summary account of the influence of the international economic community on the South African economy is reflected in the external account (Account 5) in table 2.2. The external account is also referred to and more commonly known as the balance of payments. The balance of payments shows all the transactions with the international community stretching from the value of merchandise trade, international services delivered and received, and the income received and paid accruing from capital flows (such as investments).

Should payments to the international community (for imports, services received and income from investments paid) exceed receipts, the current account of the balance of payments will be in deficit and vice versa. Should there be a deficit position, it must be financed by capital inflows, which is the saving (investments) by foreigners. Should the inflows not accrue however, they could cause an economy to become vulnerable. In such situations, consumers would feel the pinch via various channels such as unemployment, a weaker currency leading to higher consumer price inflation, an inability to maintain their expenditure, and consumers falling in arrears with debt servicing commitments.

Although it is not the focus of section 3.2, it is prudent also to explain briefly how South African consumers' financial vulnerability is affected via the financial and currency market channels in an environment of weakening or contracting international economic growth. International investors, sensing a weakening international economy, become risk averse and sell risky assets such as shares in developing countries such as South Africa. This causes the price of shares to decline, thereby lowering the value of investments in retirement funds (which form part of consumer assets). As investors also sense lower profits due to declining production by companies, share prices decline even more, further lowering the value of consumers' investments in retirement funds. This also reduces dividend payments, which negatively affect consumers' income earnings, which in turn affect their expenditure, saving and credit behaviour. In addition, as international investors sell their risky assets (shares) in South Africa, it means an outflow of capital as the South African rand will be sold (as the investments are held in South African rand) and dollars (or euros, or other currencies) will be purchased. This weakens the value of the rand against other currencies. The weaker rand, in turn, makes imports more expensive, thereby putting pressure on consumer prices to increase. As this reflects more expensive prices of goods and services, it means eroding consumer purchasing power, which also negatively affects consumer financial vulnerability as consumers are unable to keep up their expenditure, saving and debt commitments. Moreover, as South Africa imports more than it exports, the difference (current account deficit) must be financed via capital inflows (mostly investments) from foreign investors. However, as explained above, during times of a weakening or contracting international economy, international investors normally sell their risky investments, which leads to capital outflows or lower capital inflows. Account 5 in table 2.2 shows that international capital inflows (financial account and unrecorded transactions) declined from R187.7 billion in 2008 to R113.9 billion in 2009. This added further pressure on the South African rand to depreciate, making domestic consumer prices even more expensive, thereby further affecting consumers' financial position negatively and increasing their financial vulnerability.

The magnitude to which weaker international economic growth will have an effect on the domestic economy can be measured via South Africa's openness to trade. The level of openness of the South African economy (to the international community) can be gauged from a ratio showing total international trade as a percentage of GDP as calculated using the figures reflected by the national accounts of South Africa (see table 2.2). In this respect, total imports and exports of merchandise goods amounted to more than 64% of GDP in 2008 before declining sharply to 46% in 2009 as a result of the international economic recession (SARB 2012, table 2.2).

The dependency on international trade is even more pronounced when adding international services and income to merchandise goods. South Africa's total exports and imports (including services and income flows) declined from 74.2% of GDP in 2008 to 55.7% in 2009 (SARB 2012). Apart from showing the added international dependency as a result of the role of international services and income on the external account (higher percentages), the changing figures between 2008 and 2009 also indicate the lower international demand for locally produced goods and services as a result of lower international demand as reflected by the international economic recession.

Turning to the individual components of international trade, Account 5 in table 2.2 shows that merchandise imports (R739.9 billion) exceeded merchandise and gold exports (R704.3 billion) by R35.6 billion during 2008. The lower international demand as a result of the recession is also clear from table 2.2, showing South African merchandise exports declining sharply by 23.2% between 2008 and 2009. The cooling South African economy and lower domestic demand (including lower consumer demand) are reflected by the decline of 25% in imports between 2008 and 2009.

As domestic demand declined more than foreign demand, the merchandise trade balance was transformed from a trade deficit of R35.6 billion in 2008 to a trade surplus of R2.3 billion in 2009 (table 2.2). The extent to which total imports exceeded total exports is also evident from another source, namely the trade deficit as reported by the South African Revenue Service (SARS 2012). This is reflected in table 3.1. The values as reported by the South African Reserve Bank (using the definitions of the International Monetary Fund (IMF) and reflected in table 2.2) and those of the South African Revenue Service (SARS) (using the definition of the United Nations (UN) and reflected in table 3.1) differ, due to different definitions regarding what constitutes merchandise imports and exports. Nevertheless, both sets of figures portray declining imports and exports and a lowering of the trade deficit.

TABLE 3.1

TRADE BALANCE: 2007 TO 2009

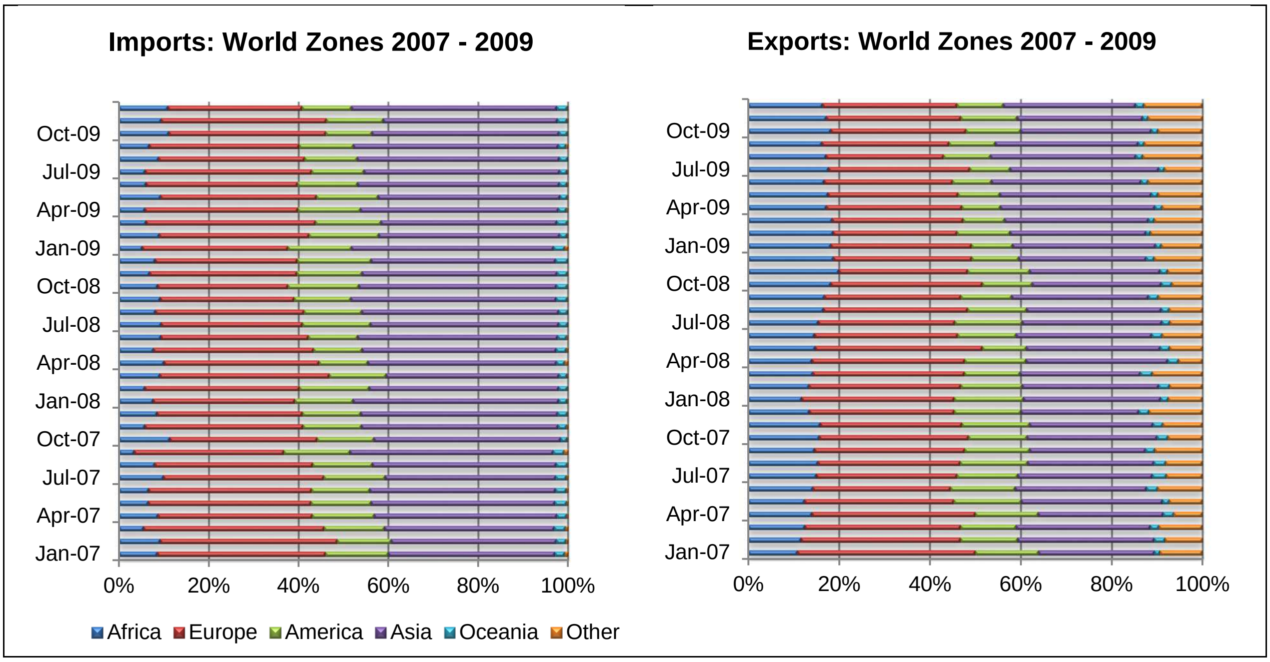
(R million)	2007 Imports	2007 Exports	Trade balance	2008 Imports	2008 Exports	Trade balance	2009 Imports	2009 Exports	Trade balance
January	42 393.78	30 329.65	**-12 064.13**	49 574.31	39 346.64	**-10 227.67**	53 698.62	36 232.29	**-17 466.33**
February	40 095.12	37 370.14	**-2 724.98**	52 766.11	46 881.63	**-5 884.48**	44 632.44	44 037.55	**-594.89**
March	45 258.40	42 389.00	**-2 869.39**	56 181.04	51 092.69	**-5 088.35**	52 478.20	51 906.59	**-571.61**
April	43 717.72	37 852.29	**-5 865.43**	66 168.99	55 841.25	**-10 327.74**	42 112.41	40 483.43	**-1 628.98**
May	46 225.02	43 393.34	**-2 831.68**	57 900.04	56 683.72	**-1 216.32**	39 436.95	41 423.85	**1 986.90**
June	47 630.01	42 182.50	**-5 447.50**	60 343.81	60 110.82	**-232.99**	39 817.53	42 986.13	**3 168.60**
July	51 521.67	42 088.60	**-9 433.07**	75 599.59	61 255.89	**-14 343.70**	44 015.13	44 384.81	**369.68**
August	51 590.31	42 355.25	**-9 235.06**	65 514.46	60 210.17	**-5 304.29**	42 361.87	40 085.33	**-2 276.54**
September	44 154.97	39 764.35	**-4 390.62**	68 179.04	61 001.24	**-7 177.80**	41 664.31	45 344.05	**3 679.74**
October	56 264.78	41 350.59	**-14 914.19**	75 445.25	65 624.08	**-9 821.17**	50 797.62	43 981.87	**-6 815.75**
November	48 989.28	48 224.40	**-764.88**	65 944.26	53 776.00	**-12 168.26**	48 330.50	45 734.89	**-2 595.61**
December	43 834.42	42 573.50	**-1 260.93**	50 176.82	48 450.37	**-1 726.45**	41 692.85	45 309.58	**3 616.73**
Total	**561 675.48**	**489 873.62**	**-71 801.86**	**743 793.72**	**660 274.50**	**-83 519.22**	**541 038.43**	**521 910.37**	**-19 128.06**

(SARS 2012)

Due to the openness of the South African economy, a decline in international economic growth projections will have an even more pronounced detrimental impact on the South African economy should the decline in the economic growth of South Africa's main trading partners be larger than that of other international economies. According to SARS (2012), South Africa's main trading partners are Europe and Asia (they were the source of 76% of all imports and the destination of 68% of exports in 2009) as per figure 3.2. Therefore, it is not sufficient to gauge the international economic growth rate only, but also the individual economic performances of South Africa's main trading partners.

FIGURE 3.2

SOUTH AFRICA'S MAIN TRADING PARTNERS



(SARS 2012)

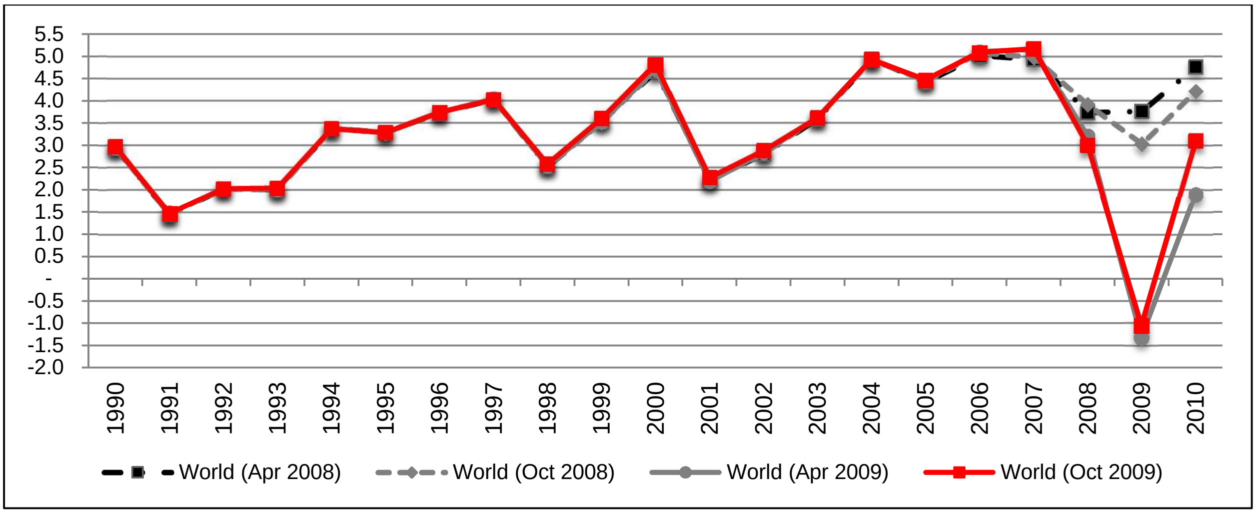
However, it is significant to note that since early 2007, Asia has replaced Europe as South Africa's main trading partner (figure 3.2) (SARS 2012). In Asia, China is South Africa's largest trading partner, whilst the United Kingdom and Germany are South Africa's dominant trading partners in Europe (SARS 2012).

The sharp decline in South Africa's international economic dealings due to the impact of the financial crisis could be ascribed to the declining global economic performance and outlook of particularly South Africa's main trading partners during the period under review. For instance, IMF figures (IMF 2011) reveal that economic growth in the United Kingdom contracted from -1.1% in 2008 to -4.4% in 2009, whilst in Germany it shrank from 0.8% to -5.1% over the same period. Economic growth in China slowed from 9.6% to 9.2%. These figures would suggest that, combined with the fact that South Africa's demand slowed down more than that of the world (imports declining more than exports compared to the world), the South African economy contracted more during the economic recession than that of the world as a collective. As will be seen later, this was indeed the case, but the significance of this fact is that South African consumers were probably financially more vulnerable than consumers in other middle-income countries who had trading partners with stronger economic growth rates.

In addition, consumers are also affected by uncertainty and volatility. A good example of the performance decline, volatility and uncertainty in the world economy is evident from the series of revised economic growth estimates for 2009 produced by the IMF as illustrated in figure 3.3. In April 2008 the IMF (2008a) predicted that global economic growth would slow from 4.9% in 2007 to 3.7% in 2008, and then increase again marginally to 3.8% in 2009 (IMF 2008a). However, during October 2008 the IMF (2008b) revised the global economic growth predictions, this time expecting the advanced economies to contract on an annual basis in 2009, down 0.8 percentage points from the April 2008 projections, but optimistic that the recovery would begin late 2009 (IMF 2008b). In April 2009, the IMF (2009a) again revised the global growth estimate downwards and for the first time in more than 20 years reflected a negative growth rate of 1.3% for 2009 before expecting the global growth rate to recover gradually to around 1.9% in 2010 (IMF 2009a). During October 2009, the IMF (2009b) adjusted their predictions for the negative global growth to be slightly better than what was expected in April, to around -1.1% for 2009 (IMF 2009b).

FIGURE 3.3

GLOBAL GDP GROWTH

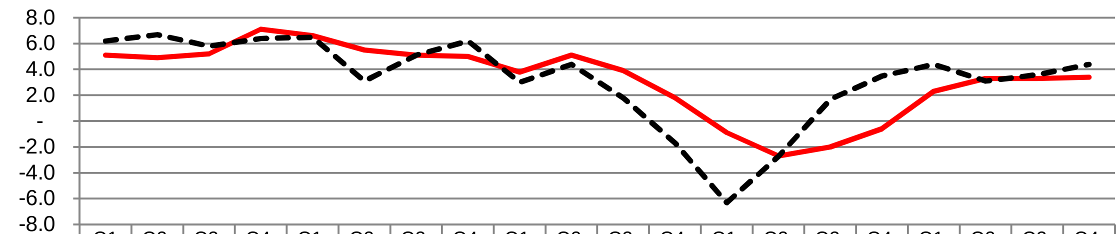


(IMF 2008a; 2008b; 2009a; 2009b)

The real annual and quarterly economic growth rates of South Africa are reflected in figure 3.4, which shows a steep decline in the year-on-year growth rate from 5.1% in the first quarter of 2006 to the turning point in the second quarter of 2009, when a contraction of -2.7% was registered, before it steadily improved again to 3.4% during the fourth quarter of 2010 (Stats SA 2011; 2012). The real seasonally adjusted and annualised quarter-on-quarter economic growth rate shows that the very negative impact of the world financial crisis reached the South African economy during the fourth quarter of 2008, lasting until the second quarter of 2009. During these three quarters, negative economic growth rates or contractions in economic growth were registered, resulting in South Africa suffering its first recession (normally defined as two or more quarters of negative seasonally adjusted and annualised quarter-on-quarter economic growth) in more than 20 years. According to the Organisation for Economic Co-operation and Development (OECD) (2010), the decline in the growth rate of real GDP over the period 2008 to 2009 represented the largest single-year slowdown on record for South Africa, and was larger than in most advanced and emerging economies, although far from being the world's worst. Figure 3.4 illustrates that the period 2008 to 2009 was one of the most problematic times for the South African economy in recent times.

FIGURE 3.4

SOUTH AFRICA'S REAL GROWTH IN GDP YEAR-ON-YEAR (Y/Y) AND QUARTER-ON-QUARTER (Q/Q) SEASONALLY ADJUSTED AND ANNUALISED



	Q1 2006	Q2 2006	Q3 2006	Q4 2006	Q1 2007	Q2 2007	Q3 2007	Q4 2007	Q1 2008	Q2 2008	Q3 2008	Q4 2008	Q1 2009	Q2 2009	Q3 2009	Q4 2009	Q1 2010	Q2 2010	Q3 2010	Q4 2010
Y/Y	5.1	4.9	5.2	7.1	6.6	5.5	5.1	5.0	3.8	5.1	3.9	1.8	-0.9	-2.7	-2.0	-0.6	2.3	3.3	3.3	3.4
Q/Q	6.2	6.7	5.8	6.4	6.5	3.1	5.1	6.2	3.0	4.4	1.8	-1.7	-6.3	-2.7	1.7	3.5	4.4	3.1	3.6	4.4

(Stats SA 2011a; 2012a)

The first link of the trade channel showed contracting international growth and uncertainty resulting in a sluggish domestic economic environment during 2008 and 2009. The declining global economic growth had a profound negative effect on the South African economy. As can be seen from Account 5 in table 2.2, merchandise exports and imports declined significantly, portraying the sharply lower international and domestic demand for produced goods and services. This caused production to slow, which, as explained above, could contribute to an increase in unemployment, which in turn could contribute to negative growth tempos in real household consumption expenditure and real household disposable income. As will be discussed in more detail in sections 3.2.4 and 3.2.5, real household consumption expenditure contracted by 1.6% in 2009 and real household disposable income by 1.3% (SARB 2012). Household consumption expenditure, being a subcomponent of

GDP (reflected in table 2.2), consequently affected South Africa's real economic growth rate negatively. In this respect South Africa's real GDP growth rate, as reported by Stats SA (2011a; 2012a), contracted by -1.5% in 2009 (which was more than the contraction of 1.1% of the world economic growth rate). However, it is significant to note that the contraction in consumer consumption expenditure exceeded that of the economy as a whole, which further reflects the influence international economic growth and specific international trading partners can have on consumers, resulting in higher levels of financial vulnerability.

3.2.2 Domestic macroeconomic policies

To enhance the domestic macroeconomy and stimulate growth, macroeconomic policies, consisting mainly of fiscal and monetary policies, can play a major role in increasing or reducing consumer financial vulnerability.

3.2.2.1 *Fiscal policy*

This section discusses the effect of fiscal policy on consumer financial vulnerability as well as the South African fiscal policy experienced during the international financial crisis and resulting economic recession.

Fiscal policy can affect consumer finances in various ways through, among others, government spending and government revenue channels. In terms of government expenditure, government affects consumer financial vulnerability in many ways. Via the expenditure distribution channel, government makes social grant transfers to the poor and vulnerable, which should reduce their financial vulnerability. The South African government employs this instrument to reduce the effect of the international economic recession on the vulnerable section of the community. Through some changes to the social grant system, the number of social grant recipients increased from 13.066 million in 2008/09 to 13.958 million in 2009/10, whilst the amount allocated to the grant recipients increased from R80.080 billion in 2008/09 to R89.368 billion in 2009/10. Moreover, the amount paid to the unemployed via the Unemployment Insurance Fund (UIF) almost doubled from R4.636 billion in 2008/09 to R8.188 billion in 2009/10 (National Treasury 2010). In addition to these measures, a government can ensure better health, education, housing and retirement for its citizens through a comprehensive social security system. In this respect, a good functioning government system can provide inexpensive and good health care facilities to the population. The same applies to schooling and other educational facilities such as colleges and universities. Ensuring a good educational system could provide the necessary skills for graduates to obtain decent work and an income that can yield a good standard of living. Although not an expenditure policy, compulsory saving policies complemented by social transfers to the elderly poor would also contribute to lowering consumer financial vulnerability after retirement.

However, such policies need to be financed and to that end taxes are levied on individuals and companies. Taxes may, however, cause greater consumer financial vulnerability if inappropriately designed and implemented. Taxes reduce taxpayers' income and, if too high, make them financially more vulnerable, since paying taxes negatively impacts on their spending, saving and debt servicing ability (as explained by Keynes 2008). Caution should therefore be taken that the tax burden on consumers is not too high as it may erode the benefits of redistribution policies.

Inefficient governments can, through the price setting channel, increase consumer financial vulnerability. As the sole determiner of the price of public goods such as the provision of water, government can put pressure on the consumer price index by high price increases, thereby not only making the public goods unaffordable for especially the poor, but by increasing the prices of other goods and services, it can reduce consumers' spending power. This type of price setting may also occur when government owns large parts of an economy, directly or via public corporations, and sets the prices for the goods and services produced by itself and its corporations. In the same vein, prices may be determined by legislation, and without the necessary competition, such prices may become unaffordable. In the case of South Africa, these types of prices are called administered prices (and such prices are not subjected to demand and supply as a price determination mechanism) and among others, include the prices of water, electricity, municipal rates, petrol and diesel, and telecommunications, but also minimum wages. Administered prices, in their fullest form, comprise almost 15% of the South African consumer price index (Stats SA 2012b). Indeed, administered prices increased far more rapidly than other prices during and after the economic recession. According to Stats SA (2012b), the consumer price index (CPI) increased by 6.3% in December 2009 compared to December 2008. However, administered prices increased by 9.9%. Without administered prices, the increase in the consumer price index was 5.3%. This clearly shows that government pricing contributed to higher consumer inflation, which, as previously discussed, erodes consumers' spending power, thus making them financially more vulnerable (Stats SA 2012b).

By means of the budget deficit/surplus channel, fiscal policy can also effect consumer financial vulnerability. During times of economic prosperity, a budget surplus can be achieved, providing funds to reduce government debt, which could create fiscal space for increasing future social security transfers. During such prosperous times, government can also reduce the tax rates on consumers, thereby increasing their disposable income. However, during economic recessions, governments can increase their spending and run up large fiscal deficits in an attempt to stabilise the economy and prevent it from falling into deeper recession. Such a policy can reduce the potential increase in unemployment and through the social grant system may also serve as a safety net for the poor.

According to the OECD (2010), the South African government indeed followed a countercyclical policy during the international and domestic economic recession, although to a lesser extent than in many other countries. The consolidated government budget balance declined by about 6 percentage points of GDP in the 2009/10 fiscal year, due in roughly equal measure to lower tax revenues and higher expenditure. Public consumption also supported output during the decline, again in part by ‘accident’, as unexpectedly large public sector wage increases were granted in 2009 after a wave of strikes. Because of the excess spending and reduced tax revenue, the fiscal deficit increased to 6.7% of GDP which, although large, is not extreme by international standards. The larger fiscal deficit, however, caused public debt levels to increase from a moderate level of 32.8% of GDP in 2008 to more than 45% of GDP.

The OECD (2010) is of the view that the cause of the South African fiscal deficit problem began many years before the economic recession. The boom in government revenue in the years preceding the crisis was eroded as government spending was ratcheted up at the time when the booming cycle was peaking. The estimated structural fiscal balance (fiscal deficit excluding once-off items and cyclical-driven revenue), which remained in deficit throughout the boom years, began to deteriorate in 2008 and worsened substantially in 2009. In this respect, South Africa behaved similar to many other countries that also increased spending as revenues grew rapidly. Although South Africa’s public debt burden remained moderate, there was a shift in the increasing trend, and the OECD (2010) believed that a difficult medium-term fiscal consolidation period lay ahead. While the National Treasury’s commitment to prudence remains unquestioned, South Africa may benefit from additional mechanisms to prevent similar policy errors in future cyclical upswings.

From the previous analysis it should be clear that incorrect fiscal policies during good and bad economic times will eventually catch up with an economy. As previously explained by means of economic chain reasoning, such bad policies have a negative effect on consumer financial vulnerability. The South African government should therefore consider the impact of its policies on consumer financial vulnerability more carefully as good intentions, by way of increased spending, may have undesirable consequences when a recession occurs. This is even more applicable when economic booms are non-sustainable and cyclical-driven – as was the case in 2008/09. In such circumstances, not only will the cyclical benefits be eliminated immediately, but the wipe-out will be complemented by the normal negativities associated with an economic recession, causing an even more desperate situation for consumers.

However, it is not only non-prudent fiscal policies that can cause a temporary artificially-driven reduction in consumer financial vulnerability and the resulting recession-induced increase in such vulnerability; monetary policies can also affect consumer financial vulnerability negatively or positively, depending on the objectives and prudence of such policy.

3.2.2.2 *Monetary policy*

Different countries apply monetary policies for different reasons, using a number of instruments. However, in the majority of countries, monetary policy is determined by an independent central bank with the aim of influencing the money supply of a country in such a way that price stability can be achieved and maintained. As in the case of fiscal policy, monetary policy can stimulate or cool down an economy, using mainly three instruments that affect the amount of credit that is lent to consumers. These instruments, which all eventually affect the interest rate at which consumers borrow, comprise setting the interest rate at monetary policy committee meetings (directly changing the interest rate), determining capital and cash reserve requirements with which financial institutions have to comply (indirectly affecting the interest rate), and open market transactions that comprise purchases and selling of bonds (indirectly affecting the interest rate).

In South Africa, an inflation-targeting regime was put in place a decade ago – and has had some success. The aim of monetary policy is to achieve price stability in the interest of balanced economic growth. The inflation-targeting framework determined by government called for the consumer price inflation rate to remain within an inflation target band of 3% to 6% (SARB 2012). Although both fiscal and monetary policies need to work together in pursuing this target range, monetary policy, via the interest rate channel, is regarded as the main policy instrument for achieving the inflation target. In this respect, the South African Reserve Bank's Monetary Policy Committee (MPC) meets every two months to determine the repurchase rate (repo rate). The repo rate is the rate at which financial institutions borrow from the Reserve Bank. Should the MPC decide to increase or decrease the repo rate, the commercial banks normally change the prime overdraft interest rates at which they lend funds to consumers/clients by the same margin.

Regarding the interest rate transmission mechanism, the normal process is as follows: the Reserve Bank's MPC decides, for instance, to increase the repo rate, which means that financial institutions have to borrow at more expensive rates from the Reserve Bank. The financial institutions then raise their prime overdraft lending rate, which means that consumers have to borrow at more expensive rates. This in turn reduces the amount consumers have available to purchase other goods and services. Should consumers be unable to supplement their income, consumer spending will slow down. This will, however, put pressure on consumers, whose financial vulnerability will increase as they will be unable to maintain their spending and saving levels. The opposite is also true: lower interest rates reduce consumers' debt instalments, which in turn make more funds available for spending/saving, which should reduce consumers' feeling of financial vulnerability.

Turning to the effect of the financial crisis and economic recession on consumer financial vulnerability, international research indicates that rising interest rates and inflation cause consumers to feel financially vulnerable (ECRI & PFRC 2008; PFRC 2008; PFRC 2009; PFRC 2010). This is evident from the Genworth study, which revealed that the increases in the vulnerability scores of certain countries could be ascribed to some extent to interest rate increases (PFRC 2009). This was especially true for Denmark, Italy, the United Kingdom and Norway. Another problem associated with rising interest rates is the increase in mortgage payments, which would also increase consumers' level of financial vulnerability. An increase in mortgage payments reduces the money available to pay other debts, and this was also reported by the PFRC team as one of the reasons for the higher level of financial vulnerability in Italy (PFRC 2009).

The Genworth study (PFRC 2008) furthermore reported on the effect of consumer prices on the level of financial vulnerability, for example in Portugal. Although consumer prices remained fairly stable at around 2%, consumers increased their debt levels, resulting in a relatively high number of them having debt problems. In 2007 Sweden had the lowest financial vulnerability score, mainly due to the fact that it was able to ensure real wage increases, its productivity growth (in terms of labour productivity per person employed) was among the highest of the countries reviewed, and for some time Sweden consequently had the lowest average inflation rate among European countries, resulting in stable expectations for its economic future (PFRC 2008).

As mentioned in section 3.2.1, South Africa was also hard hit by the 2008 to 2009 international crisis and economic recession. The next section shows how international monetary policy diverted from its normal mandate of ensuring low consumer price inflation in order to prevent a total collapse of the international financial system, which could have brought about an enormous increase in the financial vulnerability not only of South African consumers, but also all over the world.

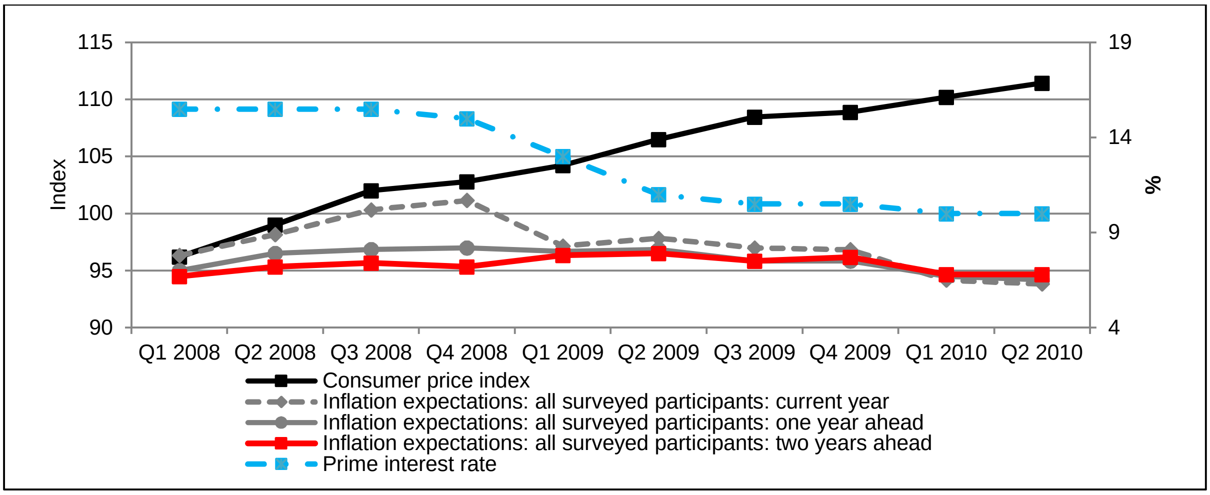
Prior to as well as during the crisis, South Africa's economy was harmed mainly through the international trade and financial and currency market channels. Although output growth was slowing from mid-2007 (year-on-year growth peaked in the first quarter of 2007) (Stats SA 2012a), quarterly real seasonally adjusted and annualised GDP growth was positive up to and including the third quarter of 2008, when the international financial crisis intensified with the downfall of two financial powerhouses in the United States of America. Lehman Brothers, one of the top banks, failed and only a last ditch effort by the authorities prevented the insurance giant AIG from also failing. The shock to the international financial system (as these institutions had financial interests all over the world) and the resulting damage to international confidence had an immediate sharp effect on capital flows to emerging markets, as investors reassessed risks, and global trade flows collapsed. Portfolio investment inflows, which had accounted for the bulk of the financing of South Africa's large current account deficits in the years leading up to the crisis, quickly turned to large net outflows, although overall net private flows remained positive as South African banks repatriated their foreign assets. Export and import volumes both plummeted, while the prices of most of South Africa's main export commodities weakened, although this was outweighed by the effect of lower oil prices, resulting in an improvement of the terms of trade. The stock market, weakened directly by net outflows on the part of selling non-residents and indirectly by the large corrections in equity prices elsewhere, had begun falling in May 2008 but saw sharp declines between September and November 2008, in line with equities in other emerging markets (OECD 2010).

In summary, the financial crisis caused the economy to shrink, unemployment to increase, the share market to plummet, and the rand/dollar exchange rate to weaken from just above R6 to the dollar to more than R11.82/US$ during October 2008. As previously explained, the weaker rand contributed to higher import prices, which in turn exerted pressure on consumer price inflation to increase. In fact, consumer price inflation edged upward to outside the target band, remaining above 8% until May 2009 (Stats SA 2012b).

Under normal circumstances, the Reserve Bank would have increased the repo rate as the inflation rate was outside the target band, but as part of an international effort to avert a collapse of the international economic system, the repo rate and prime lending rates of banks were reduced. Due to a reduction of 4.5 percentage points in the repo rate, banks reduced their prime lending rates from 15.5% at the end of the third quarter of 2008 to 11% during the second quarter of 2009, which was also the end of the economic recession. Since then the repo rate and prime lending rates were reduced by an additional 2.5 percentage points during the third quarter of 2012 (SARB 2012) as illustrated in figure 3.5. The main point, however, is that the interest rate decreases alleviated the debt servicing cost pressure on consumers and softened the blow of the recession on consumer financial vulnerability.

FIGURE 3.5

INFLATION AND INTEREST RATE CHANGES: 2008 TO 2010



(SARB 2013; Stats SA 2012b)

Although interest rates decreased during the period, consumers' financial situations did not necessarily improve, as inflation was still under pressure and projected at around 6% for the foreseeable future. This upward pressure on inflation, combined with the number of job losses, resulted in consumers remaining financially vulnerable; there was no certainty regarding future income among a broad spectrum of consumers in South Africa.

3.2.3 **Employment elasticities**

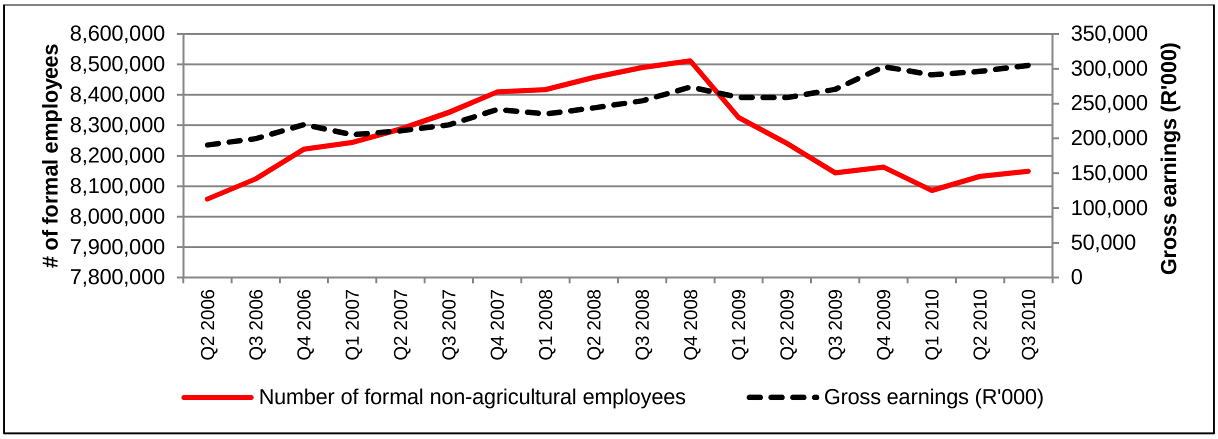
According to macroeconomic theory, high and sustainable economic growth should result in higher levels of employment, which should boost the number of consumers with an income. In turn, and as discussed above, this should have a positive impact on consumer financial vulnerability.

This viewpoint is shared by the Genworth study (PFRC 2009) conducted over the mentioned four-year period, which confirmed the effect of changes in the labour market on consumer financial vulnerability. One of the reasons attributed to the Danish consumers' higher levels of feeling financially secure was the higher levels of employment experienced over the previous few years, which resulted in an increase in real disposable income. Danish consumers felt more confident about their job prospects, as evidenced by Denmark's position in the three least financially vulnerable countries since the inception of the Genworth studies. France's index score, namely being financially relatively vulnerable, can be ascribed to the relatively higher levels of unemployment in France compared to other European countries. Lastly, Germany reflected a rather healthy macroeconomic picture compared to some other countries, although the high unemployment rate, revealed as the single most important reason for over-indebtedness in Germany, remained a problem for the German government. This resulted in an increase in consumer insolvencies – and as employment prospects bear a direct influence on consumers' financial expectations, this also explained the higher than expected financially vulnerable score reported for Germany (ECRI & PFRC 2008; PFRC 2009; 2010).

Figure 3.6 displays the employment and gross earnings trends of formal employees in the non-agricultural industry based on the Quarterly Employment Statistics published by Stats SA (2010).

FIGURE 3.6

EMPLOYMENT AND NOMINAL GROSS EARNINGS OF EMPLOYEES: 2006 TO 2010 (ALL FORMAL NON-AGRICULTURAL INDUSTRIES)



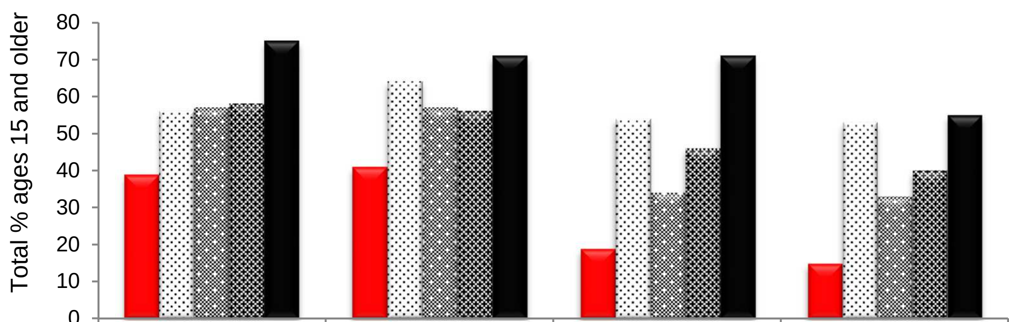
(Stats SA 2010)

Stats SA (2010) reported that the nominal gross earnings of employees in the formal non-agricultural sector increased from R190 850 million in 2006 to R304 974 million in 2010. Gross earnings of employees increased by more than R114 124 million (60%) over the said period (see figure 3.7). Nevertheless, the same trend of a high increase in earnings was not replicated in the number of employees in the formal non-agricultural sector. In fact, the number of employees in the formal non-agricultural sector increased from 8 058 000 in the first quarter of 2006 to 8 149 000 in the fourth quarter of 2010 – a mere 91 000 (1%) additional jobs were created. In the meanwhile, however, considerable job activity occurred as the number of employees declined from a high of 8 512 000 in the fourth quarter of 2008 (which also marked the start of the economic recession), to 8 241 000 at the end of the recession, in the second quarter of 2009 – a reduction of 271 000 employees. The job losses continued until the first quarter of 2010, when 8 086 000 workers were employed in the formal non-agricultural sector (Stats SA 2010). A total decline of 426 000 (5.3%) workers thus occurred before the labour market started slowly recovering. Although it may seem as if there is some relationship between output growth and employment growth, different studies came to different conclusions; some showing a strong relationship and others a weak relationship. Research conducted by Hodge (2009) indicates that the reason for the different results regarding the relationship between output growth and employment growth is that it is not a short-term, but rather a long-term co-integrated relationship. As already alluded to, it is clear from figure 3.7 that fewer people were earning more, thus those unfortunate to have lost a job since 2008 would be feeling more financially vulnerable as the prospects of employment remained disheartening. The increase in labour costs also resulted in increased consumer inflation rates, enhancing the stress on consumption expenditure for those with limited income and other resources.

A number of indicators can be used to measure the extent to which the South African economy can alleviate poverty and therefore reduce consumer financial vulnerability via employment. One such indicator is the employment to population ratio, representing the proportion of a specific country's population that is employed. Furthermore, people aged 15 years and older are referred to as the working-age population with people aged 15 – 24 years being considered the youth population (World Bank 2010). In South Africa, the employment to population ratio increased only marginally from 39% to 41% over the period 1991 to 2008 (figure 3.7), suggesting an inability to provide sufficient work for the working-age population. Moreover, the strain to obtain employment, especially among the youth, is evident from the decrease in the youth employment ratio for South Africa from 19% in 1991 to 15% in 2008.

FIGURE 3.7

EMPLOYMENT TO POPULATION RATIO



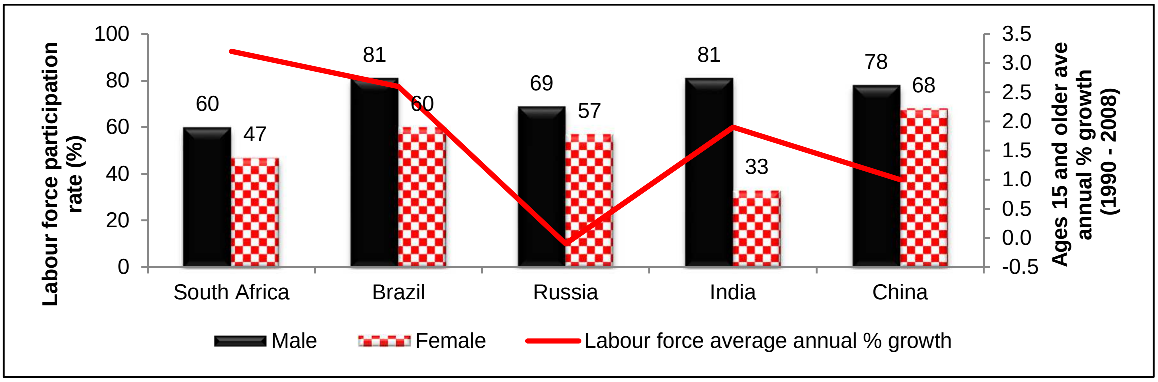
	Total 1991	Total 2008	Youth 1991	Youth 2008
South Africa	39	41	19	15
Brazil	56	64	54	53
Russia	57	57	34	33
India	58	56	46	40
China	75	71	71	55

(World Bank 2010 adapted)

Based on a calculation of South Africa's labour force participation rate (namely the proportion of the population aged 15 to 65 who are economically active, divided by all people of working age (16-65), it was determined that 60% of South African males aged 15 years and older were economically active during 2008 (World Bank 2010). In South Africa, the number of people who are currently employed and those who are unemployed but seeking work as well as first-time job-seekers has increased steadily over the past 20 years, with men still being economically more active than women. However, this increase has not improved the unemployment situation in South Africa (World Bank 2010).

FIGURE 3.8

LABOUR FORCE STRUCTURE



(World Bank 2010 adapted)

The employment coefficient (*E*), also known as the employment elasticity of economic growth and defined as the ratio of employment growth (*e*) to economic growth (*g*), can be seen as a concise measure of the relationship between employment and real economic growth ($E = e/g$). An increase in real economic growth rates resulting in a strong increase in employment is depicted by an employment coefficient of 1 or higher (Van Aardt 2009). Hodge (2009) measured the employment coefficient of South Africa for the period 1947 to 2007, and concluded that it averages roughly 0.5, suggesting that an increase of one percentage point in real economic growth is associated with half a percentage point increase in employment growth (Hodge 2009). Given South Africa's high unemployment rate, this relatively weak employment coefficient is insufficient to reduce unemployment and poverty significantly.

Regarding unemployment, the International Labour Organization (ILO 1982) defines 'unemployment' as members of the economically active population who are without work but available for and seeking work, including people who have lost their jobs or who have left work voluntarily. Table 3.2 reveals that of all the emerging economies referred to as the BRICS countries (being Brazil, Russia, India, China and South Africa), South Africa had the highest level of unemployment, namely 22.9%, during 2005 to 2008. This compares unfavourably with the other BRICS countries shown in table 3.2, which all had unemployment rates below 8%. Hodge (2009) notes that, although South Africa had a positive economic growth rate, unemployment still rose. One of the reasons reported by Hodge (2009) for the increase is that the changes in unemployment resulted from a mismatch between the structures of labour demand and supply in the economy.

TABLE 3.2

UNEMPLOYMENT OF BRICS COUNTRIES

Countries	Unemployment % of total labour force	Unemployment by educational attainment % of total unemployment		
		Primary	Secondary	Tertiary
	2005 – 08	2005 – 08	2005 – 08	2005 – 08
South Africa	22.9	36.2	56.3	4.5
Brazil	7.9	51.6	33.6	3.6
Russia	6.2	13.7	54.2	32.1
India	...	29.0	37.7	33.3
China	4.2	...	...	...

... Data not available

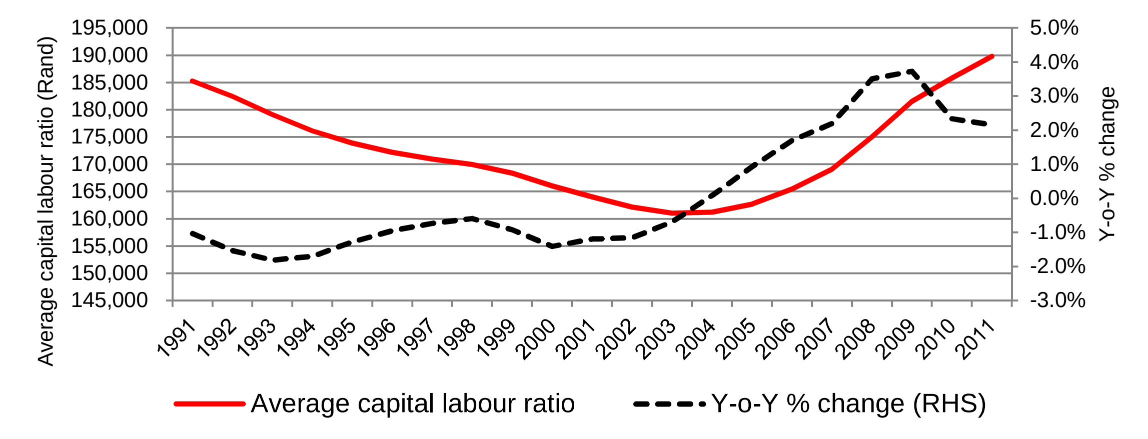
(World Bank 2010 adapted)

Based on the level of education, the level of unemployment as depicted in table 3.3 provides significant insights into the labour market requirements in terms of skills. In South Africa, for the period 2005 to 2008 only 4.5% of the economically active population who were in possession of a tertiary qualification were unemployed. The situation deteriorates for those in possession of a secondary education, where South Africa has the highest level of unemployment (56.3%) (World Bank 2010). This illustrates a possible inefficiency in resource allocation, as South Africa's labour productivity rate increased although the unemployment level appears to exceed the norm when compared to the country's peers. According to Van Aardt (2009), strong growth in job creation for both the formal and informal sector occurred in South Africa during 2002 to 2008, including high GDP growth rates. However, this did not result in a decrease of the Gini coefficient and thus a more equitable distribution of income as would have been expected. Van Aardt (2009) concludes that, although there was an increase in the number of jobs created, such jobs were not created in the occupational categories required (for example artisans, clerks and production workers), revealing that there seems to be a disjunction between the educational attainment of the labour force and the actual skills levels of the work force compared to the required skills demands. This structural imbalance should be addressed in an attempt to decrease the financial vulnerability of the citizens of South Africa by ensuring that people who are economically active have the required skills.

Another reason for the lack of improvement in the unemployment situation can be ascribed to the replacement of labour with capital that is evident from the increase in the average capital-labour ratio as reflected in figure 3.9.

FIGURE 3.9

AVERAGE CAPITAL-LABOUR RATIO



(SARB 2013)

The average capital-labour ratio declined to a low level of around R162 000 in 2003/2004 before deteriorating to the current high levels of almost R190 000 (meaning that R190 000 capital in conjunction with one unit of labour is required for production) (SARB 2013). This trend clearly highlights that employers are replacing one production factor, namely labour, with another production factor, namely capital. Should this trend continue, unemployment levels will remain high and no relief will be available for vulnerable consumers. The current labour and other legislation should be evaluated to determine how employers could be supported to revert to employing more people and using less capital in the production process.

Similar results to the Genworth studies were obtained by the Consumer Financial Vulnerability Index (CFVI) constructed by the FinMark study in 2009 (Van Aardt & Moshoeu 2009), indicating that financial vulnerability differs depending on employment status. The influence of employment on the levels of financial vulnerability is evident in table 3.3.

TABLE 3.3

FINANCIAL VULNERABILITY BY EMPLOYMENT STATUS

Employment status	Income vulnerability	Saving vulnerability	Expenditure vulnerability	Debt servicing vulnerability	CFVI
Employed full-time	4.45	4.68	5.68	4.34	4.65
Employed part-time	6.48	6.65	6.41	4.20	5.65
Self-employed full-time	6.38	5.63	4.91	4.42	5.36
Self-employed part-time	3.80	5.35	6.84	4.46	4.29
Unemployed	6.24	5.45	5.67	4.82	5.58
Not economically active	5.97	4.96	5.04	3.88	4.97
Total	**5.64**	**5.74**	**5.54**	**4.37**	**5.16**

(Van Aardt & Moshoeu 2009)

It is clear from table 3.3 that especially consumers employed full-time and those self-employed part-time (who are often part of a double-income household) experience the lowest level of income vulnerability, while high levels of income vulnerability are experienced by people who are employed part-time, those who are self-employed full-time, the unemployed, and those who are not economically active. These groups are more exposed to the full impact of the current economic recession. Many business owners (self-employed full-time), for instance, experience first-hand the impact of contracting markets. At the time of the survey in 2009, as the world as well as South Africa experienced an economic recession, those who were self-employed, the unemployed, as well as the not economically active experienced the highest level of income vulnerability, also due to the uncertain employment market conditions accruing from the volatile economic situation. An indication of the severity of this impact can be seen from statistics released by the South African Reserve Bank (2012) that showed a decline of 2.7% in real household consumption expenditure during the first quarter of 2009, while real total domestic demand declined by 0.4% and real gross domestic expenditure by 3.9%. The impact of the decline in household consumption expenditure was felt especially by companies producing and selling durable goods, where a real decline of 20.1% was experienced during the first quarter of 2009 (SARB 2013).

This high level of unemployment and the inability of the economy to create more jobs are two of the major causes of financial vulnerability of the South African population; unemployment is not conducive to poverty reduction and also creates additional strain on government to provide social wages (namely through social grants and extended public works programmes). These, in turn, will affect the disposable income of non-social wage earning consumers via the taxes needed by government to finance social wages. This may affect income tax paying consumers' financial vulnerability.

3.2.4 Consumer income

Following the dire international and domestic macroeconomic situation during 2008 to 2009, the effect on local employment was evident, as set out in the previous section. This translated into a large number of job losses and higher levels of unemployment, and also highlighted the replacement of labour with capital (namely machines) in the production process. All this resulted in pressure on consumer income, which increased levels of financial vulnerability. The state of affairs will now be explored in more detail.

Although the nominal gross disposable earnings of consumers have improved since 2007 (table 2.4), a vast number of consumers was subjected to job losses, as described in section 3.2.3. In terms of the different sources of household income, compensation of employees in nominal terms remained fairly consistent at about 56% of total household income from 2007 to 2009. Households' growing dependency on social benefits is evident in the increase in social benefits from 8.6% of total income in 2007 to 10.1% in 2009. In 2007, property income received by households (namely interest and dividends) comprised 13.5% of total household income, but this decreased to 9.9% in 2009 due to the negative impact of the recession on income received via the financial markets channel. Gross operating surplus or household income from business activities (including income from non-profit organisations) remained fairly consistent at around 16% of total income (SARB 2012).

Although business income as a percentage of total household income remained fairly stable from 2007 to 2009, from July 2007 to June 2008 12.1% more liquidations and 67.6% more insolvencies of individuals and partnerships were reported by Stats SA (2009a) compared to the period July 2006 to June 2007. The hard financial times for businesses and their inability to survive are also evident from the number of liquidations increasing from 3 284 during the period July 2007 to June 2008 compared to 3 819 for the period July 2008 to June 2009 (16.3% growth year-on-year). Households and partnerships were better able to manage their business-related problems, with an increase of only 16.3% in the number of insolvencies of individuals and partnerships during the period July 2008 to June 2009 compared to the increase of 67.6% for the previous period. Unfortunately, 3 524 individuals and partnerships were declared insolvent during the period July 2008 to June 2009, which created financial problems for a variety of consumers, resulting in severe financial vulnerability.

The combined impact of the insolvencies and the large number of consumers losing their jobs during the period under review could be some of the reasons for the increase in social benefits paid. According to the Reserve Bank (2012), social benefits amounting to R134 221 million were paid in 2007, R155 451 million in 2008 and R192 221 million in 2009. This includes various social grants paid to household members. According to the South African Social Security Agency (SASSA) (2010), the total number of grant beneficiaries gradually increased year-on-year from 11 983 141 in 2007 to 13 026 104 in 2009. Old age grants and child support grants comprised the majority of grants paid out over this period. Beneficiaries of old age grants increased from 2 195 018 in 2007 to 2 390 543 by 2010. Beneficiaries receiving child support grants increased from 8 362 975 in 2007 to 9 347 178 at the end of March 2009 (SASSA 2009; 2010; 2011).

The dependency on social grants as a source of income is also confirmed by the Finscope 2009 survey (FinMark Trust 2009), which reported that in 2009, 25% of adults received their primary income in the form of government social grants. The 2010 Finscope survey also reported this high level of grant dependency (FinMark Trust 2010), listing the loss of grant income as one of the factors creating the highest feeling of vulnerability among the Finscope participants. Considering that child grants amounted to R240 in 2009 and that the old age grant was R1 010, people dependent on these grants as their main source of income would not have any buffer against a loss of income as there would be very little, if any, income available to save at the end of a month.

Households receiving child support grants, care dependency grants and foster care grants are strongly dependent on such grants. This grant dependency may, however, bring about higher levels of financial vulnerability as they are only payable until the child (for whom the grant is paid) reaches the age of 18 years. These consumers might not have other sources of income, so losing the grant would have a negative effect on their ability to access income, which in turn would give rise to higher levels of financial vulnerability. This dependency on grants as a means of survival is confirmed by the FinScope study (FinMark Trust 2010). Respondents to the survey identified the loss of a grant as the biggest threat that could render them financially vulnerable.

A breakdown of the consumer financial vulnerability index (on a scale of 1 to 10) per source of income was also conducted during the FinMark study in 2009 and is reported in table 3.4.

TABLE 3.4

FINANCIAL VULNERABILITY BY SOURCE OF INCOME

Source of income	Income vulnerability	Saving vulnerability	Expenditure vulnerability	Debt servicing vulnerability	CFVI
No income	6.50	6.84	5.06	4.59	5.57
Wages/salaries	5.00	5.00	5.53	4.16	4.78
Pensions	6.18	6.53	5.10	4.38	5.37
Self-employed	5.79	5.54	5.81	4.41	5.04
Interest from investment	4.44	4.21	6.68	2.43	2.75
Social grants	7.16	7.50	6.06	5.10	6.41
Money from family and friends	6.83	6.69	7.89	4.86	5.75
Total	**5.64**	**5.74**	**5.54**	**4.37**	**5.16**

(Van Aardt & Moshoeu 2009)

The dependency on social grants and the resulting feeling of financial vulnerability are clear from ‘social grants’ as source of income, which shows the highest level of consumer financial vulnerability across the index and four sub-indices (Van Aardt & Moshoeu 2009). Stats SA (2011b) also reported on the high number of consumers with at least one member receiving a social grant in the ‘Living Conditions of Households in SA’ survey for 2008/2009 released in September 2011. In terms of the Living Conditions Survey, there was at least one member receiving a social grant in 42.2% of households in South Africa for the period. Limpopo had the highest number of such households, namely 59.2%, compared to the Western Cape with only 27.3% of households. More female-headed households (59.1%) with at least one member receiving a grant were also reported compared to 31.0% of male-headed households (Stats SA 2011b). However, it is important to recognise that while social grants can alleviate consumer financial vulnerability by providing consumers with a source of income (for example old age grants), in some instances social grants can also increase consumer financial vulnerability (for example child dependency grants) as the grant will only be paid until a certain age.

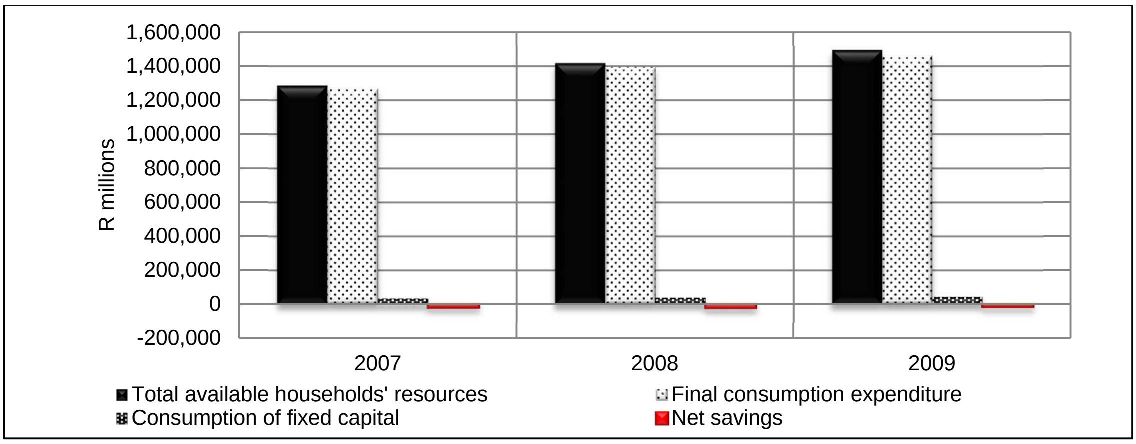
As previously mentioned, nominal consumer income increased over the time under review against an increase in the number of people losing their jobs. Unemployment, however, is not the only potential source of financial vulnerability. Although nominal gross disposable income increased by 8.7% from 2007 to 2008 and by 8.1% from 2008 to 2009, as reflected in table 2.4, in real terms disposable income increased by only 2.1% in 2008 and contracted by 1.3% in 2009 (SARB 2013). Thus, taking into account the effect of inflation, consumers were actually earning substantially less in 2009, clearly straining their ability to finance their consumption levels and resulting in higher levels of financial vulnerability.

3.2.5 Consumption expenditure

As consumers were experiencing pressure on their income in 2008 and 2009 because of the difficulties experienced via, among others, the international trade channel, it also became clear that consumers were pressurised in terms of maintaining their expenditure commitments. The negative effect of price increases, rising interest rates (prior to the recession) resulting in higher debt servicing costs, and job losses were also identified as factors placing pressure on expenditure commitments and thereby distinguishing financially vulnerable consumers from financially secure consumers in the Genworth surveys conducted from 2007 to 2010 (ECRI & PFRC 2008; PFRC 2008; 2009; 2010). This is also true for South African consumers. Based on table 2.4, figure 3.10 clearly indicates that South Africans were barely making ends meet and were not necessarily in a position to save but were utilising almost all their available resources to finance their consumption expenditure.

FIGURE 3.10

UTILISATION OF AVAILABLE RESOURCES FROM 2007 TO 2009



(SARB 2013)

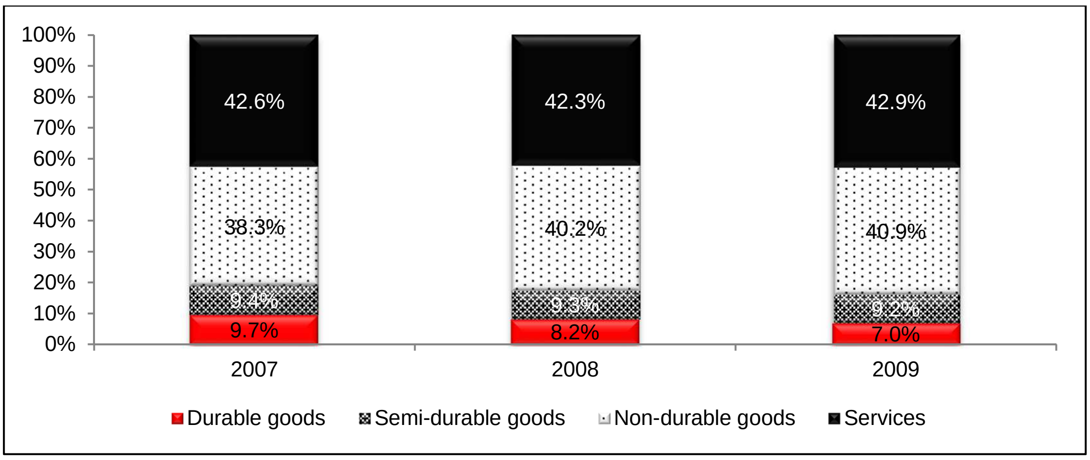
As illustrated in figure 3.10, the bulk of consumers' total available resources is utilised for consumption expenditure leaving very little, if any, resources available for saving. According to the South African Reserve Bank (2012), after taking into account households' consumption of fixed capital, households are often actually dissaving by having to take on additional credit. The continuous pressure experienced by households to maintain their consumption levels because of the contraction of disposable income is also evident in the decline in the ratio of final consumption expenditure by households to GDP. This ratio declined from 63.2 in 2006 to 60.7 in 2009 and was as low as 59.8 in 2011 (SARB 2012).

The dire circumstances for consumers are also evident in the slowdown in real consumption expenditure by households. As reported in table 2.4, household consumption expenditure increased in nominal terms over the period under review, but the same is not true in real terms. According to the Reserve Bank (SARB 2012), nominal final consumption expenditure increased by 10.1% and 4.9% respectively in 2008 and 2009. In real terms, however, it increased by only 2.2% in 2008 and contracted by 1.6% in 2009. Thus, as already mentioned, consumers actually purchased fewer units with the same amount of income.

The pressure experienced by consumers to maintain their expenditure commitments brought about by being either unable or reluctant to scale down, and therefore feeling expenditure-vulnerable, is also evident from the shift in consumers' spending patterns during the time under review. The composition of households' consumption expenditure is reflected in figure 3.11.

FIGURE 3.11

COMPOSITION OF HOUSEHOLD CONSUMPTION EXPENDITURE FROM 2007 TO 2009



(SARB 2012)

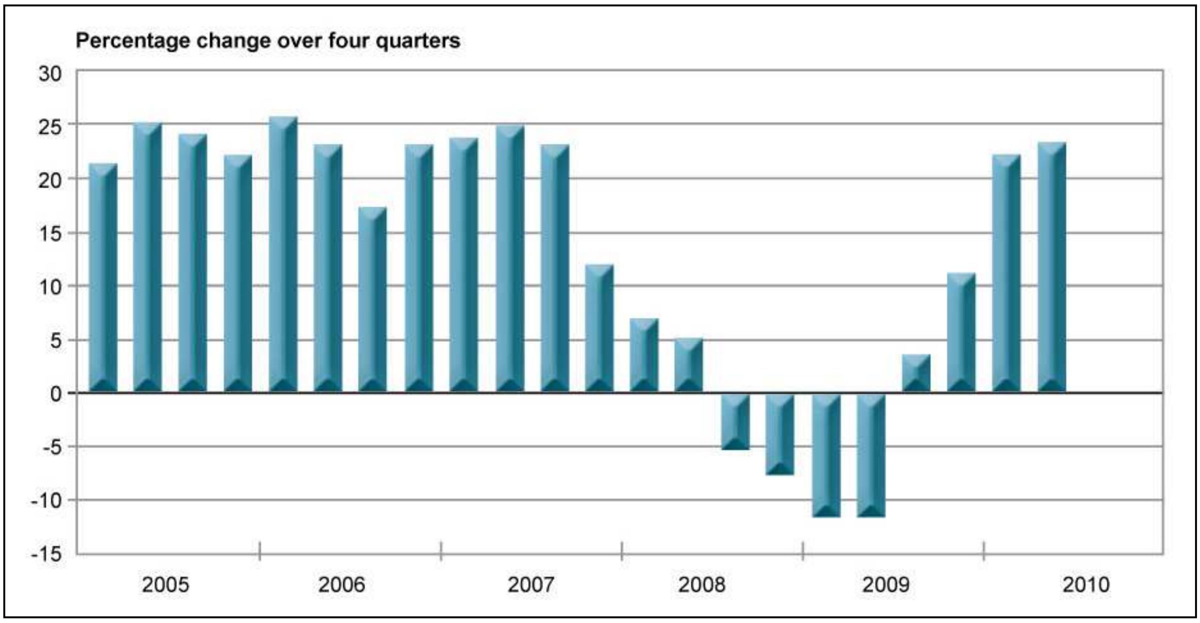
It is clear from figure 3.11 that households adjusted their spending habits in the period 2007 to 2009 specifically regarding durable goods. In 2007, 9.7% of households' total consumption consisted of the acquisition of 'durable goods', but for various reasons this decreased to 7.0% at the end of 2009. The SNA (2008) defines durable goods as items such as furniture, household appliances, motor vehicles, computers and related equipment, as well as digital cameras. Consumption expenditure on 'semi-durable goods' and 'services' both remained fairly stable at around 9% each over the said period. According to the SNA, 'semi-durable goods' refer to items such as clothing, footwear, household textiles and furnishings, motor vehicle tyres, parts and accessories, and recreational and entertainment goods. Consumption expenditure on services (namely household services, including domestic workers, medical and dental services, transport and communication services, security services and recreational, entertainment and educational services) remained fairly stable at around 43% of total consumption expenditure for the period 2007 to 2009. In 2009, consumption expenditure on 'non-durable goods' increased from 38.3% in 2007 to 40.9% of total consumption expenditure. According to the SNA, 'non-durable consumption expenditure' refers to expenditure on items such as food and beverages, fuel, electricity and water, consumer products, medical and pharmaceutical products, as well as petroleum products. In an attempt to maintain their level of consumption expenditure, consumers had to change their spending behaviour by replacing spending on durables with spending on more essential non-durables. By adjusting their spending composition, consumers succeed in reducing their financial vulnerability.

3.2.6 Household wealth

Because of pressure on their income, consumers struggled to maintain their consumption commitments and hence experienced pressure to maintain their saving, which is normally used to accumulate assets. Put differently, consumers' deteriorating income statement negatively affected their balance sheet, in other words, their net wealth position. The effect on consumers' net wealth (assets minus liabilities) will be discussed prior to the review of the different components of assets and liabilities and their unique contribution to financial vulnerability. The percentage change in the net wealth of the household sector changed considerably over the last few years as reflected in figure 3.12, and for the first part of 2009 the growth was negative in nominal terms. This would increase the overall feeling of financial vulnerability as consumers' wealth was quite drastically reduced while there were no guarantees that the situation would improve in the short term or that the pressure on their income stream would be reduced.

FIGURE 3.12

PERCENTAGE CHANGE IN NOMINAL HOUSEHOLD NET WEALTH FROM 2005 TO 2010



(SARB 2012)

The information provided in tables 2.2, 2.4 and 2.5 was used to calculate some financial ratios to gauge the state of consumer finances for the period 2007 to 2009. These results are reported in table 3.5. Table 3.5 includes additional ratios calculated by the Reserve Bank (SARB 2012) which provide further insight into the financial position of consumers.

TABLE 3.5

HOUSEHOLDS' LIQUIDITY AND SOLVENCY RATIOS: 2007 TO 2009

	2007	2008	2009
Current asset ratio (liquidity ratio)	4.58	3.98	4.49
Debt/Equity (net wealth) ratio (including durable consumer goods)	0.22	0.25	0.23
Debt/Asset ratio	0.18	0.20	0.19
Solvency ratio (asset / debt ratio)	5.56	5.02	5.38
Net saving by households to disposable income of households	-1.2	-1.2	-0.8
Household debt to disposable income of households	80.1	82.4	81.5
Household net wealth to disposable income of households	355.3	323.6	305.5
Debt-service cost to disposable income of households	10.5	12.4	9.7
Total household debt to final consumption expenditure	79.2	81.4	80.8

(Author's own calculations; SARB 2012)

As explained in chapter 2, the current asset ratio refers to households' ability to satisfy their financial obligations in the short-term and is calculated by dividing the sum of 'Assets with monetary institutions' and 'Other financial assets' by 'Other debt', as reflected in table 2.5. 'Tangible assets' (referring to 'Residential buildings' and 'Other tangible assets') as well as 'Interest in pension funds and long-term insurers' was excluded from the current asset calculation as this liquidity ratio measures the short-term ability of a household whilst the assets as mentioned are classified as long-term assets. Similarly, 'Mortgage advances' was excluded from the 'current asset ratio', as a mortgage is long-term in nature compared to 'Other debt', which will be repayable over a shorter period. The value of the current assets decreased from R1 890 billion in 2007 to R1 697 billion in 2008 before increasing to R1 962 billion in 2009. Over the same period, the 'Other debt' of households increased from R413 billion in 2007 to R437 billion in 2009 (SARB 2012). The 'current asset ratio' therefore declined from 4.58 in 2007 to 3.98 in 2008, suggesting liquidity pressure, before it recovered to 4.49 in 2009 (but still lower than in 2007). This means that households had fewer liquid assets in 2008 and 2009 with which they were able to repay their short-term liabilities compared to the situation in 2007, resulting in higher levels of financial vulnerability. The 'current asset ratio' would also differ among the various income groups, resulting in the lower-income groups being financially more vulnerable due to unequal income and asset distribution compared to the higher-income groups who have more resources and are thus financially less vulnerable.

As previously reported, net wealth is the residual remaining after deducting the value of all liabilities from the value of all assets. As very few households are in a position to acquire a house or car without financing such purchase with a loan or mortgage from a financial institution, one would expect to have debt reflected on the household balance sheet. It is, however, important to ensure that the 'debt to equity ratio' does not become too high, in which case the majority of the net worth of a household is financed, thus making the household very vulnerable to interest rate increases or other consumption shocks resulting in less funds to service the liabilities. For this calculation, the total debt (table 2.5) was divided by the net wealth (including durable consumer goods) and the results are reported in table 3.5. The 'debt to equity ratio' for the household sector remained fairly consistent from 2007 to 2009, namely around 0.22 in 2007 with an increase in 2008 to 0.25 due to the decrease in net wealth with debt not reduced in that period, but decreasing to 0.23 in 2009. This illustrates that approximately a fifth of the net wealth of households was financed.

The 'debt to net wealth ratio' correlates with the household 'debt to asset ratio'. The total household debt (mortgages and other loans) was divided by the value of the total assets of the household (including residential property). The 'debt to asset ratio' remained fairly consistent over the period 2007 to 2009, at around 0.2 for most of the period. What the 'debt to asset ratio' thus illustrates is that, on average, households still owe the bulk of the capital of their original acquisitions and are basically only paying the interest portions of their loans and mortgages.

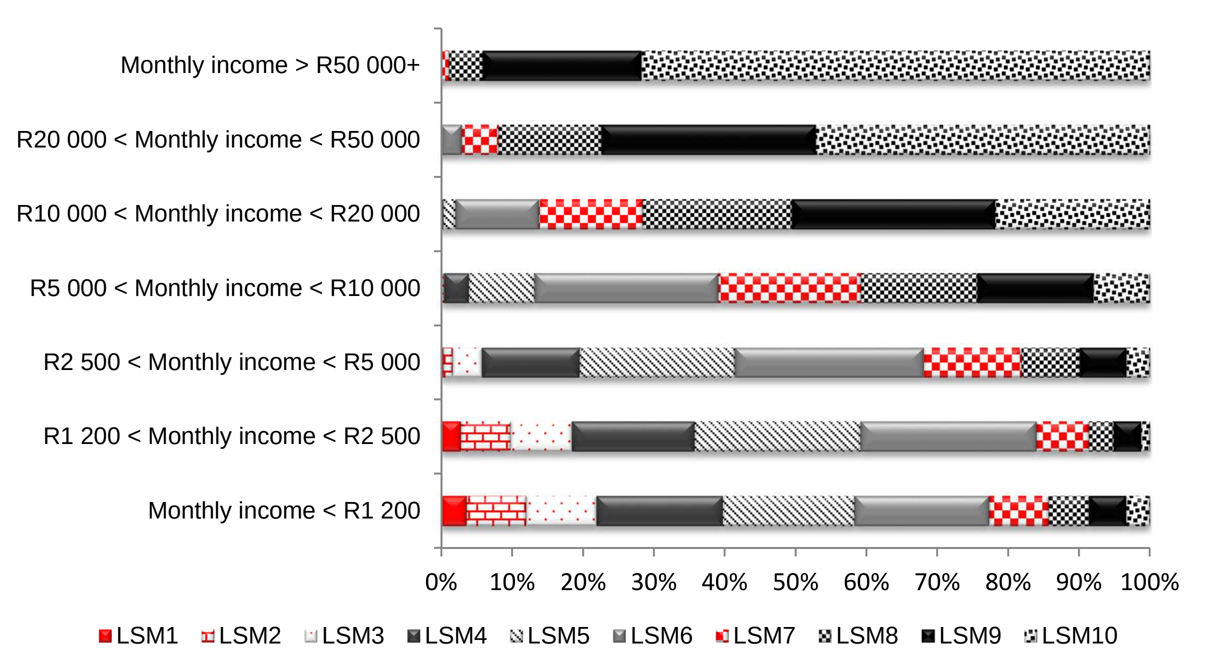
The 'solvency ratio' as calculated and reported in table 3.5 provides an indication of the extent to which the household would be able to meet all its liabilities should circumstances result in financial strain. Although a household's assets may be more than its liabilities, due to cash flow or other problems, it may be sequestrated. The 'solvency ratio' is therefore a reflection of the number of times a household's assets exceed its total debt liability. Households' 'solvency ratio' declined sharply in 2008 before recovering somewhat in 2009 (refer to table 3.5). The 'solvency ratio' is thus a clear indication that in 2009 households would have been able to realise more than five times the amount of money required to service their current debt, should the need arise.

From the 'net wealth to disposable income ratio' it is clear that the aggregate household's situation deteriorated sharply in 2008 and 2009 from 355.3% in 2007 to 305.5% in 2009. This can be attributed to the sharp decline in the value of households' holdings in retirement funds, as well as slower growth in the value of their residential assets. This could contribute to the feeling of becoming financially more vulnerable.

However, it is important to remember that the information provided refers to households in total as reported by the South African Reserve Bank, but should more balance sheet information become available per income group or other socio-demographic variables, a better understanding of the financial vulnerability of the sub-groups would assist in better understanding the dynamics. Some insight can be gained by reviewing the income bands per Living Standards Measure (LSM) categories as provided by the South African Advertising Research Foundation (SAARF 2010). Based on the information available, the LSM distribution at the end of 2010 is produced in figure 3.13.

FIGURE 3.13

INCOME BAND PER LSM CATEGORY



(SAARF 2010)

It is interesting to note from figure 3.13 that almost 40% of the people earning less than R1 200 per month are classified in categories 6 to 10 in terms of the Living Standard Measurement (LSM) scale, representing those consumers with higher living standards. In terms of the LSM categories, a score of 1 describes the consumers with the lowest living standards and a score of 10 those with the highest living standards. Classification in LSM categories 6 to 10 implies that, although these people are income-poor, they are relatively asset-rich. The assets referred to in the higher LSM categories would be items such as television sets, microwave ovens, fridges and not necessarily housing (SAARF 2010). These assets would also not necessarily produce income or appreciate in value; thus, this picture is slightly distorted because one cannot assume that these households own assets that could reduce their financial vulnerability. Most of such consumers were probably grant dependants; thus, the grant received is not necessarily utilised for consumption expenditure but in such a way that these consumers are able to acquire these assets. It may be that such consumers obtained these assets through transfers from other household members or benefactors that resulted in them being classified as relatively asset-rich although they were still below the poverty line in terms of income and thus remained financially vulnerable.

Consumers with a sound financial position and thus in a strong positive net wealth position would be financially less vulnerable than consumers breaking even or even in a negative net wealth position. Consumers having a high liquidity and high solvency ratios will manage to survive hard financial times making them financially less vulnerable compared to those consumers struggling with low liquidity and solvency ratios.

3.2.6.1 *Saving/assets*

Table 2.5 reported on the balance sheet composition of the household sector for the period 2007 to 2009, indicating that total assets comprised around 65% of financial assets, 25% of residential property and 11% of other non-financial assets (Author's own calculations; SARB 2012). Since residential property, pension funds and directly held securities were therefore the main contributors to consumer wealth, any decrease in the values of these assets could increase a consumer's feeling of financial vulnerability.

Looking at the performance of the biggest asset class, namely financial assets, consumers' investment in pension funds, long-term insurance products, stocks and bonds and other financial assets contributed more than 60% of total assets as reported in table 2.5. Thus, any negative fluctuations in these values would have a dramatic effect on consumer wealth, resulting in higher levels of consumer financial vulnerability. For the period under review, the value of other financial assets (for example stocks and bonds) decreased by 19% from 2007 to 2008 before it increased again by 21.5% in 2009. Interest in pension funds and long-term insurance remained fairly consistent over the period, increasing from R1 969 billion in 2007 to R2 126 billion in 2009 (SARB 2012). These fluctuations could have a very negative impact on consumer wealth, especially should a consumer have had to retire in 2008 amidst the downturn of the financial markets. This would result in consumers having far less than they had projected for their retirement, thus putting their financial future at risk. Allowing for increased medical costs after retirement, it is feasible to assume that these consumers were experiencing high levels of financial vulnerability during this period. Although the markets recovered in 2009, the uncertainty and potential losses could still be fresh in the minds of consumers as there were no guarantees that such a situation would not recur. Consumers would thus in all likelihood remain vulnerable for as long as they were exposed to such fluctuations without guaranteed funds or other mechanisms guaranteeing their retirement capital but with lower returns on investment.

This is especially true in circumstances where consumers were planning to supplement their income by realising assets earmarked for that specific purpose. Consumers experience high levels of financial vulnerability if their prospects for additional income appear fairly negative and their planned future consumption has to be reduced due to the lower levels of past saving.

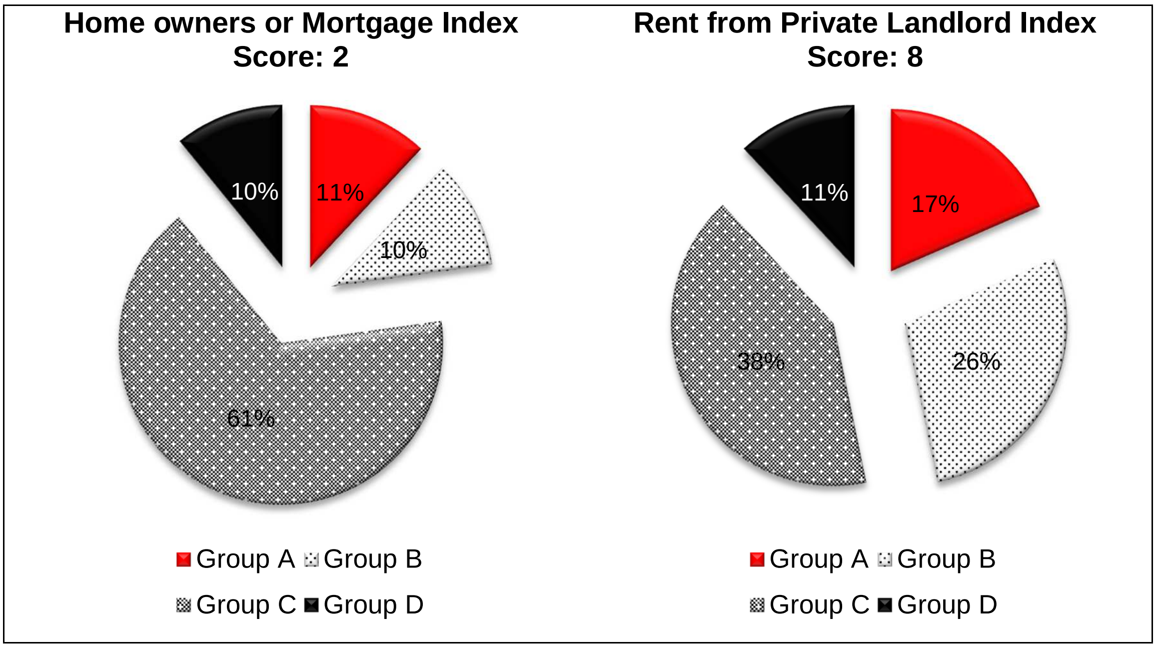
Focusing on the second biggest asset class, namely residential property, both housing tenure as well as growth in the value of this asset class could influence consumer financial vulnerability, as is evident from the Genworth study (ECRI & PFRC 2008). To gain more insight into the possible factors that could leave consumers feeling financially more vulnerable, the Genworth study explored the influence of housing tenure on financial vulnerability. Consumers of the various countries under review were classified in the four groups based on their perceptions of financial vulnerability:

- **Group A: 'Financially vulnerable'** is composed of financially vulnerable persons who were frequently in financial difficulties in the previous 12 months and who feel that their situation is unlikely to improve.
- **Group B: 'Strivers'** is a relatively small group that experienced financial difficulties fairly frequently in the previous 12 months but who now feel more confident that their situation may improve. These persons are neither financially vulnerable nor financially secure.
- **Group C: 'Circumspect'** comprises a large group that has not frequently experienced difficulties, if at all, and that expects their situation to remain the same. These individuals are again neither financially vulnerable nor financially secure.
- **Group D: 'Financially secure'** is made up of financially secure persons who have seldom or never experienced financial difficulties in the previous 12 months, and who expect their financial situation to improve. (ECRI & PFRC 2008).

Based on the abovementioned groupings, it is clear from figure 3.14 that housing tenure does seem to have an effect on financial vulnerability levels. For instance, 11% of French homeowners or mortgagors were categorised in Group A (Financially vulnerable) compared to 17% who rented (ECRI & PFRC 2008). On the other end of the scale, almost 10% of renters and homeowners were feeling financially secure.

FIGURE 3.14

FINANCIAL VULNERABILITY AND TYPE OF HOUSING TENURE



(ECRI & PFRC 2008)

With regard to Groups B and C, bigger differences regarding their perceived financial vulnerability are evident from figure 3.14, which shows that in Group B only 10% of homeowners were inclined to have financial difficulties compared to 26% of rentees, while in Group C 61% of homeowners tended to feel more secure in comparison to just below 40% of rentees. This indicates that housing tenure does in fact have an influence regarding the perceived levels of financial vulnerability of French consumers with home owners being financially less vulnerable than renters (ECRI & PFRC 2008; PFRC 2008; 2009; 2010).

Regarding Germany, the Genworth study found that housing tenure represented a relatively higher portion of renters being financially more vulnerable than those who owned a house or were still repaying their mortgage. In contrast, almost similar percentages of consumers renting or owning a house were reported as being financially secure. The same result was essentially obtained for Group D, allowing the researchers to conclude that housing tenure did not appear to influence the relative financial vulnerability of consumers in Germany (ECRI & PFRC 2008; PFRC 2008; 2009; 2010).

For consumers in Spain, the results were counterintuitive regarding housing tenure as the Genworth study revealed that those consumers renting rather than owning were financially less vulnerable. The study attributed this result to a smaller group of financially secure consumers among the homeowners, as the size of the financially vulnerable group differed by just one percentage point (ECRI & PFRC 2008; PFRC 2008; 2009; 2010).

In South Africa, the housing market has been fairly turbulent over the past few years as is evident from the various housing indices provided by several of the financial institutions and property analysts such as Absa Bank. Changes in the housing market are evident from the average nominal house prices as recorded by the Absa Home Loans Division's Housing Report. According to the ABSA House Price Index, three housings segments are identified, namely (i) the middle segment referring to houses between 80m^2 and 400m^2 valued less than R2.9 million in 2007 (R3.1 million in 2008 and 2009) (ii) the affordable segment with houses between 40m^2 and 79m^2 valued less than R400 000 in 2007 (R430 000 in 2008 and 2009) (iii) and the luxury segment (valued more than R2.9 million but less than R10.7 million in 2007 (R11.5 million in 2008 and 2009). The national average nominal house prices for the middle segment, the affordable segment and the luxury segment are reported in table 3.6 (Absa 2008; 2009; 2010).

TABLE 3.6

ABSA AVERAGE NOMINAL HOUSE PRICES

	2007	**2008**	**% change Y-on-Y**	**2009**	**% change Y-on-Y**
Middle segment	929 776	964 890	3.8%	965 244	0%
Affordable segment	257 289	283 572	10.2%	291 328	2.7%
Luxury segment	4 082 489	4 432 705	8.6%	4 463 521	0.7%

(Absa 2008; 2009; 2010)

Housing is normally seen as a shield against inflation but the lack of growth in housing value (apart from the affordable segment in 2008), is worrisome regarding the impact on the financial vulnerability of home owners. Little or no capital appreciation occurred according to the average nominal house prices reported by Absa; thus, consumers acquiring residential property as part of their wealth creation would need to hold on to these assets until the property market had recovered. After taking transfers and holding costs into account in 2009, consumers were in a neutral position regarding their housing portfolio, which is not good in terms of wealth creation with the aim of reducing financial vulnerability.

Consumers depending solely on residential property for financial security would be financially more vulnerable than those having a variety of assets. With residential property markets not providing returns in excess of inflation for the past few years, consumers received less than they expected when they sold their properties, resulting in higher levels of financial vulnerability. The same holds true regarding consumers owning financial assets only as they are very dependent on the current market value of the assets at the time when the assets are required. Should it be when the market collapses, consumers would be financially very vulnerable, because they would need to survive on less money than they expected. Consumers investing for the long-term with a diverse portfolio, however, would be financially less vulnerable.

3.2.6.2 *Debt servicing/liabilities*

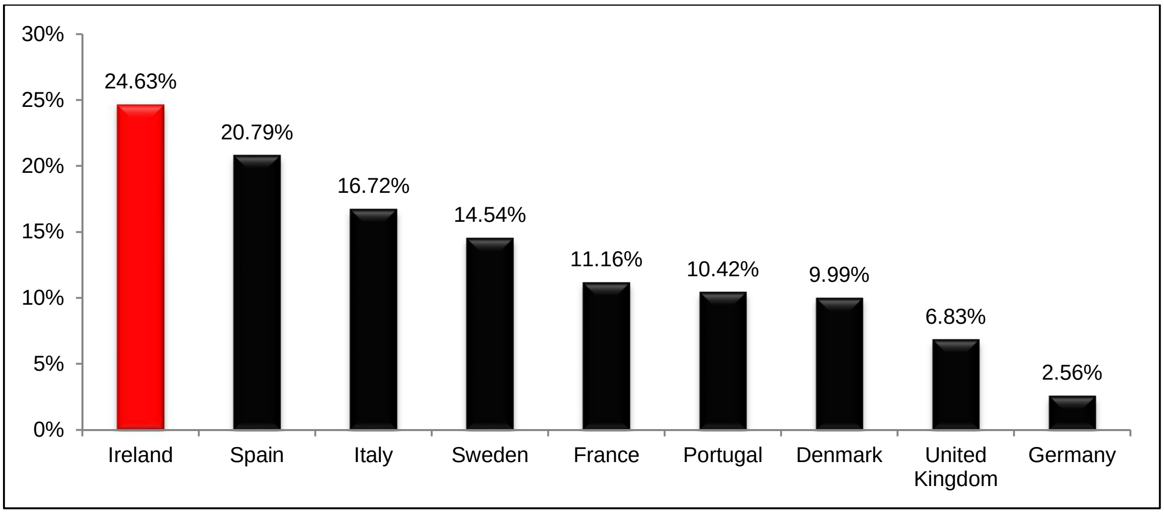
Not only were income, consumption and savings causes for concern during the period under review, the influence of consumer credit and associated debt servicing commitments should also be taken into account since, as discussed, consumers utilise credit to finance consumption in times of income shortages. With the pressure consumers were experiencing it seems likely that they were struggling to maintain their debt servicing commitments. A clear example of the effect of these factors on the financial vulnerability levels of consumers is evident from Spain's situation. The ratio of total consumer credit to final consumption expenditure was 132% in 2007, an increase of almost 46% since 2003. Consumers trapped in these situations had no other alternative but to cut back on consumption expenditure, resulting in a lack of economic growth and enhancing their financial vulnerability (ECRI & PFRC 2008; PFRC 2008; 2009; 2010).

The effect of consumer credit on consumer financial vulnerability is also evident from the Genworth studies conducted since 2007. In several European countries, the Genworth index reported higher perceived levels of financial vulnerability due to continuous increases in consumer borrowing linked to variable interest rates resulting in higher mortgage payments. In the United Kingdom, the variable interest rates resulted in mortgage repayments increasing significantly. A similar trend was evident in Norway, and this especially had a severe impact on the financial vulnerability levels of younger consumers with higher debt burdens. Originally, Ireland reported lower levels of financial vulnerability (-16 in 2007) but as the study was repeated, this rating decreased to 51 in 2008, to 63 in 2009 before improving to 52 in 2010 (ECRI & PFRC 2008; PFRC 2008; 2009; 2010). This change in the level of financial vulnerability could be ascribed to the fact that Ireland had the highest average mortgage growth rate among 10 European countries evaluated, as shown in figure 3.15.

Not only is mortgage debt a contributor to higher levels of financial vulnerability, an increase in the total debt of consumers across several European countries was also identified as one of the reasons for increased levels of financial vulnerability. Germany was identified as one of the countries with high levels of consumer financial vulnerability, which could be the result of the increase in the number of consumer insolvencies, although long-term mortgage credit increased. Italy reported the highest average consumer credit growth rate from 2001 to 2006 (16.4%), as shown in figure 3.15, while Spain reported an average consumer credit growth rate of 11.6% – both these countries had higher levels of consumer financial vulnerability in 2008 (ECRI & PFRC 2008).

FIGURE 3.15

AVERAGE MORTGAGE CREDIT GROWTH RATE: 2001 TO 2006



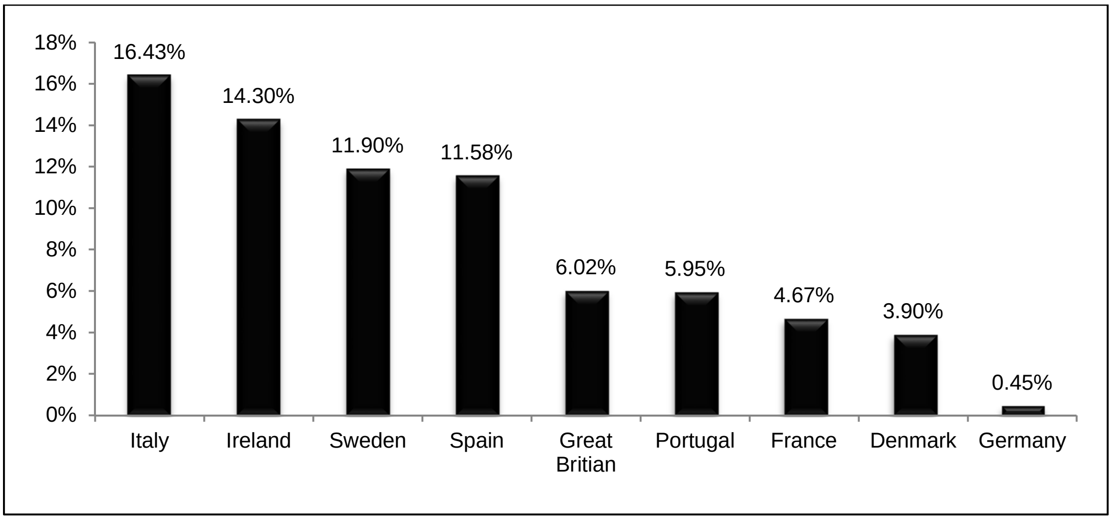
(ECRI & PFRC 2008)

In addition to the high growth rate in consumer credit (figure 3.16), Italy and Portugal reported the highest percentage of consumers experiencing problems in making ends meet. Although several countries had overall positive economic outlooks, increased credit still resulted in consumers being under payment stress when interest rates increased. The Genworth study also reported that notwithstanding lower consumer credit growth, consumer indebtedness had risen since 1990, resulting in Portugal's household debt to disposable income (124% in 2006) being the highest in

Europe. Thus, although the average rate since 2001 was not as high as in the other European countries, the build-up to 2001 resulted in high debt levels, which clearly explains why Portugal was one of the most financially vulnerable countries in Europe at the time of the study (ECRI & PFRC 2008).

FIGURE 3.16

AVERAGE GROWTH RATES OF CONSUMER CREDIT IN NINE EUROPEAN COUNTRIES: 2001 TO 2006

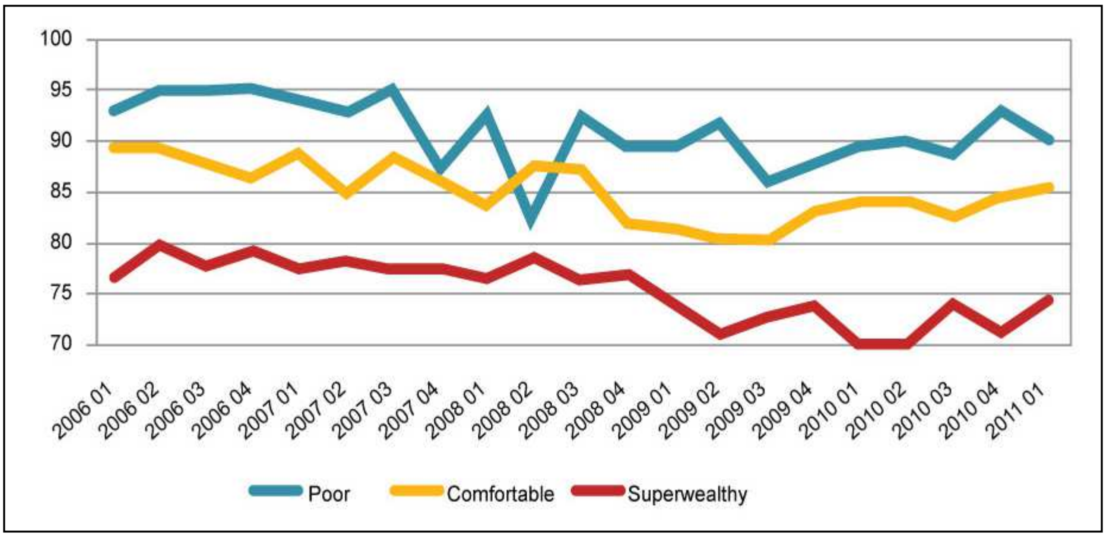


(ECRI & PFRC 2008)

In their June 2011 property newsletter, Lightstone (2011) highlighted the constraints on the housing market in South Africa with an average of fewer than 8 000 new loans being approved per quarter by the four major banks during 2009 compared to an average of more than 30 000 during 2006. This decrease in new loans as well as in the value of the accounts, was the result of various factors, such as the effect of the new National Credit Act that came into operation during mid-2007 while interest rates still increased, thus making affordability more difficult. The average loan to value ratios reflect the affordability problem across the different market segments (see figure 3.17). It is clear from the loan to value ratios that the poor market segment had less cash in hand for a deposit than the super wealthy market segment. The affordability of housing remained under strain for a large section of the population, as it seemed they did not have other sources to finance the deposit (Lightstone 2011). Given the potential lack of other sources, this might have forced consumers to rent, even though they may have been able to afford a monthly instalment on a house. This will hamper consumers' ability to obtain an asset that should increase in value over time (enhancing their net worth, since the outstanding mortgage should decrease over the same period) and hence could result in consumers remaining financially vulnerable.

FIGURE 3.17

AVERAGE MORTGAGE LOAN TO MARKET VALUE BY MARKET SEGMENT



(Lightstone 2011)

The ratio of total household credit to final consumption expenditure was also highlighted by the Genworth study as a possible indicator of higher levels of consumer financial vulnerability. This was especially true for Spanish consumers as their ratio amounted to 132%. This high ratio resulted in Spanish consumers feeling very vulnerable since the threat of a recession could result in their over-indebtedness becoming unmanageable, with consumption expenditure under severe strain (ECRI & PFRC 2008).

To determine the change in consumer credit in the South African context, information obtained from the National Credit Regulator will be analysed to determine the possible effect on the level of financial vulnerability of South African consumers. Compared to the fourth quarter of 2007, the total amount of reported debt owed to credit providers increased from R1.048 trillion to R1.125 trillion at the end of the second quarter of 2009 (more than 7%) (NCR 2009). Illustrated in table 3.7, the strong growth in the gross debtors book occurred in the first two quarters of 2008 after which the growth per month decreased to less than 1% in the fourth quarter of 2008 and first quarter of 2009 before negative growth occurred in the second quarter of 2009. As seen from the Genworth study (ECRI & PFRC 2008), an increase in consumer credit, if not managed properly, could result in over-indebtedness and insolvencies. Consumers utilising credit to substitute the loss of income to sustain their standard of living could experience high levels of financial vulnerability as they may not be in a position to service debt commitments.

TABLE 3.7

GROSS DEBTORS BOOK

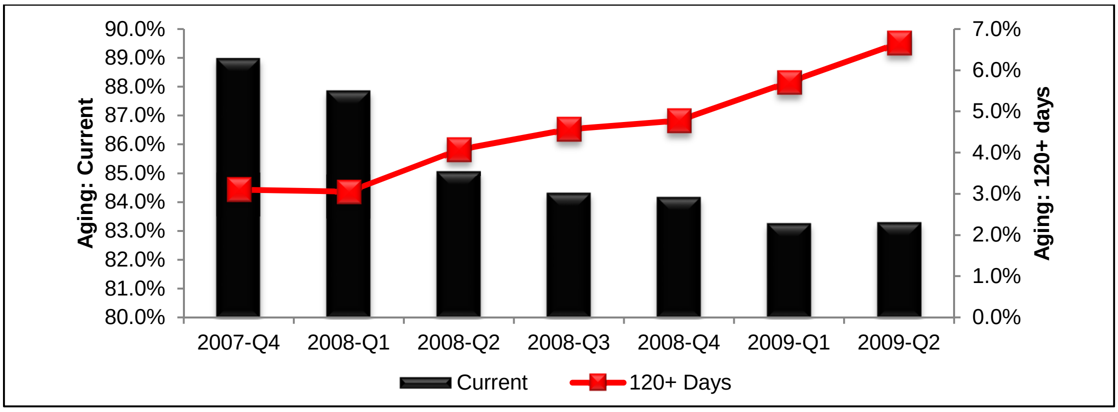
Quarter	R	Q-on-Q % change
2007-Q4	1 049 347 772 373	
2008-Q1	1 084 337 809 529	3.3
2008-Q2	1 116 706 568 533	3.0
2008-Q3	1 130 843 128 133	1.3
2008-Q4	1 134 225 095 441	0.3
2009-Q1	1 140 644 598 591	0.6
2009-Q2	1 125 101 995 050	-1.4

(NCR 2009)

Although the gross debtors book declined in the second quarter of 2009 as illustrated in table 3.7, it is evident from figure 3.18 that consumers had more difficulty in repaying their outstanding debt as the current portion of the debtors book decreased from 89.0% to 83.3% from 2007-Q4 to 2009-Q2 (NCR 2009). At the same time, the portion of the gross debtors book that was outstanding for 120 days and more, increased from 3.1% to 6.7%, highlighting the financial difficulties consumers were experiencing in servicing their debt. Consumers being unable to make ends meet are at risk of becoming over-indebted should preventative action not be taken and will continue to experience higher levels of consumer financial vulnerability should this situation prevail. Should consumers not be able to service their liabilities in the long-term, no additional credit will be available, other resources will be depleted and they will remain financially vulnerable.

FIGURE 3.18

AGING OF DEBTORS BOOK

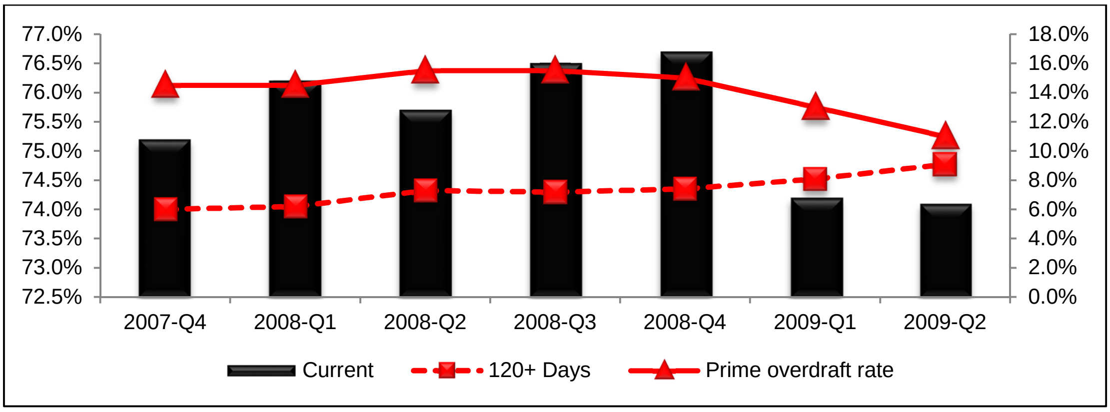


(NCR 2009)

The deterioration of the debtors book occurred across all types of credit, excluding credit facilities. In 2009-Q2, some 6.7% of mortgage repayments were longer than 120 days outstanding compared to 2% in 2007-Q4 (NCR 2009). Other credit agreements increased from 1.7% to 4% and unsecured credit from 14.3% to 16.3% over the period 2007-Q4 to 2009-Q2 (NCR 2009). This deterioration was not limited to the gross value of the debtors book but is also evident from the increased number of accounts that were outstanding for some time as illustrated in figure 3.19.

FIGURE 3.19

AGING PERIOD OF NUMBER OF ACCOUNTS AND PRIME OVERDRAFT RATE



(NCR 2009)

A total of 4.6% of all mortgage repayments was outstanding for more than 120 days in 2009-Q2 compared to 1.9% of the accounts in 2007-Q4 (figure 3.20). The number of credit agreement accounts that were outstanding for more than 120 days doubled from 2007-Q4 (4.7%) to 2009-Q2 (10.1%). It is evident from figure 3.20 that consumers were struggling to repay their debt, in particular mortgages and credit agreements (NCR 2009). Various factors may have contributed to this situation. As illustrated in figure 3.20, consumers' debt servicing position deteriorated over the same period that interest rates declined. Thus, although consumers should have been in a better financial position with excess cash to service their debt, they were unable to do so.

This could be due to some consumers losing their jobs during this period (see section 3.2.3) as well as increased inflation (see section 3.2.2), thus raising the cost of living, leaving consumers financially stressed and experiencing difficulties in making ends meet. The strain on consumers is also evident from the decrease in their ability to obtain credit over the period under review, as illustrated below in figures 3.20 and 3.21.

FIGURE 3.20

TOTAL CREDIT GRANTED (R-VALUE & NUMBER OF ACCOUNTS)

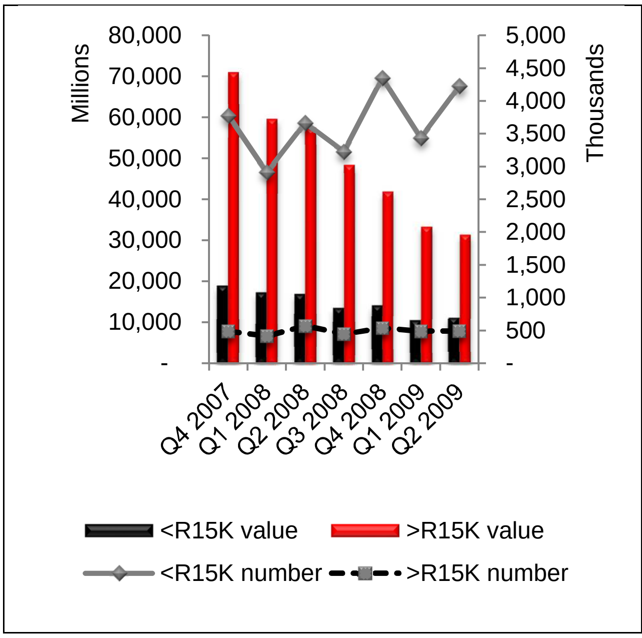
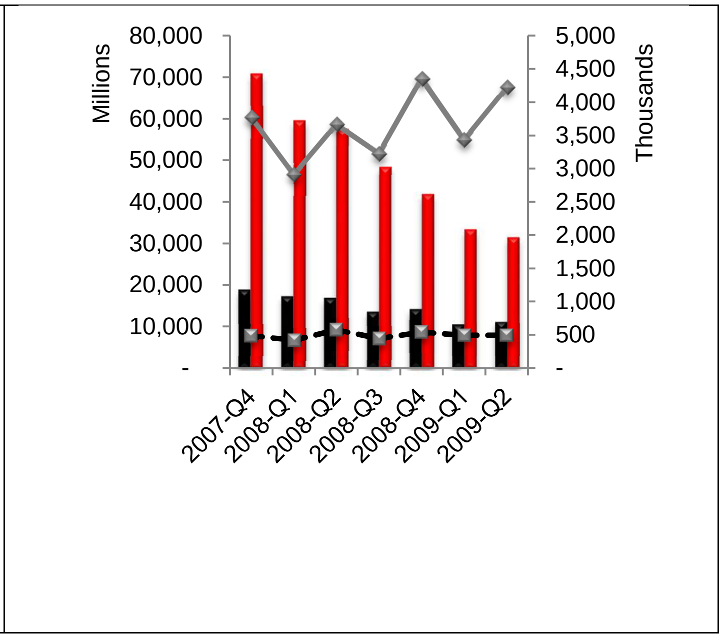


FIGURE 3.21

TOTAL MORTGAGES GRANTED (R-VALUE & NUMBER OF ACCOUNTS)



(NCR 2009)

Total credit granted per income category illustrated in figure 3.20 reflects that consumers earning less than R15 000 per month had more credit accounts compared to those earning more than R15 000 per month. The value of the credit agreements was, however, far larger for the higher-earning income group than for the lower-income group. It is clear from figure 3.21 that buying a house using mortgaged finance was largely limited to consumers earning more than R15 000 per month, with the majority of mortgages (90% and more) being awarded to that income category. The difficulty for consumers to obtain mortgages is also evident from figure 3.21 as the value of mortgages granted declined from R51 811 million in quarter 4 of 2007 to R17 175 million in quarter 2 of 2009. During the same period, the number of mortgages granted also declined from just below 80 000 000 mortgages in 2007-Q4 to only 32 764 000 in 2009-Q2 (NCR 2009).

Almost the same trend is visible with secured credit transactions. 'Secured credit' refers to pension-backed loans, insurance-backed loans, retail furniture accounts and vehicle accounts (NCR 2009). Consumers earning more than R15 000 per month were again the majority of recipients of secured credit for the acquisition of items such as cars and furniture. According to the National Credit Regulator (NCR 2009), almost 80% of this category of credit consists of motor vehicle finance. The value of the credit obtained was also higher for higher-earning consumers than for lower-earning consumers. There was also a decline in the value as well as the number of credit agreements for all income segments, showing that consumers were under strain and unable to access the same levels of credit as in the past (figure 3.22).

According to the National Credit Regulator (NCR 2009), the total value of credit facilities approved to the higher-income groups (earning more than R15 000 per month) declined from R4 530 million in the fourth quarter of 2007 to R2 867 million in the second quarter of 2009, although the number of credit facilities remained fairly consistent over the period (202 788 in the fourth quarter of 2007 and 223 346 in the second quarter of 2009) (figure 3.23). Although the value of the credit facilities granted to the lower-income group decreased during the period in question, in total it remained fairly consistent from 2007-Q4 (R3 511 million) to 2009-Q2 (R3 384 million). However, the number of credit facilities granted to the lower income categories increased over the period from 1 436 840 in 2007-Q4 to 2 553 720 in 2009-Q2. The average amount of a credit facility granted thus decreased from around R22 000 at the end of 2007 to around R12 000 in the middle of 2009, highlighting the constraints on the higher-income group to obtain larger credit facilities. For the lower-income category, the average amount of credit facilities also declined over the same period from approximately R2 500 per facility to only R1 300 in 2009, although they were able to obtain more credit facilities.

FIGURE 3.22

TOTAL SECURED CREDIT GRANTED (R-VALUE & NUMBER OF ACCOUNTS)

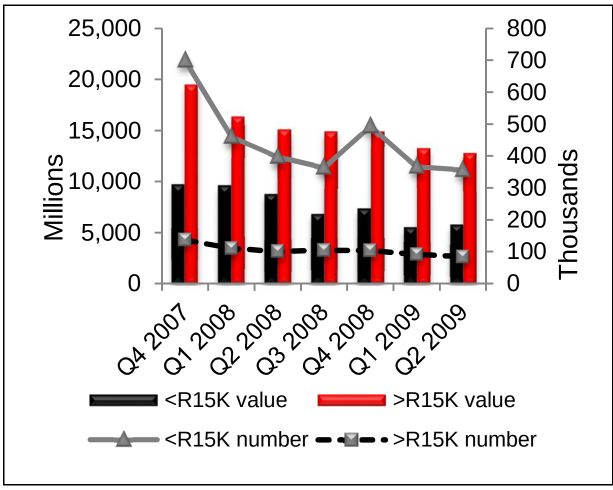
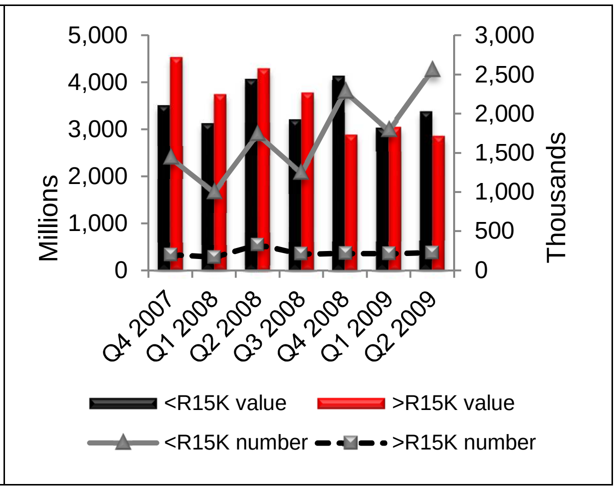


FIGURE 3.23

TOTAL CREDIT FACILITIES GRANTED (R-VALUE & NUMBER OF ACCOUNTS)

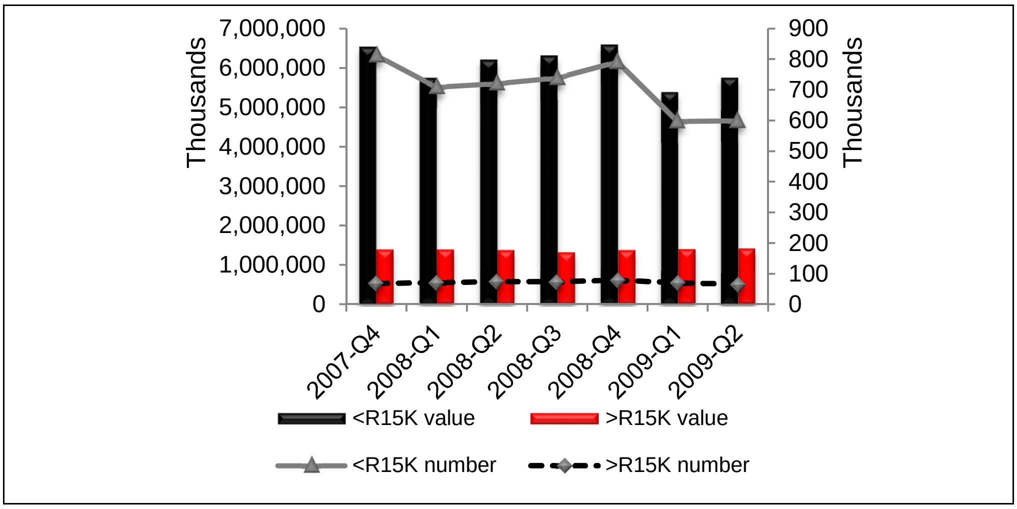


(NCR 2009)

Unsecured credit transactions include all transactions in respect of which the lender does not have any security, excluding credit facilities and short-term credit (NCR 2009). Consumers earning less than R15 000 per month are the main users of unsecured credit as the total value of the unsecured transactions for this income group amounted to R5 748 million compared to R1 421 million for the higher-income groups for the second quarter in 2009 (figure 3.25). The total value of unsecured credit declined for the lower-income group from R6 529 million in the fourth quarter of 2007 to R5 748 million in the second quarter in 2009. In contrast to the lower-income group, the amount of unsecured credit granted to the higher-income group increased from 2007-Q4 (R1 340 million) to 2009-Q2 (R1 421 million). The number of transactions also declined for the lower income group from 811 911 transactions in the fourth quarter of 2007 to 598 207 in the second quarter of 2009 (NCR 2009). This decrease could be attributed to the implementation of the National Credit Act (South Africa 2005), which enforces the affordability test for new credit far more stringently than was applied in the past. Because of the National Credit Act (South Africa 2005), fewer people would qualify for new credit, resulting in the decreased number of transactions. The number of transactions for the higher-income group remained fairly constant over this period, decreasing slightly from 68 304 to 65 542. The average credit transaction amount increased from R20 489 to R21 681 for consumers earning more than R15 000 per month. The average amount of unsecured credit agreements for the lower-income earners increased by almost 20% over the period 2007-Q4 to 2009-Q2 from R8 042 to R9 610 (NCR 2009). As with the impact of the new National Credit Act on the lower-income group, the Act (South Africa 2005) also resulted in more stringent lending requirements for the higher-income groups, with fewer transactions being approved. In addition, the financial institutions also revised their lending criteria to ensure risk minimisation as a result of the international credit crisis; thus, although the higher-income groups may have been able to honour their monthly instalments, financial institutions were often not prepared to take the risk of taking on possible medium to high risk clients. Not being able to access credit would result in consumers feeling financially vulnerable, since they would not necessarily have other resources to fall back on to help them through tough times or to provide short-term bridging of consumption expenditure while they await possible new income opportunities.

FIGURE 3.24

TOTAL UNSECURED CREDIT FACILITIES GRANTED (R-VALUE & NUMBER OF ACCOUNTS)

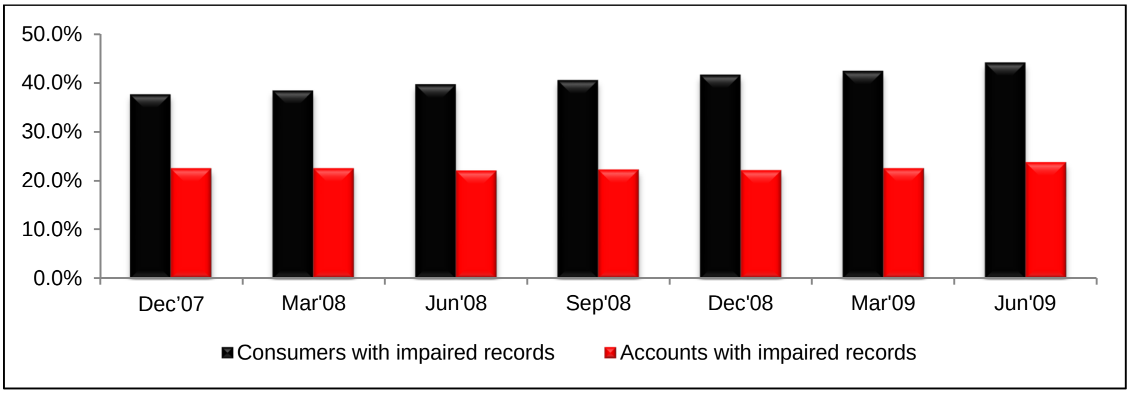


(NCR 2009)

It is clear from the changes in the value of credit as well as the number of transactions granted across all the categories that consumers from all income categories had difficulty in obtaining new credit facilities during the period 2007 to 2009 (NCR 2009). In most situations, the credit transactions decreased but the amount of credit increased, indicating that already indebted consumers had to increase their credit levels in order to finance their living expenses and acquisitions, and there were not necessarily many more new entrants into the credit markets. The difficulty that consumers experienced in making ends meet is also evident from the increase in the number of civil summonses issued for outstanding debt over this period. In addition, evidence of consumers being unable to service their debt is clear from a variety of other sources. According to Stats SA (2007; 2008; 2009a) 285 364 civil summonses were issued for outstanding debt in the fourth quarter of 2007. For all the quarters during 2008 approximately 300 000 civil summonses were issued for outstanding debt. This figure increased to almost 325 000 for both the first and second quarter of 2009. Fortunately, the number of civil judgments decreased from 190 000 in the fourth quarter of 2007 to as little as 159 000 in the fourth quarter of 2008 but it increased again to 174 000 in the second quarter of 2009 (Stats SA 2007; 2008; 2009a). This consumer hardship is also reflected in the number of credit-active consumers with impaired records, as reported by the National Credit Regulator (NCR 2009) and reflected in figure 3.25.

FIGURE 3.25

ACCOUNTS WITH IMPAIRED RECORDS



(NCR 2010)

According to the National Credit Regulator (NCR 2010), 37.6% of credit-active consumers had impaired records in December 2007, which deteriorated to 44.1% of credit-active consumers by June 2009 (figure 3.25). In figures, this translates into 6.45 million impaired records as at December 2007 (from 17.12 million credit-active consumers) increasing to 7.85 million by June 2009 (out of 17.79 million). The situation regarding the number of impaired consumer accounts for the period is reflected in figure 3.25, from which it appears that the number of impaired accounts increased from 22.5% in 2007-Q4 to 24.7% in 2009-Q2. It is also evident from figure 3.2 that the number of credit-active consumers with impaired records increased more than the number of accounts, consequently more credit-active customers were in default (NCR 2010).

The trend of increased unsecured credit led to higher levels of financial vulnerability in 2009, as there was no supporting asset that could be sold when experiencing financial hardship. Consumers using debt to finance consumption expenditure would be very vulnerable because they would have to repay the debt in the future and may not always have sufficient income to service the debt, due to unemployment or even illness. Consumers applying sound financial management principles, living within their means and not utilising debt for consumption expenditure would be financially less vulnerable and possibly financially more secure, compared to those requiring debt to make ends meet. Although interest rates have remained fairly low over the past few years, many consumers are financially vulnerable towards an interest rate increase as they have large amounts outstanding on their mortgages. Should income not increase at the same or higher levels than inflation and interest rates, more consumers will be unable to service their debt, thereby placing them in the financially vulnerable category. The increasing number of consumers struggling to service their debt is also evident from the increase in both consumers and accounts with impaired records as reported by the National Credit Regulator, thus resulting in high levels of financial vulnerability.

3.2.7 CONCLUSION

The negative economic performance as reflected by the decline in real GDP growth during 2008 and 2009 had various consequences, influencing the level of income, consumption expenditure, saving and debt servicing. As mentioned and discussed earlier, the declining international demand led to a decline in domestic production, which in turn created excess production capacity. As businesses were unable to carry the remuneration costs of workers, an increase in unemployment resulted. According to the expanded definition of unemployment, the Quarterly Labour Force Survey shows the number of unemployed people in South Africa increased from 5.8 million in the fourth quarter of 2008 to 6.8 million in the fourth quarter of 2009, suggesting that the number of unemployed increased by 1.1 million people since the beginning of the economic recession in the fourth quarter of 2008 (Stats SA 2011). Simultaneously, however, businesses also scaled down on investment expenditure, as less production capacity was required. This caused gross fixed capital formation to shrink substantially from a real growth rate of 13.3% in 2008 to -3.2% in 2009. The combination of these and other factors and the chain of events as discussed above, resulted in consumers becoming financially more insecure and more vulnerable. This is shown by their scaling down on consumption expenditure and borrowing, as reflected by, among other things, the total household debt to disposable income ratio that declined in nominal terms from 82.4% in 2008 to 81.5% in 2009 (SARB 2012), as well as the decline in both the amounts borrowed and the number of new credit accounts. As fewer consumers earned an income from labour and the amount of dividends received also reduces, this also affected their ability to save and repay debts. The debt service to disposable income ratio as calculated using figures compiled from the national accounts (such as the disposable income of households), as represented in table 2.2, first increased but then declined from 12.4% in 2008 to 9.7% in 2009, whilst the number of consumers with impaired credit records increased from 6.6 million in the first quarter of 2008 to 8.2 million in the fourth quarter of 2009 (NCR 2011). These are all indications of consumer financial vulnerability experienced during the economic recession.

In section 3.2, the international trade channel was used to identify the ways in which macroeconomic events affect and influence consumers' financial vulnerability. Understandably, the international trade channel is not the only channel by which consumers can become financially vulnerable. Other variables also play an important role in affecting consumer financial vulnerability. Such socioeconomic factors will be discussed in section 3.3.

3.3 DEVELOPMENT FACTORS INFLUENCING CONSUMER FINANCIAL VULNERABILITY

A prosperous international economy and progressing levels of international development would, among others, through the international trade channel result in more production opportunities, economic growth and development in the local economy, thereby enabling higher levels of job creation and income earnings, which in turn would enable improved health, higher levels of education, psychological health and eventually result in lower levels of financial vulnerability. In contrast, a stagnant or declining world economy would, through the international trade-, currency- and financial market channels, have a negative effect on local economic growth and may even increase unemployment, giving rise to lower levels of real consumer income and unaffordable consumption expenditure commitments in an environment where some members of the household are either HIV-positive, unemployed, or ill, or have little or no education, with a strong external locus of control. These consumers would in all likelihood become financially vulnerable.

Other factors described in section 1.4 that could influence consumers' feelings towards their financial position could be classified as socioeconomic factors. Section 3.3 will therefore explore how socioeconomic factors such as the size and age distribution of the population, income inequality, education and health could result in consumers feeling financially vulnerable. For that purpose, the Human Development Index (HDI), as developed by the United Nations Development Programme (UNDP), will firstly be explored, as illustrated in figure 1.6 but repeated in figure 3.26 for convenience.

FIGURE 3.26

CONSUMER FINANCIAL VULNERABILITY CHAIN BASED ON DEVELOPMENT FACTORS

Development factors	**Potential influence of development factors on consumer financial vulnerability**		**Discussed in section:**
	Conducive to low levels	Conducive to high levels	
Living standards	Income equality	Income inequality	section 3.3.2
Educational attainment	High levels of educational attainment	Low levels of educational attainment	section 3.3.3
Health	Good health	Bad health	section 3.3.4
Geographical location	Urban	Rural	section 3.3.5
Household structure and support	Two earners	One earner	section 3.3.6
Gender	Male	Female	section 3.3.7

(Source: Author's own compilation)

The Human Development Index provides a set of four indicators in three dimensions to compare different countries in terms of the socioeconomic environment that could result in different levels of consumer financial vulnerability among the countries (UNDP 2010). As discussed in section 3.2, economic policies, such as fiscal and monetary policies, could be utilised to reduce/increase financial vulnerability, given the macroeconomic events. An example in this regard is the utilisation of social grants as a means of ensuring that there is more income distribution, resulting in the poor becoming financially less vulnerable. However, this could result in the middle class becoming financially more vulnerable as they have to pay higher taxes to finance the social grants. It is thus evident that variables other than those discussed in the macroeconomic channel (international trade was used as an example) could also play a role in affecting consumer financial vulnerability. Encapsulated in the central theme, the United Nations originally reported on the Human Development Index as: “People are the real wealth of a nation” (UNDP 2010). The success or failure of unlocking human wealth would in this context also have a bearing on consumer financial vulnerability, and this will become more evident in this section. However, before turning to such analysis, it is necessary to briefly take account of the historical change in terms of how consumers individually, and collectively, think of caring for themselves financially before and after retirement.

According to Caldwell (2006), ‘primitive’ or ‘traditional’ societies believed that a large family was a form of wealth as children have limited needs other than food and are taken care of by everyone in the community. Children were thus seen as a form of insurance for the older generation in that they would be able to provide for the older generation in their old age. In respect of agriculture, in such societies the elders controlled property rights and retained control and power. Land formed part of the communal property and the aim of all activities of the members of the community was to provide for all those belonging in the community, thus no individual was able to sell the land for his/her own benefit or security. Everything generated by either the agricultural or hunting activities of the elders was for the benefit of the community. Children were expected to participate in the communal activities, depending on their ages and abilities. It was a common belief that children increased a parent’s wealth and provided care and security in old age. The community in total was responsible for the wellbeing of everyone, thus the older generation pooled all the resources and these were distributed to the community as the need arose and in so doing wealth was transferred from the old to the young (Lee 2007).

With the progression of the economy to an industrialised state, men continued to work until much older (in 1900, 74 was the retirement age for males), but this has changed dramatically over the second half of the twentieth century. Not only did the retirement age decrease, but children became more educated. Education had a major impact on the transformation from a traditional society to a developed society. As some of the members of the traditional society became educated, the traditional society was exposed to a diversification of income (no longer being solely dependent on agricultural income only) as well as a broader range of opportunities in a town or city compared to the limited exposure in a rural area. The younger generation experienced feelings of personal value and expectations at the expense of society as they were able to generate their own income and make their own financial decisions. Parents of educated children now expected the children to subsidise them (not necessarily society any longer) with income and help in times of need and old age. The new generation realised the benefits of having fewer but better educated children (Caldwell 2006; Lee 2007).

The above historical changes had a pronounced influence on the way consumers perceived their vulnerability and provided for their security. The following section shows that the above factors are currently still relevant, but affect consumer financial vulnerability in a totally different way as a result of, among others, economic advancements.

3.3.1 Human development index

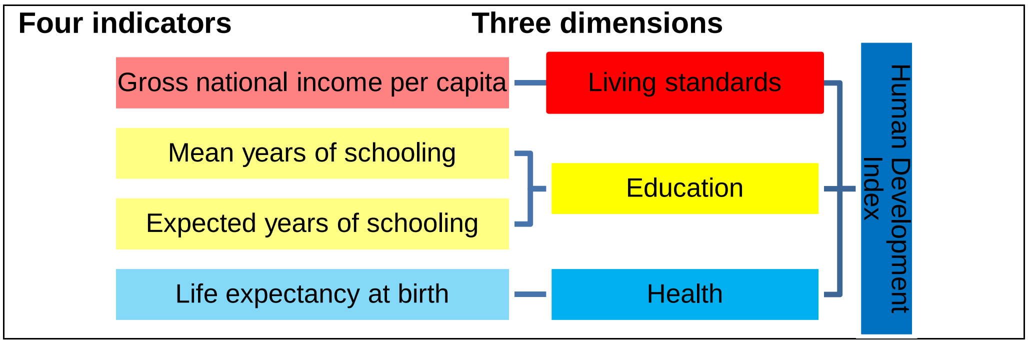
Although the Human Development Index has been criticised since its development in 1990, the United Nations has continued to emphasise that a country's success or consumers' wellbeing is not influenced by money alone (as per the discussion in section 3.2.1) (UNDP 2010). Although resources are necessary to finance progress, it is also important to determine whether consumers can lead long and healthy lives, whether they have the opportunity to be educated and whether they enjoy a decent standard of living (UNDP 2010). As a broader measurement of development focusing not only on income, the Human Development Index was developed in 1990, defining human development as follows:

Human development ... brings together the production and distribution of commodities and the expansion and use of human capabilities. It also focuses on choices – on what people should have, be and do to be able to ensure their own livelihood. Human development is, moreover, concerned not only with basic needs satisfaction but also with human development as a participatory and dynamic process. It applies equally to less developed and highly developed countries (UNDP 2010).

As was evident from the discussion explaining the way in which consumers can be affected via the international trade channel (see 3.2.1), economic growth (whether international or domestic) appears to play a pivotal role in alleviating consumer financial vulnerability. The same holds true for addressing consumer financial vulnerability via the development channel. In addition to labour market dynamics, monetary and fiscal policies as discussed in section 3.2, the World Bank (2001) supported human development by arguing that through income equality, population growth and education, economic growth could be influenced positively, thereby increasing the probability of alleviating poverty and reducing vulnerability. The Human Development Index and its subcomponents will now be explored to determine whether the policies and resources available to South Africans were able to ensure progress in health and education as well as a more equal distribution of income and better living conditions for all. The Human Development Index is a composite measure of health, education and income whereby development progress is measured on a far broader basis than income alone (see figure 3.27). The Human Development Index ranks countries in different categories, namely 'Very high human development', 'High human development', 'Medium human development' and 'Low human development'. One hundred and eighty-seven countries across the world are classified in terms of the Human Development Index.

FIGURE 3.27

COMPONENTS OF THE HUMAN DEVELOPMENT INDEX

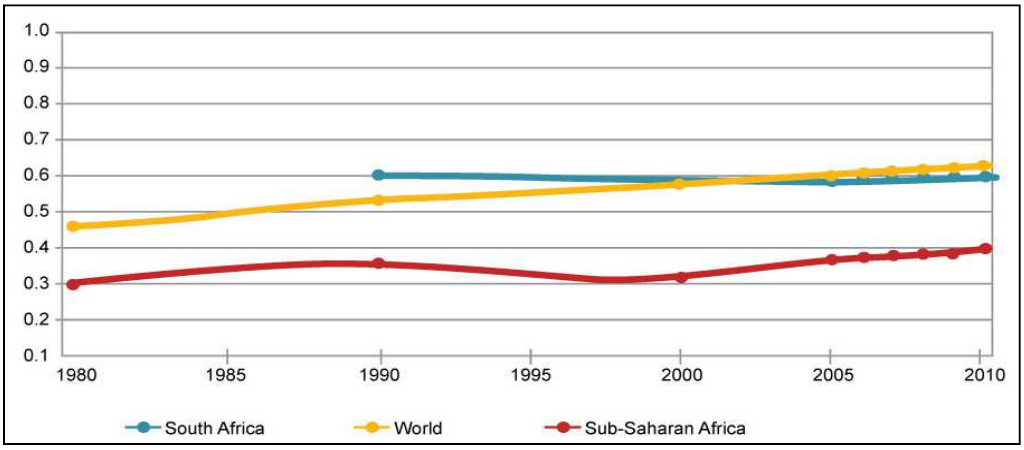


(UNDP 2010)

From first impressions formed from figure 3.28 it appears that South Africa stagnated in terms of the overall Human Development Index during 1990 to 2010 compared to an overall improvement by the rest of the World (UNDP 2010).

FIGURE 3.28

HUMAN DEVELOPMENT INDEX: 1990 TO 2010



(UNDP 2010)

However, South Africa’s position is still far better when compared to other sub-Saharan countries, although it is important for South Africa to ensure that human development remains a significant focus area of all policies, initiatives and budgeting processes so that it does not fall to the level of the rest of sub-Saharan countries. South Africa should also revisit some of its policies of the past 20 years, because these policies have not improved the health, education and standard of living for most South Africans to a level at which it can limit the impact of negative events on consumer financial vulnerability. The financial vulnerability of the residents of South Africa will not decrease if these areas of concern are not addressed.

3.3.2 **Living standards**

The ‘standard of living’ as measured by the ‘gross national income (GNI) per capita’ and calculated via the national accounts of South Africa, is one of the dimensions of the Human Development Index. The World Bank reported huge differences in the gross national income per capita among the countries measured during 2009 (2012). In 2009, Norway had the highest gross national income per capita, namely \$83 680 compared to the Democratic Republic of the Congo with the lowest national income per capita of only \$170, with South Africa’s gross national income decreasing slightly from \$5 860 in 2008 to \$5 730 in 2009 (UNDP 2012). Table 3.8 compares the differences in the gross national income between the various countries, as well as whether progress has been made in terms of living conditions. According to the first dimension of the Human Development Index, namely progress in living standards, South Africa did not perform very well, showing that the country’s consumers did not experience a dramatic increase in their living standards (see table 3.8).

TABLE 3.8

PROGRESS IN LIVING STANDARDS: 1980 TO 2010

HDI ranking	Country	1980	1985	1990	1995	2000	2005	2006	2007	2008	2009	2010
GENERAL RANKING												
..	Very high human development	0.756	0.769	0.789	0.794	0.814	0.826	0.83	0.832	0.831	0.826	0.829
..	High human development	0.631	0.619	0.623	0.62	0.631	0.656	0.663	0.671	0.676	0.67	0.676
..	Medium human development	0.342	0.366	0.393	0.431	0.461	0.504	0.516	0.53	0.539	0.547	0.558
..	Low human development	0.338	0.328	0.333	0.332	0.341	0.364	0.373	0.379	0.383	0.387	0.392
COUNTRY SPECIFIC RANKING												
1	Norway	0.792	0.815	0.823	0.847	0.869	0.883	0.884	0.886	0.885	0.881	0.880
66	Russian Federation	..	..	..	0.624	0.634	0.68	0.691	0.704	0.711	0.699	0.706
84	Brazil	0.615	0.603	0.608	0.620	0.622	0.632	0.637	0.644	0.650	0.648	0.657
101	China	0.239	0.298	0.345	0.414	0.469	0.533	0.549	0.568	0.580	0.592	0.606
123	South Africa	0.634	0.625	0.622	0.615	0.617	0.635	0.641	0.645	0.649	0.646	0.649
134	India	0.314	0.336	0.359	0.383	0.41	0.448	0.459	0.471	0.475	0.486	0.499
187	Democratic Republic of the Congo	0.286	0.274	0.242	0.150	0.109	0.131	0.135	0.136	0.129	0.137	0.142

(UNDP 2012)

The living standard index of the ‘Very high human development’ countries improved by almost 10% between 1980 and 2010, whilst that of ‘High human development’ countries improved by 7.13%. The ‘Middle human development’ countries’ living standard index improved by as much as 63.16% and that of ‘Low human development’ countries by 15.98%. Of all the BRICS countries, China achieved the highest improvement rate of 153.56%, with the living standard index increasing from 0.239 in 1980 to 0.618 in 2010. The other BRICS countries did not achieve the same level of progress but it is important to note that they did not start from the same low base. South Africa succeeded in increasing the living standard index by only 2.37% over a period of 30 years, although it should be kept in mind that HIV had a significant impact on life expectancy, which is one of the pillars of the Human Development Index.

However, the gross national income per capita is not sufficient to determine the standard of living; it ignores, for instance, the unequal distribution of income. A country may portray a high level of income inequality, but at the same time the level of income of the very low income groups may have increased more than enough for such a group to maintain a decent standard of living. Conversely, a country may have a more equal distribution of income, but consumer income may be too low for a decent standard of living. Therefore, other factors such as the unemployment rate may also be used to complement the gross national income per capita.

For purposes of measuring consumer financial vulnerability as a collective, the level of income inequality thus becomes very important. Income inequality can be reflected in many ways; however, the Gini-coefficient is the most widely used. A Gini-score of 1 reflects total income inequality, whilst a score of 0 portrays total income equality. The Gini index for South Africa and the other BRICS-countries is reported in table 3.9, reflecting South Africa with the highest level of income inequality among all BRICS countries (SAIRR 2010; World Bank 2010 adapted). Although the South African government has made addressing income inequality via redistribution of income as well as job creation a national priority (ANC 2007; Patel 2010), they have not yet succeeded in eliminating the inequality.

TABLE 3.9

DISTRIBUTION OF INCOME OR CONSUMPTION (GINI INDEX)

Countries	Survey year	Gini index
South Africa	2008	0.65
Brazil	2007	0.55
Russia	2007	0.44
India	2004 – 2005	0.37
China	2005	0.42

(SAIRR 2010; World Bank 2010 adapted)

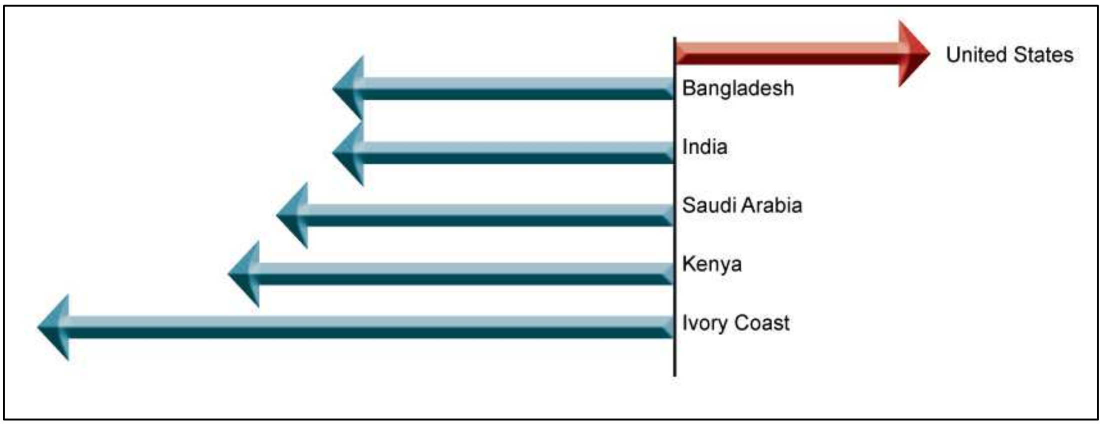
The inequality ranges from a relatively low level of 0.37 for India to South Africa having the highest level of inequality of 0.65, as reflected in table 3.9. This spread of inequality as shown by the Gini-coefficient illustrates that the distribution of income in South Africa is far from ideal, with the majority of the South African population receiving a very small portion of the total income, whilst a small percentage receives the majority of the income. A very high Gini-coefficient suggests that the majority of consumers should feel financially vulnerable as they receive little or no income, thereby affecting their ability to spend, save, incur debt and acquire assets. Under such circumstances, a country should record a score reflecting a high level of consumer financial vulnerability.

Given that South Africa's gross national income at market prices as reported in the national accounts of South Africa (table 2.2) increased from R2 182.6 billion in 2008 to R2 352.9 billion in 2009, it could have been expected that the living standards of South African consumers would have increased, making them financially less vulnerable, more so given that during the international economic recession the gross national income per capita remained virtually unchanged at R36 400 (SARB 2012). South Africa's problem stems mainly from the unequal distribution of income, as indicated by the Gini coefficient. This, in turn, makes it more difficult for consumers to improve their education and health status, which affects their level of human development.

The transfer of income from one segment of the population to another is an integral part of reducing poverty and income inequality. With the development of societies over time, the distribution of income changed, due to both societal changes and governmental influences. In this respect, Lee (2007) reviewed the changes in the institutional context of income transfers. Hunter-gatherers were living in small family clusters, supporting each other. Child rearing was done not only by parents but also by the community to enable other members of the community to provide for all. In comparison, agricultural communities were less likely to share across households with transfers mainly occurring in the immediate family. At retirement, the elderly were supported by transfers from their children and grandchildren. Over time, industrial nations allocated an increasing part of their GDP to age-targeted transfers, with transfers to the elderly dominating. Figure 3.29 shows the differences between the average age of receiving benefits and the average age of paying taxes for a number of developing countries as well as the United States of America.

FIGURE 3.29

DIRECTION OF PUBLIC SECTOR TRANSFERS: DIFFERENCE BETWEEN THE AVERAGE AGES OF RECEIVING PUBLIC SECTOR TRANSFERS AND OF PAYING TAXES

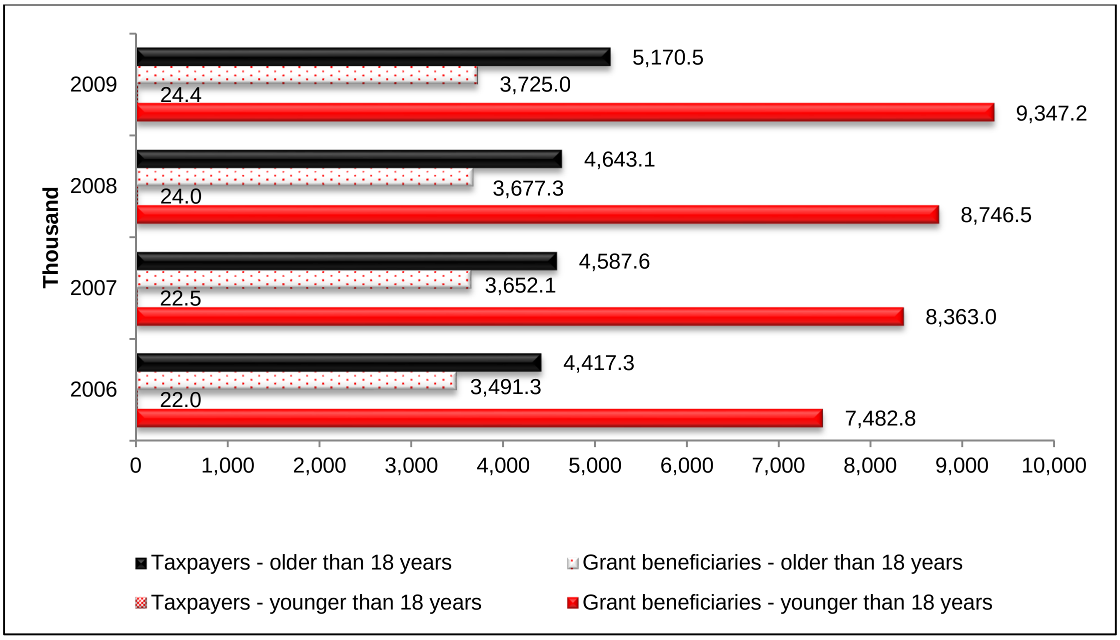


(Lee 2007)

As reflected in figure 3.29, the difference between the average age of receiving benefits and the average age of paying taxes is negative for all the developing countries (namely the blue arrows pointing left for Bangladesh, India, Saudi Arabia, Kenya and the Ivory Coast). With developing countries it is thus clear that older taxpayers are transferring resources down to children and are thus supporting the younger generation. In contrast, in the United States of America (namely a developed country), the transfer of resources is upwards to the elderly from the children; thus the children are supporting the elderly. It is evident from figure 3.30 that for South Africa, transfers are also happening downwards, with only 5.1 million taxpayers over the age of 18 paying taxes in 2009 compared to 9.3 million grant recipients under the age of 18 (SARS 2010; SASSA 2009).

FIGURE 3.30

AGES OF RECEIVING PUBLIC SECTOR TRANSFERS AND OF PAYING TAXES IN SOUTH AFRICA



(Compiled from SARS 2010; SASSA 2009)

As illustrated in figure 3.30, the majority of social grants are paid for the benefit of children younger than 18 years. Thus, although there was a dependency burden of 53.6% in 2010, with a small proportion of South Africans paying taxes (5.17 million taxpayers older than 18 in 2009) and providing for more than 9 million grant beneficiaries younger than 18, the income dependency burden may contribute to South African taxpayers becoming financially vulnerable if this dependency burden is to increase further.

Given the high level of inequality in South Africa and the small tax base, middle-income earners in particular are prone to higher levels of financial vulnerability compared to a situation in which a lower income dependency burden prevailed. As middle-income earners are subjected to pressures of higher tax liabilities, it reduces their personal income, placing strain on their abilities to finance their own consumption levels and debt servicing. However, these tax transfers reduce the financial vulnerability of the lower-income groups as their source of income is fairly secure and they should therefore be in a position to honour their expenditure commitments.

3.3.3 **Knowledge provides opportunities**

The importance of education in the development of consumers cannot be overemphasised. Progress from the agricultural era to the industrial era is indicative that education creates opportunities for a better future. People with access to education are exposed to a broader range of opportunities, a variety of sources of income and overall potential to a better life. Educated people are more aware of better health care possibilities, which are conducive to longer and more comfortable lives. Education also leads to higher wages and better employment opportunities (UNDP 2010). As explained in section 3.2.4, consumers with higher income levels should be less vulnerable as they should be in a position to sustain the pressure on their consumption commitments, and be able to save and to service their liabilities. Differences in educational attainment are therefore key factors that influence financial vulnerability. The effect of education on the levels of financial vulnerability is also evident from a FinMark study conducted in 2009 (Van Aardt & Moshoeu 2009). Financial vulnerability by educational status is reflected in table 3.10.

TABLE 3.10

FINANCIAL VULNERABILITY BY EDUCATIONAL STATUS

Educational status	**Income vulnerability**	**Saving vulnerability**	**Expenditure vulnerability**	**Debt servicing vulnerability**	**CFVI**
No education	7.71	7.74	7.11	5.28	6.91
Grade 1 to 7	5.76	6.01	5.48	4.44	5.21
Grade 8 to 12	5.58	5.76	5.58	4.40	5.15
First degree or diploma	5.34	5.33	5.27	4.10	4.87
Advanced degree/diploma	3.81	4.17	4.28	4.20	4.31
Total	**5.64**	**5.74**	**5.54**	**4.37**	**5.16**

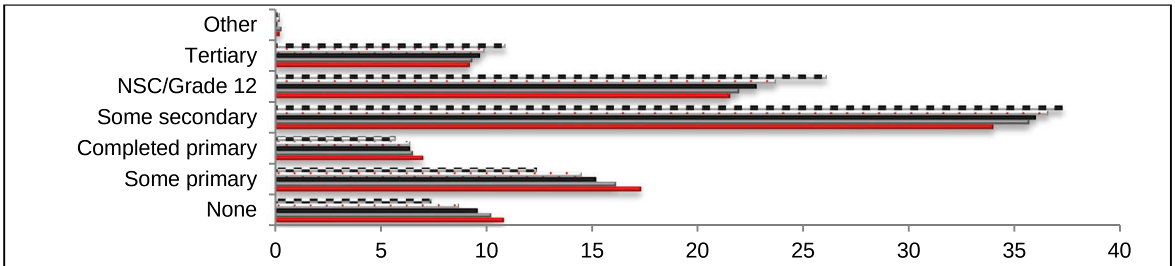
(Van Aardt & Moshoeu 2009)

It is evident from table 3.10 that there is an indirect relationship between educational attainment and consumer financial vulnerability – the higher the level of education, the lower the reported level of consumer financial vulnerability. This seems also true regarding income, saving and expenditure vulnerability, and to a lesser extent with regard to debt servicing vulnerability. The reasons for such differences include that a higher level of education enables individuals to be better informed on economic developments that may affect their finances, to obtain higher-paid employment, have more knowledge about saving instruments, as well as sufficient knowledge of financial planning to help them draw up and adhere to personal and/or household budgets. Higher education also enables individuals to ensure that their skills remain current so that they are better able to maintain their income throughout their lives.

The relevance of education to the process of development is not new, as reflected by research of Wils and Goujon in 1998. According to these researchers, developed or industrialised countries have higher education levels, achieve almost universal literacy, have an average of 10 to 13 completed years of schooling among adults as well as equal educational attainment for men and women at all school levels. In developing countries, for example countries in Africa, adult illiteracy rates were as high as 85% in 1990 and a large gender gap still existed in 1998 (Wils and Goujon 1998). The educational attainment of persons aged 20 years and older in South Africa has increased in recent years (see figure 3.31). However, the percentage of persons who can be regarded as functionally illiterate (less than Grade 7) still remained high at 19.7% in 2009 although it improved slightly from 2002 (Stats SA 2009a).

FIGURE 3.31

EDUCATIONAL ATTAINMENT OF PERSONS AGED 20 YEARS AND OLDER



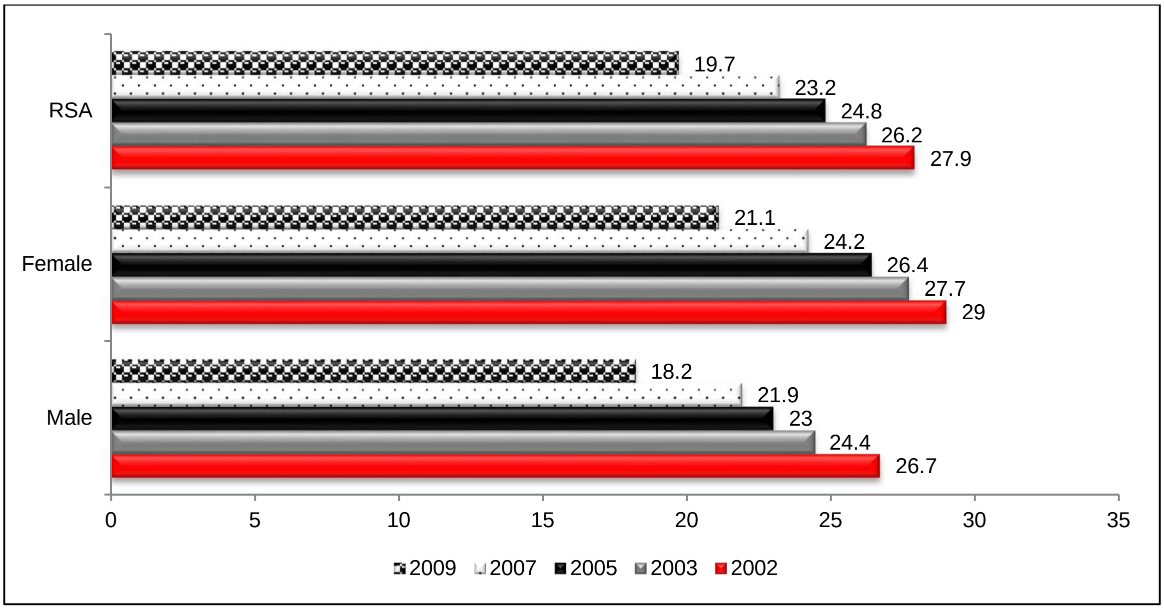
	None	Some primary	Completed primary	Some secondary	NSC/Grade 12	Tertiary	Other
2009	7.4	12.4	5.7	37.3	26.1	10.9	0.2
2007	8.7	14.5	6.4	36.6	23.7	9.9	0.2
2005	9.6	15.2	6.4	36	22.8	9.7	0.1
2003	10.2	16.1	6.5	35.7	21.9	9.3	0.3
2002	10.8	17.3	7	34	21.5	9.2	0.2

(Stats SA 2009a)

The gender disparity regarding educational attainment is evident from figure 3.32, showing that South African women are slightly more functionally illiterate than men (Stats SA 2009a). As such, women should be more prone to being financially vulnerable.

FIGURE 3.32

PERCENTAGE OF PERSONS, AGED 20 YEARS AND OLDER WITH NO FORMAL EDUCATION



(Stats SA 2009a)

According to Barro and Lee (2010), gender gaps in terms of education are on average fairly small for young children in developing countries, although older children in rural areas are still prone to far larger gaps. A possible reason for the difference in enrolment and attainment figures between developed and developing countries could be the perceptions regarding the value of children among the various communities. Ongoing research regarding the value of children, according to Caldwell (2006), has reached near consensus regarding the pre-modern insurance value of children. The level at which societies have changed from being traditional to developed has a direct impact on the value of the children in such societies. With the reduction in fertility, societies are able to invest in the health and education of the surviving children, so that these children are able to become better educated than their predecessors. Such children are also able to participate in a broader range of occupations, with alternative sources of income as well as higher incomes. The increase in income and migration from the traditional societies have also enabled these children to become involved in an advanced financial system, thus exposing them to ways and means of creating wealth (and saving mechanisms) not dependent on the number of children they might have later in their lives.

South Africa's performance in terms of the second dimension of the Human Development Index will show that a better education will ultimately result in lower levels of financial vulnerability, For the Human Development Index to track progress in education, the education dimension is portrayed by two indicators, namely (1) the mean years of schooling and (2) the expected years of schooling. The progress in terms of the Education Index from 1980 to 2010 is provided in table 3.11.

TABLE 3.11

EDUCATION INDEX: 1980 TO 2010

HDI Ranking		1980	1985	1990	1995	2000	2005	2006	2007	2008	2009	2010
GENERAL RANKING												
..	Very high human development	0.706	0.734	0.77	0.82	0.851	0.877	0.879	0.883	0.888	0.892	0.894
..	High human development	0.518	0.555	0.581	0.608	0.653	0.692	0.695	0.701	0.707	0.712	0.716
..	Medium human development	0.332	0.367	0.401	0.443	0.482	0.529	0.534	0.545	0.551	0.557	0.561
..	Low human development	0.196	0.228	0.246	0.277	0.305	0.361	0.368	0.377	0.383	0.389	0.392
COUNTRY SPECIFIC RANKING												
1	Norway	0.725	0.765	0.82	0.872	0.946	0.991	0.993	0.992	0.987	0.986	0.985
66	Russian Federation	0.623	0.662	0.688	0.679	0.733	0.769	0.773	0.778	0.783	0.784	0.784
84	Brazil	0.402	0.451	0.486	0.54	0.599	0.645	0.646	0.646	0.652	0.657	0.663
101	China	0.372	0.396	0.437	0.482	0.535	0.579	0.588	0.599	0.61	0.619	0.623
123	South Africa	0.486	0.486	0.572	0.691	0.69	0.689	0.692	0.695	0.699	0.702	0.705
134	India	0.232	0.279	0.318	0.348	0.365	0.419	0.426	0.436	0.441	0.445	0.450
187	Democratic Republic of the Congo	0.191	0.212	0.235	0.267	0.256	0.315	0.326	0.338	0.351	0.355	0.356

(UNDP 2012)

It is clear from table 3.11 that higher levels of education were attained across the world as none of the countries achieved a lower score in 2010 compared to 1980. Countries ranked with low human development achieved a 100% improvement from 1980 to 2010; countries with medium human development improved by 68.98%; countries with high human development improved by 38.03%; and countries with very high human development improved by 26.63% during this period. Among the BRICS countries, India achieved the best improvement of 96.97%, followed by China with 67.47%, Brazil with 64.93%, South Africa with 45.06% and Russia with 25.84%.

South Africa measured fairly favourably by achieving an index score of 0.705, which nearly equalled that of the average of the countries with high human development, namely 0.716. It must, however, be noted that whereas South Africa achieved a huge jump between 1985 and 1995, its score stagnated by 2008 with only a marginal improvement until 2010.

For educational attainment, it is imperative that learners aim to attend school for as long as possible. To complete secondary school, it would thus be expected that the mean years of schooling should be around 10 to 12 years. The United Nations (UNDP 2012) has provided the actual mean years of schooling of adults as represented by the average number of years of education received by people aged 25 and older, as reflected in table 3.12.

TABLE 3.12

MEAN YEARS OF SCHOOLING OF ADULTS: 1980 TO 2010

HDI Ranking		1980	1985	1990	1995	2000	2005	2006	2007	2008	2009	2010
GENERAL RANKING												
..	Very high human development	8.5	9	9.5	10.1	10.7	11	11.1	11.1	11.2	11.2	11.3
..	High human development	5.4	6	6.5	7	7.6	8.2	8.2	8.2	8.3	8.4	8.5
..	Medium human development	3.1	3.7	4.2	4.8	5.5	5.9	6	6.1	6.2	6.2	6.3
..	Low human development	1.6	2	2.4	2.9	3.2	3.8	3.9	4	4	4.1	4.2
COUNTRY SPECIFIC RANKING												
1	Norway	9.1	10	10.8	11.1	11.5	12.7	12.7	12.7	12.7	12.6	12.6
66	Russian Federation	7.2	7.8	8.5	8.9	9.6	9.7	9.8	9.8	9.8	9.8	9.8
84	Brazil	2.6	3.2	3.8	4.6	5.6	6.6	6.7	6.8	6.9	7.1	7.2
101	China	3.7	4.3	4.9	5.7	6.6	7.1	7.2	7.3	7.4	7.4	7.5
123	South Africa	4.8	4.8	6.5	8.2	8.2	8.2	8.2	8.3	8.4	8.5	8.5
134	India	1.9	2.4	3	3.3	3.6	4	4.1	4.1	4.2	4.3	4.4
187	Democratic Republic of the Congo	1.2	1.5	2	2.7	3.2	3.4	3.4	3.4	3.4	3.4	3.5

(UNDP 2012)

It is evident from table 3.12 that there is a large disparity among the average years of schooling. Adults of countries with low human development average only 4.2 years of schooling compared to adults from countries with very high human development, where schooling averages 11.3 years. South Africa compares well with the average of countries with high human development, achieving a score of 8.5 in 2010. The progress in educational attainment is also evident, with South Africa scoring only 4.8

in 1980 and almost doubling the score to 8.5 in 2010. Although South Africa has improved regarding the mean years of schooling, a score of 8.5 reflects that there are still many children not completing secondary school. This could be one of the main reasons for the high unemployment rate among the youth.

Also influencing the progress in education is the expected number of years of schooling that a child of school entrance age can expect to receive if prevailing patterns of age-specific enrolment rates persist throughout the child's life (UNDP 2012). The years of schooling that can be expected are reflected in table 3.13.

TABLE 3.13

EXPECTED YEARS OF SCHOOLING OF CHILDREN: 1980 TO 2010

HDI Ranking		1980	1985	1990	1995	2000	2005	2006	2007	2008	2009	2010
GENERAL RANKING												
..	Very high human development	13.2	13.5	14.1	15.0	15.3	15.7	15.7	15.8	15.9	15.9	15.9
..	High human development	11.3	11.6	11.7	11.8	12.6	13.2	13.3	13.4	13.6	13.6	13.6
..	Medium human development	7.9	8.3	8.7	9.1	9.6	10.6	10.7	11.0	11.1	11.2	11.2
..	Low human development	5.3	5.7	5.6	5.9	6.5	7.7	7.8	8.1	8.2	8.3	8.3
COUNTRY SPECIFIC RANKING												
1	Norway	13.1	13.2	14.0	15.4	17.5	17.4	17.5	17.5	17.3	17.3	17.3
66	Russian Federation	12.1	12.6	12.5	11.7	12.6	13.7	13.8	14.0	14.1	14.1	14.1
84	Brazil	14.1	14.1	14.1	14.1	14.5	14.2	14.0	13.8	13.8	13.8	13.8
101	China	8.3	8.2	8.9	9.1	9.8	10.7	10.9	11.2	11.4	11.6	11.6
123	South Africa	11.1	11.1	11.4	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1
134	India	6.5	7.3	7.7	8.3	8.4	9.9	10.1	10.3	10.3	10.3	10.3
187	Democratic Republic of the Congo	7.1	6.8	6.3	6.0	4.6	6.6	7.1	7.5	8.1	8.2	8.2

(UNDP 2012)

The average years of schooling that a child in a country with very high human development can expect was 15.9 years in 2010, compared to only 8.3 years for a child in a country with low human development. South Africa and the other BRICS countries, with the exception of India, compare very favourably with the countries with high human development, reflecting expected schooling in excess of 13 years.

It is important to note that schooling is not the only form of education and that higher education would also assist in reducing levels of financial vulnerability as it should result in better employment opportunities. However, in certain circumstances this is not true, as indicated by a study conducted by Bhorat, Mayet and Visser in 2010, who found a mismatch among employment opportunities and qualifications obtained. Bhorat et al. (2010) reviewed the determinants of graduation and of employment in South Africa in a study tracing cohorts of non-completers and graduates from seven selected South African public higher education institutions. They revealed that, although graduation from a higher education institution was not a significant predictor of employment, it was, however, significant in the determination of earnings. In this regard, the authors reported that technikon students had a higher probability of obtaining employment than those studying at universities.

It is evident from the current discussion that the level of education of an individual and of the country as a whole can play a major role in consumer financial vulnerability. Effective education should reduce income inequality, thereby reducing the impact of negative economic events on consumer financial vulnerability. In this regard, Schultz (1961) concluded that differentials in income between individuals and between countries largely correspond to differentials in education, suggesting that higher levels of education will result in higher income and better income distribution for all. Schultz (1961) reported further on how investment in human capital could result in increased economic growth due to higher levels of productivity. Human capital accumulation is still recognised as one of the most important contributors to economic growth (Asteriou & Agiomirgianakis 2001). Schultz (1961) classified investment in human capital into five major categories: (1) health facilities and services, (2) on-the-job training, (3) formally organised education at elementary, secondary and higher levels, (4) study programmes for adults that are not organised by firms, and (5) migration of individuals and families to adjust to changing job opportunities.

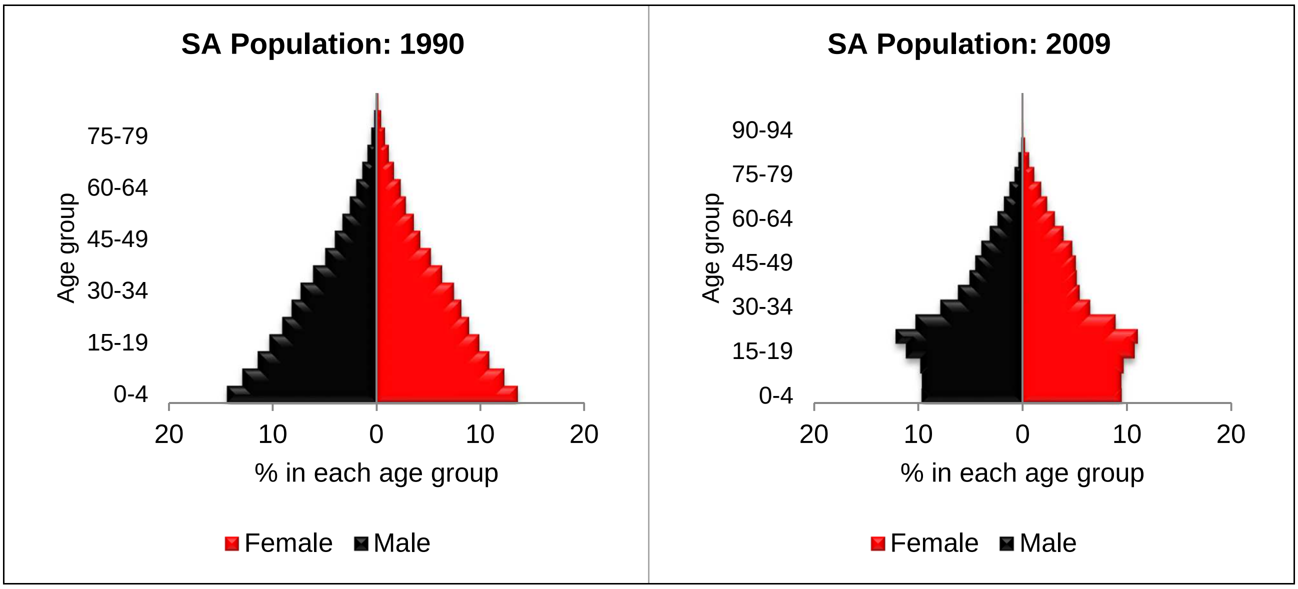
3.3.4 Longer lives, better health

The interaction between demographic change and economic progress is relevant to determine how progress in demographic evolvement reduces consumer financial vulnerability. As already mentioned, in primitive or traditional societies, having several children was a mechanism to reduce financial vulnerability, as the elders depended on children to provide for them in their later years. Therefore, the elders believed that their future income streams were secured as they could live off the income earned by the children and they would therefore be able to maintain their future expenditure commitments, including health care, which would ensure longer lives. As society evolved, the advantages of having a good education became evident, resulting in a decrease in fertility rates. Parents consequently had fewer children and were better able to afford the children's education. The educated children had access to better employment opportunities and their higher income would ensure financial security.

Developmental changes are also evident in South Africa. The number of children per woman in South Africa decreased from three or four children in 1990 to two or three children per woman in 2009 (Gapminder 2011). Unfortunately, however, societal development was not the only reason for a change in the South African population composition (US Census Bureau 2011). In addition to having fewer children, the life expectancy of South Africans also deteriorated, resulting in a changed population composition, as reflected in figure 3.32. An important premise of life expectancy is that it is based on the assumption that the prevailing patterns of age-specific mortality rates remain the same over an infant's life (UNDP 2012). As illustrated in figure 3.32, the population pyramid structure for South Africa has changed dramatically over time, providing more insight into the decline in the life expectancy of South Africans.

FIGURE 3.32

POPULATION PYRAMID OF SOUTH AFRICA: 1990 AND 2009

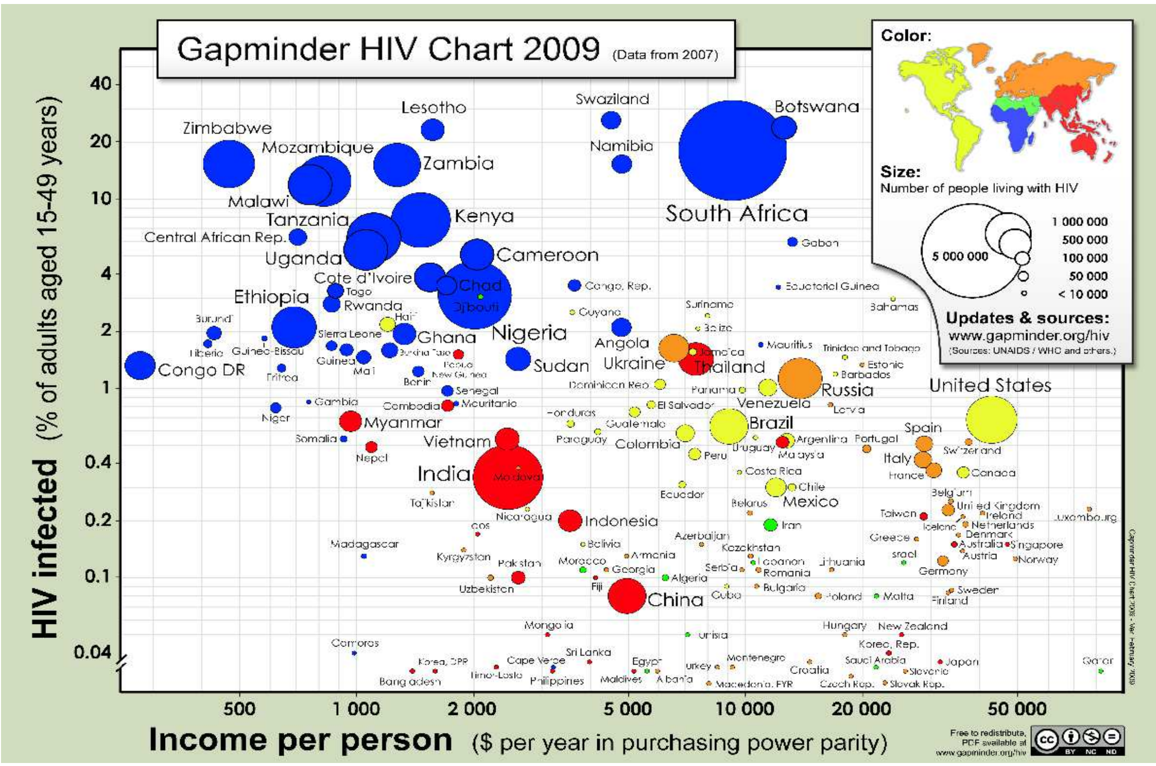


(Compiled from the US Census Bureau 2011)

Under normal circumstances, one would expect the population pyramid structure in 1990 as reflected in figure 3.32 to be replicated in 2009, with a natural decline towards the older ages. This, however, was not true for South Africa as there is a reduction in the proportional age group below 15 years in 2009 compared to 1990 but an increase in the proportional age group 15 to 30 years. The change in the pyramid structure could be attributed to the decline in fertility rates in South Africa as well as the occurrence of HIV/AIDS that started to increase mortality rates from the 1980s. Life expectancy can influence financial vulnerability from two different perspectives: an increase in life expectancy due to factors such as improved health care or medical breakthroughs means that people are now living longer but have not necessarily made enough provision for their retirement and longevity. On the other hand, with HIV/AIDS, the life expectancy in certain countries is far lower. As illustrated in figure 3.33, South Africa is one of the countries with the highest percentage of adults infected with HIV, namely nearly 20% (Gapminder 2011).

FIGURE 3.33

PERCENTAGE OF ADULTS AGED 15 TO 49 YEARS AFFECTED BY HIV



(Gapminder 2011)

The deterioration of South Africa's life expectancy is evident from table 3.14, which reflects the number of years a new-born infant could expect to live if prevailing patterns of age-specific mortality rates at the time of birth remain the same throughout the infant's life (UNDP 2010). South Africa's life expectancy is currently lower than the average of the countries with low human development, whereas in developed countries, population aging as a result of increased medical interventions could be some of the reasons for the improvement of life expectancy.

TABLE 3.14

LIFE EXPECTANCY, SOUTH AFRICA: 1980 – 2010

HDI Ranking		1980	1985	1990	1995	2000	2005	2006	2007	2008	2009	2010
GENERAL RANKING												
..	Very high human development	73.4	74.6	75.5	76.6	77.7	78.9	79.1	79.3	79.5	79.6	79.8
..	High human development	64.8	66.1	67.8	68.8	69.9	71.3	71.6	71.9	72.3	72.6	72.8
..	Medium human development	61.4	63.1	64.6	65.8	66.9	68.1	68.3	68.6	68.9	69.1	69.4
..	Low human development	50.1	51.4	52.4	53.1	54.3	56.3	56.7	57.1	57.5	57.9	58.3
123	South Africa	56.9	59.8	61.5	59.9	54.8	51.1	51.0	51.1	51.4	51.8	52.2

(UNDP 2012)

The above trends are reflected in the final component of the Human Development Index, the Health Index, which records the changes in life expectancy over time of several countries around the world. As indicated in table 3.15, many countries have achieved large gains in life expectancy over the past thirty years (UNDP 2010).

TABLE 3.15

HEALTH INDEX: 1980 – 2010

HDI Rank	Country	1980	1985	1990	1995	2000	2005	2006	2007	2008	2009	2010
GENERAL RANKING												
..	Very high human development	0.843	0.861	0.876	0.892	0.91	0.929	0.932	0.935	0.938	0.941	0.943
..	High human development	0.707	0.728	0.753	0.769	0.787	0.809	0.814	0.819	0.824	0.829	0.833
..	Medium human development	0.653	0.68	0.703	0.722	0.74	0.758	0.762	0.766	0.771	0.775	0.779
..	Low human development	0.475	0.496	0.511	0.522	0.542	0.572	0.579	0.585	0.592	0.599	0.605

COUNTRY SPECIFIC RANKING												
1	Norway	0.877	0.883	0.891	0.910	0.926	0.944	0.948	0.951	0.955	0.958	0.961
66	Russian Federation	0.750	0.764	0.758	0.726	0.710	0.727	0.736	0.745	0.753	0.760	0.765
84	Brazil	0.670	0.700	0.730	0.762	0.791	0.813	0.818	0.822	0.828	0.833	0.838
101	China	0.742	0.762	0.780	0.795	0.808	0.822	0.826	0.829	0.833	0.836	0.840
123	South Africa	0.582	0.628	0.655	0.629	0.549	0.491	0.489	0.491	0.495	0.501	0.509
134	India	0.557	0.584	0.605	0.628	0.656	0.683	0.689	0.694	0.700	0.706	0.711
187	Democratic Republic of the Congo	0.408	0.417	0.424	0.409	0.405	0.426	0.429	0.432	0.435	0.439	0.443

(UNDP 2012)

It is clear from table 3.15 that since 1980 the majority of countries have progressed in terms of the Health Index; South Africa being the exception. In terms of the general ranking of the countries, the health situation in countries with very high human development has improved by 12.2% since 1980, that of countries with high human development by 18.5%, of countries with medium human development by 20.1% and of countries with low human development by 28.6%. However, in contrast to several other countries, South Africa has experienced a reduction on the Health Index, reflecting a decrease of 11.2% in life expectancy in 2010 compared to 1980 (UNDP 2012). The threat of the loss of an income earner is a larger reality in South Africa than in most other countries, since South Africa is one of only nine countries in which the life expectancy levels in 2010 declined to below the 1970 level, due largely to the HIV pandemic (UNDP 2012). The loss of an income earner as the only or main source of income has made South African consumers more prone to financial vulnerability compared to countries with a longer life expectancy.

It is clear from the above discussion that at least one portion of the older population was dealt a double financial blow. Having fewer children combined with such children dying prematurely as a result of HIV/AIDS has left elderly people with only old age grants from government to fend for themselves, thereby making them financially more vulnerable compared to other consumers. This is another indication that demographic factors play a significant role in the magnitude of consumers' financial vulnerability following an adverse economic event.

Although lower life expectancy for South Africa may result in higher levels of financial vulnerability for most consumers, it is important to note that for a portion of the population, longevity could also result in higher levels of financial vulnerability. This is confirmed by the Genworth study that reported that consumers' ages influenced the perceived levels of their financial vulnerability across the countries reviewed (ECRI & PFRC 2008; PFRC 2008; 2009; 2010). In Denmark, the number of persons reporting financial difficulties was in the higher age brackets. This was also true for France and Italy, with the elderly expressing higher levels of vulnerability than the younger age groups. Higher levels of vulnerability among older consumers could be ascribed to not having accumulated enough resources over their lifetime to ensure a financially secure retirement (including sufficient health care after retirement). Although the younger age groups generally reported lower levels of vulnerability, across countries there were certain of them reporting high levels of financial vulnerability, which could probably be ascribed to high debt levels at the start of their careers that needed to be serviced in an uncertain future (ECRI & PFRC 2008; PFRC 2008; 2009; 2010). A similar result was obtained in the FinMark study (Van Aardt & Moshoeu 2009) conducted in South Africa and reported in table 3.16.

TABLE 3.16

FINANCIAL VULNERABILITY BY AGE GROUP

Age group (years)	Income vulnerability	Saving vulnerability	Expenditure vulnerability	Debt servicing vulnerability	CFVI
25 and under	4.72	4.47	5.01	3.76	4.22
26 -34	6.26	6.23	5.94	4.95	5.74
35 – 44	5.09	5.40	5.40	4.30	4.88
45 – 54	5.33	5.62	6.00	4.51	5.35
55 – 59	6.45	6.57	5.73	4.49	5.65
60+	6.17	6.15	5.27	4.34	5.26
Total	**5.64**	**5.74**	**5.54**	**4.37**	**5.16**

(Van Aardt & Moshoeu 2009)

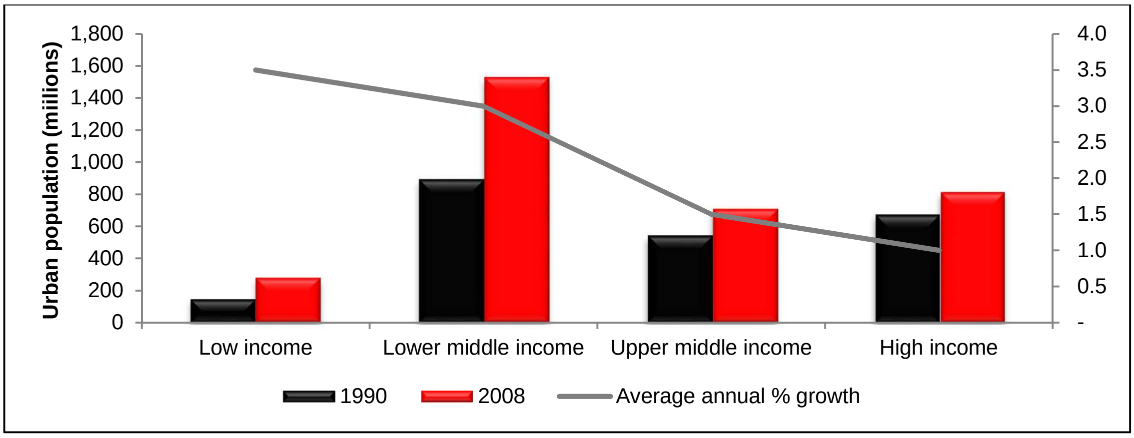
Taking into account the high youth unemployment figures as discussed in section 3.2.3, the age group 26 to 34 years reported the highest overall consumer financially vulnerable score (table 3.16). For those receiving an income, this would be when most of them are getting married, starting a family, buying a house and car, thus incurring high amounts of debt, which would explain their higher levels of vulnerability. Similar to their European counterparts, older participants would also be experiencing higher levels of saving vulnerability when they realised that their savings would not be sufficient for their retirements needs. The younger generations would furthermore be experiencing higher saving vulnerability due to barely surviving their consumption expenditure and debt servicing with limited (if any) possibility for saving.

3.3.5 **Geographical location**

While trends regarding urbanisation over the past few years reveal that there is an increasing tendency to migrate from rural areas to urban areas, this phenomenon is not limited to South Africa, as can be seen in figure 3.34. Consumers are migrating to urban areas with aspirations of better employment opportunities, as well as access to better health care facilities and education. Those consumers who are unable to migrate to urban areas are financially more vulnerable as they have fewer employment opportunities; in several instances, they also have higher living costs. Access to infrastructure, markets and employment also has an impact on the level of financial vulnerability of the residents of a country. The transformation from the agricultural/hunter era to the industrial era has resulted in more people migrating from the rural areas to the urban areas for better employment opportunities.

FIGURE 3.34

URBAN MIGRATION TRENDS SINCE THE 1990s



(World Bank 2010 adapted)

Over the past twenty years, a clear move to urban areas has occurred across all income categories all over the world, as depicted in figure 3.34. A higher level of migration occurred in the low- and lower middle-income groups (between 3% and 3.5%) compared to the higher-income groups (1% to 1.5%). This is mainly because the higher-income groups are already urbanised while consumers in rural areas are less economically active, with decreasing employment opportunities and lower future expectations, and consequently they will be more financially vulnerable.

This viewpoint is supported by the South African Consumer Financial Vulnerability Index (CFVI) results as reported in the FinMark study (Van Aardt & Moshoeu 2009). The highest levels of financial vulnerability were experienced by rural dwellers, especially regarding saving and income vulnerability, as shown in table 3.17. Consumer debt servicing vulnerability was high in non-metro urban areas, with indebtedness levels comparable to the metro areas, although income and saving in such areas were generally lower than in metro areas (Van Aardt & Moshoeu 2009), as well as in rural areas where people have very little money to pay for debt servicing.

TABLE 3.17

FINANCIAL VULNERABILITY BY AREA IN 2009

Area	Income vulnerability	Saving vulnerability	Expenditure vulnerability	Debt servicing vulnerability	CFVI
Metro	5.70	6.08	5.49	4.11	4.87
City	6.12	5.73	5.08	4.47	5.27
Town	4.83	4.75	4.90	3.98	4.52
Rural	6.16	6.41	6.21	4.82	5.87
Total	**5.64**	**5.74**	**5.54**	**4.37**	**5.16**

(Van Aardt & Moshoeu 2009)

The FinMark study (Van Aardt & Moshoeu 2009) identified both the area as the province in which a consumer resides as variables that result in differential levels of financial vulnerability (see table 3.18).

TABLE 3.18

FINANCIAL VULNERABILITY BY PROVINCE

Province	Income vulnerability	Saving vulnerability	Expenditure vulnerability	Debt servicing vulnerability	CFVI
Eastern Cape	6.06	6.44	6.21	4.69	5.62
Free State	5.35	5.45	3.64	3.48	4.32
Gauteng	5.66	5.80	5.12	4.42	5.14
KwaZulu-Natal	5.10	4.88	5.13	4.44	4.93
Limpopo	5.39	6.09	5.86	3.99	5.12
Mpumalanga	6.78	7.13	7.35	4.77	6.11
Northern Cape	6.87	6.86	8.37	4.88	6.18
North-West	5.11	4.71	5.35	4.77	5.01
Western Cape	5.97	5.21	5.36	4.00	5.08
Total	**5.64**	**5.74**	**5.54**	**4.37**	**5.16**

(Van Aardt & Moshoeu 2009)

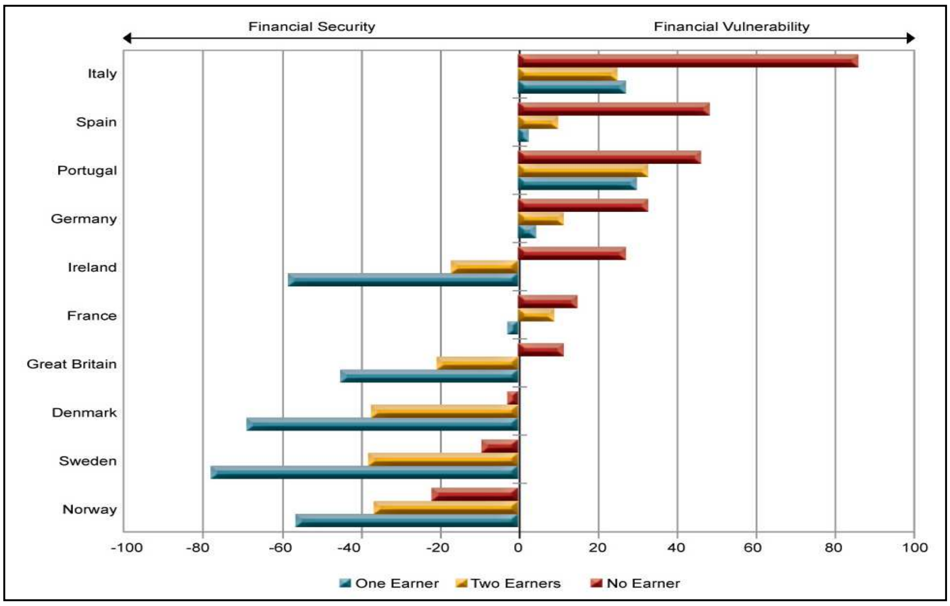
The Consumer Financial Vulnerability Index breakdown per province as provided in table 3.18 supports the notion that the province in which a consumer resides influences the level of financial vulnerability. The provinces with the highest poverty rates as reported by the SAIRR (2010), namely the Eastern Cape, Northern Cape and Mpumalanga, also had the highest levels of financial vulnerability, according to the FinMark study (Van Aardt & Moshoeu 2009). As was evident in the international trade channel (section 3.2), access to employment opportunities is a prerequisite for reducing financial vulnerability.

3.3.6 Household structure and support

As per the discussions in section 1.5 and the life-cycle hypothesis (see 2.5.2), changes during a consumer's lifetime result in changes in consumption patterns, increased saving needs and possible increased debt liabilities. Some of these changes could be due to marriage, divorce, the births of children and deaths in the family, all resulting in differential levels of consumer financial vulnerability. Divorce or the death of a household member reduces the number of income earners. The effect thereof on consumer financial vulnerability is clearly illustrated in figure 3.35 as households with no income earners reported the highest levels of financial vulnerability compared to households with two earners, reflecting the lowest levels of financial vulnerability (ECRI & PFRC 2008).

FIGURE 3.35

INDEX SCORES DEPENDING ON THE NUMBER OF EARNERS IN THE HOUSEHOLD



(ECRI & PFRC 2008)

Not only is the number of income earners identified as a factor influencing the level of consumer financial vulnerability; the number of dependent children in a household also revealed some differences in vulnerability levels across the countries reviewed in the Genworth study (ECRI & PFRC 2008). In France, the Genworth index revealed that households with children tended to be financially more secure than childless consumers (ECRI & PFRC 2008). It can therefore be assumed that consumers with children take more responsibility with their financial management to ensure the financial futures of their children as well.

The household structure has several implications regarding consumer financial vulnerability. In the Genworth study (ECRI & PFRC 2008), households with more than one income earner were financially less vulnerable than those with only one or no income earners. Should one of the income earners from a household with more than one earner become sick or unemployed, the effect would not be too severe as there would still be the income of the other household member. The number of children in a household also creates differences in consumption patterns among households by placing additional strain on the household's limited financial resources and making them more vulnerable. The effect of the loss of income earners is not limited to the European countries reviewed in the Genworth study (ECRI & PFRC 2008), but was also evident from the FinMark study (Van Aardt & Moshoeu 2009). It appears from table 3.19 that divorce or widowhood is a strong predictor of financial vulnerability. Divorced or widowed consumers have a higher level of overall financial vulnerability than consumers who were never married or are still married. The divorced or widowed consumers also had far higher levels of income and saving vulnerability than the consumers who never married.

TABLE 3.19

FINANCIAL VULNERABILITY BY MARITAL STATUS

Marital status	Income vulnerability	Saving vulnerability	Expenditure vulnerability	Debt servicing vulnerability	CFVI
Never married	5.42	5.53	5.58	4.34	5.01
Divorced or widowed	6.37	6.55	5.87	4.46	5.67
Married	5.60	5.63	5.41	4.37	5.15
Total	**5.64**	**5.74**	**5.54**	**4.37**	**5.16**

(Van Aardt & Moshoeu 2009)

From the above discussion, it should again be clear that demographical factors as reflected in the household structure, such as the number of children in a household, or the number of income earners, would influence the magnitude of consumer financial vulnerability.

3.3.7 Gender

In the Genworth studies, gender differences were also highlighted as a reason for differential financial vulnerability rates. Fewer Danish women (14%) indicated that they were financially secure compared to 30% of men. France reported a smaller differential among gender groups, while Norway once again had a noticeable difference, with men being financially more secure than women. Spain reported similar results as those of Norway (ECRI & PFRC 2008). These differences could probably be attributed to the fact that men, regarded as household heads, are normally responsible for the household's financial management.

Table 3.20 provides a breakdown of the overall index and the sub-indices by gender for the South African study conducted in 2009 (Van Aardt & Moshoeu 2009). It appears from this table that females are financially marginally more vulnerable than males with regard to income and saving because females, on average, earn a lower income than males and therefore have less income security and less money to save. However, the bulk of mortgages and vehicle finance agreements are entered into by males, making males more vulnerable with respect to keeping up repayment, especially in adverse economic conditions.

TABLE 3.20

FINANCIAL VULNERABILITY BY GENDER

Gender	Income vulnerability	Saving vulnerability	Expenditure vulnerability	Debt servicing vulnerability	CFVI
Male	5.50	5.62	5.64	4.44	5.15
Female	5.70	5.79	5.49	4.34	5.17
Total	**5.64**	**5.74**	**5.54**	**4.37**	**5.16**

(Van Aardt & Moshoeu 2009)

3.4 FINANCIAL ATTITUDES AND CONSUMER FINANCIAL VULNERABILITY

In sections 3.2 and 3.3 the international trade channel and the development factors were discussed in relation to their relevance to consumer financial vulnerability. The literature review will conclude with a brief discussion on consumers' financial attitudes and how these could influence consumer financial vulnerability.

3.4.1 Savers' attitudes

Valuable insights regarding consumers' perceived feelings of financial vulnerability can be gained by assessing attitudes towards saving. From the Genworth study (ECRI & PFRC 2008) it was clear that in a country such as Denmark, consumers who tended to save reported fewer financial problems than those tending to spend instead of save. In addition, locus of control also influenced financial vulnerability, as consumers prepared to save for what they wanted to buy were financially less vulnerable than consumers who preferred to buy on credit. The savers, however, did not feel financially secure, but experienced an underlying anxiety that something could still go wrong and that they did not have enough savings (ECRI & PFRC 2008).

An interesting picture emerged when the saving attitudes of French consumers were reviewed. Almost a quarter of French consumers who believed they were savers were classified in the financially secure group according to the Genworth classification (namely Group D) (see 1.4). Thus, although the country reported an overall relatively financially vulnerable situation, only 1% of savers were in Group A (being financially vulnerable) and 13% in Group B (being neither vulnerable nor secure but having experienced some financial difficulties). With Germany, a large differentiation in the index scores was reported, depending on attitudes to saving/buying on credit. Those who preferred to buy on credit perceived themselves as financially vulnerable. A similar trend emerged for consumers in Sweden and the United Kingdom, with savers feeling financially less vulnerable compared to the rest. In contrast, Portuguese consumers who believed in saving first, felt financially more vulnerable while those who preferred buying on credit were the largest portion of consumers feeling financially secure (ECRI & PFRC 2008).

The ability to defer gratification appears to have a direct effect on the level of consumer financial vulnerability. Consumers with internal locus of control, who were prepared to first save for items before they acquired them, perceived themselves as having lower levels of financial vulnerability because they were in control of the situation. Should their financial situation change, they could still change their mind regarding the appropriation of the saving. Consumers who preferred to incur debt exposed themselves to negative economic changes resulting in higher levels of financial vulnerability. They were also inclined to make decisions they may have known were not correct but for various reasons (for example 'keeping up with the Joneses') continued making such decisions.

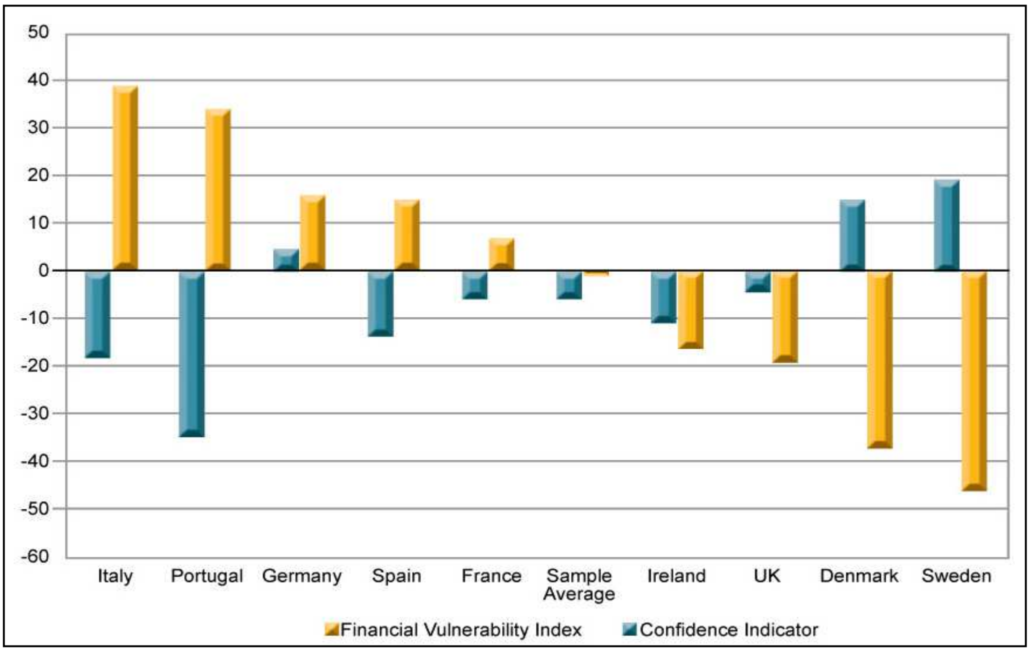
The Genworth study (ECRI & PFRC 2008) has identified consumers' saving attitudes and demeanour as having a direct influence on the perceived financial vulnerability of citizens of several European countries. Consumers prepared to wait and save before they acquire luxury items were financially less vulnerable in most cases compared to those who obtained the items on credit. The ability to defer gratification hints at a strong locus of control for those prepared to wait and save. Such consumers understand the risks involved in their financial decisions and would be perceptive to financial education programmes assisting them in making sound financial decisions.

3.4.2 Consumer confidence

The final factor reviewed in the Genworth study (ECRI & PFRC 2008) that could influence the perceived level of consumer financial vulnerability was the consumer confidence index constructed by the European Commission based on the measurement of consumer perceptions of the specific country's economic situation, the consumer's personal financial situation and the consumer's high-value consumption or saving plans. The answers of the respondents were based on their interpretation of economic news and their own personal financial experience as well as the unemployment situation that could have a negative influence on the consumer's financial situation as their main source of income is wages. The relationship between the consumer confidence score and the financial vulnerability score of some of the European countries is shown in figure 3.36 (ECRI & PFRC 2008).

FIGURE 3.36

CONSUMER CONFIDENCE AND FINANCIAL VULNERABILITY



(ECRI & PFRC 2008)

The inverse relationship between the consumer confidence score and the consumer financial vulnerability score is clear in figure 3.36, from which it appears that countries such as Italy, Portugal, Spain and France have negative consumer confidence scores and high levels of perceived financial vulnerability scores. The opposite is true for countries such as Sweden and Denmark, where consumer confidence was high and levels of financial vulnerability low (ECRI & PFRC 2008).

The sixth exogenous variable identified was the possible influence of the economic outlook on consumer financial vulnerability. It was evident from the Genworth study (ECRI & PFRC 2008) that respondents from countries with positive economic prospects, high GDP growth figures and low unemployment reported lower levels of consumer financial vulnerability in comparison to countries with more negative economic prospects. The economic and financial information portrayed to consumers in a country also had an effect on consumers' confidence. The relationship between consumers' confidence and consumer financial vulnerability, as discussed, clearly showed that the more confident consumers were, the lower their perceived financial vulnerability. Confident consumers were also prepared to increase their consumption as they believed their employment prospects were good. Income would therefore not be a problem and they would be in a position to obtain assets and incur new debt. However, should this turn out to the contrary, such consumers would become less confident and due to their financial actions could become vulnerable if they had to incur too much debt, bought non-growth assets or lost their income.

In South Africa, a consumer confidence index is constructed by the Bureau for Economic Research (BER) and First National Bank (FNB) on a quarterly basis (FNB/BER 2009). At the time of the financial vulnerability survey (2009), the consumer confidence index rose by 3 index points in the second quarter of 2009 compared to a year before when the biggest fall in the index value in a quarter was reported (FNB/BER 2009). The increase in index value occurred at a time when consumer disposable income and consumption expenditure were still contracting and unemployment remained a problem. The index did reveal, however, that although consumers did not believe that that was the right time to start consuming again (and were saving more), their future expectations were becoming more positive; they believed the economic situation as well as their own financial circumstances would improve within the next twelve months, rendering them more positive (FNB/BER 2009). These results concur with the consumer financial vulnerability results because South African consumers reported the highest level of vulnerability regarding their saving levels (Van Aardt & Moshoeu 2009). Their reduction of consumption at that stage illustrated that they were in a more precautionary mode of saving (as defined by Keynes 2008) and that the shock of the economic crises highlighted the principles of sound financial management to everyone.

To reduce levels of financial vulnerability, consumers will have to apply sound financial management behaviour, starting with prudent saving behaviour. As such, consumers must take responsibility for their own financial situation and ensure that they save enough to support themselves in difficult financial times. Consumers with high levels of confidence could be financially less vulnerable as they are in control of their own finances, and believe in themselves as well as in the economic prospects to provide them with what they need to become financially secure.

3.5 CONCLUDING REMARKS

On the basis of the theoretical foundations and financial accounts discussed in chapter 2, this chapter has identified a variety of factors such as economic growth, employment, health, education, household income and consumption, savings, debt and financial attitudes that may cause consumer financial vulnerability, and affect the magnitude of the effect of such factors on consumer financial vulnerability. Some of the more pertinent theories, namely the absolute income hypothesis, incorporating consumers' propensity to consume (Keynes 2008) (section 2.5.1); the permanent and life-cycle hypotheses (Ando & Modigliani 1963) (section 2.5.2); the relative income hypothesis (Duessenberry 1949) (section 2.5.4); the prospect theory (Kahneman & Tversky 1979) (section 2.6.1); as well as Fromm's modes of existence (Fromm 1976) (section 2.6.2) and objectification (Nussbaum 1995) (section 2.6.3) have been reviewed in terms of their relevance to consumer financial vulnerability.

In section 3.2, the impact of harmful events in the international economy on South African consumer financial vulnerability through the international trade channel was highlighted, as this comprised the widest chain through which such events could affect domestic consumers. In times of strong international economic growth, strong domestic economic growth becomes possible, which should translate into more and better employment opportunities. Being able to obtain employment would result in higher income, which would enable consumers to consume, save and service their debt. These combined factors would result in lower levels of consumer financial vulnerability.

Section 3.3 explored the effect of development in a country, as portrayed by changes in some demographic and financial attitudes of consumers, given their relationship to consumer financial vulnerability. In countries with income equality, consumer financial vulnerability will be low, as everyone will have income to enable them to consume, in contrast to countries with high levels of income inequality. In these countries, such as South Africa, numerous consumers do not have any income and are therefore very vulnerable – they have limited (or no) sources to help them maintain their living standards and consumption patterns, let alone save. Factors such as the state of health and education in a country will also contribute to making their residents more or less financially vulnerable as their health could influence their ability to obtain employment. The same holds true for education; being educated could result in better employment opportunities, which would reduce the vulnerability levels. Whilst they are strong enough to cause consumer financial vulnerability, their largest impact is that they determine the magnitude of vulnerability triggered by events as described in section 3.2.

Development, as described by the four indicators of the three dimensions of the Human Development Index, was subsequently explored in section 3.3.1. Through the Human Development Index it became evident that by improving living standards (section 3.3.2) and ensuring a more equal distribution of income through improving educational attainment (section 3.3.3) and achieving longer and better lives (section 3.3.4), consumer financial vulnerability could be decreased. In addition, the effect on socio-demographic variables such as age (included in section 3.3.4), geographical location (section 3.3.5), household structure and support (section 3.3.6) and gender (section 3.3.7) were also discussed before the chapter concluded with more behavioural attributes such as saving attitudes (section 3.4.1) and consumer confidence levels (section 3.4.2). Where applicable, information available from the South African study conducted by FinMark in 2009 (Van Aardt & Moshoeu 2009) to determine the financial vulnerability of South African consumers was incorporated. Based on the extensive literature survey, the causal exogenous and endogenous factors that could influence the perceived level of consumer financial vulnerability are indicated in the heuristic model in table 3.21.

TABLE 3.21

HEURISTIC MODEL OF CONSUMER FINANCIAL VULNERABILITY

Consumer financial vulnerability	Variables	Consumer financial security
High	**Marginal propensity to consume**	Low
High	**Life-cycle consumption**	Low
High	**Conspicuous consumption**	Low
High	**Relative income theory**	Low
High	**Loss aversive in nature**	Low
High	**To have or to be mode / Objectification**	Low
Low	**International economic prospect**	High
Low	**Macroeconomic growth**	High
	Fiscal policies	
Low	- Government spending (grants)	High
High	- Government income (taxes)	Low
High	- Administered prices	Low
High	- Budget deficit	Low
	Monetary policies	
High	- Inflation	Low
High	- Interest rates	Low
Low	**Employment elasticities**	High
Low	**Consumer income**	High
High	**Consumption expenditure**	Low
Low	**Saving / Assets**	High
High	**Debt / Liabilities**	Low
Low	**Income equality**	High
Low	**Living standards**	High
Low	**Educational attainment**	High
Bad	**Health**	Good
Rural	**Geographical location**	Urban
One earner	**Household structure and support**	> One earner
Female	**Gender**	Male
Not saving	**Savers' attitudes**	Saving
Low	**Consumer confidence**	High

(Source: Author's own compilation)

It is evident from table 3.21 that several independent variables could influence the perceived feeling of consumer financial vulnerability. The identified exogenous independent variables consist of population group, age, gender, province, economic outlook, monetary and fiscal policies and household structure (referring to the number of income earners in the family, number of children as well as marital status). The endogenous independent variables consist of the area in which the consumer resides, the consumer's confidence in the economy, health status, educational attainment (or human capital development level), employment status as well as his or her level of income and income sources, assets, consumption expenditure patterns and liabilities.

Another independent variable listed is that of ‘age’, which is firstly related to the health status of consumers. Younger consumers should be healthier, with better employment opportunities and lower medical expenditure. As age increases, consumers’ consumption expenditure on medical and related costs could increase. Should there not be an increase in income or other resources available, this would place a strain on the aging consumers’ finances or could even force consumers to incur debt to finance high medical costs, followed by higher levels of financial vulnerability. In addition, age also has an influence on the educational attainment of consumers, as adult illiteracy remains a huge problem for a large portion of older consumers in South Africa. Illiteracy also restricts the success of any financial education programme. Being financially uneducated could be one of the biggest threats for consumers, resulting in their making financial decisions to their detriment because they are unable to comprehend the implications.

The disparity between educational attainments based on gender revealed that women still had lower levels of educational attainment compared to males, resulting in fewer employment opportunities for women. The relationship between employment, income and consumer financial vulnerability showed that fewer employment opportunities resulted in increased levels of consumer financial vulnerability. In many households, men are still seen as the household heads who have to take responsibility for all financial decisions of the household while women are not necessarily involved or are unaware of the household’s financial situation. Should anything happen to either the household head or the financial situation of the household, it could result in considerable financial vulnerability for the surviving spouse.

Gauteng and the Western Cape are the two provinces in South Africa with the highest population figures as well as the highest levels of employment. Living in any of the other provinces would limit employment and lead to dependency on social benefits, thereby causing the residents to be financially vulnerable, as is evident from the high vulnerability scores of residents in Mpumalanga and the Northern Cape. In addition, the discussion of the effect of urbanisation highlighted the migration trends from rural to urban areas and showed that rural consumers were financially more vulnerable than those who reside in cities or metropolitan areas.

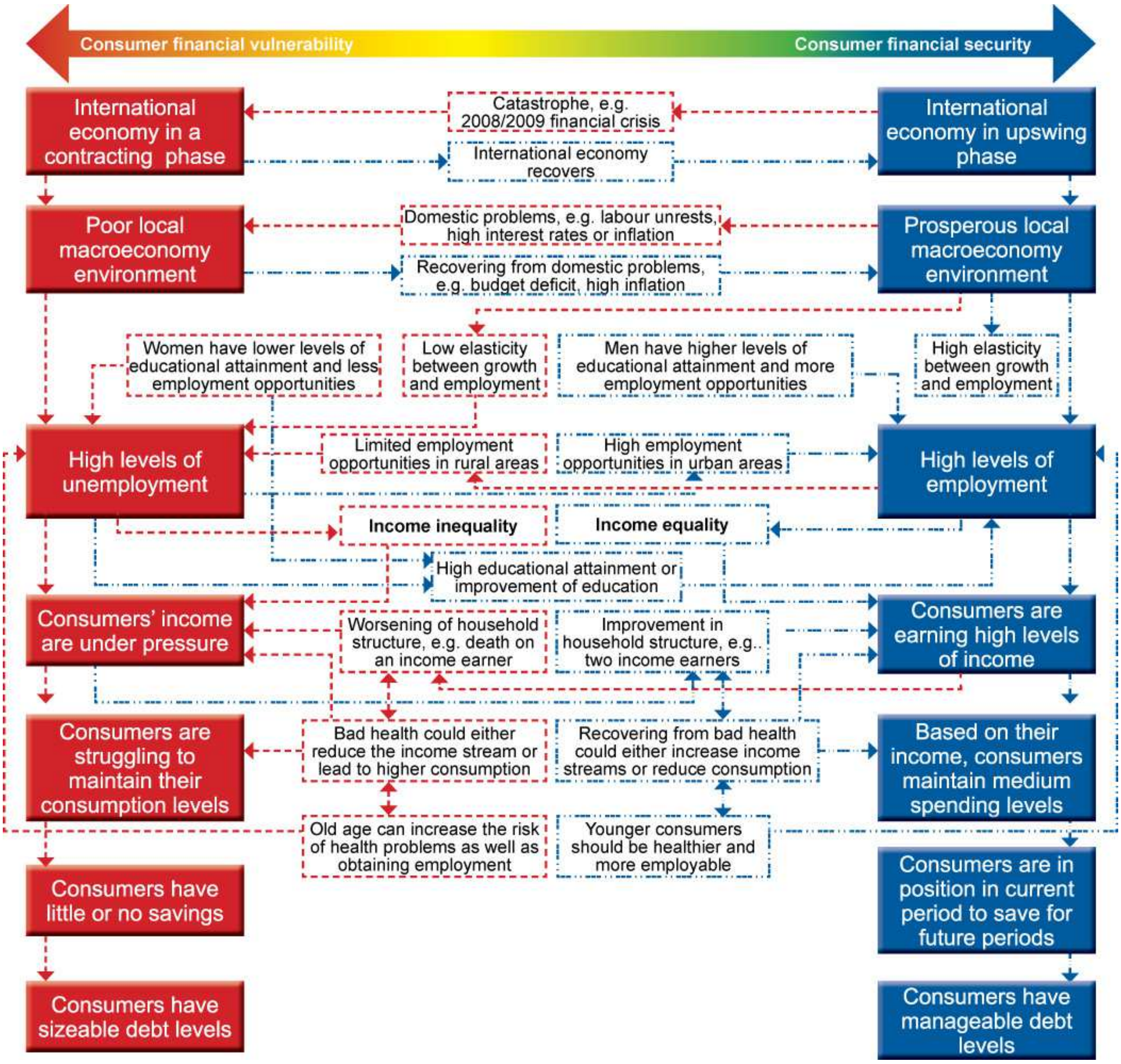
The interaction between consumers' income, expenditure, assets and liabilities became evident, showing that consumers' past actions influence their future actions and need to be taken into account in any financial decision-making. Should consumers incur debt, the debt has to be serviced from future income, and should this income come under threat, consumers would need to realise past saving to finance debt servicing and current consumption needs. Should the consumer not have sufficient assets or have access to assets, he/she would need additional debt to finance any shortage. In the current debt environment, new debt is not always available, for various reasons.

From the discussion thus far, it can be deduced that the linear path contemplated in chapter 1 is rather a non-linear path with contemporaneous feedback loops. As indicated in the chain reasoning, a prosperous international growth environment should result in economic growth in South Africa and eventually in increased consumer income via employment elasticity based on the concrete process described in chapter 1. However, it has become clear from the discussion in this chapter that economic growth does not translate into employment opportunities for all and therefore many consumers remain financially vulnerable. This interaction amongst the variables is also not static but is a dynamic process. Given the symbolic discourse of consumers making sense of their reality through a process of social interaction and negation, consumers also adjust their financial behaviour to adapt to the challenges they face. Consumers have to adjust their consumption spending pattern as they can no longer afford their previous consumption basket and, given a host of other reasons, can also no longer access new credit to supplement the deficit.

Furthermore, should something change in the household, for example a marriage that could result in two income earners that would also influence their consumption basket. However, with an additional income resource the household may now feel financially less vulnerable than prior to the marriage. The causal chain of consumer financial vulnerability is thus not as linear as originally indicated in figure 1.3 but rather forms a spiral with events and factors influencing the financial vulnerability over time and in different ways. The revised causal chain is illustrated in figure 3.37. Factors that could result in increased feelings of financial vulnerability are indicated in red while those that could reflect a reduction in feelings of financial vulnerability are indicated in blue. The two extreme consumer financially vulnerable or financially secure paths are reflected at the two ends of the path diagram. The magnitude of the impact of an event that could influence consumer financial vulnerability, for example economic recession, would depend on the variables indicated between the two extreme paths. It is important to bear in mind that these events could occur more than once in a consumer's lifetime and may influence consumer financial vulnerability differently each time, depending on the age, household structure, gender, educational attainment, health and geographical location of the consumer.

FIGURE 3.37

PATH DIAGRAM OF CONSUMER FINANCIAL VULNERABILITY



(Source: Author's own compilation)

Figure 3.37 shows that the causal chain of consumer financial vulnerability is more complex than originally contemplated. For example, the path could start on the left hand side of the diagram, indicative of a contracting phase in international growth resulting in a poor local macroeconomic environment. The poor macroeconomic environment could result in high levels of unemployment, placing consumers' income streams under pressure, and resulting in consumers struggling to maintain their consumption levels. Should the consumers not have any saving and / or sizeable debt in addition to their income and consumption pressures, these consumers would be experiencing high levels of financial vulnerability. However, the situation could improve at any given time, as consumers might be successful in obtaining better employment due to increased education and thus would be experiencing reduced levels of financial vulnerability although the macroeconomic position might still be constrained. The same also holds true for the right hand path as depicted in figure 3.37. During a prosperous macroeconomic time, consumers might be experiencing low levels of financial vulnerability due to secure employment but with changes to the household structure (e.g. death of an income earner), the household could suddenly experience high levels of financial vulnerability.

This interaction between the various components of the Consumer Financial Vulnerability Index was explored through a detailed discussion of several theories developed in trying to explain consumer behaviour and spending patterns. The influence of the four components on consumer financial vulnerability, namely income, expenditure, saving and debt servicing, was extensively discussed throughout this chapter. From this discussion, it is clear that any threat to either income or employment would have a snowball effect on consumers' consumption, their ability to save as well as their dependency on debt. The interaction between these various components will result in consumers being financially more or less vulnerable.

By means of a literature review, the various exogenous and endogenous causal factors of financial vulnerability were identified and their possible effect on the perceived levels of financial vulnerability was discussed in detail. Chapter 4 will present the research methodology that was applied to determine, by means of path analysis, whether the proposed relationships were true. The methodology chapter will be followed by a detailed discussion of the results of the path analysis supported by insights gained from focus groups held with key informants regarding income, expenditure, saving and debt.

CHAPTER 4

RESEARCH METHODOLOGY AND DESIGN

4.1 INTRODUCTION

Chapters 2 and 3 reported on the results of a conceptual analysis conducted to identify the various factors that could result in consumers feeling financially vulnerable. These two chapters concluded with a heuristic model designed to explain the relationships between the identified factors and consumer financial vulnerability as accurately as possible. This chapter will provide a detailed description of the research design and methodology used to accomplish the objectives of the study as stated in chapter 1.

Before the results of the study are discussed, it is important to define the research methodologies applicable to the financial disciplines in general and to this study in particular. Consequently, this chapter will present a discussion of several paradigmatic assumptions, such as the nature of the social world the study aimed to understand (ontology); the nature of the researcher's knowledge about the world based on the relationship between the knower (namely the researcher) and what can be known (epistemology); as well as the methodology applicable to this study, describing the way the researcher aimed to find out what she believes can be known (Stack 2011).

4.2 RESEARCH METHODOLOGY OF THE ACCOUNTING AND FINANCIAL DISCIPLINES

Ryan et al. (2002) summarise the development of philosophies in financial research, concluding with a dominant methodology in financial disciplines as well as some alternative methodologies. The distinction between the various methodologies originates from the underlying epistemology of the various approaches, defining the nature of the belief, the basis of truth and the problem of justification.

Various sources of the nature of belief (as the foundation for acquiring knowledge) are reported by Ryan et al. (2002), namely perceptual belief (perceived object or events), memorial belief (remembered facts), introspective belief (coming to believe by a process of introspection), rational belief (coming to believe by a process of reasoning), inductive belief (coming to believe through induction, which is a process of inferring general truths from perceptual and/or memorial belief) and testimonial belief (coming to believe because of the testimony of others). The authors conclude that the various sources of belief can be categorised in two overarching sources, namely (1) that which is grounded within our rational processes as the enquiring subjects – rational belief, and (2) that which is grounded in the object of our enquiring – perceptual belief. Rational belief is the cornerstone for empiricism, stating that beliefs that are not justified by experience or by logically or mathematically derived implications of experience are meaningless and that beliefs about the world cannot be justified by the use of reason alone. Empiricism was the foundation for one of the most significant philosophical developments, coining the term ‘positivism’ (Ryan et al. 2002).

In contrast to the positivist paradigm, according to Ryan et al. (2002) several philosophers disagreed with the empirical viewpoint and argued that knowledge could also be gathered by means of observation and categorisation. For example, Ryan et al. (2002) refer to Aristotle, who argued that, through repeated observation of particulars, an understanding of the properties of a general class of markets can be formed. In turn, these general properties are amenable to logical extension and analysis. This school of thought extended the concept of perceptual belief, resulting in the second paradigm genre of non-empirical or interpretative belief (Ryan et al. 2002).

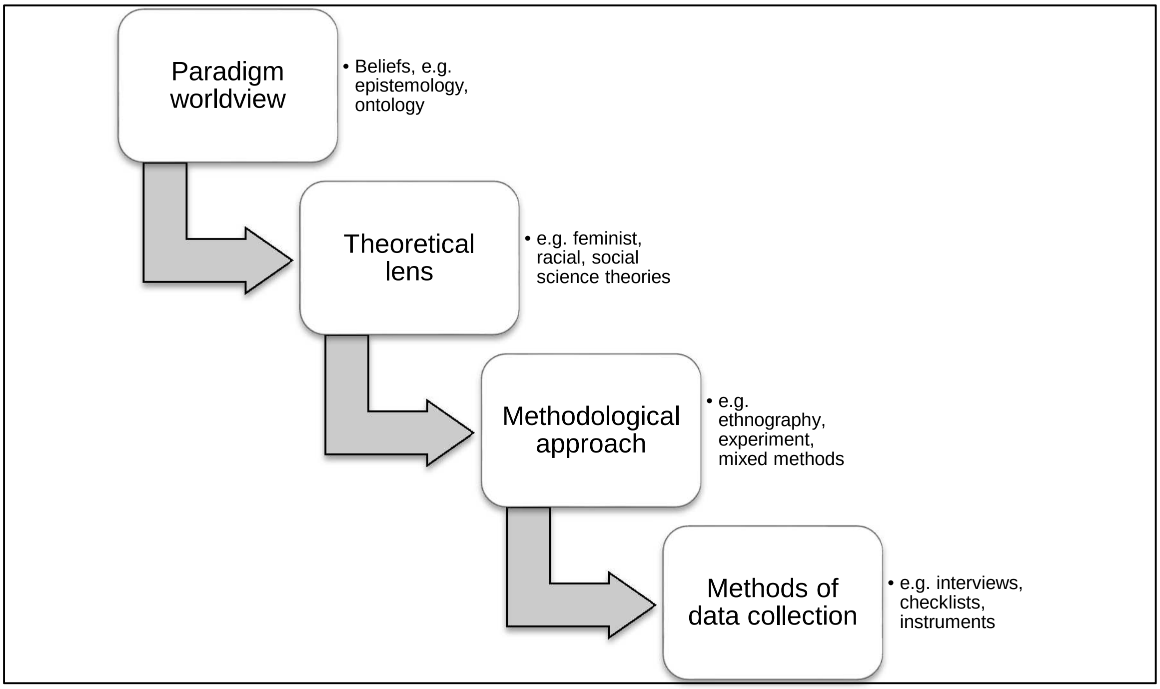
Following the debate on the form and nature of reality, scholars also disagreed on the relationship between the knower (namely the researcher) and what can be known (the research topic). Ryan et al. (2002) reflects that one school of thought clearly supported the positivist approach as applied in the natural sciences, where the researchers were clearly detached from the research topic, for example, the law of gravity will not change regardless of who is conducting the research, and who believed that this phenomenon was also true for research in social sciences. Critique of the natural sciences methods as the only methods applied to social sciences research led to the development of a broader perspective to obtain knowledge in the social sciences domain. One of the methodologies that subsequently developed as a result, has become known as the ‘hermeneutic circle’. Although hermeneutics originated as a theological term, the concept was also relevant to the interpretation of intentional human behaviour, language and institutions. A prominent advocate for a broader perspective towards social science research, according to Ryan et al. (2002), was Habermas, who argued as follows with regard to the social sciences:

- Data cannot be separated from theory, and facts can be reconstructed in the light of theory.
- Theory in the natural sciences is constructed from ‘models’ of reality, while in the social sciences theories mimic facts and are judged good or bad by the extent to which they allow us to understand and interpret meaning.
- Unlike the essentially external law-like relationships of the natural sciences, social laws relate to ‘internal’ mental states and can be imposed by the observer.
- The language of the social sciences is malleable, permitting a wide diversity of meaning.
- Facts in the natural sciences are independent of meanings while meanings are the facts of the social sciences (Ryan et al. 2002).

Based on their review of accounting and financial research, which was strongly influenced by Tomkins and Groves, Ryan et al. (2002) argue that the dominant methodology of the financial disciplines is empiricist in nature. Koornhof (2001) also reviewed research methodologies in the field of accounting sciences and concluded that accounting research traditionally was more inclined towards the empirical perspective but argued for expanding the methodological perspective to interpretative methods, endorsing the viewpoint that knowledge could be obtained from other means than solely empirical investigation. Tomkins and Groves (1983) highlight that both empirical and interpretative approaches could be applicable when conducting research and the most appropriate research methodology should be determined based on the nature of the phenomenon being researched. The authors conclude that the researcher’s assumption regarding the nature of the phenomenon’s reality (ontology) will influence the way in which the knowledge will be obtained (epistemology) and that will dictate the process of doing research (methodology). Tomkins and Groves (1983) highlight that an appropriate research methodology cannot be selected without taking into account the ontological and epistemological assumptions that underpin the research question. Creswell and Plano Clark (2011) summarise the relationship of the various components in four levels for developing a research study based on an adaption of prior work, as illustrated in figure 4.1.

FIGURE 4.1

FOUR LEVELS FOR DEVELOPING A RESEARCH STUDY

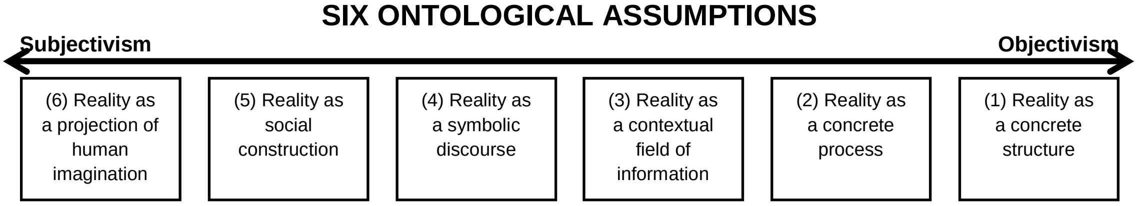


(Creswell & Plano Clark 2011)

Following the four levels of research identified, the first issue to address is the ontological assumptions (or worldview) relevant to the current study. Morgan and Smircich (1980) identified six alternative ways of viewing the world, namely six ontological assumptions, with (1) being the most objective and (6) being the most subjective, as reflected in figure 4.2.

FIGURE 4.2

SIX ONTOLOGICAL ASSUMPTIONS



(Adapted from Morgan and Smircich 1980)

For the current research, the author shares the view of Creswell and Plano Clark (2011) that more than one worldview may be required in a mixed methods study, given that the aim of the current research required a broader view that could not be answered by having a single worldview. On the far right-hand side of the spectrum as depicted in figure 4.2, in terms of (1) reality being a concrete structure, and reality of the external world is a given, objective facts can be discovered and defined by appropriate variables and tied together by general laws. This worldview of reality is applicable in the physical sciences, for example Sir Isaac Newton's Universal Law of Gravitation, and is not relevant to the context of the current study.

Moving slightly away from the rigid structure, (2) reality as a concrete process assumes that reality exists within the relationships and general laws that describe how things change. The predictable and contingent relations through which consumers function and transact can be described by applying economic chain reasoning as proposed by Fourie and Burger (2010). To identify the causal chain of consumer financial vulnerability, it is necessary to determine the chain through which, for instance, international economic events affect the domestic economy via the trade channel as this will eventually affect consumer financial vulnerability. The extent to which the different economic variables in the chain will be affected depends on various factors such as elasticity, multipliers, accelerators and marginal propensities. Obviously, international trade is but one channel through which economic chain reasoning can determine the causal chain of international economic events on consumers. For instance, international events can also affect consumers via the financial markets channel. In this thesis, the focus of the chain reasoning is not so much on the macroeconomic chain, but rather on the consumer financial vulnerability chain that is expected to be a linear relationship.

Concurring with the work of Morgan and Smircich (1980), Burrell and Morgan (1979), explain that social science consist of four distinct but related elements: assumptions about ontology, epistemology, human nature, and methodology, as illustrated in table 4.1.

TABLE 4.1

BURRELL AND MORGAN'S SOCIAL SCIENCE DIMENSION

Ontology:	Individual consciousness	⟶	Concrete construction
Epistemology:	Interpretation	⟶	Observation
Human nature:	Free will	⟶	Determinism
Methodology:	Hermeneutics	⟶	Scientific method
Collapsed to:	Subjective	⟶	Objective

(Burrell & Morgan 1979)

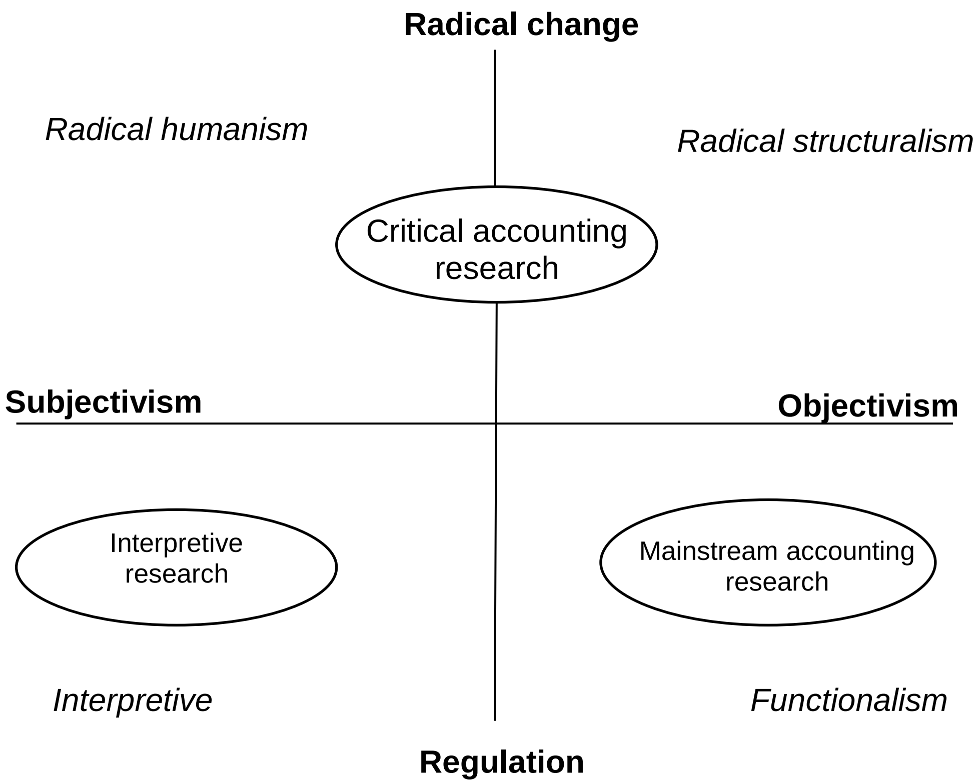
As in the beliefs of Morgan and Smircich (1980), it is clear from table 4.1 that Burrell and Morgan (1979) also concluded that ontological assumptions range from the individual consciousness, where reality exists in the mind of the individual, to the concrete construction, where there is an external reality that is independent of the researcher. In addition, knowledge can be obtained by means of various methods. Thus, from an epistemological viewpoint, knowledge can be obtained from interpretation through to observation with a combination of methods in between. In addition, Burrell and Morgan (1979) acknowledge the human nature involved in research by highlighting the one extreme, namely the free will humans have compared to the actions and behaviours completely being determined by the environment. Ryan et al. (2002) summarise the relationship between the various components and their methodological implications as follows:

> When reality is concrete and objective, and human behaviour is deterministic, knowledge is gained through observation and, so, scientific method will be appropriate. But where reality is grounded in subjective experiences and individuals possess free will, knowledge is gained through interpretation, and hermeneutical methods are needed.

Based on the works of Burrell and Morgan, Hopper and Powell (1985) depicted the taxonomy of accounting research in a subjective-objective continuum but added a second dimension representing the range of approaches that researchers take towards society. On the one side of the spectrum, researchers may be concerned with *regulation* and the creation of order in society, and on the other side researchers could be reviewing the conflicts and inequalities in society, and may be concerned with the potential for *radical change*. It is important to note that these positions are not mutually exclusive and several research projects could be conducted in the intermediate positions, for example in an attempt to assist policy-makers in their regulation, it would be important to determine what would result in a change of behaviour of the objects being researched. Hopper and Powell's (1995) taxonomy of accounting research is set out in figure 4.3.

FIGURE 4.3

HOPPER AND POWELL'S TAXONOMY OF ACCOUNTING RESEARCH



(Ryan et al. 2002)

In order to clearly identify and obtain better insight into the possible causes or predictors of consumer financial vulnerability, this researcher attempted to be an objective and detached observer applying empirical methods. This approach accords with mainstream accounting and finance research. However, as this field of research is fairly new in the South African context, the traditional accounting and finance research methods were extended to include interpretative research. Through triangulation, the researcher hoped not only to validate the results of the empirical research but also to provide a deeper understanding of the phenomenon of consumer financial vulnerability. As per Burrell and Morgan's (1979) social science dimension illustrated in table 4.1 above, the research methods applied in this study extended from specific quantitative methods (survey) on the one hand, to hermeneutics (applying the art of interpreting) on the other.

4.3 RESEARCH METHOD

The mixed methods research approach has evolved and Creswell and Plano Clark (2011) provide the following components of a mixed methods approach where the researcher should:

- collect and analyse persuasively and rigorously both qualitative and quantitative data (based on the research questions);
- mix (or integrate or link) the two forms of data concurrently by combining them (or merging them) sequentially by having one build on the other, or embedding one within the other;
- give priority to one or to both forms of data (in terms of what the research emphasises);
- use these procedures in a single study or in multiple phases of a programme or study;
- frame these procedures within philosophical worldviews and theoretical lenses; and;
- combine the procedures into specific research designs that direct the plan for conducting the study.

Creswell and Plano Clark (2011) list four principles for designing a mixed methods study, namely (1) mixed methods designs which can be fixed and/or emergent, (2) different approaches to the design exist, (3) it is important to match the design to the research problem, purpose and questions, and (4) the researcher should be explicit about the reasons for mixing methods. Each of the four principles will be discussed briefly and applied to the current study.

'Fixed mixed methods' refers to mixed methods studies where the researcher plans from the start of the research process to apply a mix of predetermined quantitative and qualitative methods and also conducts research procedures as originally planned. Emergent mixed methods refers to mixed methods studies where the use of mixed methods only becomes apparent during the first planned phase due to issues that emerge in the first phase. Generally, the second phase is added when the study is already in progress and one method is found to be inadequate (Creswell & Plano Clark 2011).

At the inception of the research conducted for this study, identifying the causes of consumer financial vulnerability by means of a quantitative strand (through a survey), followed by focus group interviews was considered as the best approach to address the research problem. The process was completed as planned; hence classifying the current study as a fixed mixed methods study.

The second principle discussed by Creswell and Plano Clark (2011) refers to two categories of design approaches: typology-based and dynamic. A typology-based approach to mixed methods design focuses on the classification of a mixed methods design and the choice and application of a particular design to a study's purpose and questions. Over time, methodologists have advanced a range of specific mixed methods approaches for specific disciplines. In contrast, the dynamic approaches to mixed methods design concentrate on a design process that considers and connects multiple components of research design rather than highlighting an appropriate design from an existing typology (Creswell & Plano Clark 2011). Given that research in the accounting and financial disciplines, and in particular consumer financial vulnerability, is still developing, especially in South Africa, this study tended to be dynamic, since the identification of a causal chain is not a static design methodology.

Thirdly, the importance of the research problem, purpose and questions comprises a key principle of mixed methods research design (Creswell & Plano Clark 2011). Based on the particulars of the research process incorporating the current study's implicit ontological and epistemological assumptions, techniques such as quantitative, qualitative or mixed methods were used in the current study.

The final principle for mixed methods research design discussed by Creswell and Plano Clark (2011) requires the researcher to state explicitly the actual reasons for selecting the mixed methods design based on a variety of reasons summarised by Greene, Caracelli and Graham (1989) and extended by Bryman (2006). According to Greene et al. (1989), the following five justifications for mixed methods can be identified:

1. *Triangulation*: convergence, corroboration, correspondence or results from different methods. In coding triangulation, the emphasis is placed on seeking corroboration between quantitative and qualitative data.
2. *Complementarity*: seeks elaboration, enhancement, illustration, clarification of the results from one method with the results from another.
3. *Development*: seeks to use the results from one method to help develop or inform the other method, where development is broadly construed to include sampling and implementation, as well as measurement decisions.
4. *Initiation*: seeks the discovery of paradox and contradiction, new perspectives of frameworks, the recasting of questions or results from one method with questions or results from the other method.
5. *Expansion*: seeks to extend the breadth and range of enquiry by using different methods for different inquiry components (Greene et al. 1989).

In addition to the five potential reasons for applying a mixed methods design, Bryman (2006) provides sixteen possible rationales:

1. *Triangulation* or greater validity – refers to the traditional view that quantitative and qualitative research may be combined to triangulate findings in order that they may be mutually corroborated. If the term is used as a synonym for integrating quantitative and qualitative research, it is not coded as triangulation.
2. *Offset* – refers to the suggestion that the research methods associated with both quantitative and qualitative research have their own strengths and weaknesses so that combining them allows the researcher to offset their weaknesses to draw on the strengths of both.
3. *Completeness* – refers to the notion that the researcher can bring together a more comprehensive account of the area of enquiry in which he or she is interested if both quantitative and qualitative research is employed.
4. *Process* – quantitative research provides an account of structures in social life but qualitative research provides a sense of process.
5. *Different research questions* – this is the argument that quantitative and qualitative research can each answer different research questions but this item is coded only if authors explicitly state that they are doing this.
6. *Explanation* – one method is used to help explain findings generated by the other method.

7. *Unexpected results* – refers to the suggestion that quantitative and qualitative research can be fruitfully combined when the one generates surprising results that can be understood by employing the other.
8. *Instrument development* – refers to contexts in which qualitative research is employed to develop questionnaire and scale items, for example, so that better wording or more comprehensive closed answers can be generated.
9. *Sampling* – refers to situations in which one approach is used to facilitate the sampling of respondents or cases.
10. *Credibility* – refers to suggestions that employing both approaches enhances the integrity of findings.
11. *Context* – refers to cases in which the combination is rationalised in terms of qualitative research providing contextual understanding coupled with either generalisable, externally valid findings or broad relationships among variables uncovered through a survey.
12. *Illustration* – refers to the use of qualitative data to illustrate quantitative findings, often referred to as putting 'meat on the bones' of 'dry' quantitative findings.
13. *Utility* or improving the usefulness of findings – refers to a suggestion, which is more likely to be prominent among articles with an applied focus, that combining the two approaches will be more useful to practitioners and others.
14. *Confirm and discover* – this entails using qualitative data to generate hypotheses and using quantitative research to test them within a single project.
15. *Diversity of views* – this includes two slightly different rationales – namely, combining researchers' and participants' perspectives through quantitative and qualitative research respectively, and uncovering relationships between variables through quantitative research while also revealing meanings among research participants through qualitative research.
16. *Enhancement* or building upon quantitative/qualitative findings – this entails a reference to making more of or augmenting either quantitative or qualitative findings by gathering data using a qualitative or quantitative research approach (Bryman 2006).

It is evident from the above summary that the development of the third research design, namely the mixed methods approach, results from a single method not being suitable to address a variety of research questions. The rationale for using mixed methods for this study was derived from some of the reasons provided by both

Greene et al. (1989) and Bryman (2006) namely, triangulation, off-set, completeness, the process, different research questions as well as providing some explanations. From a positivist perspective, this approach improved the limited understanding of consumer financial vulnerability that could have occurred if the study was restricted to quantitative analyses. From a constructivist perspective, more insight in the causes of consumer financial vulnerability in South Africa could be gained from the information obtained from the qualitative analyses. The quantitative analyses addressed the factors that predict consumer financial vulnerability but to better understand the causal chain by which these factors relate to one another, resulting in consumers being financially vulnerable, qualitative focus group interviews were conducted with subject specialists.

Having decided on the reasons for choosing the mixed methods design as appropriate for the study, certain key decisions in choosing a mixed methods design must be made. A strand refers to the component of a study that includes the performance of the quantitative or qualitative research (Cresswell & Plano Clark 2011). These decisions refer to the different ways that the quantitative and qualitative strands of the study relate to each other. Four key decisions to determine the appropriate mixed methods design are:

1. the level of interaction between the strands: being either independent (the quantitative and qualitative strands are implemented independently from one another) or interactive (there is direct interaction between the quantitative and qualitative strands);
2. the relative priority of the strands: the two methods may have equal priority (both play an equally important role in addressing the research problem), or a quantitative priority (greater emphasis is placed on the quantitative methods and the qualitative methods are used in a secondary role) or a qualitative priority (greater emphasis is placed on the qualitative methods and the quantitative methods are used in a secondary role);
3. the timing of the strands – describing the order in which the researcher will use the results from the two sets of data within the study: concurrent timing (both the quantitative and qualitative strands are implemented during a single phase of the study), a sequential timing (the strands are implemented in two distinct phases, with the collection and analysis of one type of data occurring after the collection and analysis of the other type) or multiphase combination

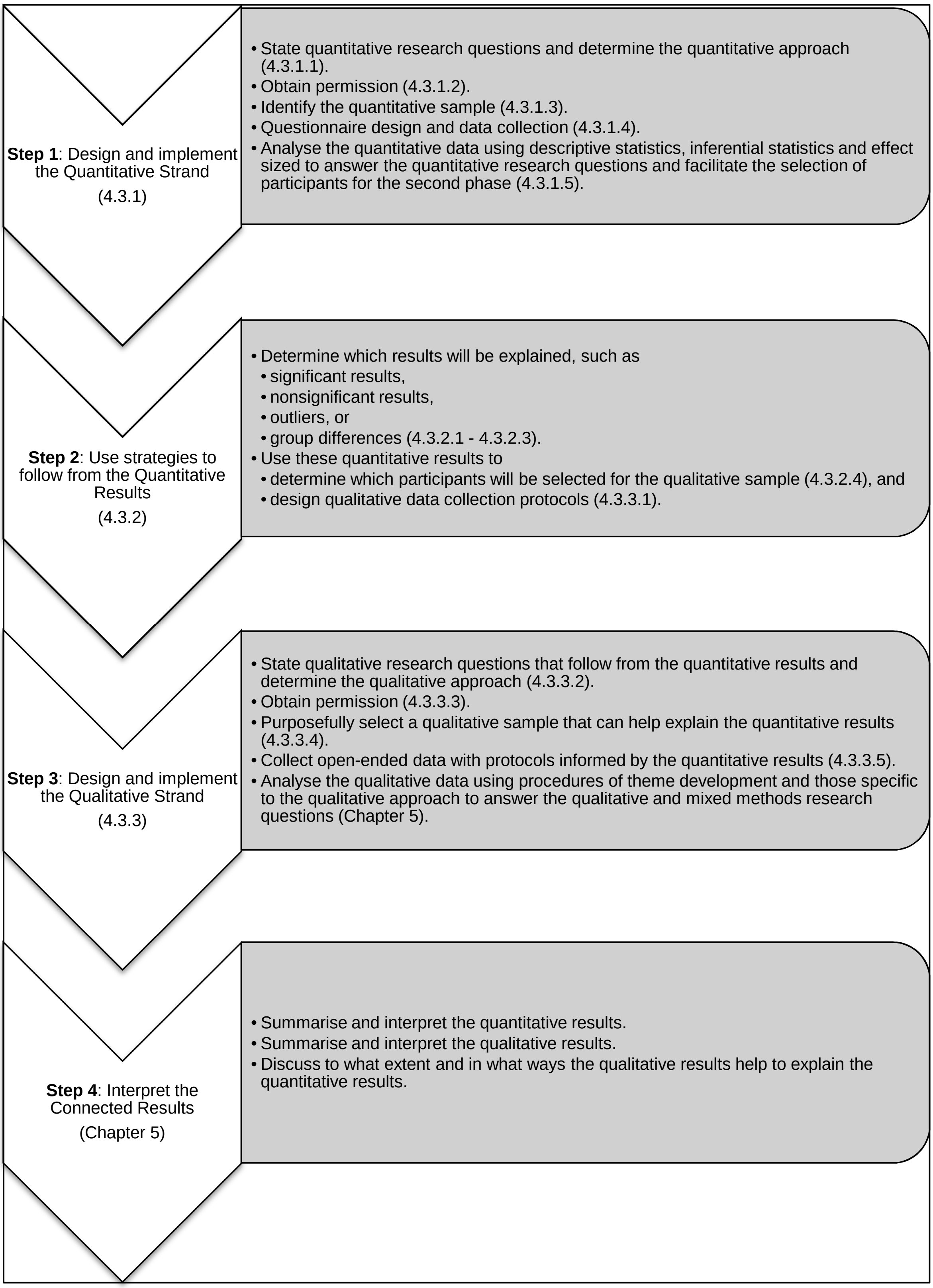
timing (multiple phases are implemented, including sequential and/or concurrent timing during the duration of the study or project); and

4. the procedures for mixing the strands: mixed during interpretation (the qualitative and quantitative strands are mixed during the final step of the research process after both sets of data have been collected and analysed); mixed during data analysis (both strands are mixed when analysing the two sets of data); mixed during data collection (the two strands are mixed when the second set of data is collected – the results of the one strand build on the collection of the other type of data); and mixed at the level of design (the qualitative and quantitative strands are mixed during the larger design stage of the research process, namely embedded mixing, theoretical framework-based mixing or programme objective framework-based mixing). (Cresswell & Plano Clark 2011)

Based on the principle of mixed methods designs and the key decisions that should be made to select the appropriate design, Creswell and Plano Clark (2011) describe six major mixed methods designs, namely (1) the convergent parallel design; (2) the explanatory sequential design; (3) the exploratory sequential design; (4) the embedded design; (5) the transformative design; and (6) the multiphase design. For the current study, the explanatory sequential mixed methods design was deemed appropriate to achieve the proposed research objectives, as shown in figure 1.7 in chapter 1. The basic procedures in implementing an explanatory design as reported by Creswell and Plano Clark (2011) are presented in figure 4.4.

FIGURE 4.4

FLOWCHART OF THE BASIC PROCEDURES WHEN IMPLEMENTING AN EXPLANATORY DESIGN



(Adapted from Creswell & Plano Clark 2011)

Based on the flowchart provided in figure 4.4, the four steps of the current explanatory study are discussed in the remainder of this chapter as well the following two chapters. Steps 1 to 3 are discussed in this chapter, with the exception of the analyses of both the quantitative and qualitative strands, which are discussed in chapter 5. A comprehensive and integrative interpretation of the results will be provided in chapter 6, followed by some concluding remarks and recommendations.

4.3.1 Step 1: Design and implementation of the quantitative strand

As shown in figure 4.4, the phases in designing and determining the quantitative strand consist of the statement of the research questions to be answered through the quantitative strand, obtaining the necessary ethical permission to conduct the study, identifying the quantitative sample, collecting the data with the necessary instruments and finally, analysing the data.

4.3.1.1 *Research questions and quantitative strand*

Secondary data was obtained from the FinMark Trust consumer financial vulnerability study (Van Aardt & Moshoeu 2009) conducted in 2009, in which the researcher participated. Secondary research entailed accessing and extracting existing data on the subject matter given that the data extracted was valid and reliable. The secondary data was originally obtained from consumers by means of a consumer financial vulnerability questionnaire designed specifically for the FinMark study during 2009. The data obtained in the FinMark study could also support the purposes of the current study, given that the FinMark study concluded with a set of descriptors of potential drivers of consumer financial vulnerability. The primary aim of the current study was to arrive at a better understanding of the predictors of consumer financial vulnerability in South Africa by constructing a causal chain based on inferential statistical analyses not originally conducted in the FinMark study. The first three research questions as provided in chapter 1 are addressed as follows:

1. A comprehensive literature survey identified the factors giving rise to consumers being financially vulnerable

By means of quantitative data analysis techniques, the next two questions were answered:

2. What is the nature of the causal chain between such factors giving rise to consumers being financially vulnerable?

3. What is the strength of each factor in its contribution to consumer financial vulnerability?

Based on the literature survey provided in chapter 2, various possible factors were identified that could lead consumers to feel financially vulnerable. By means of categorical regression analyses, the researcher aimed to extend the descriptive work done in the original FinMark study by identifying the most significant factors of consumer financial vulnerability based on the prediction power (R^2) of the various variables through inferential statistical analyses. Categorical regression was used as method of regression because the potential predictor variables ranged in nature from nominal to interval measurement level, necessitating a form of regression that could incorporate predictor variables on a range of measurement levels. Following the identification of the factors that could cause financial vulnerability, multiple categorical regression analyses were used to construct a path analysis consisting of different layers of predicting variables. By means of path analysis, it was possible to determine the nature of the causal chain between these factors as well as the strength of each factor's contribution to consumer financial vulnerability.

4.3.1.2 *Obtain permission*

As secondary data was used for the quantitative strand, no ethical approval was required. Ethical approval, however, was obtained when the study was originally conducted. The researcher ensured that the original study complied with the ethical code of the South African Market Research Association (SAMRA). Permission was also obtained from FinMark Trust to further explore the data for this study.

4.3.1.3 *Identifying the quantitative sample*

Although secondary data was used for the inferential statistical analyses, the sample plan as well as the realised sample of the original study was relevant for interpreting the results. According to Tustin, Ligthelm, Martins and Van Wyk (2005), a sample plan consists of measures to define the population, specifications of an appropriate sample frame, selection of the sampling method and the determination of the final sample size that is used to draw the sample. For this study, the population comprised all households in South Africa, which included nearly 13.7 million households (Van Aardt 2007). The weighting matrix is provided in Annexure A.

Respondents to a quantitative study can be selected through either a probabilistic sampling strategy or a non-probabilistic strategy to reflect the characteristics of the group about which the researcher wishes to make statements (Cresswell & Plano Clark 2011). In terms of probabilistic sampling, all members of the population have a known chance of selection compared to non-probabilistic sampling, which only involves selecting individuals who are available and can be studied (Cresswell & Plano Clark 2011). To ensure a representative sample of consumers, a sample was drawn covering all nine provinces, all four main population groups, both genders, all age groups as well as the various income groups in South Africa. The sample frame for purposes of identifying the respondents consisted of the white paper telephone directories.

Determining the sample size influences the statistical power (the probability to successfully find differences if they actually exist) (Tustin et al. 2005). Based on research conducted by Hair, Black, Babin and Anderson (2010), acceptable levels of power were provided, suggesting that studies should aim to achieve alpha levels of at least .05 with power levels of 80 per cent. To adhere to this guideline, the sample size had a direct impact on the required outcome, since at any given alpha level, increased sample sizes always produce greater power for statistical tests.

Sample size also affects the generalisability of the results by the ratio of observations to independent variables. Hair et al. (2010) state that as a general rule, the ratio should not be less than 5:1 (namely five observations for each independent variable). For this study, the factors identified in chapter 2 were transposed to 88 statements in the questionnaire. Therefore, the proposed sample size of 976 as depicted in table 4.2 complied with the general rule, as in terms of the proposed sample size, the number of observations would be almost ten times the number of variables to be analysed. The consumer sample (see table 4.2) consisted of the following two sub-samples:

- 571 consumers with landlines who were contacted via the Bureau of Market Research's computer aided telephonic interview (CATI) system; and
- 405 consumers in areas where limited amenities were available via face-to-face interviews (316 face-to-face interviews were successfully conducted).

TABLE 4.2

SAMPLE SIZE BY PROVINCE

Province	CATI		Face-to-face		Total	
	n	%	*n*	%	*n*	%
Eastern Cape	52	9.1	70	17.3	122	12.5
Free State	28	4.9	40	9.8	68	7.0
Gauteng	157	27.5	20	5.0	177	18.1
KwaZulu-Natal	80	14.0	35	8.6	115	11.8
Limpopo	49	8.6	70	17.3	119	12.2
Mpumalanga	21	3.7	60	14.8	81	8.3
North-West	20	3.5	70	17.3	90	9.2
Northern Cape	66	11.6	20	5.0	86	8.8
Western Cape	98	17.2	20	5.0	118	12.1
Total	**571**	**100.0**	**405**	**100.0**	**976**	**100.0**

(Van Aardt & Moshoeu 2009)

4.3.1.4 *Questionnaire design and data collection*

For the telephonic and in-house consumer interviews, the BMR designed and compiled a structured multiple-response research instrument with inputs from and final approval of the FinMark Trust. The questionnaire was designed to be completed both electronically via an interviewer-administered approach (for CATI purposes) and in-house personal interviews (for fieldwork purposes). The main focus of the questionnaire was to determine consumer financial vulnerability of consumers in South Africa.

The questionnaire consisted of the following three sections: Section A required respondents to describe the members of their household, Section B contained questions relating to household and personal financial status, while Section C required respondents to provide their personal details. The questions were structured in such a way that various structured measuring scale questions could be used with very few open-ended response questions requiring respondents to provide details about their financial situation.

The questionnaire was based on the following topics:

- details of persons in the household;
- improvement in consumers' financial situation over the past 12 months;
- financial instruments utilised during the preceding 12 months;
- attitudes and views on money;
- attitudes towards saving;
- saving instruments utilised over the preceding 12 months;
- reasons for financial difficulties over the preceding 12 months; and
- respondent's biographical background.

To conduct both the CATI and personal interviews, fieldworkers were appointed by the Bureau for Market Research utilising experienced supervisors and fieldworkers. Fieldworkers had to have at least a Grade 12 qualification, be multi-lingual and having been involved in similar studies in the past. Fieldworker training was conducted both at the BMR's offices and at the off-site locations.

The questionnaire was changed several times until a final questionnaire for survey purposes was obtained. Changes to the survey occurred before and after pilot testing. Based on the input of subject specialists and FinMark Trust, the survey was originally compiled and given to colleagues and other individuals representing the South African consumer. After reviewing the completed surveys, certain adjustments were made to the survey instrument before submitting the fieldworkers to a second pilot test on the revised survey instrument. The fieldworkers and CATI interviewers were requested to complete a limited number of surveys. Based on the analysis and feedback obtained from the fieldworkers and interviewers who conducted this limited survey, the survey instrument was finalised.

To ensure the reliability and accuracy of data, quality control measures were applied by means of a call-back check technique. This exercise entailed calling back 10% or more of the respondents who had already been interviewed to verify whether the designated respondents were in fact interviewed and to confirm that all the questions in the questionnaire were asked and understood by the respondents. The outcome of this process showed that all the collected data was accurate and that the respondents understood most of the questions that were asked.

Both the CATI and personal interview survey data was captured onto a data file for analysis by means of LIME Survey software, after which the data was cleaned and analysed by means of the Statistical Package for the Social Sciences (SPSS).

4.3.1.5 *Data analyses*

The data analyses conducted in this study can be disaggregated in three distinct phases, namely:

- **Phase 1 – data analyses in preparation for the Finmark study:**
  This process consisted of Analytical Hierarchical Process (AHP) modelling where a selected group of experts were requested to identify possible variables which are indicative of consumer financial vulnerability. This process was informed by the work of Heymans (2008) as well as background research conducted by Ms A Moshoeu (social and psychological variables) and Prof CJ van Aardt (economic, socio-economic and demographic variables) predicting consumer financial vulnerability. The group discussion by these experts was facilitated by an AHP expert, Dr M Pohl, who assisted the group to identify four consumer financial vulnerability sub-indices, each consisting of three contributing variables. By means of the AHP weights were assigned for each of the sub-indices as well as each of the contributing variables. Such weights were used to compile the consumer financial vulnerability sub-indices and overall index. These weighted indices were used as criterion variables in the current study.

- **Phase 2 – data to populate the consumer financial vulnerability indices:**
  Data to populate the said indices by using the AHP generated weights as well as predictor variables was obtained by means of the survey discussed in section 4.3.1.4 above. This data was used to produce two types of variables, namely unweighted (raw data) variables to which population weights were applied to make it nationally representative as well as AHP weighted indices, which were used for criterion purposes as described above. The reliability of the AHP weighted criterion variables as well as the raw population weighted variables was determined by means of Cronbach Alpha analyses while the validity of such data was determined by means of factor analyses (not reported on in the current study). The results of the reliability and validity tests were found to be acceptable.

- **Phase 3 – inferential analyses:**

  The inferential analyses conducted in phase 3 forms the focus of the current study. Inferential analyses were conducted by means of categorical multiple regression analyses together with tests for serial correlation and colinearity. By means of the said categorical regression analyses predictive relationships between variables were explored by using a causal chain analysis structure. In terms of this structure, predictive relationships between variables were explored. However, such predictive relationships jointly constitute antecedents for financial vulnerability, thus establishing causal chains between joint antecedents and criterion variables.

Before embarking on the categorical multiple regression analyses to examine the relationship between consumer financial vulnerability and a bouquet of independent variables, it was necessary to review the data obtained by means of descriptive analyses. After cleaning and weighting the dataset (refer to Annexure A regarding the weighting of the dataset), the following descriptive analyses were conducted:

- frequency tables and cross-tabulations to obtain results regarding the distribution of data;
- confirmatory factor analyses to determine the integrity of the indices constructed;
- reliability analyses to determine the reliability of the data obtained during the CATI and face-to-face surveys; and
- cross-tabulations to obtain breakdowns of the index scores with the various demographic variables.

Profiles of consumer respondents

Profiles of consumer respondents are provided in tables 4.3 to 4.7. It appears from these tables that all critical demographical attributes were adequately captured in this study, including an acceptable distribution of respondents across provinces (table 4.3), gender (table 4.4), area (table 4.5), age (table 4.6) and population group (table 4.7).

TABLE 4.3

RESPONDENTS BY PROVINCE AND GENDER (UNWEIGHTED)

Province	Male	Female	Total
Eastern Cape	38	83	121
Free State	15	33	48
Gauteng	70	107	177
KwaZulu-Natal	24	56	80
Limpopo	30	90	120
Mpumalanga	30	51	81
Northern Cape	14	26	40
North-West	21	81	102
Western Cape	34	84	118
Total	**276**	**611**	**887**

TABLE 4.4

RESPONDENTS BY GENDER AND INCOME GROUP (UNWEIGHTED)

Gender	Metro	Non-metro city	Town	Rural	Total
Male	38	39	94	105	276
Female	131	55	168	257	611
Total	**169**	**94**	**262**	**362**	**887**

TABLE 4.5

RESPONDENTS BY PROVINCE AND AREA (UNWEIGHTED)

Province	Metro	Non-metro city	Town	Rural	Total
Eastern Cape	17	9	23	72	121
Free State	21	6	1	20	48
Gauteng	32	27	109	9	177
KwaZulu-Natal	7	11	40	22	80
Limpopo	23	8	18	71	120
Mpumalanga	7	2	9	63	81
Northern Cape	18	2	0	20	40
North-West	27	0	2	7	102
Western Cape	17	29	60	12	118
Total	**169**	**94**	**262**	**362**	**887**

TABLE 4.6

RESPONDENTS BY AGE GROUP AND AREA (UNWEIGHTED)

Age group (years)	Metro	Non-metro city	Town	Rural	Total
25 and under	20	14	40	28	102
26 – 34	18	13	41	49	121
35 – 44	44	16	41	80	181
45 – 54	29	16	47	72	164
55 – 59	15	14	28	39	96
60+	43	21	65	94	223
Total	**169**	**94**	**262**	**362**	**887**

TABLE 4.7

RESPONDENTS BY AGE AND POPULATION GROUP (UNWEIGHTED)

Age group (years)	African	Asian	Coloured	White	Total
25 and under	76	2	16	8	102
26 – 34	100	7	9	5	121
35 – 44	141	10	18	12	181
45 – 54	117	14	13	20	164
55 – 59	60	8	13	15	96
60+	135	12	35	41	223
Total	**629**	**53**	**104**	**101**	**887**

Based on the dynamic nature of the sample strategy compared to a stochastic sampling strategy, a response rate of 100% was achieved because the fieldworkers replaced a respondent who was not available with another respondent based on the original criteria, resulting in 887 completed questionnaires. Regarding the number of observations disaggregated by more than one demographic variable, it was evident that certain cells did not obtain the desired level of at least 30 observations per cell. A suitable dispersion per province was obtained but even with the enlarged sample size it was not possible to obtain a subminimum of 30 per cell. This did not reduce the statistical value of the analyses to be conducted but limited the level of data disaggregation that could be used.

Reliability, validity and structural integrity of the indices

As previously described in the current section, the overall consumer financial vulnerability index was constructed by means of an analytical hierarchal process including four sub-indices, namely the income vulnerability index, the saving vulnerability index, the expenditure vulnerability index and the debt servicing vulnerability index. The results of the analytical hierarchal process are provided in Annexure B.

During the development of the index by means of the said analytical hierarchal process (AHP) methodology, the reliability of the exercise was determined by means of a consistency index. This index indicated a high level of index consistency. After the first set of data was obtained, the validity of the index was determined by means of confirmatory factor analysis. This analysis showed that the index and its sub-indices were valid measures of consumer financial vulnerability. The factor loadings obtained were generally indicative of high levels of validity and structural integrity of the various sub-indices and overall index.

The obtained data was also scrutinised for data quality by using reliability, validity and structural integrity tests. To ensure that the data adhered to the requirements of reliability, validity and structural integrity, the following analyses were conducted: the modal range, standard deviation, skewness, kurtosis, range interval, minimum and maximum values, reviewing the normal distribution, correlations matrixes and frequency distributions. For more detail regarding the actual tests and results, see Annexure B but the following decision rules were applied:

- during the AHP, the consistency had to be less than 0.05;
- for the component factor analysis the correlation value was set at a minimum of 0.3;
- reliability was measured by means of the Cronbach alpha and the value had to be between 0.65 and 0.95;
- internal validity was found to be acceptable at levels above 0.3; and
- structural integrity was done through the data cleaning process to identify and eliminate out of range figure.

Based on the level to which the various tests adhered to the decision rules an overall conclusion were made – the outcomes of these tests with respect to the different indices are reported in table 4.8:

TABLE 4.8

COMPLIANCE OF STATISTICAL TESTS TO DETERMINE RELIABILITY, VALIDITY AND STRUCTURAL INTEGRITY

INDEX	Consistency (AHP)	Component factor analysis (CFA)	Reliability	Internal validity	Structural integrity	Overall conclusion regarding quality
Overall consumer financial vulnerability index	Yes	Yes	Yes	Yes	Yes	Satisfactory
Income vulnerability index	Yes	Yes	Yes	Yes	Yes	Excellent
Saving vulnerability index	Yes	Yes	Yes	Yes	Yes	Satisfactory
Expenditure vulnerability index	Yes	Yes	Yes	No	Yes	Satisfactory
Debt servicing vulnerability index	Yes	Yes	No	No	No	Unsatisfactory

Based on the numerous statistical tests conducted to determine reliability, internal validity and structural integrity of the data as illustrated in table 4.8, it was concluded that the overall consumer financial vulnerability index, the income vulnerability index, the saving vulnerability index and the expenditure vulnerability index adhered to all the necessary requirements. This, however, was not true of the debt servicing vulnerability index, with the implication that inferential statistical analyses were conducted with respect to the overall consumer financial vulnerability indices as well as the income, saving and expenditure vulnerability index but not with respect to the debt servicing vulnerability index.

The final overall index and sub-indices were based on 10-point scales where ‘0’ was indicative of complete financial security by all consumers while ‘10’ was indicative of total financial vulnerability by all consumers. These indices were compiled by using data from a consumer survey, giving a score of ‘0’ to consumers who are not at all vulnerable, ‘5’ to consumers who are somewhat vulnerable, and a score of ‘10’ to consumers who are very vulnerable. Should none of the consumer respondents be experiencing vulnerability, the mean score of all consumers will be ‘0’. Should all consumer respondents be experiencing vulnerability, the mean index score will be ‘10’. Any index score between ‘0’ and ‘10’ will be indicative of consumers being vulnerable to a greater or lesser extent with mean scores between ‘0.0’ and ‘1.99’ which will be indicative of consumers being financially very secure, a mean score between ’2.0’ and ‘3.99’ would indicate that consumers are financially secure, a mean score between ‘4’ and ‘5.99’ would be indicative of consumers being somewhat vulnerable, a mean score between ‘6.00’ and ‘7.99’ would be indicative of consumers being vulnerable, while a mean score between ‘8.00’ and ’10.00’ would be indicative of consumers being very vulnerable.

The overall results of the various sub-indices and consumer financial vulnerability index were as follows:

- consumer income vulnerability: 5.64
- consumer saving vulnerability: 5.74
- consumer expenditure vulnerability: 5.54
- consumer debt servicing vulnerability: 4.37
- consumer financial vulnerability: 5.17

Inferential statistical analyses

The research results obtained for the current study were derived by means of in-depth analyses of the abovementioned consumer financial vulnerability data via regression analysis. The data was used to identify the predictors of the four components of the consumer financial vulnerability index, namely income, saving and expenditure as well as the overall index. The results of these analyses are shown and discussed in the next chapter.

For this study, multiple categorical regression analyses were used to construct a causal chain consisting of different layers of predicting variables.

By means of regression analyses, a number of diagnostic results were obtained, which were used to construct the causal chain, namely:

- coefficient of determination to measure the strength of relationships;
- F-tests to determine the ratio between model variation and error variation in order to assess the level of homoscedasticity in the postulated relationships; and
- partial regression analyses to determine the percentage contribution of each predictor variable to variation in the criterion variable.

Decision rules were formulated to determine whether specific predictor variables should be included or excluded in the final model. These were as follows:

- coefficient of determination of higher than 0.15;
- overall index-level F-score of 1.1 or higher and sub-levels F-scores of 5 and higher; and
- partial regression contribution of higher than 8% of variance.

The causal chain conducted by using the regression analyses and decision rules shown above commenced by firstly identifying the strength of the relationship between the four sub-indices of consumer financial vulnerability and the overall consumer vulnerability index. Thereafter, a variety of endogenous and exogenous variables were regressed onto the four sub-indices to determine the predictors of each of the sub-indices. Having completed the first two levels of analyses, additional analyses were conducted to determine further levels of prediction until no more levels could be predicted, with the implication that no further analyses were conducted when the path analyses became saturated. The results of the inferential statistical analyses are provided in chapter 5.

4.3.2 Step 2: Use strategies to follow from the quantitative results

In section 4.3.1, the steps regarding the quantitative phase were discussed in detail, illustrating the principles for sample design, data collection and the proposed statistically analyses. In the following section, the two phases will be interfaced by identifying which quantitative results (as discussed in chapter 5) require additional explanation. The quantitative results will be used to guide the development of the qualitative strand. In this section, the qualitative research question will be reviewed, purposeful sampling procedures will be discussed and the data collection protocol will be stipulated, based on the results of the quantitative strand. The qualitative strand will conclude with a discussion of the results in chapter 5 prior to the researcher concluding in chapter 6 with the extent as well as the ways in which the qualitative results explain and provide more insights into the qualitative results.

Before embarking on the qualitative phase of the research, several decisions had to be made based on the results of the quantitative phase to determine which qualitative data collection method would be most appropriate. These decisions included: (1) deciding whether the same or different individuals should be included in samples, (2) deciding on the size of the second sample, (3) deciding what quantitative results to follow up and (4) deciding how to select the best participants for the qualitative follow-up phase. Each of these decisions will be discussed briefly before the implementation of the qualitative phase is discussed in more detail.

4.3.2.1 *Same or different individuals included in both samples*

Because consumer financial vulnerability and its causes are still fairly unknown and also quite interlinked, as shown in chapter 2, for this study it was decided to use subject specialists to assist with the process of understanding the possible causes of consumer financial vulnerability and not to re-interview the original participants of the quantitative phase.

4.3.2.2 *Size of second sample*

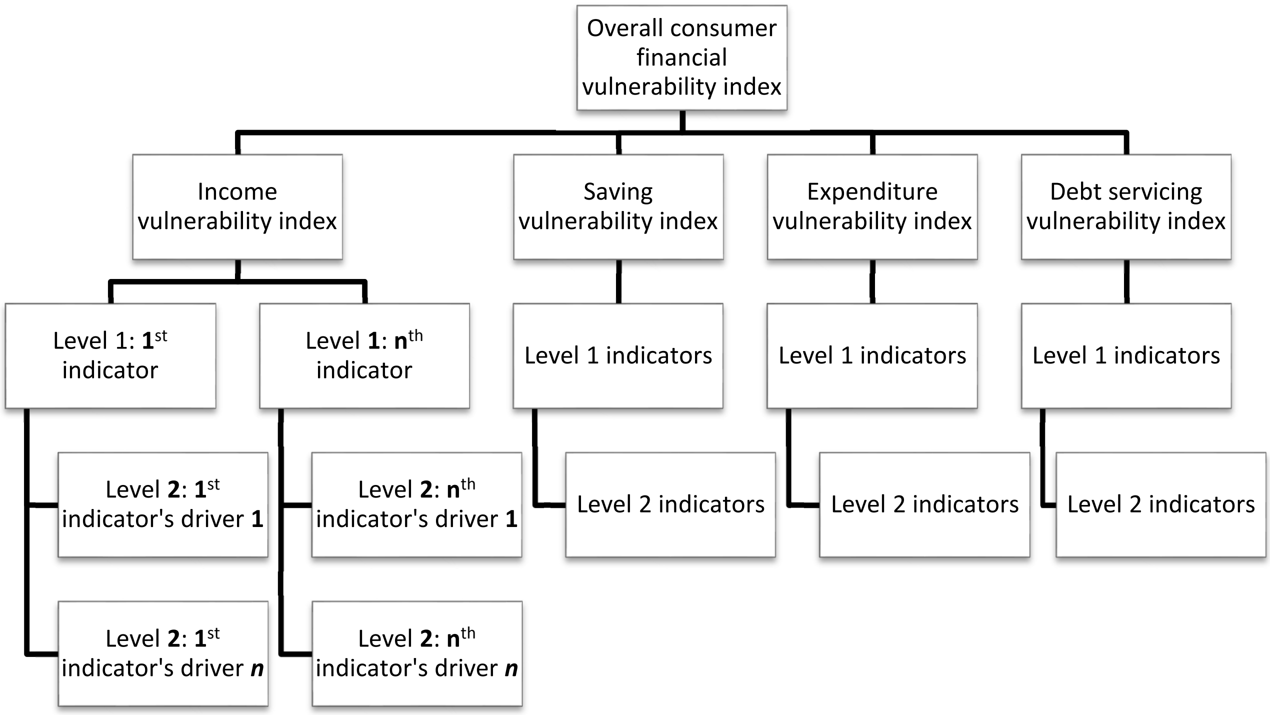
As the intention of this design was not to compare the results of the quantitative phase with the qualitative phase, but rather to inform the results, it was not necessary to have the same sample size for both studies. However, it was necessary to obtain enough meaningful information to construct meaningful themes, and by limiting the scope, it was necessary that fewer rather than more participants were invited to participate in the focus group discussions.

4.3.2.3 *Decide which quantitative results to follow up*

It was necessary to limit the scope of the discussions to focus on the main causes of consumer financial vulnerability and not necessarily on the entire causal chain as constructed from the quantitative phase. Based on the decision rules discussed in section 4.3.1.5 and the complexity of the causal chain as depicted in chapter 5, it was decided that the discussion for the focus groups had to be limited to the top three layers of the drivers of the overall index, namely the four sub-indices and the first two layers of predictors regarding the sub-indices. Schematically, this is illustrated in figure 4.5, with the extended levels depicted in the income vulnerability index also applied to the other three sub-indices:

FIGURE 4.5

SCHEMATIC ILLUSTRATION OF ANALYSES OF LAYERS OF CAUSAL CHAIN



A detailed causal chain based on the path analyses the overall consumer financial vulnerability index, the income vulnerability index, the saving vulnerability index and the expenditure vulnerability index will be provided in chapter 5.

4.3.2.4 *Decide on selection of the best participants for the qualitative follow-up*

As illustrated in chapter 1, the consumer financial vulnerability index is a function of four sub-indices, namely the income, saving, expenditure and debt servicing vulnerability indices. As each of the topics supporting the four indices is very complex, it was deemed appropriate to have four focus group discussions with experts from each of the four identified areas instead of only one combined focus group. An in-depth understanding of the possible predictors of consumer financial vulnerability could only be obtained by reviewing each index in more detail on its own instead of combining it with the other three indices. Subject experts participating in the focus groups included regulators, policy-makers, financial service providers, other stakeholders and researchers involved in the various underlying topics.

4.3.3 **Step 3: Implement the qualitative strand**

Based on the flowchart provided in figure 4.4, the four steps of the current explanatory study are discussed in the remainder of this chapter as well the following two chapters. Apart from the analyses of both the quantitative and qualitative strands, steps 1 to 3 are discussed in this chapter. The analyses are discussed in chapter 5. The interpretation of the connected results is discussed in chapter 5, while chapter 6 will provide some concluding remarks and recommendations.

4.3.3.1 *Design and implementation of the qualitative strand*

As illustrated in figure 4.4, the phases in designing and determining the qualitative strand consisted of the statement of the research question to be answered through the qualitative strand, obtaining the necessary ethical permission to conduct the second phase, purposefully selecting a qualitative sample that would help explain the quantitative results, collecting open-ended data in line with the necessary protocols applicable and, finally, analysing the qualitative data using procedures of theme development and those specific to the qualitative strand to answer the qualitative research question.

4.3.3.2 *Research questions and the qualitative strand*

Based on the results of the qualitative phase and the criteria selected for further analyses, the researcher aimed to address the following research question by means of the analysis of the focus group interview data obtained:

What do key informants in the financial services industry believe to be the causes of consumer financial vulnerability?

Neuman (2006) defines a focus group as a special qualitative research technique in which people are informally interviewed in a group discussion setting.

The informal nature of the focus group method allowed the researcher to question several individuals systematically and simultaneously. Typically, a focus group consists of between 5 and 15 people who are homogenous in certain aspects. The interviews can be structured, semi-structured or unstructured, and should be facilitated by a trained moderator. The moderator must ensure that the interviews are nondirective and able to facilitate free and open discussions by all group members (Babbie 2007; Neuman 2006).

4.3.3.3 *Obtain permission*

Ethical approval to conduct the focus group survey was obtained from the ethical representative from the Department of Taxation in terms of the prescribed policies and procedures. Each participant in the focus groups signed an informed consent form, agreeing to participate voluntarily in the focus group discussion.

4.3.3.4 *Purposeful selection of qualitative sample*

In addition to the consumer sample that was required to populate the consumer financial vulnerability index, a sample of subject specialists was identified to obtain information regarding the financial situation of consumers from key informants who could be used for different purposes, namely:

- to explain the findings from the causal chain analyses derived from the quantitative phase. Although none of the key informants' data was used to populate the consumer financial vulnerability index and construct the causal chain, the data was useful to arrive at a more detailed understanding of vulnerability patterns emerging from the causal chain.
- to determine the level of congruence between the financial vulnerability of consumers as reported by themselves in the household survey and the views of the key informants in this regard; and
- to shed further light on the causes of consumer financial vulnerability in South Africa.

In contrast to the quantitative phase, where a random sampling selection method was applied, it was more appropriate with the qualitative phase to apply a purposive sampling method to select the sample of respondents based on their knowledge of the phenomenon being researched (Babbie 2007). The key informants, being subject specialists, although not representative of all consumer financial vulnerability subject specialists in South Africa, provided a good distribution on the basis of their specialisation area. This sample constituted a purposive sample where sample units were selected with a specific purpose in mind, namely to obtain the views of selected key informants regarding their experience of their own consumer financial vulnerabilities (Tustin et al. 2005). The distribution of the subject specialists is shown in table 4.9.

TABLE 4.9

DISTRIBUTION OF KEY INFORMANTS BY INSTITUTION

Regulators	5
Financial services providers	4
Policymakers	4
Academia	2
Financial services industry representatives	3
Total	18

4.3.3.5 *Qualitative data collection*

Four focus group discussions were held during June 2010 at the Unisa main campus. The four focus groups were constructed to provide more detail regarding each component of the four sub-indices. Some subject specialists attended more than one focus group discussion but the majority attended only one. The focus group discussions were facilitated by Prof PJ Joubert of the BMR. Prof Joubert's field of expertise is investment psychology and he had conducted several focus groups prior to the current focus group sessions.

Prof Joubert welcomed the participants and informed them of the purpose of the discussion. Each participant then briefly introduced him/herself as they were not all acquainted with each other. Before embarking on the detailed discussions, the researcher provided the participants with a brief overview of the construction of the consumer financial vulnerability index and the four sub-indices and also with a schematic presentation of the first two layers of the relevant sub-index under discussion. After the limited overview, Prof Joubert started the discussions based on an unstructured guide compiled by the researcher. The discussion guide was based on the main results of the quantitative phase and the areas identified from the analyses of the results that required further insights and possible explanations. The discussion guide is provided as Annexure C. The discussions were recorded and transcribed afterwards for purposes of thematic analysis, the results of which are provided in chapter 5.

4.3.3.6 *Analysis of qualitative data*

The data obtained by transcribing the focus groups was analysed by a three-step qualitative thematic data analysis process, namely:

- Step 1: theme identification (open coding). The data was scrutinised and underlying themes were identified.
- Step 2: populating themes (selective coding). The data was reorganised in terms of the themes identified.
- Step 3: creating links between themes (axial coding). During this process linkages between themes were identified and unlinked data was discarded.

4.4 CONCLUDING REMARKS

The applicable research methodologies in accounting research were discussed at the outset of this chapter before the relevant epistemology and ontology of the specific study were discussed in more detail. Thereafter, the chapter provided information regarding the mixed methods research approaches followed to conduct the study. The sampling design, data collection techniques and analyses were discussed, supported by a description of the validity, reliability and structural integrity tests conducted to ensure the inferential statistical analyses to be conducted would be possible. Based on the results of these tests, it was concluded that the debt servicing vulnerability index did not adhere to the necessary requirements and would not be analysed further. The impact of this decision was not relevant in terms of the overall consumer financial vulnerability index and thus did not pose a problem. The chapter concluded with the research approach of the qualitative strand to address the last research question raised in chapter 1. Chapter 5 follows with a discussion of the results of the quantitative strand by addressing the first three research questions, namely the factors causing consumer financial vulnerability, the causal chain analysis and the prediction power of each of the factors.

CHAPTER 5

DISCOVERING THE CAUSAL CHAIN OF CONSUMER FINANCIAL VULNERABILITY

5.1 INTRODUCTION

Chapter 3 concluded with the identification of a heuristic model containing the various factors contributing to consumer financial vulnerability as depicted in table 3.21. This addressed the first research question, namely: *What are the factors that give rise to consumers being financially vulnerable?* Chapter 4 then described the research methodology and design for purposes of attending to the remainder of the research questions. Both quantitative and qualitative research techniques were applied in an attempt to find deeper answers to the research questions.

This chapter discusses the results stemming from such quantitative and qualitative strands. Although at the same time attending to the first research question, the specific aim is to address the following two research questions:

Research question 2:	What is the nature of the causal chain between such factors giving rise to consumers' financial vulnerability?
Research question 3:	What do key informants in the financial services industry believe to be the causes of consumer financial vulnerability?

The results of the inferential statistical analyses conducted to determine the factors giving rise to consumers being financially vulnerable are discussed firstly in terms of the overall consumer financial vulnerability index. As previously shown, the various sub-indices are inter-related in their ability to predict the overall index and should not be seen in isolation, as the circumstances regarding one index could have a domino effect on the others. The drivers of each index are thus discussed separately by means of the causal chain. The strength of each factor in its contribution to consumer financial vulnerability and the detailed results of the regression analyses are provided in Annexure B.

The causal chain depicted in chapter 2 reflected an almost linear relationship between international, domestic and personal level factors – as international economic factors influence the domestic economic factors, and domestic economic factors in turn influence consumers' financial position. The extent to which the financial position of consumers is influenced would to a large degree be determined by the demographic attributes of consumers, which in turn are influenced by their financial attitudes.

The purpose of the questionnaire utilised for the analyses described in the remainder of this chapter was to measure the financial vulnerability of South African consumers. Although the questionnaire did not address differences in the global economic outlook and market access, it did include development factors such as health, education and the impact of the global economic environment relevant to South African consumers.

The survey of the consumer financial vulnerability index was conducted in 2009 among 976 respondents (Van Aardt & Moshoeu 2009). The survey consisted of a variety of questions testing the perceptions of consumers in four areas: income, saving, consumption expenditure and debt servicing vulnerability. This chapter focuses on the results of the additional inferential statistical analyses of the data that was collected in the original survey, because the original analysis only reported on the descriptive elements of the survey results. By means of the inferential statistical analyses a causal path of consumer financial vulnerability could be determined that was not evident from the original analysis.

5.2 OVERALL CONSUMER FINANCIAL VULNERABILITY INDEX

To determine the factors giving rise to overall consumer financial vulnerability, statistical methods, namely regression analyses, were applied. This was done by firstly determining the prediction power of the four sub-indices towards the overall index, which followed from a process of regression analyses to determine the predictors of each of the sub-indices. It appeared from the regression analyses that the four sub-indices of the overall consumer financial vulnerability index succeeded in predicting 95.1% of the variance in consumer financial vulnerability. As reflected in table 5.1 and supported by figure 5.1, the regression analyses succeeded in predicting consumer financial vulnerability accurately by making use of the income, saving, expenditure and debt servicing indices at a 100% level of certainty in probability terms. It is clear from this table that the model variance accurately predicted by the regression model was 4.5 times that of the error variance, which is an indication of the high level of accuracy with which the various indices collectively predict consumer financial vulnerability.

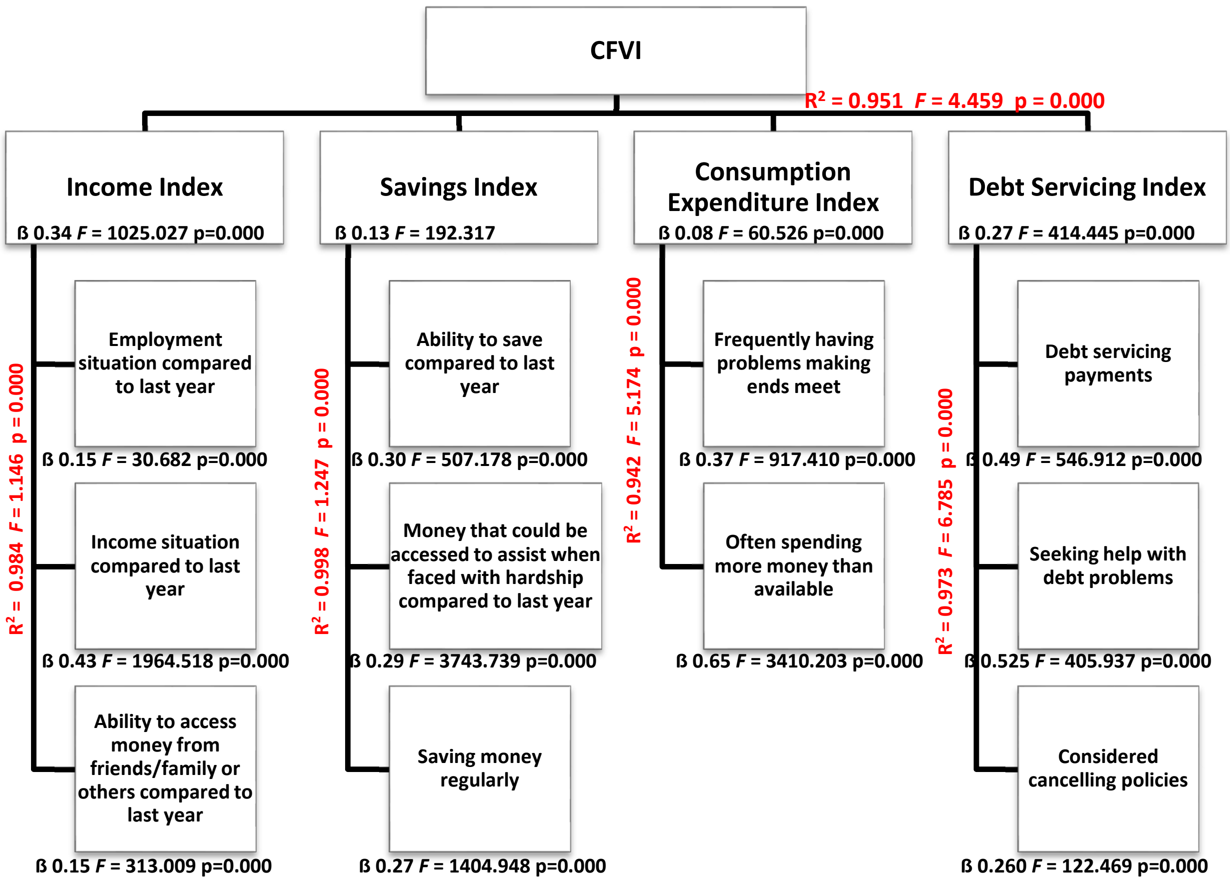
TABLE 5.1

RESULTS OF THE OVERALL CONSUMER FINANCIAL VULNERABILITY INDEX

	OVERALL	SUB-INDICES			
	Consumer financial vulnerability index	Income vulnerability index	Saving vulnerability index	Expenditure vulnerability index	Debt servicing vulnerability index
R^2	0.951	0.984	0.998	0.942	0.973
F-stat	4.459	1.146	1.247	5.174	6.785
Significance value of F	0.000	0.000	0.000	0.000	0.000

FIGURE 5.1

OVERALL CONSUMER FINANCIAL VULNERABILITY INDEX



(Source: Author's own compilation)

The above results also confirmed the nature of the causal chain relationship to be interrelated as the sub-indices collectively strongly predicted overall consumer financial vulnerability. Although it is possible for one index alone to cause consumer financial vulnerability, the results showed that it is more likely for such vulnerability to be caused by the collective impact of the interrelated influences of the sub-indices – both influencing each other as well as directly influencing the overall financial position of a consumer.

The direct influence of each sub-index on overall consumer financial vulnerability can be explained by the following examples. Factors such as the high levels of poverty in South Africa and the high unemployment rate could be possible explanations for the strong relationship (see figure 5.1) between the income vulnerability sub-index and the overall consumer financial vulnerability index. High consumer price inflation rates regarding necessities (such as food, utilities and housing) give rise to the consumption expenditure index being a strong predictor of consumer financial vulnerability. High interest rates related to the rapidly growing unsecured debt as well as the high consumer debt to disposable income ratios resulted in high debt servicing vulnerability, which caused the debt servicing index to be a strong predictor of consumer financial vulnerability. Finally, income earning problems and difficulty in affording consumption expenditure and debt servicing had a negative influence on saving, resulting in consumers actually dissaving, giving rise to high saving vulnerability in 2009.

However, the cycle continues due to the interrelated influences of the sub-indices on each other in a causal chain. For instance, not having enough savings, especially at retirement, could give rise to an increase in income vulnerability, which in turn will affect consumption expenditure vulnerability and so on. A further example of the inter-relationship among the various indices is a household that has a large income (thus not being vulnerable in terms of the income index), but low or no saving (thus, high level of vulnerability in terms of the saving index), high living standards (namely high levels of consumer expenditure giving rise to high vulnerability in terms of the expenditure index) and high levels of debt (high debt servicing vulnerability), resulting in the household being overall financially vulnerable.

Although the debt servicing sub-index did not comply with all the necessary reliability and validity tests in the current research, it is important to note that the debt servicing sub-index still influences the overall index. The drivers of the debt servicing sub-index, however, will not be further explored due to the limitations as discussed in chapter 4.

5.3 INCOME VULNERABILITY INDEX

As reflected in figure 5.1 and supported by table 5.2, the regression analyses succeeded in predicting income vulnerability accurately at a level of 100% certainty in probability terms from the questions regarding the employment situation of a consumers, their income situation and finally their ability to access money from friends or family or other sources. It is clear from table 5.2 that the model variance accurately predicted by the regression model was 1.2 times that of the error variance, which is an indication of a moderate level of accuracy with which the various factors predicted income vulnerability.

TABLE 5.2

RESULTS OF THE INCOME VULNERABILITY INDEX

Coefficient of determination (R^2)	0.984
F-ratio	1.146
Significance value of F	0.000

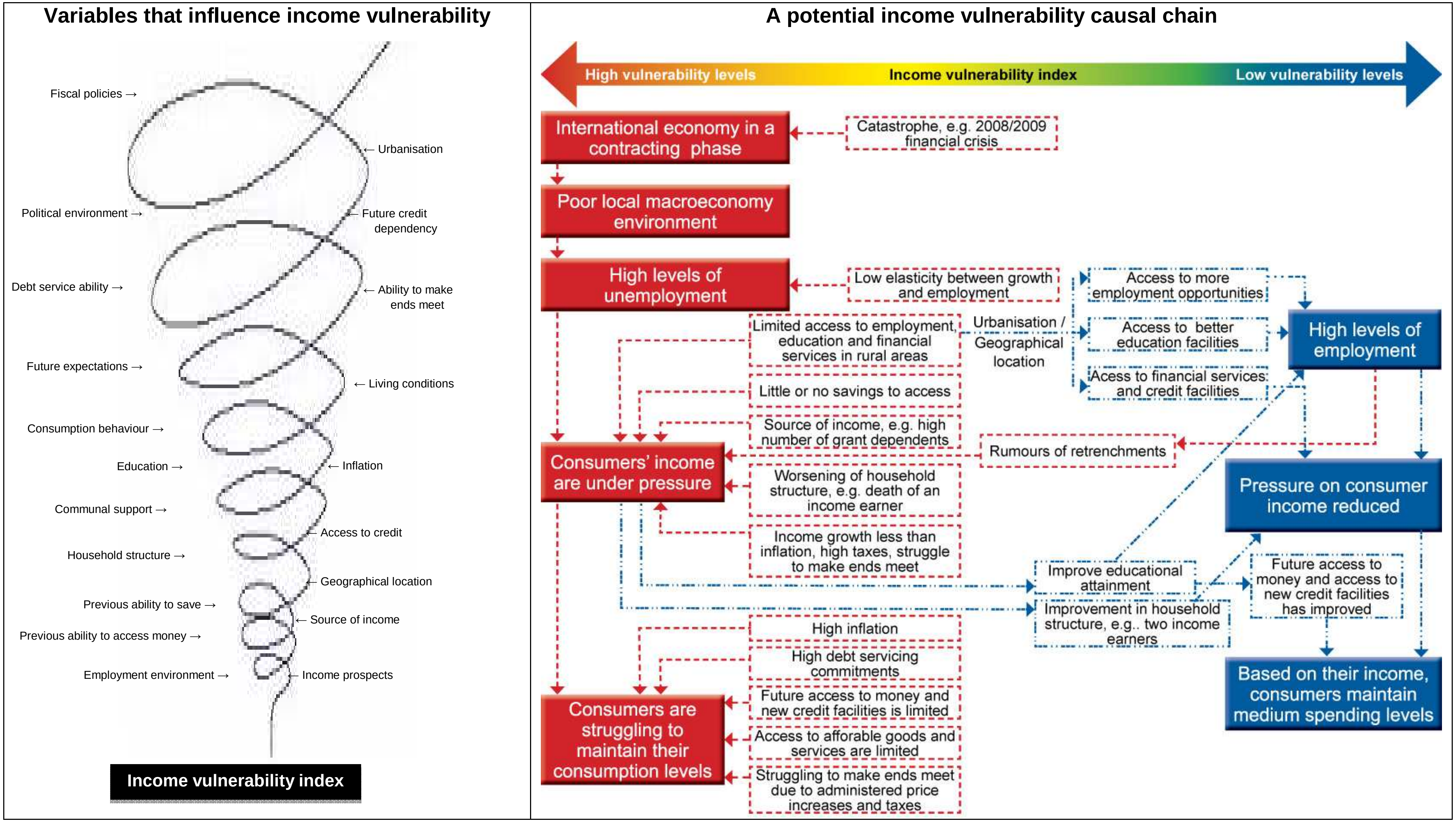
The regression analyses identified the main predictors of the income index as well as the strength of each factor. In this respect, employment (15% of variance in income-index explained), income (43%) and the ability to access money from friends or family (15%), collectively succeeded in predicting 98.4% of the income index. Although individually each of the three variables has a limited contribution to the income vulnerability index, collectively they provide an almost 100% explanation of what causes income financial vulnerability. This meant that income vulnerability was less affected by employment than would have been expected following from the macroeconomic causal chain discussed in chapter 2. The analyses showed that income vulnerability was especially affected by the ability of households to obtain income from a wide variety of sources other than employment. This suggests that the causal chain of financial vulnerability may not be as linear as originally contemplated in chapter 3. By expounding consumer financial vulnerability firstly via the causal chain of income vulnerability as summarised in figure 5.2 (full diagram available in Annexure D), it appeared that a far larger and more intrinsic chain of relationships exists. The nature of the causal chain was therefore not as linear as originally contemplated; it was far larger, with smaller chains appearing and each smaller chain having its own links. In addition, the causal chain also showed more interrelatedness with the other sub-indices.

In this respect, figure 5.2 illustrates that the financial position of consumers appears to play a dominating role in influencing their income vulnerability. Their financial position is reflected by the levels of income and consumption expenditure enabling consumers to save or incur debt. In addition, demographic attributes of consumers, such as the province in which they reside and changes to the household structure, also appear to influence their level of income vulnerability.

On the left-hand side of figure 5.2 the different variables that influence income vulnerability are indicated in the spiral diagram as these variables influence one another at more than one level. Given that the income vulnerability causal chain is not the same for all consumers as the effect of certain events influences consumers differently, given their specific circumstances, educational attainment and other characteristics, a possible causal path for income vulnerability is indicated on the right-hand side of figure 5.2.

FIGURE 5.2

CAUSAL CHAIN OF THE INCOME VULNERABILITY INDEX



(Source: Author's own compilation)

From figure 5.2 it should be clear that being unable to earn an income from employment does not automatically cause income vulnerability. Other micro managing and external factors also play a role in determining consumers' income financial vulnerability. For instance, consumers' ability to make ends meet (despite job losses), survive hard financial times, ability to access money and save, as well as the value (price) of goods appeared to be the main drivers that recurred at various levels and intervals in the deeper income vulnerability causal chain (figure 5.2). For a large portion of the respondents the norm was reliance on employment income and as such they were dependent on other sources of income and this may be what drove the regression results as well. This illustrates that the causal chain as described previously is not linear. However, this is also not equally applicable to all consumers, especially as many smaller links appeared in the income chain (consumers' ability to make ends meet despite job losses, survive hard financial times, ability to access money and save, as well as the price of goods) and each smaller link has its own chain. This non-linear and larger chain can also be used to describe how different consumers are affected differently and how events can create an even larger chain.

The chain reasoning methodology can be applied to explain the causal chains of the three predictors of the income vulnerability index, namely the employment environment, the income prospects and consumers' previous ability to access money. The following hypothetical situation serves as an example of the income vulnerability causal chain stemming from the employment environment. Assume an unskilled consumer is working at a mine in North-West Province. Due to the recession and financial crisis across the globe, there is a low demand for South African commodities, placing tremendous strain on the productivity and profitability of South African mines. This situation forces the specific mine at which the consumer works to explore the possibility of closing one of its plants, which could result in retrenchments among workers. Although the decision to close the plant has not yet been made, the consumer becomes concerned about his employment situation, as he may be one of the workers who will be retrenched. In addition, he is not highly skilled, limiting his opportunities to obtain alternative employment. This miner regularly transfers the majority of his income to his family residing in another province, and this is their only source of income, save for the social grants they receive for the two children aged 17 and 15. Not only is the consumer experiencing income vulnerability due to his employment situation; his family's alternative income stream is also not secured, since the one child will turn 18 shortly and they will no longer qualify for a social grant. Given the consumption commitments this family has to address, they are unable to save and thus have limited (if any) goods that they could sell, should they need to supplement their income stream. The increase in living costs hampers their ability to access money from other family members who are also struggling financially. Given that this consumer is the only income earner of the family, he may not qualify for credit and thus will be unable to obtain credit to supplement the income deficit. All these factors will negatively affect his ability to make ends meet. This consumer will clearly be income-vulnerable. On the other hand, the 17-year-old child may soon finish school and thereby will then be able to start working and thus provide positive cash inflow to assist the family's ability to make ends meet. However, should something happen to the child, such as the child for instance become HIV-infected and unable to obtain employment due to illness, the income vulnerability of the household will deteriorate. As is evident from this example, the income vulnerability chain will differ for each consumer or household, although the three strands identified in the chain will still be relevant to all consumers.

It is clear from the above example that an uncertain employment environment (opposed to losing employment) has a direct bearing on the feeling of income vulnerability. To better understand the influence of the employment environment on income vulnerability, it is necessary to differentiate between employment status and the employment environment. The FinMark study (Van Aardt & Moshoeu 2009) indicates that the actual employment status, namely full-time employment or self-employed, resulted in differential levels of consumer financial vulnerability. Significantly, the (variable) actual employment status only occurred once in the more complicated causal chain and also at a fairly low level. However, consumers' perceptions of their employment environment and not their actual employment status were identified as one of the main drivers of income vulnerability in the causal chain. Their perceived feelings that their employment situation may improve or deteriorate thus clearly have an influence on their income vulnerability. Given the actual deteriorating employment environment in South Africa at the time of the survey, it is clear why the expectations regarding employment (employment environment) are so dominant in the causal chain as depicted. Against the backdrop of the number of consumers losing their jobs in 2009, it should be borne in mind that compensation for employment still increased. This phenomenon could be one of the reasons why the employment situation was so evident in the causal chain in the FinMark study (Van Aardt & Moshoeu 2009), supported by the fact that consumers could have been employed at the time of the survey, but were aware of possible retrenchments at their place of employment. Thus, although formally employed, respondents experienced feelings of uncertainty towards their employment position. In the FinMark study (Van Aardt & Moshoeu 2009), consumers' perceptions regarding their employment environment appeared at a very high level in the causal chain. This was mirrored by the viewpoint of some of the key informants in the current study. A participant in the current study pointed out that he was concerned that the unemployment situation could be worsening:

> *'It is worse than 2008/2009, due to lacklustre economic activity in the mining, manufacturing and the SMME sector. The SMME sectors suffer, because government is not providing any support when times are tough.'*

In line with Smith's theory (2003) that the increase in human capital could lead to consumers being more employable, key informants in the current study also discussed the relationship between skills levels, types of skills and the quality of basic education that were linked to the employment uncertainty resulting in income vulnerability. One participant maintained that skills levels have an important role to play in determining vulnerability:

> *'Lower skilled people are more vulnerable. Although they are able to secure a job in good economic times, they are the first to lose it when the economy turns for the worse. Yet, even in poor economic times there is still a skills shortage for higher level skills/ different skills than what schools are producing at the moment. Education is the driver for skills levels. Thus unless the education system improves dramatically, the high unemployment problem is not going to be fixed.'*

The second main driver of income vulnerability featuring in the causal chain as illustrated in figure 5.2 concerned the prospects regarding consumer income. Consumers whose annual income increased by less than the inflation rate experienced problems in making ends meet, as their expenditure increased more than their income. This was especially true for consumers receiving social grants, as the increase in social grants was less than the increases in fuel, transport and housing – the three major spending categories of lower-income groups of households (Masemola, Van Aardt & Coetzee 2010). For these consumers, the causal chain is in fact a downward spiral, as their employment prospects are very limited, the possibility of improving their income streams is not very positive, and their expenditure increases due to factors beyond their control. Various focus group participants were concerned about the level of dependence on social welfare, which deters consumers from obtaining employment. As mentioned by one of the participants:

> *'And also, I know a lot of people are against the grant, they say keeping them this way, in poverty, which I partly agree with. But I also feel that the labour union orchestrates very big roles in keeping communities up, the inside-outside effect. They're keeping wages at a high level. People can't get into the job market. And the grants are useful. A lot of the grants are used for education, the income grants ... they'd rather pay for education than send their kids to the rural schools.*
>
> *I don't think those grants are being paid, or used, for the children that are supposed to be benefiting from those grants. There might be a lot of data that says that, because if I have a child and I'm receiving some sort of grant for that child, obviously I will tell the guy doing the survey that yes, I'm supporting my child. But I struggle to find the development factor where you have a numerous amount of children and you're receiving a sort of grant for them, and how it actually benefits that child at the end of the day. Because the grant says that it's a 'child support grant'. But is it really supporting that child? I totally disagree. I don't see education in that lower income improving ... and I think this is what you're going to have to find out. Is the grant being received? Is this grant actually being used in order to improve the actual social structures of those communities? Is the policy then therefore effective? Which I can tell you now, you might go and look at a lot of data, and probably the best data you'll find is from the South African Institute of Race Relations. And then go and see ... use this grant for the development of those people. It's part of a developing country, saying that we look after our poor. But the actual end result would be, and this will be the end of this, would be to create full, sustainable employment for these people. That's the bottom line. Create full-time, sustainable employment for these people.'*

The issue of social grant dependency was shared by another key informant who, however, raised the issue as a possible factor for reducing income vulnerability:

> *'Obviously I will get higher income earnings from the current job I am in. Because that would be what we would then call the reason why we're entering into the job market. Because the guy can make more money now than if I receive a social grant. So then I ask myself, 'well listen, I am doing this job because I'm currently receiving a high income from doing this job than I would have received from the social grant perspective.' But the next question would be: 'how vulnerable am I?' I don't really care, because even if I lose my job, I will then get a social grant. And yes, the vulnerability model is just showing us that social and psychological aspects are even making that people in the lower income bracket are feeling comfortable. And that to me is very strange, is that move you were talking about that they're just not willing to make the move, that they're feeling welcome and it's fine being in this lower bracket because we've got government that will be supporting us. You don't need to work. And the high income is feeling comfortable – well, nobody is going to touch my income, because government hasn't got an idea how to touch my income. It's a very strange dynamic.'*

It is important to note that consumers across all income groups could have experienced feelings of income vulnerability, as it is not only low-income consumers who would be income-vulnerable and struggle to make ends meet. For instance, consumers earning higher levels of income with no problems regarding the source of income, but who had overspent in previous periods or incurred high levels of debt to maintain their living standards, could also experience feelings of income-vulnerability, thereby reducing the earnings available for spending and saving. This phenomenon was also evident from the consumption theories explained in chapter 3. For instance, consumers assume that their income levels will be sufficient to maintain their living standards and thus incur debt to supplement any deficit with the assumption that their future income will be sufficient to service the increased debt levels. However, should living costs increase more than envisaged, it would severely hamper the consumer's ability to service his or her debt and keep consumption at the same level. High debt levels, increased high living standards and an uncertain employment environment would also result in high-income earners becoming income-vulnerable.

As noted by the key informants and confirmed by this study, another factor that influences consumers' income and employment prospects and which also has an effect on their income vulnerability is the province in which they reside. Some provinces have a limited number of employment opportunities relative to the number of residents in the province, for example Limpopo province. A lack of employment opportunities in rural areas also results in migration to urban areas with the expectation of obtaining employment there. Given the development and infrastructure, certain areas would also have more access to financial services and educational facilities, which would enable consumers to get a better education with the expectation of obtaining better employment. All these factors result in differential levels of income vulnerability. Those consumers in rural areas fortunate enough to have employment would be less income-vulnerable than those who are unemployed.

Key informants also provided further insights regarding the provincial differences that could result in differential levels of income vulnerability. Different provinces have different economic, health and cultural factors that, combined, affect income vulnerability to a greater or lesser extent. Some of the issues raised included:

- Living conditions and opportunities in rural areas resulting in higher levels of income vulnerability:

  'The Eastern Cape is more financially vulnerable possibly due to deep rural communities having lesser access to social grants (often no ID). The province suffers from high rates of HIV and does not have access to social services. Further, in terms of economic activity the province's high reliance on the motor industry impacts the community in economic downturns. Poor governance and corruption has resulted amongst others in school feeding schemes not running as it should.'

- The sense of community and cultural structures improves feelings of financial security.

  One of the participants was amazed that KwaZulu-Natal featured as a less vulnerable province, given the many, very poor, rural communities. The following reasons were proposed that possibly ensure better income security:

- o KwaZulu-Natal has a higher child grant ratio that could mean deeper reach of social grants.
- o Rural black communities have strong traditions that create a sense of community and, although people are very poor, the perception of their own situation is not that of despair.
- o Traditional leaders with tribal land and tribal structures receive funding from government as they perform key functions (namely employ people in the community to look after roads, etc).
- o The fact that there is a royal family and king adds to structure and financial support that possibly affects the wider community. (The king's household gets an allowance from government.)
- o KwaZulu-Natal has a large Indian population, many of whom are perceived to be wealthier business people. Furthermore, Indian culture supports a strong sense of community.
- o Language can be a good indicator of culture, and type of culture is a driver of financial vulnerability.

- According to key informants, large-scale urbanisation was also a factor that could increase or decrease financial vulnerability. The income focus group participants pointed out that a number of people are moving from rural to urban areas and that this structural change affects income vulnerability. Urbanisation is sometimes perceived positively in that city and metropolitan areas may offer more job and entrepreneurial opportunities. The downside is that, should a person not find a job, he or she is more vulnerable than in the rural environment, with no social or family structure to assist and support him or her. Rural communities often engage in subsistence farming that provides some level of food security that would not be available to the newly urbanised inhabitant, while the overcrowding in slums makes living conditions very difficult.

A further factor that influences the income earned by consumers is taxes charged in terms of fiscal policies (Keynes 2008). There should be very little difference between the income and net income levels of the lower-income groups falling below the tax threshold, while the higher-income groups can experience a difference of up to 40% at the current tax rates, reducing their ability to maintain their consumption patterns. Should any changes in fiscal policies occur, for example an increase in the value added tax rate, the level of income vulnerability may increase as the living costs for even the lower-income groups could increase. This had not occurred at the time of the current study although further tax changes, such as the dividend tax amendments, could reduce the income levels of consumers and here especially retired consumers living off their dividend income, could become income-vulnerable.

The potential increases in taxes and the effect on income vulnerability were also discussed by key informants and the potential strain on net-income is evident from the following extract:

> *'No, ... I've heard so many people say this year that growth is probably going to happen in your higher-income brackets and I just struggle to find the reasoning behind why some people are saying that the high-income brackets, now talking 8 000 a month and up, irrespective, are going to grow a lot larger, or greater than the 8 000 and less. The reasoning behind it. I'm thinking there's nothing policy-wise, incentive-wise for these people, 8 000 up, and it's a clear indication in the market that the tax is going to increase, expenditure is out of control and the Minister of Finance has, on numerous occasions, said that this is the wrong place and time to ask for tax cuts. We just went through a World Cup, are we going to make a profit off it? So obviously we're going to pay that tax.'*

Not only were fiscal policies an area of concern, the political environment at the time of the survey was also discussed.

> *'I'm thinking of what the political impact during 2008, 2009 could be. Our country was moving and making a shift politically. With Jacob Zuma, there were parties that were entering the political party. There was a lot of those type of things. And I think people, when it comes to income, you seem to hold on tighter and you seem to feel a little bit more vulnerable.*
>
> *But poverty is also created. Because what we did see is just before Zuma came into power, all the promises that he made, people believed that escape from poverty is finally going to happen. There was a lot of hope. I think that's also why we got, about three months later, a lot of service protests when people started realising it's not going happen. But nothing really changes the situation, it's just hopeless.'*

This viewpoint was shared by another participant:

> *'What I've noticed, the last 3 – 4 years, nobody has been financially, I think your powerhouse, their whole culture concerning spending, expenditure, has changed. They have been indebted, living with it and it's been fine. And here China comes, and they're showing you we've got a different culture towards how we manage our income. That whole thing is globally touching everything.'*

The third main driver of income vulnerability determined in the causal chain (figure 5.2) was consumers' ability to access money in the past. Should consumers' income streams not be sufficient to finance their consumption needs, they had to supplement their income by either realising past saving or accessing credit. Based on the life cycle hypothesis (Ando & Modigliani 1963), consumers supplement any deficit in current income with credit to be financed from future income.

To enable consumers to supplement their income stream with realised saving, they should have saved in previous periods. Given that almost 70% of households earn less than R100 000 per annum (Masemola et al. 2010), supplementing their income would have been unlikely for most South African consumers. In balance sheets of South African households, as reported on in chapters 2 and 3, interest in pension funds and long-term insurers are the largest assets of households. Unfortunately, such assets would predominantly belong to consumers who are employed, as the bulk of such assets are pension-fund backed. The second highest asset class of the household balance sheet refers to residential property. However, this is also problematic as the housing shortage in South Africa is a well-known fact. Income vulnerability will be very high for consumers with no or low levels of saving or debt-free assets, as they would have no additional resources with which to supplement their income streams.

Several factors resulted in many consumers being unable to obtain credit to supplement their income streams. Since the introduction of the National Credit Act (South Africa 2005), access to especially mortgages and secured credit have declined radically for numerous consumers as they could no longer comply with the minimum affordable requirements. This has placed tremendous strain on consumers' ability to smooth their consumption patterns by financing any deficit with new credit. The new Act also limits consumers in obtaining additional credit to service any other outstanding payments. In the wake of the global financial crisis and in addition to the requirements of the National Credit Act (South Africa 2005), financial service providers have also enforced stricter lending criteria, making it even more difficult for consumers to obtain financing. Consumers are no longer able to obtain a 100% mortgage; they have to provide a deposit of up to 20%, making it very difficult for the majority of them to buy a house.

A representative from one of the formal banks confirmed the predicament consumers found themselves in regarding affordability and access to credit:

> *'... that's the problem with your high-income groups ... they have somewhere where they can have income from. Where your mass group probably won't. If you look towards the banking environment at the moment, they've got very high lending appetite, but there's no capital. We have to look at our capital and who we give it to, that's why. We want to lend as much as possible, we're a bank. But there's just not enough capital.'*

The stricter credit criteria regarding secured credit resulted in consumers replacing secured credit with unsecured credit. It is evident from the credit statistics released by the National Credit Regulator (NCR 2009) that both lower- and higher-income groups were obtaining credit although the growth in credit granted declined. The decline reiterated the fact that consumers were not necessarily obtaining the credit they required to supplement their income streams, resulting in feelings of income vulnerability. Representatives of micro-finance organisations who participated in the focus group discussions confirmed the utilisation of credit by consumers to finance their lifestyle expenditure rather than acquire assets. These representatives provided relevant insights, since they dealt with both micro credit providers as well as mashonisa loans. Their typical client profile reflected that they were being approached by an increasing number of people earning R8 000 to R25 000 per month who had lost their jobs and required credit as a result of their lifestyles. They also mentioned that it was apparent that many such consumers were very aspirational in their consumption behaviour and were highly indebted.

Figure 5.2 supports Keynes' (2008) notion that consumption is also influenced by consumers' expectations of the relationship between their present and future levels of income. The third variable identified as a main driver of income vulnerability referred to consumers' previous ability to access money. By means of regression analyses it became evident that consumers' previous ability to access money as a supplement to income was significantly influenced by their future expectations regarding their credit dependency; access to money; ability to make ends meet; debt servicing ability as well as future debt dependency; possible negative changes to their household structures, such as divorce or death; and finally, access to employment opportunities, affordable goods and money.

Married, highly skilled consumers residing in Gauteng and earning high levels of income experienced low levels of income vulnerability (Van Aardt & Moshoeu 2009). These consumers had access to new credit and had a sound financial position reflected by a positive net wealth position. They were able to make ends meet as their income exceeded their consumption levels. They had also been able to save in the past and finance any income deficit, should it occur. As these consumers were highly skilled, their annual income increases would be the same or more than inflation, enabling them to withstand inflationary increases in their living conditions. Due to their high skills levels, these consumers were very positive regarding their future employment prospects and earning capabilities and hence confident regarding their future abilities to survive hard financial times and to access credit, should they need to do so. As these consumers had been able to save in the past, they were confident that their asset classes would grow by at least the same rate as inflation, making their future financial position secure.

Changes to the household structure were also identified as having a recurring influence on the causal chain analyses. Such changes could have a positive or negative effect on income vulnerability. Should the change to the household structure result from an additional income-contributing member, such as a marriage, the income vulnerability of these consumers would decrease, as they would no longer be dependent on only one income stream to support their consumption levels. On the other hand, should one of the income earners pass away, income vulnerability would increase although consumption levels would not necessarily decrease but there would be less income to finance the consumption levels.

In conclusion, income vulnerability is not a linear process as originally contemplated but rather a spiral process of several interrelated factors influencing one another at various stages.

5.4 SAVING VULNERABILITY INDEX

Turning to saving vulnerability, figure 5.1 illustrates that the main predictors of the saving sub-index are the ability to save (30% of variance in saving-index explained), money that can be accessed when facing hardship (30%) and saving money regularly (27%). This implies that the three variables identified have a fairly equal impact on the saving index (approximately a third each). Furthermore, sound financial management principles, i.e. not only having the ability to save, but actually saving on a regular basis, cannot be underestimated. As reflected in table 5.3, the regression analyses succeeded in predicting saving vulnerability accurately at a 100% level of certainty by making use of consumers' ability to save, the money they can access when facing hardship, and whether they save on a regular basis. This table also reveals that the model variance accurately predicted by the regression model was 1.3 times that of the error variance, which is an indication of a moderate level of accuracy with which the various factors predict saving vulnerability.

TABLE 5.3

RESULTS OF THE SAVING VULNERABILITY INDEX

Coefficient of determination (R^2)	0.998
F-ratio	1.247
Significance value of F	0.000

As with income vulnerability, the above results suggest that the causal chain is not linear and is more complicated than contemplated via macroeconomic chain reasoning. This also becomes clear from the following discussion and views of key informants. Therefore, before exploring the causal chain as reflected in figure 5.3, it is prudent to relook at what constitutes saving, because different definitions imply different causal chains and paths towards saving vulnerability.

As discussed in chapter 3, saving has a very specific definition in terms of the System of National Accounts (SNA 2008), although in real life, consumers do not necessarily share that definition. For a number of households, saving could be interpreted as an investment in children's education, since the idea is for the children to take care of the parents when they retire.

The various definitions of saving, which affect saving vulnerability differently for different consumers due to their different views on what constitutes saving, were discussed in detail during the focus group interviews. The importance of reaching a better understanding of the various definitions is evident from the following observation of a key informant:

> *'... exactly the question you are asking now also creates quite a lot of conflict within our department. If you take for example John Maynard Keynes, in chapter 6 he describes very nicely that saving is total income, minus your expenditure. And that's also the way described if you read a lot of documents which say that South Africans are in general just saving. But then when we started looking at the saving motives, I started reading that book again and I came across something very interesting. He says that at household level it doesn't work that way. He says that on a household level, people, you can't just take the difference between income and expenditure as constituting saving. Saving, also a form of consumption expenditure that eventually become saving. For example, buying a watch. When you are faced with dire situation you've got assets to sell – a car, a watch, or you've bought a home for example. Then he also said that there are often circumstances where people make conscious decisions not to save in a bank. And there could be quite a lot of reasons for that. That they rather decide to save in other ways. To have, for example, property because it might be that they feel that the value of property accumulates much faster, that they don't believe that the value of the rand is going to be consistent when they're older. It might be because of tax. For example, saving accounts are directly taxed. He might say 'no, no, I don't want to pay this. There are other ways for me to save.' So, the definition that we use is chapter 16, is a broader definition.'*

An alternative perspective was suggested by another participant:

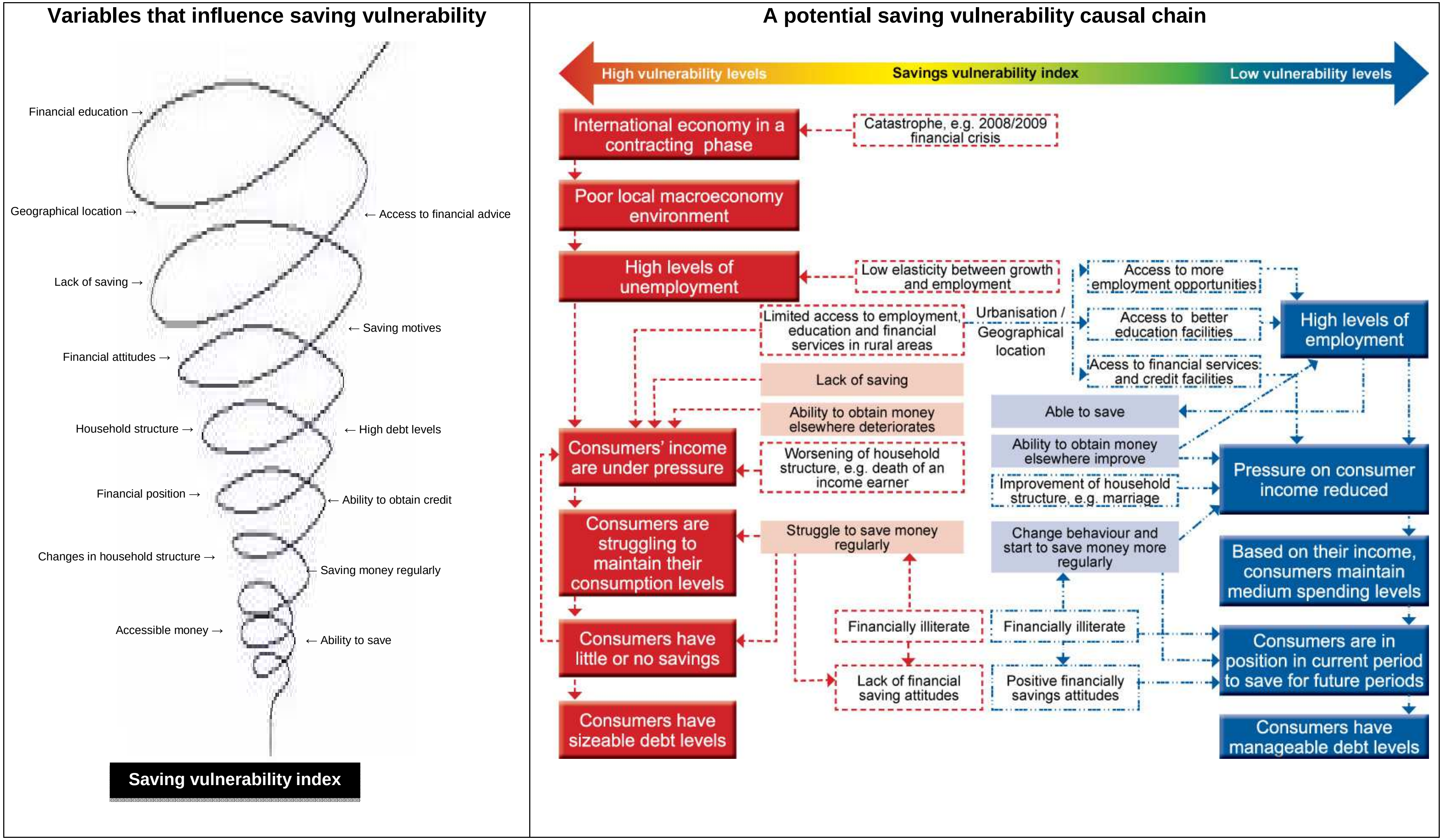
> *'If we define saving just as an income and monitor your expenditure, then there are certain obligations that you have to do with your income and there you'll see if there's something left to save. But included in these obligations is also your pension. So, some people will say my pension is ... sort of saving. In my head I feel no, it's income minus expenditure. Or to pay the pension is part of the expenditure payments, it's obligation pay ... done before you have something to save ... in order to save for holiday or something. If I don't have the income, if I don't have any income left after all my obligations have been done, then I can't go on holiday.'*

Finally, a respondent also raised the concept that saving could be regarded as deferred consumption. Should consumers be unable to consume all their income in a current period but be able to postpone or defer the consumption to a later period, the deferred consumption would be recognised as saving. This way of thinking aligns with the life-cycle hypothesis (refer to chapter 2), which states that consumers smooth their consumption patterns over their lifetime.

It should therefore be clear that, unlike income, saving can take different forms in the minds of consumers. However, although this phenomenon should be explored further, this study was confined to the role of the three predictors identified above in the causal chain regarding saving vulnerability. This is illustrated in figure 5.3.

FIGURE 5.3

CAUSAL CHAIN OF THE SAVING VULNERABILITY INDEX



(Source: Author's own compilation)

The chain reasoning methodology was also applied to explain the causal chains of the three predictors of the saving vulnerability index, namely the ability to save, access to money and saving regularly. The following explanation serves as an example of the saving vulnerability causal chain stemming from the ability to save predictor (summarised in figure 5.3, full causal chain available in Annexure F). Assume a household or consumer whose access to credit, or ability to obtain money elsewhere (e.g. past saving, transfers from government or family or friends) deteriorates (thus also affecting income vulnerability) due to, for instance, loss of employment or stricter credit regulations. The lack of sufficient money inflows to cover the living expenses would negatively influence the household's ability to make ends meet (to continue with a particular living standard and thereby affecting expenditure vulnerability). It should also have a negative impact on the household's credit status, as the household would be unable to obtain the amount of credit needed to repay debts (affecting the household's debt servicing vulnerability). As the household struggled to repay debts due to the pressure to make ends meet, financial hardship would start to kick in. In addition, as the prices of goods increased due to inflation (affecting expenditure vulnerability), it would become even more difficult to survive financially. This would make it more difficult to make ends meet, contributing to even fewer goods being purchased. The worsening financial situation of the household would further affect its credit status, making it more difficult to access credit and obtain money from elsewhere (affecting income vulnerability) such as from past saving. The household would clearly be saving-vulnerable. It is important to note that the process could start at different links in the chain and could also work backward from an initial inability to save (predictors), eventually also affecting the ability to access money or credit (initial starting point in this explanation).

Figure 5.3 also shows that the chain, links in the chain and eventual path to saving vulnerability were different for the different predictors. However, it should be noted from the outset that as with income vulnerability, the causal chain for saving vulnerability would be different for different types of consumers and different types of households, as they would have different monetary and demographic features. This is essential for a better understanding of the possible causal chain of saving vulnerability, as it would affect the utilisation of resources for purposes of consumption expenditure and saving differently, and therefore would create different causal chains and paths on the road towards saving vulnerability.

In this context, in their daily economic activities all consumers must decide which portion of current resources they will consume and which portion will be saved. In the traditional sense, the main difference between consumption and saving is the timing when the satisfaction regarding the utilisation or acquisition of the goods or services will be enjoyed. For consumption purposes, the goods or services are purchased and yield satisfaction in the current period. Saving, on the other hand, refers to activities in which the current period's resources are used to yield satisfaction in future periods. Consumption expenditure and saving are therefore a continuum, with pure consumption expenditure at one extreme and pure saving at the other (Bryant & Zick 2006).

This futuristic approach by consumers is supported by the permanent income and life-cycle hypotheses that emphasise that one of the main reasons for saving and borrowing is to even out the variations in income streams over time to facilitate a constant demand for goods and services through time. As the decision to consume or save affects saving vulnerability, the causal chain of consumption expenditure vulnerability will be discussed in more detail in section 5.4, with the current section focusing on consumer behaviour and factors that lead to saving vulnerability. The results shown in figure 5.3 support the influence of time on saving as they indicate that saving vulnerability is determined by short-term (money that can be accessed when facing hardship), medium-term (current ability to save) and long-term (saving money regularly) factors.

As with income vulnerability, the money consumers can access when faced with hardship was also one of the major causes for saving vulnerability, depicted as one of the main drivers in the saving vulnerability causal chain. For consumers experiencing short-term difficulties with their income streams due to either limited employment opportunities or illness, a lack of previous saving would result in feelings of saving vulnerability since they would have no alternative resources to supplement their income, consequently placing them under pressure to uphold their current consumption patterns. They would clearly have a causal chain different to that of consumers in the same short-term financial trouble, but who have saved before. This perspective was shared by one of the participants of the focus group discussions who pointed out that a likely driver of saving vulnerability is the fact that many people have unstable and low incomes and saving can only start once obligations have been met. Another participant also indicated that the reason for people not saving ultimately boils down to their income status.

'The poor do not have enough to save, the middle-income spend too much and thus end up not having enough to save and the high-income people simply do not use traditional saving instruments thus are not counted as their saving as it is often invested in non-traditional ways. And these three combined result in the negative saving rate we see in South Africa. Most people do not save and the ones that do save do it in a manner that it is hidden from official statistics.'

The effect of a difficult macroeconomic environment on consumer financial vulnerability was discussed in detail in chapters 2 and 3. A participant also highlighted the pressure on consumers to maintain their consumption commitments and service their debt and not to dissave:

'When times are tough, people dissave. Cancel policies and use up some of their existing saving. Thus a downturn in the economy is likely to drive an increase in saving vulnerability.'

A lack of access to money could also result from changes in the household leading to a reduction in household resources. Divorce could be such a change, resulting in a split of a household's net wealth. In some instances, when faced with divorce, the residential property of the household needs to be sold and the proceeds divided between the two spouses. The mortgage bond applicable to the residential property should be settled prior to any distribution occurring. Given the low levels of growth in the residential property market, the proceeds of the residential property would be lower than expected, leaving very little for distribution. This phenomenon would result in saving vulnerability since there may have been an expectation gap between the perceived money that could be accessed from the residential property and reality. In addition, the mortgage bond could also have been a source of income to be accessed in times of hardship and would now no longer be available, thus also resulting in higher levels of saving vulnerability.

On the positive side, changes to household structures may also reduce saving vulnerability by providing a married couple the opportunity to reduce their individual consumption levels with duplicate expenditure, for example rates and taxes. These excess resources enable the household to save in the current period and provide it with money available to access in the future, should it experience such a need.

The chain by which several factors influence consumers' ability to save provided some insight into consumers' medium-term capabilities to reduce their saving vulnerability. Money accessible from previous periods not only influenced consumers' ability to save in the medium-term, but also their ability to obtain credit, as portrayed in figure 5.3. As with consumers, financial service providers sometimes expect a stream of earnings and other income to accrue to consumers in future periods, and thus grant them credit facilities. Any deficit from current income streams to service consumption levels may be financed via the offered credit facilities. This enables consumers to maintain their current consumption levels without realising past savings, should they have any. Since the introduction of the National Credit Act, however, access to credit is no longer as readily available to consumers as in the past. Financial institutions apply more stringent lending criteria, for example, deposits are required when applying for a loan as the loan values are no longer 100%. Consumers unable to provide such a deposit are incapable of obtaining the necessary mortgages and therefore cannot acquire any residential properties. As discussed previously, mortgage facilities could be used as a resource to tide over the household in times of financial hardship.

Part of the affordability tests applied by financial service providers before granting credit are also designed to evaluate the financial position of consumers as reflected by their balance sheets. Since South Africans are notorious for not saving, and given the income households receive, the majority of households utilise their income for consumption expenditure, with little or no saving – refer to chapters 2 and 3 in this regard. In 2009, numerous consumers would have been unable to obtain additional credit, as the risk of becoming over-indebted may have been too high, given their credit situations. In addition, although unsecured credit was granted to some consumers, they may be unable to service this debt should they lose their income or become disabled. All these factors have an impact on consumers' income as well as their ability to save. It is thus logical that consumers' inability to save appeared prominently in both the causal chains of the saving vulnerability index as well as the income vulnerability index.

The financial attitude that consumers reflected in their behaviour regarding saving money regularly was the third factor identified in the causal chain of the saving vulnerability index. In contrast to the causal chain of the income vulnerability index, consumers' financial attitudes and behaviour strongly influence saving vulnerability, but this did not feature at all in the income vulnerability chain. Thus, in addition to the actual state of consumers' financial position, saving vulnerability is dependent, to a lesser extent, on exogenous factors such as labour market dynamics, while it is strongly influenced by a series of endogenous factors such as the saving attitudes of consumers. A participant summed it up as follows:

> *'To understand saving, one need to understand the motivations and decision-making tools that people use to put money away.'*

The causal chain representing the saving vulnerability index confirms the eight subjective motives for saving as identified by Keynes (2008), plus the one additional motive added by Browning and Lusardi (1996) as mentioned in chapter 2. The more motives consumers can address by actually saving, the lower the levels of saving vulnerability will be.

The first saving motive, namely the *precautionary motive,* enables consumers to build up a reserve for unforeseen contingencies. This is supported by the causal chain, as 1) the ability of consumers to put money aside to ensure they have cash available when needed, 2) saving for unforeseen events, and 3) unexpected expenses were all identified as factors influencing a consumer's inclination towards saving money regularly. Should consumers be able to fulfil these motives, they would be able to put money aside in previous periods, providing them with resources to access in current and future periods. This would be especially true in times of pressure on their income streams, thus resulting in lower levels of vulnerability. In addition, the money could also be placed in short-term saving instruments, thereby providing additional income streams but retaining liquidity that should create a financial comfort zone for the consumer. The motivation to set money aside depends on whether there is a strong incentive.

However, the motives for saving depend on the consumer's saving attitude, a point well made by one of the respondents:

> *'... so depending on how risky a person ... influence your saving behaviour. Because that precautionary motive, is to some extent I would say, influenced by your risk profile. If you're a person who likes to make sure that you've got something away in case of a rainy day, you'll do it. Other people don't care, probably would ... So it's probably there where the softer, psychological ... comes in. It seems to me that is an important driver of saving. Saving in the*

> *sense of putting money away, saving in the sense of investing in education. The other thing, and here ... is the question of saving or, you mentioned time, where do you put that in the box?'*

The next saving motive identified was the *foresight (life-cycle) motive,* which intends to provide for an anticipated future relationship between the income and needs of consumers that would be different from the current relationship. This motive addresses, for example, the anticipated reduction of income due to old age or additional consumption expenditure due to the upbringing of children yet to be born. Saving towards the foresight motive was confirmed in the causal chain as 1) saving for old age, and 2) saving money for the future, which may influence consumers' saving vulnerability. Consumers who realise that they should incorporate their future consumption patterns as well as future stream of income in the current planning, would be less saving-vulnerable. In addition, consumers who are able to delay gratification, realising that more consumption in a future period is preferable to a smaller immediate consumption (referred to as the third saving motive – the *intertemporal substitution motive*) would also experience lower levels of saving vulnerability. Not all consumers are knowledgeable regarding the impact of the time value of money as well as the consequences of compound interest when buying durable goods on credit.

Participants also emphasised the effect of inflation on the value of saving and that consumers do not always have the financial knowledge to ensure that they are able to withstand the erosion of their saving and retirement benefits due to inflation.

Participants furthermore identified the *enterprise motive* as a possible reason for saving. They pointed out that people often make a conscious decision not to save money in a bank, for example choosing to invest in property, should they believe that property values would rise. Furthermore, investing in a small business could be regarded as saving, albeit at a high risk, as this type of saving may lead to high levels of saving vulnerability, should the business fail.

The causal chain of saving vulnerability also highlights the importance of the *down payment motive* as a means of reducing saving vulnerability. This is evident in the causal chain as the two variables, namely saving a fixed amount each month and saving for a specific annual expenditure, occurred several times in the causal chain of the saving vulnerability index. The ability to save for a deposit for a house, car or other durables allows consumers peace of mind regarding the affordability of the required items and future commitments.

The causal chain also reflects on the effect of a lack of saving on the financial state of mind of consumers. Being unable to save on a regular basis, for either a specific or unforeseen event/item, may lead to consumers experiencing feelings of financial stress, and ultimately to financial difficulties. All these factors result in increased levels of saving vulnerability, as reflected by one of the participants:

> *'Saving is always something that is done for a purpose. Very few people save because they feel saving is good. I'm not saying that's the right way to look at it, but the motivation for saving is usually to put money away for a purpose. And I think it's that purpose that drives saving and if you feel that your savings are not adequate to cover those purposes, you're feeling vulnerable. So if I know that I have a medical condition that will make me less likely to work for a very long time, I know that I have to save a lot. And if I can't get to that level of saving, I feel vulnerable. Whereas someone right next to me, who doesn't have that condition, who saves much less than I do, doesn't feel vulnerable. So there's a lot of individual characteristics. So I think demographics plays a very big role. Where you are in your life stages, make a very big difference. I don't think about ... as much as I should, because I ... far away from that. But ... would be very important for me to think about that. So, individual descriptions like demographics, also other descriptive that makes you vulnerable for income purposes. And then finally, the things that happen to you, the things that you have no control of. Losing a job, losing an income, losing someone that you're dependent on.'*

It is further evident from the causal chain that the province in which consumers reside has an effect on saving vulnerability. A possible reason could be limited access to financial service providers resulting in limited saving instruments. This could furthermore lead to limited opportunities to participate in financial education initiatives. Through participation in financial education, consumers become equipped with the required financial skills to practice sound financial management and understand the importance of saving. As one participant pointed out

> *'you need some information, some professional equipment, and guidance, something that you're on a regular basis interacting with, to assess the situation; are you on track, are you not on track. If your circumstances are changing, what are your options?'*

Thus, not having access to sound advice with regard to saving could be a driver of saving vulnerability.

To reduce saving vulnerability, it is important to find saving instruments that are suitable for the specific income profile and saving goals. Depending on income levels, saving instrument options are very different. Very low-income and low-income people have limited options with regard to saving instruments, as they often have to make use of informal mechanisms. Formal instruments may prove to be too expensive, unsuitable, and/or financial service providers have not yet designed a saving instrument that could exist on low and infrequent contributions.

Although access to financial instruments and sound financial advice could result in decreased levels of saving vulnerability, in the context of the lower-income market, many consumers simply do not trust a bank or other financial services company with safekeeping of their money, as is evident from the following statements:

> *'People say, 'The bank is eating my money'. A stokvel works well as there is social pressure to honour your monthly contribution. Further, poor people have not really seen much evidence that works for them that saving are important and have benefit.'*
> *'There's a lot of poor people who'd rather put their money into a house than into a strange product, because when I get old I've got a house. Or put their saving into their kids' education ... The underlying ... is that somebody will see ... look after him.'*
>
> *'The thing is, at the low-income level, you need to sell the idea of the benefit of saving, specifically at that level. At your high income levels you are very well able and have good reasons then to say such and such an instrument will give such and such a return.'*

To summarise, saving vulnerability is not a linear process. There are different causal chains for the different predictors and each predictor has different paths toward saving vulnerability, whilst the different causal chains of saving vulnerability are tightly integrated and interrelated with those of income, expenditure and debt servicing vulnerability. These saving vulnerability chains and paths are furthermore influenced by the definition in the minds of consumers as to what constitutes saving. The low-income group either do not have enough to save or when they do save, it is in many instances not in traditional saving products. As such, their causal chain towards saving vulnerability will not only have many paths (e.g. a path for those not saving, a path for those saving irregularly, and a path for those who save but not enough), but also appear very different compared to that of higher-income groups. In most instances, higher-income groups should be able to save regularly, although in some instances they also supplement such saving with consumption expenditure they deem as saving, such as value-increasing jewellery. Furthermore, the decision of consumers in the two mentioned income groups whether to save or not is influenced by demographic factors such as the size of the household, education, the province in which they live, as well as monetary factors such as access to money. Each of these factors will not only enlarge the chain, but will also increase the different paths towards saving vulnerability.

In addition, consumers' attitudes towards saving and management of their finances, of which they have control, constitute a channel that could be addressed by consumers themselves to alleviate some of the pressures they experience. Finally, saving habits need to be changed, as suggested by a participant:

> *'... looking at the problem, saving is a habit, in the end. So maybe that's the habit of not saving in South Africa. If you look at our past, a big part of our habit has been to redistribute our income to defer consumption. ... at any moment in time we redistribute consumption across people. So I am dependent on everyone around me, or at the moment I fund the expenses of the people around me because I have the expectation that when I get to that point in time where I will need that other people will do it to me. So that's the kind of redistribution that we've seen up to now. The habit that we have to change is to make that redistribution successful. That's difficult. And some of the government's programmes are trying to address a combination of these two. But also, what we're trying to redistribute across the wide spectrum is something like the UIF, something like an old-age pension. So people's attitudes have to change.'*

5.5 EXPENDITURE VULNERABILITY INDEX

With regard to the expenditure vulnerability index, figure 5.4 reflects the two main predictors of the expenditure sub-index as frequently experiencing problems in making ends meet (37% of variance in consumption expenditure-index explained), and often spending more money than available (66%). These results agree with what was reported by Personal Finance (2010) as being amongst the most common errors made by consumers when managing their finances, namely not planning for the unexpected; not having short-term insurance; not belonging to a medical aid scheme; not saving; inadequate budgeting; living off credit; not managing credit or store card debt; not reading loan agreements carefully; not following basic rules of investing, and finally, not planning for a long life. As reflected in table 5.4, the regression analyses succeeded in predicting expenditure vulnerability accurately by the two drivers identified at a 100% level of certainty. It is also evident from this table that the model variance accurately predicted by the regression model was 5.2 times that of the error variance, which is an indication of a high level of accuracy with which the various factors predict expenditure vulnerability.

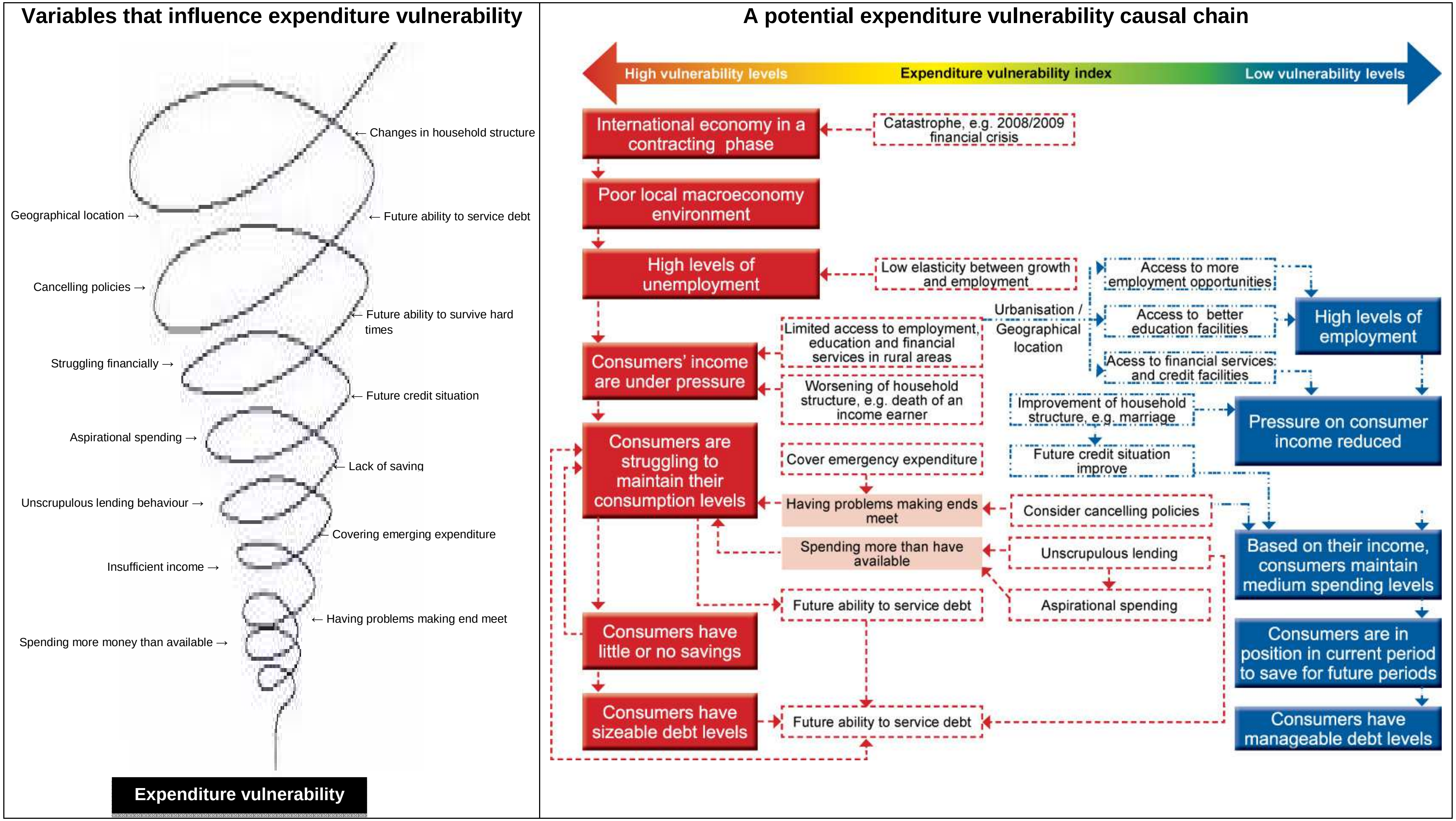
TABLE 5.4

RESULTS OF THE EXPENDITURE VULNERABILITY INDEX

Coefficient of determination (R^2)	0.942
F-ratio	5.174
Significance value of F	0.000

FIGURE 5.4

CAUSAL CHAIN OF THE EXPENDITURE VULNERABILITY INDEX



(Author's own compilation)

Focusing on the causal chain of one of the two main drivers, namely consumers' inability to make ends meet, it is interesting to note that consumers plan better for future factors that will have an impact on their ability to make ends meet. The biggest concern raised by consumers was their ability to cover emergency expenditure in the future. This is supported by the lack of saving by consumers as discussed in chapters 2 and 3: consumers realise that they do not have a safety net to fall back on, should the need arise.

When analysing the causal chain of consumers' inability to make ends meet (summarised in figure 5.4 and reflected in full in Annexure E), the spiral in which consumers are trapped is evident from the various chains. When analysing the top chain in figure 5.4, it appears that their future ability to survive hard financial times is influenced by their future ability to make ends meet, which in turn is influenced by their future credit situation and again the future ability to survive hard times. This clearly indicates that consumers were not very optimistic regarding their ability to sustain future pressure on their expenditure commitments. This pressure can originate from deteriorating income streams, an inability to service debt, and an inability to access credit. This also reflects the integration and interrelated relationships with the other sub-indices; in this instance, the income and debt servicing vulnerability indices.

In this respect, it is clear from the chain that consumers' future credit situations contribute significantly to their feeling unable to make ends meet. As discussed in chapter 3, consumers utilised a great deal of credit in the past to finance the deficit between their income stream and their expenditure commitments. Now, however, they realise that new credit may not be available to them due to various reasons. Given the negative economic environment, improvement in employment opportunities will not necessarily occur and since consumers do not have other sources of income, the lack of additional credit will severely pressurise their ability to maintain their living standards.

The impact of credit on expenditure vulnerability resulting in consumers struggling to make ends meet is also clear from the concern raised by consumers regarding their future ability to service their debt payments. Interest rate increases will compound cash flow commitments, reducing the available resources to be spent on essential consumption expenditure. Consumers are aware that, because of the low interest rate environment, they are succumbing to pressure on their consumption levels and the position will only deteriorate further, should any interest rate increases occur. One of the participants also noted this concern:

> *'Going back to the issue of ... raise prices, rates and taxes and fuel prices, which tend to put pressure on a lot of people have to spend. And I think what that has done is it's almost cut off the benefit that the interest rate cut had over the past year.'*

A further variable that featured as a contributing factor influencing consumers' ability to make ends meet was the possibility that household structures could change in future and such changes would have a negative impact on households. Given the high HIV infection rate in South Africa and the low life expectancy rate, the threat of the death of one of the household members is a real concern for many South African households. With the loss of one of the income earners of the household, there would be even less income although the household consumption would not necessarily decrease much. In addition, all credit commitments would still need to be serviced, placing more strain on the consumers' ability to make ends meet. For numerous households the support provided by the broader community is the only way to survive. The following comment by a participant summarises the internal workings of many South African households:

> *'Don't you find that because of the social structure, that where you've got different elements of a family staying together, and although they have low income, they actually all contribute to ... and they seem to be able to buy essentials from that.'*

In conclusion, consumers' expenditure vulnerability chain as evidenced by their struggles to make ends meet is largely influenced by their confidence in being able to withstand interest rate increases, unexpected expenditure commitments, their future credit situation and related ability to service debt commitments, and their ability to obtain new sources of credit or access money from other resources. Without a family support structure, many South African consumers would struggle to survive the pressure on their expenditure commitments.

The second path identified in the expenditure vulnerability chain relates to consumers' behaviour in spending more than what they have available. This could be due to various reasons, such as the inability of their income stream to service all their consumption requirements resulting in increased debt levels. Another reason could possibly be the theoretical discussion in chapter 2 regarding conspicuous consumption and the 'to have or to be' modes of existence.

For a large portion of consumers, their low levels of income (namely dependency on social grants) place tremendous strain on their expenditure commitments. Their basic needs such as food, housing and transport consume the bulk, if not all, of their income sources; hence, they are not guilty of conspicuous consumption, they are struggling to survive. Such consumers were also recognised as having more financial knowledge than would have been expected. This could be due to the need to survive, since their resources are very limited, as stated by a key informant:

> *'Anyway, the thing that did strike me, just out of what we saw in the last six months, their income is small and what actually struck me as well is that the people we were dealing with were actually quite disciplined. Because they have to be. Far more than people with money coming in. So we were quite amazed with some of the things.'*

However, the unscrupulous lending behaviour of lenders, especially as far as the lower-income groups are concerned, was also identified as a factor resulting in expenditure vulnerability. A number of participants agreed that the middle-income and new middle-income groups that moved up from the lower-income levels were probably the most vulnerable. Discussions on this point ascribed this to the fact that these people were targeted by a wide range of financial service providers, such as clothing and furniture stores. With earnings above subsistence levels, their aspirations grow stronger and they then spend beyond their means. Various stores simultaneously offer credit to middle-income consumers, who take up too many offers at the same time.

Furthermore, consumers spend on items they cannot necessarily afford because they wish to portray their wealth through the acquisition of luxury items and expensive services. Consumers' consumption patterns are driven by their desire to be classified as wealthy, even though they cannot necessarily afford the luxury items. Examples of such consumption expenditure include branded clothing or expensive furniture that is normally financed through unsecured credit. During the focus group discussions the opinion was expressed that some consumers, despite tough times, would spend regardless of their circumstances, as is evident from the following statement:

> *'So the 'I want to spend money, I want to buy the clothes' is always there. And I think we're picking up, and maybe you pick it up on the XXXXX Group side as well, all of a sudden we're again more under pressure now than say six months ago in terms of the quality of people that you get that want to borrow money.*'

Fromm's 'to have or to be' modes also refer to this type of consumer behaviour. Consumers perceive themselves as being successful if they own everyone and everything, promoting the ambiguous message of *I am = what I have and what I consume* (Fromm 1976), and they spend accordingly. Such consumers are of the opinion that they have to own the best of everything, failing which they will not be deemed successful. This often leads to consumers spending more money than they have available. One of the participants also highlighted the aspirational reasoning behind consumers' actions:

> *'Those people are also more actually rational. So they tend to want to compete with the Joneses and drive a better car and so on. Those that are financially literate will start migrating through the LSM groups and we find in our business, we find them moving from chain to chain which caters for those LSM markets. So you're quite right. Your middle income is the most vulnerable, lower-middle income. And we've seen those figures in debt review as well. It's not your person earning R2 000 – R2 500 a month, R3 000 a month that's actually getting themselves into trouble. It's the aspirational low middle income.'*

The stress that this aspirational spending behaviour or pressure to service expenditure commitments places on consumers is evident from the expenditure causal chain (figure 5.4), since the overall mental attitude of consumers towards their financial position is clearly visible, given the recurrence of the following variables in the causal chain:

- My household struggles financially;
- From time to time, my household is not able to pay its bills;
- The members of my household generally feel financially stressed; and
- It is difficult to escape periods of financial difficulty.

Previously, the effect of unscrupulous lending was noted as advancing saving vulnerability but unfortunately, not all the blame can be placed on service providers as consumers participate in reckless borrowing activities as well. Consumers apply most creative methods to obtain durables that they actually cannot afford, as is evident from the following:

> *'I just want to quickly add, what you've just said is very interesting. Yesterday I was in a meeting with a motor vehicle finance company. They're finding more and more fraud in the sense that people are applying for motor finance via the wife's good credit record or the son's good credit record, instead of their own. Because their own credit record is impaired and the latest statistics show that 39.5% of consumers at the credit bureau have got a bad credit record. Now that's down from a year ago of about 40-45%. So it means more than 60% of consumers in South Africa have got a good credit record.'*

The key informants discussed the issue of bad credit ratings of consumers that cause them to obtain informal credit from friends and families although this contributed to their feelings of vulnerability. The key informants felt that these feelings of despair could also be ascribed to the consumers' monthly financial obligations in respect of having to pay back money borrowed from friends or family. From the discussion it became clear that consumers were struggling to sustain their debt commitments as the money they borrowed from personal loans as well as stokvels all contributed to the stress they experienced to service their commitments to their families or friends. It was clear that consumers utilised various informal credit avenues to obtain additional credit, while the extent of such credit liabilities placed additional strain on them, making them expenditure-vulnerable.

In an attempt to address the financial problems consumers were experiencing due to high levels of consumption and high debt levels, the causal chain reflects that consumers explored the possibility of cancelling some of their insurance and saving policies to cover their debt. Such behaviour underlined the hardships that consumers were experiencing regarding their consumption levels. By cancelling their policies, consumers would have more funds available to service their other expenditure commitments and thus they believed it would reduce their levels of expenditure vulnerability. Given the lack of access to financial education, this measure in itself could provide short-term relief but could result in consumers becoming financially vulnerable over the longer term. Policies are a mechanism of saving that consumers could utilise in future periods to assist, for example, in times of disability or death. Policies can replace the income stream that is lost. Short-term insurance covering vehicles and household contents could also safeguard consumers against future harmful events, especially as many consumers need their motor vehicles for travelling to and from work. Should the vehicle break down or be involved in an accident, and it is not covered by insurance, they would be unable to reach their place of work and may risk losing their employment. The possibility of approaching someone to help with debt problems also featured in the causal chain, although the variable 'considering approaching someone' does not necessarily translate into actually getting assistance. Consumers need to be educated about the importance of sound financial advice at the right time to assist them in addressing their financial vulnerability.

The province in which consumers reside featured throughout in both paths of the expenditure causal chain. The relevance of province in expenditure vulnerability could be explained by the close relationship between province and income received by consumers, thus providing the necessary resources for consumption and if possible for saving. This relationship was discussed extensively during the focus group sessions dealing with both income vulnerability and saving vulnerability. However, it is important to note a slight extension to the discussion that transpired from the expenditure causal chain. The lack of access to income-generating opportunities, not having sufficient access to financial education, and the lack of access to affordable goods were all factors contributing to expenditure vulnerability. Given the province or area in which consumers reside, it could have a severe effect on their income, saving and expenditure vulnerability. Areas or provinces that have low levels of employment and limited income opportunities may lead to increased pressure on a consumer's ability to service his/her consumption levels, especially in areas where there is a lack of affordable goods. In addition, several of these areas do not have sufficient opportunities for consumers to educate themselves financially, thereby preventing them from obtaining the necessary financial skills to overcome their financial problems.

In conclusion, the two main drivers of consumer expenditure vulnerability point towards factors that are endogenous to the family or household and factors being exogenous to consumers. The endogenous factors refer to bad financial planning, not budgeting, and reckless buying behaviour on the part of consumers that result in high levels of expenditure vulnerability. Exogenous factors refer for instance to the fact that many prices have increased, for example food, petrol and electricity. These factors are beyond the control of consumers but since they are already experiencing a strain on their income resources without any saving, they are unable to withstand the pressure on their expenditure.

5.6 CONCLUDING REMARKS

Based on a series of regression analyses, this chapter aimed to address the three research questions stated in chapter 1. The results of the inferential statistical analyses were provided for the overall consumer financial vulnerability index supported by the three sub-indices, namely the income vulnerability index, saving vulnerability index and expenditure vulnerability index. Based on the results of the inferential statistical analyses, causal chains for the three sub-indices were constructed and discussed in this chapter.

Based on the causal chain methodology, it became evident that the consumer financial vulnerability path is not a linear one and that many decisions and actions occur between the causal factors depicted in chapters 2 and 3. It emerged from the causal chains described in this chapter that the consumer financial vulnerability path is a spiral path with several factors influencing consumers on more than one level. Some of the factors listed in the analyses were also evident in more than one of the sub-indices' causal chains, re-iterating the fact that the path is far more complex than normally contemplated in theory.

The causal chain analyses clearly highlighted the intrinsic relationship between consumers' income, expenditure, saving and debt. For instance, when factors such as consumers' perceptions regarding their employment situation, their income situation and their ability to access money from friends and family become pressurised, this pressure is extended to the saving attitude of consumers. As consumers were unable to save in the past and did not think that they would be able to save in the future, did not have access to money to alleviate some of the income pressure and were unable to save regularly, they experienced high levels of saving vulnerability in addition to the income vulnerability. The pressure on both income and saving prohibited consumers spending as they did not have sufficient money to make ends meet and they often needed to spend more money than they had. The combined interaction of the sub-indices translates into consumer financial vulnerability and the magnitude thereof.

Through application of the economic trade channel as well as the development factors discussed in chapters 2 and 3, and the causal chains illustrated in chapter 5, it was possible to identify the factors and the path that could result in consumers being financially vulnerable. Chapter 6 will conclude the research by bringing together all the factors and influences affecting consumer financial vulnerability and will provide some recommendations to policy-makers and stakeholders in the financial services industry that could result in reduced levels of consumer financial vulnerability.

CHAPTER 6

CONCLUSIONS AND RECOMMENDATIONS

6.1 INTRODUCTION

The aim of the study was stated in chapter 1 as the identification of a causal chain that illustrates the path through which a variety of factors influences consumer financial vulnerability. In line with the research objectives formulated in chapter 1, an extensive literature review of the theoretical framework was conducted in sections 2.2 to 2.6 in chapter 2. Chapter 3 extended the literature review by firstly describing causes for consumer financial vulnerability via the international trade channel (section 3.2), and secondly via the developmental channel (section 3.3), and lastly some behavioural factors (section 3.4). The literature review provided the heuristic model for constructing the causal chain as illustrated in figure 3.37. Chapter 4 followed with a discussion on the relevant research methodology applicable to the study. Based on the stated research methodology and the constructed heuristic model, chapter 5 reported on the results of the inferential statistical analyses supported by the information obtained from participants of the focus group discussions. This final chapter will provide a summary of the answers to the research questions stated in chapter 1 before concluding with some recommendations regarding potential policy implications to reduce consumer financial vulnerability.

6.2 FACTORS GIVING RISE TO CONSUMERS BEING FINANCIALLY VULNERABLE

Research question 1: What are the factors that give rise to consumers being financially vulnerable?

Through the application of macroeconomic chain reasoning (section 2.2) it was possible to identify factors acting as triggers that may cause consumers to become financially vulnerable (section 3.2), which, together with a list of demographic variables (section 3.3), led to the construction of a heuristic model as illustrated in table 3.21. The longest possible chain stems from developments in the international economy that can trigger a change in South African consumers' financial vulnerability. Through the international trade channel (section 3.2), consumers in South Africa are mostly influenced by the economic performance of South Africa's main trading partners. As discussed in detail in chapters 2 and 3, at the time of the current study, declining global economic growth had a profoundly negative effect on the South African economy (sections 3.2.1 and 3.2.2). Contracting international economic growth and uncertainty among South Africa's trading partners resulted in lower international and domestic demand for produced goods and services, evident from the sharp decline in merchandise imports and exports. This caused domestic production to decline, which contributed to a decrease in the number of employed South Africans, which in turn contributed to negative growth in real household consumption expenditure and real household disposable income.

The South African government can also influence consumer financial vulnerability through fiscal policy (section 3.2.2.1). By way of, among others, the expenditure distribution channel, social grant transfers are made to the poor and vulnerable, thereby assisting in reducing their financial vulnerability. During 2008/09, more than R80 billion was allocated to 13 million grant recipients (National Treasury 2010; SASSA 2010). In addition, the amount paid to the unemployed via the Unemployment Insurance Fund (UIF) almost doubled from 2008/09 to 2009/10 (National Treasury 2010). For a large group of South African households, this was their only source of income as the social grant transfers assisted them to reduce their financial vulnerability and they at least had a source of income. On the other hand, such social benefits need to be financed through the taxes levied on individuals and consumers. A high tax burden therefore can increase the financial vulnerability of taxpayers as they have less disposable income for their own consumption, saving and debt servicing commitments. Given the high dependency burden on South African taxpayers, this adds to their experiencing a strain on maintaining their own financial position, thereby increasing their level of financial vulnerability.

In addition to fiscal policy, monetary policy via the interest rate transmission mechanism is another factor that could influence consumer financial vulnerability (section 3.2.2.2). Increases in interest rates result in higher debt servicing costs, thereby reducing the money consumers have available to maintain their expenditure commitments. Should consumers not have other income sources to compensate for the deficit due to the interest rate increase, this will slow down consumer spending. This situation will strain consumers' ability to maintain their spending and saving levels, resulting in higher levels of financial vulnerability. The opposite is also true, with interest rate reductions relieving the pressure on consumer financial vulnerability.

Consumer price inflation targeting is also incorporated in monetary policy. The aim is to keep consumer price inflation within a target band of 3% to 6% via among other things interest rate changes, as high inflation erodes the purchasing power of consumers, which can increase consumer price vulnerability if disposable income does not increase proportionally. As discussed earlier, the weakening of the rand/US dollar exchange rate during 2008 from R6 to the US dollar to more than R11.82 contributed to higher import prices, which in turn exerted pressure on consumer price inflation to increase from below 6% to above 8%. This high inflation environment prevailed until May 2009 and, during the first round price effect, contributed to higher consumer financial vulnerability, as consumers were unable to purchase the same number of units with the same disposable income.

As already alluded to, the difficult economic environment at the time of the study also contributed to high levels of unemployment due to reduced levels of local and international production (section 3.2.3). On the other hand, nominal gross earnings of employees in the formal non-agricultural sector increased, indicating that fewer people were earning more. For those unfortunate consumers who lost their jobs, their level of financial vulnerability would have increased as the prospects of obtaining employment were very slim. The fortunate ones who were employed and who received increases were financially less vulnerable as they were able to absorb and divert the pressure on their expenditure and saving.

The problem with the dynamics in the labour market was further illustrated by the low employment coefficient, indicating that even in times when South Africa experienced positive economic growth, this did not translate into higher employment levels (section 3.2.3). This was evident from the long-term employment coefficient of 0.5 as calculated by Hodge (2009), suggesting that a one percentage point increase in real economic growth was associated with a half percentage point increase in employment growth. Hodge (2009) concluded that the difference between employment growth and economic growth could have resulted from a mismatch between the structures of labour demand and supply in the economy. In addition, the average capital-labour ratio also increased to almost R190 000 in 2008, confirming that employers were replacing labour with capital, placing more pressure on consumers' hopes of obtaining employment. Consumers having the right qualifications and skills demanded by the economy would be financially less vulnerable than those without education and a lack of skills.

The magnitude of the impact of events or triggers such as international and domestic economic performances, monetary and fiscal policies and the labour market environment on consumer financial vulnerability is not the same for all consumers. The magnitude of the impact will differ for each consumer and will depend largely on factors determining the structure of the economy. It was shown that structural factors such as living standards and income inequality (section 3.3.2), educational attainment (section 3.3.3), health and age (section 3.3.4), geographical location (section 3.3.5), household structure (section 3.3.6), gender (section 3.3.7) and financial attitudes (section 3.4), together with consumer confidence, would determine the magnitude of the impact of the abovementioned events or triggers. However, it must be borne in mind that at times, the structural factors can also act as triggers. From the analyses conducted in chapter 5, the different factors that could lead to differential levels of impact on consumers' feelings of financial vulnerability are summarised in table 6.1.

TABLE 6.1

FACTORS GIVING RISE TO CONSUMERS BEING FINANCIALLY VULNERABLE

Consumer financial vulnerability ←	Variables	→ Consumer financial security
Low	**Employment prospects**	High
Limited	**Sources of income**	Several
Difficult	**Accessing money**	Easy
Limited	**Ability to save**	Extensive
Rural	**Geographical location**	Urban
Deteriorating and only one income earner	**Household structure**	Improving and more than one income earner
High	**Consumption price inflation**	Low
Low	**Educational attainment**	High
Poor	**Living conditions**	Good
Low	**Future financial expectations**	High
Difficult	**Ability to makes ends meet**	Easy
Low	**Debt service ability**	High
High	**Future credit dependency**	Low
Unhealthy	**Financial management**	Sound
Unhealthy	**Financial position**	Sound
Negative	**Financial attitudes**	Positive
Financially illiterate	**Financial education**	Financially literate
Aspirational spending	**Spending behaviour**	Budgeting
Insufficient	**Income levels**	Sufficient

(Source: Author's own compilation)

The effect of each of these factors on consumer financial vulnerability was discussed in detail in chapter 5 but their relevance to the nature of the causal chain will become evident in the following section, in which the causal chain is applied to two hypothetical households.

6.3 NATURE OF THE CAUSAL CHAIN

Research question 2: What is the nature of the causal chain between such factors giving rise to consumers' financial vulnerability?

Through the application of the constructed causal chain to two hypothetical households, the impact of triggers via such causal chain on consumer financial vulnerability will address the second and third research questions stated in chapter 1. During the analyses provided in chapter 5, supported by the key-informant opinions, it became evident that the causal chain is not a linear process, as originally contemplated and illustrated in figure 3.37, but rather a far more complex spiral chain, given the recurrence of several variables at different stages of the causal chains. The interaction among these variables and the different sub-indices also emerged from the causal chains constructed. Several variables not only featured at different levels in a specific causal chain, but also featured in that causal chain. The origin of the interaction among the variables was described in chapter 2, based on the discussion of the various consumption and behaviour theories. Given that household consumption expenditure, saving and liabilities are dependent on household income, this interaction between the variables clearly supports the consumption theories previously described. To illustrate the potential causal chain, two extreme households are used in the hypothetical discussion.

Household 1:

- The household consists of two employed individuals, both highly educated in occupations for which there is a high demand, earning high salaries.
- They are both in their early thirties and do not have any children.
- Both exercise regularly, eat healthy, are overall in good health and are members of a comprehensive medical aid scheme.
- Their financial position is very secure – they bought a moderate house a few years ago, the mortgage is repaid, they save a lot every month and have no other debt.

- Financial management is very important to them as they budget each month and ensure that they do not spend more than they have budgeted for. In addition, they obtain financial advice from a registered financial planner on a regular basis.

Household 2:

- The household consists of a husband and wife and three dependent children. The family hopes that the children will obtain further qualifications after completing school in the hope of earning enough income to support their parents.
- The wife was retrenched after her 60th birthday and is now unemployed due to illness, and they cannot afford to contribute to a medical aid scheme.
- The wife receives an old age grant each month and the family also receives child grants.
- Neither the husband nor wife has completed secondary school.
- Their financial position is dire. Due to the wife's high medical bills, they have to finance the medical expenditure by means of their mortgage, as they have no other resources available. They therefore still owe a large amount on the mortgage and have several other debt commitments. They have exhausted all their past savings.
- The husband turned 60 a month ago and has just been informed that he will be retrenched. After his retrenchment, he will receive grants from the unemployment fund.

The magnitude of the impact of an economic recession on these two households will influence their financial vulnerability differently.

The members of Household 1 are highly educated and possess skills for which there is a high demand. Although the company for which they work needed to retrench workers due to a scaling down of production and financial strain, these two individuals received above-inflation salary increases, as their skills were required to guide the company through the recession. However, when the government increased income taxes to finance additional social grant transfers, they experienced some pressure on their consumption. Due to their prudent planning and saving behaviour it was not necessary for them to reduce their saving, but they rather adjusted their consumption patterns. Thus, given the event of an economic recession, the magnitude of the impact on the financial vulnerability of Household 1 was limited:

- They are not income-vulnerable as they are employable due to their skills and education and they have received above-inflation salary increases.
- They are slightly more vulnerable in terms of their consumption expenditure due to the increases in tax but alleviated some of the pressure by adjusting their consumption patterns.
- They may be more saving-vulnerable as the value of their assets did not perform as had been expected, but since they are still young, this is not a major concern.
- They are not debt servicing vulnerable, as they do not have any debt commitments.

It is thus clear that Household 1 was financially secure before the economic recession and would remain so although their level of financial security had decreased slightly. This situation, however, could change, for instance, should the number of people in the household increase, resulting in higher levels of expenditure vulnerability. Given the increase in the number of household members, the household could also decide to upgrade their current residential property and incur more debt, making them susceptible to debt servicing vulnerability due to future interest rate increases, which could result in their becoming financially less secure.

In contrast, Household 2's situation is not as secure as that of Household 1 and therefore the magnitude of the impact of the economic recession will be far more severe on their level of financial vulnerability. Firstly, the husband has lost his job, making him income-vulnerable at the outset. The loss of his income will increase already strained consumption commitments, including the upkeep of the medical expenses of the wife. This will also place additional strain on the household's ability to pay all the extra educational expenses required for their children, causing strain on the children's ability to obtain good educational qualifications. For this household, part of their long-term expectation was for the children to become educated and therefore take care of their parents when they could no longer look after themselves. However, the husband has received some comfort from the unemployment insurance fund, but this is much less than his salary. The household has also qualified for child grants from the government, which has marginally alleviated their financial pressures.

Thus, in the event of an economic recession, the magnitude of the impact on Household 2's financial vulnerability would be severe:

- Initially this household will experience high levels of income vulnerability due to the loss of the husband's job. The likelihood of the husband obtaining new employment is very slim because of his age and his limited skills. Their income vulnerability decreases slightly because the husband and children qualify for and receive social grants from the government.
- Before the recession, they were already experiencing high levels of expenditure vulnerability as they were struggling to make ends meet, given that they only had one member employed. Now, however, they receive an even smaller income, adding pressure to maintain their expenditure commitments, which are now much higher than the income they receive. In addition, due to the increasing consumer price inflation and increasing medical costs, they are struggling even more to make ends meet, thus increasing their expenditure vulnerability even further.
- Due to the high levels of consumption expenditure, they have already depleted their savings and are not in a position to save anymore. This will translate into high levels of saving vulnerability, as they will not have any further resources to fall back on.
- They will also be experiencing high levels of debt servicing vulnerability, as they now are unable to pay their accounts and credit. They will probably also not have access to new credit, making them more debt servicing vulnerable.

It is thus clear that Household 2 were already experiencing high levels of financial vulnerability prior to the economic recession, but due to the structure of the economy and of the household, the situation has deteriorated as result of the recession. Through the application of fiscal policy and the transfer of social grants, the government has assisted this household to become less income vulnerable, but the consolation is small compared to the loss of income from employment. Any further interest rate or inflation increases would increase this household's level of financial vulnerability as it is already experiencing pressure on its ability to maintain its consumption commitments and is struggling to service its current debt responsibilities. As with Household 1, however, its situation could also improve, should the husband obtain employment or establish his own business, providing them with the necessary income streams. Alternatively, they may inherit from a family member, giving them a financial injection that will reduce their liabilities and provide them with the financial freedom to reduce the pressure on their consumption as well. Their children might achieve the educational attainment they aspire to and/or become employed themselves. This would enable them to provide an additional income stream not previously available to the household and so reduce their financial vulnerability.

The two hypothetical cases demonstrate that financial vulnerability can be influenced by a variety of factors and that the magnitude of the impact of the factor or event differs for each consumer due to their specific financial position (structure) as well as their personal attributes and financial behaviour. The financial vulnerability causal chain is not a singular linear process but rather a non-linear one (with contemporaneous and singular linkages) with various factors influencing financial vulnerability, as well as influencing each other over time.

An evaluation of South Africa's financial vulnerability (as a country) reveals that it corresponds to a large degree to that of Household 2; hence, the environment is not very conducive to short-term improvement for consumers. During the period under review (2008 – 2009), South Africa experienced some of the highest levels of income inequality in the world (section 3.3.2). Furthermore, as a result of HIV the life expectancy of South Africans is fairly low (section 3.3.4). The country also did not excel in terms of the Human Development Index (section 3.3.1) and its sub-components, unemployment levels remained high (section 3.2.3) and, as reported in the national accounts aggregates, saving was low for all the institutional sectors, namely households, the corporate sector and general government (section 2.3). The national accounts aggregates also reflected that although nominal income increased, in real terms South African consumers did not experience the same level of increases. Although the debt to disposable income ratio remained fairly stable, it is important to remember that a large number of South African consumers were earning less than R50 000 per annum and did not qualify for debt such as credit cards or store cards, and if so, only qualified for debt with high interest rates. Therefore, the debt used for the calculation of the debt to disposable income ratio as provided in the national accounts of South Africa, mostly reflects the debt of the household sector in the South African economy in general and does not give details of individual consumers of the broader South African population. In times of economic recession, South Africa as a whole will mostly follow the same path as that of Household 2 and become financially much more vulnerable, whereas a country such as Norway (as discussed in the Genworth study, section 3.2), which has the characteristics of Household 1, will become financially marginally more vulnerable.

6.4 KEY INFORMANTS' VIEWS REGARDING CAUSES OF CONSUMER FINANCIAL VULNERABILITY

Research question 3: What do key informants in the financial services industry believe to be the causes of consumer financial vulnerability?

By means of the second strand of the research, namely the qualitative phase, the participants of the four focus groups provided valuable insights into the causes of consumer financial vulnerability. In essence, they supported the findings of the quantitative strand of the research, which answered the first two research questions, confirming the identified variables as the main drivers of consumer financial vulnerability.

The key informants all agreed that, given the timing of the survey and the number of job losses at the time, the employment environment should prevail as one of the drivers of consumer financial vulnerability. The key informants discussed this issue for some time, as well as the importance for consumers to be trained and educated with the correct skills required for the South African labour market. Currently, there seems to be a mismatch between the skills provided and the skills required in the labour market, resulting in high levels of unemployment and low growth-employment elasticity in the South African labour market. Further to the discussion, the labour costs and labour laws of South Africa were also put forward as possible reasons for replacing labour with machines, making the employment environment more ominous for many consumers, resulting in higher levels of consumer financial vulnerability.

In the problematic employment environment, sources of income were the next variable identified by key informants as causing consumer financial vulnerability. The pros and cons of increased grant dependency were discussed, with one school of thought claiming that the increase in the number of grant dependants in South Africa would lead to higher levels of consumer financial vulnerability because this source of income may not be sustainable (for example the child grant). Another school of thought, however, stated that the grant system could possibly reduce levels of financial vulnerability, since consumers could perceive the grant system as a safety net, should they require it.

The unequal distribution of income was another factor that could result in differential levels of consumer financial vulnerability. Since South Africa has one of the most unequal distributions of income in the world, many consumers are struggling to make ends meet. This is especially true of consumers residing in rural areas with limited employment opportunities, limited access to education as well as limited financial services, which makes them financially more vulnerable than consumers residing in urban areas.

This further translates into a number of consumers being unable to save to assist them in future periods when their income streams may be under pressure. The majority of South African households are spending the bulk of their income on necessities such as food, housing and transport, and do not have sufficient funds available to service their minimum requirements, let alone save for future requirements. Because of their dire financial situation, these consumers do not qualify for credit as they will not meet the affordability requirements, thus further limiting their financial resources. According to key informants, such consumers are experiencing high levels of consumer financial vulnerability.

The importance of financial education was also identified as a factor that could have an influence on consumer financial vulnerability levels. Should consumers be financially literate, they would be able to understand and interpret the financial information being provided to them, be able to budget, and plan for future contingencies. Financially illiterate consumers, however, are prone to reckless lending practices by financial service providers; hence, such consumers become over-indebted. Consumers should be educated to understand the implications of the transactions they wish to enter into and they should fully comprehend the total costs thereof. With the low levels of literacy in South Africa, many consumers are unable to understand all the financial jargon in contracts they are required to sign and could be engaging in actions that would result in high levels of financial vulnerability.

According to the participants of the focus groups, many consumers are guilty of aspirational spending, resulting in their spending more on items than they can actually afford. This could result in consumers not having sufficient money left to pay their monthly consumption commitments and also being unable to withstand any price increases. For instance, should electricity prices increase, many consumers, being unable to afford such an increase, would feel financially vulnerable. The same holds true for other price increases.

Finally, key informants concluded that it was necessary to understand consumers' motives for saving to better understand their reasons for not saving, should they have the funds available. Given the aspirational spending previously discussed, consumers often spend rather than save. Thus, remedies to effect behavioural change are required to assist consumers in becoming financially less vulnerable.

6.5 EXPLANATIONS FOR CAUSES OF CONSUMER FINANCIAL VULNERABILITY

Research question 4: What are the explanations for the causes of consumer financial vulnerability?

It was initially contemplated that the consumer financial vulnerability path would be a linear one and that there would be several direct relationships among the various independent variables and consumers' financial vulnerability. Given that there had been very limited research in this regard in the past, this study embarked on a literature review to identify the set of possible variables that could influence consumer financial vulnerability. During this process, it became evident that obtaining a comprehensive understanding would require a broader research methodology.

Initially, the consumer financial vulnerability path was described through the worldview of the concrete process of the various expected relationships via the international trade channel as well as the development channel. Subsequently, it became clear that by only focusing on the concrete process, several of the other variables that could influence consumer financial vulnerability would not be encapsulated. This required that the worldview (ontology) for determining the causal path should be extended to contextualise the reality by a description of the South African context by means of relevant or appropriate national accounts aggregates as well as other micro data available on consumers in South Africa. This information included a variety of sources on South African consumers' income, consumption expenditure, assets (also referred to as saving) and debt (also referred to as liabilities).

Following the description of the South African context, the first phase of the research analyses was conducted by means of regression analyses to determine the potential causal path of consumer financial vulnerability. Given the information obtained from the literature review as well as the regression analyses, it was possible to construct a potential causal path, although the reasons behind the causal path were not clear. The information up to that stage was able to describe the way in which the potential causal path could evolve; however, it was not possible to provide reasons as to why consumers would feel financially vulnerable, given the context provided.

To shed more light on the potential reasons for consumers feeling financially vulnerable, it was necessary to extend the scope of the research to include focus group discussions with experts in the field of household finance. By combining the viewpoints of the key informants with the results obtained from the regression analyses, it was possible to obtain a comprehensive understanding of how and why consumers were feeling financially vulnerable at the time of the survey in 2009.

By using the mixed methods approach it was possible not only to identify the set of independent variables that could influence consumer financial vulnerability, but by incorporating an understanding of the way in which consumers internalise information, act on the information and behave in terms of their financial position, it was also possible to conclude that the causal chain of consumer financial vulnerability is not a linear process but rather a non-linear process with a host of contemporaneous feedback loops:

- Various variables in the consumer financial vulnerability causal chain enhance or depress each other. For instance, if someone was born to affluent parents, was sent to the right school, where he/she received a good education, which ensured that he/she got a good job, with a good salary and he/she learnt how to work with money, he/she might be financially secure. This research, however, has shown that his/her financial security will not be stable ‘forever after’ but will fluctuate, depending on a number of variables.
- Furthermore, the research showed that someone’s degree of financial vulnerability will not only depend on his/her qualifications and labour market status, but also on his/her attitudes, personal financial abilities, level of personal empowerment as well as several other factors.

- Another important deduction from this research is the influence of government's actions on consumer financial vulnerability. By acting in a 'pater familial' fashion through the grant system, government is alleviating short-term consumer financial vulnerability to some extent, but long-term consumer financial vulnerability is being exacerbated.
- Consumer financial vulnerability is not a state of being but a financial phase of life. Should a person not be empowered to take responsibility for his/her own financial affairs and do something about his/her consumer financial vulnerability status, he/she will remain in a vulnerable situation.

The fact that the causal path of consumer financial vulnerability is a non-linear process results in important policy implications, since several of the current policies in South Africa are based on a linear path, namely that economic growth will translate into inclusive growth whereby the cost of living will be reduced. It became evident from the causal path that it is not simplistic and that new policy interventions should be designed to allow for the diversity of consumers and the various paths, and that such policies should be targeted with more specific audiences in mind.

6.6 SOME POLICY RECOMMENDATIONS

The importance of the correct policy frameworks is evident from the previous discussion and, based on the results of the causal path of consumer financial vulnerability, certain policy recommendations can be proposed:

- **Education to ensure employability**
  The importance of education as a means of obtaining employment and thereby reducing consumer financial vulnerability was described in detail in previous chapters. Education is allocated a large share of the South African budget, although the education system is not necessarily gaining from the allocation. Schools are not receiving the necessary textbooks, and teachers are absent, which leads to children being deprived of the necessary education to ensure that they become employable.

In addition to the problems in providing the necessary support for schools, the current focus in the education system is to ensure that the Grade 12 pass rate increases every year, but this will not necessarily ensure that learners become employable. It was evident from the discussion regarding employment in chapter 3 that fewer workers are earning more, and human labour is being replaced by machines, while a large portion of the South African youth is unemployed. In an attempt to address the high levels of youth unemployment in South Africa, Mr Pravin Gordhan, the Minister of Finance, introduced a new budget initiative in the 2010 Budget Speech, proposing wage subsidies for the employment of youths to encourage employers to employ the youth of South Africa (Gordhan 2010). In his 2011 Budget Speech, the importance of youth employment as a priority for South Africa was re-emphasised, with the initial youth employment subsidy being proposed to cost the South African Government R5 billion over three years (Gordhan 2011). In comparison to the other BRICS countries, South Africa's youth unemployment is at unacceptable levels and should remain the focus of government policies. Bangladesh succeeded in creating employment opportunities that did not seem glamorous and earth shattering but resulted in elevating young and old from dire circumstances to a better financial future (Sachs 2005). At present, consumers are unable to access appropriate skills training or the ability to create self-employment because of the lack of proper education. The investment in human capital by the South African government should be evaluated to determine why it is currently failing to provide the necessary skills to ensure employability in an attempt to reduce the levels of income vulnerability.

- **Consumer education and empowerment**

  Education also relates to empowerment of vulnerable groups. Education, and more specifically targeted or customised financial education, will ensure that consumers become more financially literate. Financial literacy will ensure that consumers do not become trapped in the greedy behaviour of financial service providers. In South Africa, recent debates regarding the increase in unsecured lending and the market conduct of several financial service providers have led to agreements between the National Treasury and the Banking Association of South Africa, focusing especially on garnishee orders in an attempt to protect and assist indebted consumers. With the necessary financial education, consumers should be empowered to make the correct financial decisions and apply sound financial management behaviour.

Financial education programmes should, however, have a very narrow focus and be developed with specific vulnerable groups in mind. Single-headed households clearly have different financial decisions and problems than a double-income household. Households with children need to make different financial decisions compared to households that have no children. People buying their first house will need to understand all the implications of owning a house and the effect of interest rate changes on their monthly debt servicing commitments. A national strategy with the over-arching aim of financial education could assist in this regard, but it should be aligned with specific financial education needs. Institutions providing financial education should be incorporated in the national strategy to ensure that all the various areas are addressed and not duplicated, and that programmes are developed to address the gaps in the current offerings. The quality of financial education programmes as well as the effect of financial education should also be monitored and evaluated to ensure that it changes behaviour and educates consumers in making the right financial decisions.

- **Market conduct and consumer protection**

  Microfinance practices should be researched to determine whether microfinance achieves the original goal of broadening access to loans to a larger portion of the population, especially those who do not qualify for loans in the 'formal' banking environment (Banerjee & Duflo 2011). This is especially true for South Africa, given the increase in unsecured credit and the prevailing debate on unscrupulous lending behaviour. Microfinance could assist small business owners with the necessary finance to increase their businesses and thereby create some employment opportunities, but this should be supported by financial education, because the current survival rate of micro businesses is not positive. Such assistance to small business owners can achieve employment growth and reduce the financial vulnerability levels of numerous consumers.

- **The process of policy formation**

  In the development of the various national and fiscal policies, care should be taken to ensure that the complexity and diversity of the South African consumers are taken into account. In the 2013 Budget Review (National Treasury 2013) mention was made of a host of funding priorities, focusing only on the low-income earners of the country. On the other hand, certain policy recommendations stated that funding of certain initiatives would require increasing taxes in future, for example financing of the national health insurance. Given that over 60 per cent of working people earn less than the tax threshold (namely do not pay any income tax), this increased tax burden will be borne by a very limited number of taxpayers in South Africa.

As was clear from the financial vulnerability path, not only the low income households are financially vulnerable, but also the higher-income households. Thus, policies resulting in the higher-income groups becoming financially vulnerable should be revisited. Effectiveness of the funding allocations, ensuring actual deliverance and sound education as well as aggressive policies and incentives to encourage employers to participate in the training and up-skilling of workers are required. Furthermore, the grant dependency of a number of South Africans should be reduced by providing training programmes and employment opportunities. The current grant system is not conducive to more people becoming self-employed or reskilling themselves to address market requirements.

The policy interventions proposed in the Budget Review as well as the National Development Plan should also be monitored and evaluated. Periodic evaluation of the success or failure of policy interventions should result in accountability of public funding utilised in the programmes and the impact achieved. For example, through a better understanding of the psychology of saving, appropriate saving products can be provided that would assist consumers to start saving and be financially less vulnerable. Given the current reform in the retirement industry and saving environment being driven by the National Treasury, cognisance should be taken of the saving behaviour and culture among the various population and income groups in South Africa. For example, the newly introduced tax-friendly saving products that will be made available via the formal banking sector will only benefit a small portion of the South African population as not all consumers are saving in the formal sector. However, the ability to save has the potential to reduce the financial vulnerability levels of consumers, thus products and mechanisms should also be made available to those in rural areas and others not included in the formal banking environment.

Furthermore, the importance of effective policies to ensure a more equal income distribution was reiterated by Mr Strauss-Kahn, erstwhile managing director of the International Monetary Fund, at a discussion hosted by the Brooking Institution in April 2011 regarding sustainable recovery from the global job crisis through employment and equitable growth. Mr Strauss-Kahn highlighted the importance of policies to reduce inequality and ensure a more equitable distribution of opportunities and resources, supported by progressive taxation to dampen market-driven inequalities and more investment in health and education (Strauss-Kahn 2011). At the same discussion event, Mrs Burrow (general secretary of the International Trade Union Confederation) confirmed the magnitude of the global job crisis. According to Burrow (2011), approximately 205 million people worldwide were unemployed, the highest level ever recorded, and the prospects are not very positive, with 45 million young people joining the labour market every year. These figures paint a very negative picture and present a major challenge to ensure equal distribution of income; thereby improving living standards and reducing poverty as well as consumer financial vulnerability levels, one of South Africa's biggest problems. Labour laws and the improvement of labour conditions should receive the highest priorities in ensuring that more South Africans become and remain employed.

6.7 LIMITATIONS AND FUTURE RESEARCH AREAS

The original data collection for the current study was conducted during June 2009 at a time when the world economy was contracting and the future prospects, especially over the short term, were not very positive. It is recommended that the study be repeated during 'normal' and prosperous economic conditions to determine whether the causal chain as developed in the current study will remain the same, or whether changes will occur. Further recommendations made by the key informants were also to evaluate the effect of the timing of the survey, for example consumers would report different levels of financial vulnerability at the beginning of the year compared to the end of the year as well as at the beginning of a month compared to the end of the month.

An in-depth analysis of the secondary sources used, such as those provided by the National Credit Regulator or other official data suppliers, was not done, since the raw data is not available. However, in context of the current discussion, this is not deemed problematic.

Furthermore, the current study did not develop a causal chain for individual income groups but focused on consumers in general. As indicated by the two hypothetical households, disaggregation of the study for more income groups would be very informative. Similar to income groups, the key informants suggested that it could also add some value should the study be repeated to understand the causal chain, taking into account different demographic variables, thus extending the analysis to more representative sets of hypothetical household compositions with different levels of education, types of employment and places of residence (for instance urban versus rural).

Further research into the effect of changes in social structure within the middle class and the effect on the financially vulnerable would also be a valuable contribution. Currently, research on the progress of consumers from one income group to the next is being conducted by a variety of researchers and financial institutions, but the drivers for aspirational spending, resulting in spending more money than consumers actually have available, are still fairly un-researched. It became evident from the expenditure causal chain that aspirational spending is a major contributor to expenditure vulnerability, although research has not determined the reasons for consumers acting in the way they do.

Another very important aspect that should be explored in more detail is the correlation of consumer financial vulnerability and the sub-indices with a variety of macro-economic indicators. As emerged from the discussions in the previous chapters, consumers change their consumption patterns in difficult financial times, but the extent and timeframe of the change, given their perceived feelings of financial vulnerability, have been only partially explored by researchers at the BMR since 2009. Information provided by the national accounts of South Africa could be used for such an analysis to further enrich the understanding of consumer behaviour within the South African economy.

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ANNEXURE A

SAMPLING WEIGHTING MATRIX

1. Realised sample per province and population group

Population group					
Province	**African/Black**	**Asian/Indian**	**Coloured**	**White**	**Total**
Eastern Cape	88	1	9	23	121
Free State	46	0	1	1	48
Gauteng	124	11	3	39	177
KwaZulu-Natal	25	38	1	16	80
Limpopo	118	1	0	1	120
Mpumalanga	74	1	1	5	81
North-West	23	0	17	0	40
Northern Cape	102	0	0	0	102
Western Cape	29	1	72	16	118
Total	629	53	104	101	887

2. SA household population per province and population group

REPORT 364	African	Asian	Coloured	White	Total
Eastern Cape	1 665 853	6 550	120 903	137 851	1 931 157
Free State	772 096	977	22 854	124 218	920 144
Gauteng	2 297 337	51 826	85 538	697 784	3 132 485
KwaZulu-Natal	2 020 356	245 544	31 297	237 863	2 535 060
Limpopo	1 381 657	1 685	2 845	41 409	1 427 596
Mpumalanga	912 732	4 129	5 611	89 331	1 011 803
Northern Cape	163 626	793	122 047	40 696	327 161
North-West	934 422	3 044	14 058	85 974	1 037 498
Western Cape	335 880	12 640	589 855	393 135	1 331 510
Total	10 483 959	327 188	995 008	1 848 261	13 654 414

(Source: Van Aardt & Coetzee, 2006)

3. Weighting factor to increase sample size to population distribution

WEIGHT	African	Asian	Coloured	White	Total
Eastern Cape	18 930	6 550	13 434	5 994	15 960
Free State	16 785	1	22 854	124 218	19 170
Gauteng	18 527	4 711	28 513	17 892	17 698
KwaZulu-Natal	80 814	6 462	31 297	14 866	31 688
Limpopo	11 709	1 685	1	41 409	11 897
Mpumalanga	12 334	4 129	5 611	17 866	12 491
Northern Cape	7 114	1	7 179	1	8 179
North-West	9 161	1	1	1	10 172
Western Cape	11 582	12 640	8 192	24 571	11 284

4. Weighted sample distribution

WEIGHT	African	Asian	Coloured	White	Total
Eastern Cape	1 665 853	6 550	120 903	137 851	1 931 157
Free State	772 096	0	22 854	124 218	919 168
Gauteng	2 297 337	51 826	85 538	697 784	3 132 485
KwaZulu-Natal	2 020 356	245 544	31 297	237 863	2 535 060
Limpopo	1 381 657	1 685	0	41 409	1 424 751
Mpumalanga	912 732	4 129	5 611	89 331	1 011 803
Northern Cape	163 626	0	122 047	0	285 673
North-West	934 422	0	0	0	934 422
Western Cape	335 880	12 640	589 855	393 135	1 331 510
Total	10 483 959	322 374	978 105	1 721 591	13 506 029

ANNEXURE B

STATISTICAL TABLES AND RESULTS

B.1 OVERALL CONSUMER VULNERABILITY INDEX

1. Reliability

Scale: ALL VARIABLES

Case Processing Summary

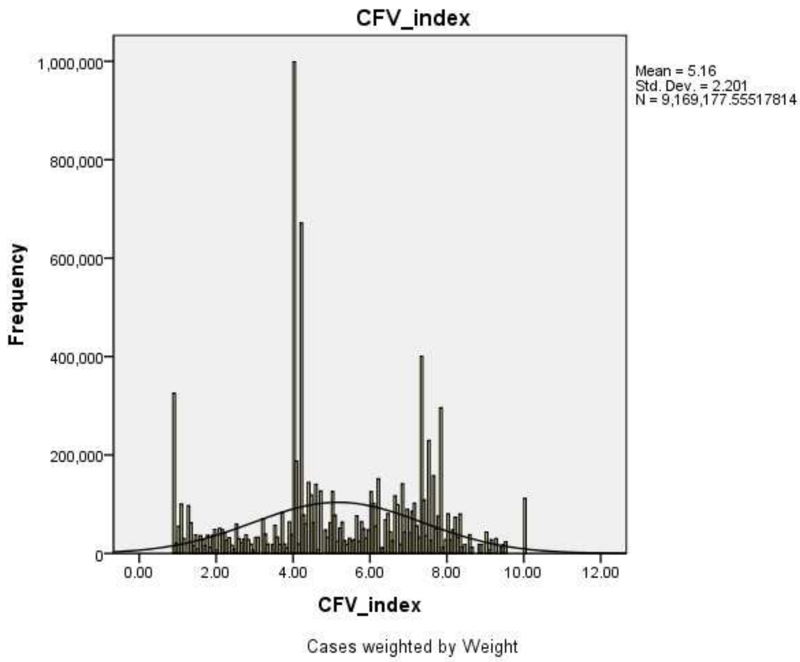
		N	%
Cases	Valid	571	100.0
	Excluded[a]	0	.0
	Total	571	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.706	3

		Overall CFV index
N	Valid	9169178
	Missing	4336851
Mean		5.1650
Std. Error of Mean		.00073
Median		4.7408
Mode		4.02
Std. Deviation		2.20143
Variance		4.846
Skewness		-.109
Std. Error of Skewness		.001
Kurtosis		-.719
Std. Error of Kurtosis		.002
Range		9.11
Minimum		.89
Maximum		10.00
Sum		47358484.35
Percentiles	25	4.0216
	50	4.7408
	75	7.1535



2. Internal validity

Correlations

			CFV index	Income vulnerability index	Savings vulnerability index	Expenditure vulnerability index	Debt servicing vulnerability index
Spearman's rho	CFV index	Correlation Coefficient	1.000	.904**	.815**	.597**	.730**
		Sig. (2-tailed)	.	.000	.000	.000	.000
		N	590	590	590	590	590
	Income vulnerability index	Correlation Coefficient	.904**	1.000	.745**	.383**	.436**
		Sig. (2-tailed)	.000	.	.000	.000	.000
		N	590	713	677	700	626
	Savings vulnerability index	Correlation Coefficient	.815**	.745**	1.000	.437**	.444**
		Sig. (2-tailed)	.000	.000	.	.000	.000
		N	590	677	799	788	689
	Expenditure vulnerability index	Correlation Coefficient	.597**	.383**	.437**	1.000	.441**
		Sig. (2-tailed)	.000	.000	.000	.	.000
		N	590	700	788	859	727
	Debt servicing vulnerability index	Correlation Coefficient	.730**	.436**	.444**	.441**	1.000
		Sig. (2-tailed)	.000	.000	.000	.000	.
		N	590	626	689	727	735

**. Correlation is significant at the 0.01 level (2-tailed).

3. Structural integrity

		Frequency	Per cent	Valid Per cent	Cumulative Per cent
Valid	.89	325466	2.4	3.5	3.5
	.95	20870	.2	.2	3.8
	1.01	55376	.4	.6	4.4
	1.07	27688	.2	.3	4.7
	1.07	16785	.1	.2	4.9
	1.07	12334	.1	.1	5.0
	1.09	17892	.1	.2	5.2
	1.10	7114	.1	.1	5.3
	1.12	18527	.1	.2	5.5
	1.15	11582	.1	.1	5.6
	1.18	18930	.1	.2	5.8
	1.26	80814	.6	.9	6.7
	1.26	7114	.1	.1	6.8
	1.27	9161	.1	.1	6.9
	1.31	18527	.1	.2	7.1
	1.32	8192	.1	.1	7.2
	1.35	35784	.3	.4	7.5
	1.40	7114	.1	.1	7.6
	1.43	9161	.1	.1	7.7
	1.46	21495	.2	.2	8.0
	1.47	9161	.1	.1	8.1
	1.49	7114	.1	.1	8.1
	1.55	9161	.1	.1	8.2
	1.58	17892	.1	.2	8.4
	1.62	18527	.1	.2	8.6
	1.65	16785	.1	.2	8.8
	1.66	11582	.1	.1	8.9
	1.70	11709	.1	.1	9.1
	1.75	4711	.0	.1	9.1
	1.76	18527	.1	.2	9.3
	1.80	18527	.1	.2	9.5
	1.86	12334	.1	.1	9.7
	1.88	17892	.1	.2	9.9
	1.93	18930	.1	.2	10.1
	1.96	18527	.1	.2	10.3
	1.97	12334	.1	.1	10.4
	2.00	17892	.1	.2	10.6
	2.04	6462	.0	.1	10.7
	2.08	14866	.1	.2	10.8
	2.09	9161	.1	.1	10.9
	2.10	8192	.1	.1	11.0
	2.11	18527	.1	.2	11.2
	2.13	18930	.1	.2	11.4
	2.14	11582	.1	.1	11.6
	2.14	17892	.1	.2	11.7
	2.20	12334	.1	.1	11.9
	2.22	11709	.1	.1	12.0
	2.24	18527	.1	.2	12.2
	2.27	18527	.1	.2	12.4
	2.28	8192	.1	.1	12.5
	2.32	12334	.1	.1	12.6
	2.33	8192	.1	.1	12.7
	2.36	11709	.1	.1	12.9
	2.41	16785	.1	.2	13.0
	2.47	9161	.1	.1	13.1
	2.50	11709	.1	.1	13.3
	2.50	14866	.1	.2	13.4
	2.51	8192	.1	.1	13.5
	2.56	12334	.1	.1	13.7
	2.56	12334	.1	.1	13.8
	2.57	11582	.1	.1	13.9
	2.57	18527	.1	.2	14.1
	2.67	12334	.1	.1	14.2
	2.68	9161	.1	.1	14.3
	2.69	8192	.1	.1	14.4
	2.73	11709	.1	.1	14.6
	2.73	9161	.1	.1	14.7
	2.77	9161	.1	.1	14.8
	2.80	16385	.1	.2	14.9
	2.81	12334	.1	.1	15.1

2.85	9161	.1	.1	15.2
2.86	18930	.1	.2	15.4
2.90	18930	.1	.2	15.6
3.00	6462	.0	.1	15.7
3.00	5994	.0	.1	15.7
3.02	18527	.1	.2	15.9
3.03	8192	.1	.1	16.0
3.07	17892	.1	.2	16.2
3.09	14866	.1	.2	16.4
3.19	18527	.1	.2	16.6
3.19	18930	.1	.2	16.8
3.19	9161	.1	.1	16.9
3.21	12334	.1	.1	17.0
3.24	11582	.1	.1	17.1
3.25	14866	.1	.2	17.3
3.26	18930	.1	.2	17.5
3.30	5611	.0	.1	17.6
3.33	18930	.1	.2	17.8
3.45	9161	.1	.1	17.9
3.45	9161	.1	.1	18.0
3.52	8192	.1	.1	18.1
3.53	11582	.1	.1	18.2
3.54	6462	.0	.1	18.3
3.55	12334	.1	.1	18.4
3.56	18527	.1	.2	18.6
3.57	12334	.1	.1	18.7
3.61	11582	.1	.1	18.9
3.61	9161	.1	.1	19.0
3.64	9161	.1	.1	19.1
3.66	9161	.1	.1	19.2
3.69	18527	.1	.2	19.4
3.70	6462	.0	.1	19.4
3.71	18930	.1	.2	19.6
3.72	18527	.1	.2	19.8
3.73	9161	.1	.1	19.9
3.74	11709	.1	.1	20.1
3.81	18930	.1	.2	20.3
3.85	11709	.1	.1	20.4
3.88	18527	.1	.2	20.6
3.88	11709	.1	.1	20.7
3.93	18930	.1	.2	20.9
3.93	14866	.1	.2	21.1
3.95	6462	.0	.1	21.2
3.96	12334	.1	.1	21.3
3.98	11709	.1	.1	21.4
3.98	8192	.1	.1	21.5
4.01	9161	.1	.1	21.6
4.01	18527	.1	.2	21.8
4.02	964731	7.1	10.5	32.4
4.02	6462	.0	.1	32.4
4.08	11709	.1	.1	32.5
4.11	11582	.1	.1	32.7
4.11	164248	1.2	1.8	34.5
4.17	8192	.1	.1	34.6
4.18	11709	.1	.1	34.7
4.19	17866	.1	.2	34.9
4.20	200860	1.5	2.2	37.1
4.20	418654	3.1	4.6	41.6
4.20	9161	.1	.1	41.7
4.22	18322	.1	.2	41.9
4.25	6462	.0	.1	42.0
4.26	49124	.4	.5	42.5
4.29	9161	.1	.1	42.6
4.29	6462	.0	.1	42.7
4.30	6462	.0	.1	42.8
4.30	7114	.1	.1	42.9
4.32	18527	.1	.2	43.1
4.33	4129	.0	.0	43.1
4.34	9161	.1	.1	43.2
4.35	16785	.1	.2	43.4
4.36	11709	.1	.1	43.5
4.38	20870	.2	.2	43.7
4.38	45278	.3	.5	44.2
4.39	54946	.4	.6	44.8
4.43	11582	.1	.1	45.0

4.43	11582	.1	.1	45.1
4.45	4711	.0	.1	45.1
4.45	31297	.2	.3	45.5
4.45	18527	.1	.2	45.7
4.47	52361	.4	.6	46.3
4.49	12334	.1	.1	46.4
4.52	11582	.1	.1	46.5
4.54	23418	.2	.3	46.8
4.55	11582	.1	.1	46.9
4.55	11582	.1	.1	47.0
4.56	4711	.0	.1	47.1
4.56	18527	.1	.2	47.3
4.56	9161	.1	.1	47.4
4.56	56275	.4	.6	48.0
4.59	9161	.1	.1	48.1
4.61	17892	.1	.2	48.3
4.61	17892	.1	.2	48.5
4.62	11709	.1	.1	48.6
4.65	7114	.1	.1	48.7
4.71	8192	.1	.1	48.8
4.71	18527	.1	.2	49.0
4.74	18527	.1	.2	49.2
4.74	75721	.6	.8	50.0
4.75	5994	.0	.1	50.1
4.81	8192	.1	.1	50.2
4.82	18930	.1	.2	50.4
4.85	11582	.1	.1	50.5
4.86	9161	.1	.1	50.6
4.88	11582	.1	.1	50.7
4.89	4711	.0	.1	50.8
4.91	16420	.1	.2	51.0
4.95	8192	.1	.1	51.0
4.97	18930	.1	.2	51.2
4.98	12334	.1	.1	51.4
4.99	16785	.1	.2	51.6
5.00	6462	.0	.1	51.6
5.00	58545	.4	.6	52.3
5.01	23418	.2	.3	52.5
5.03	18527	.1	.2	52.7
5.05	18930	.1	.2	52.9
5.05	6462	.0	.1	53.0
5.08	18527	.1	.2	53.2
5.08	12334	.1	.1	53.3
5.09	11709	.1	.1	53.5
5.11	16785	.1	.2	53.7
5.12	18527	.1	.2	53.9
5.13	16785	.1	.2	54.0
5.17	8192	.1	.1	54.1
5.22	14866	.1	.2	54.3
5.22	16785	.1	.2	54.5
5.22	11709	.1	.1	54.6
5.24	8192	.1	.1	54.7
5.27	11709	.1	.1	54.8
5.27	18930	.1	.2	55.0
5.27	9161	.1	.1	55.1
5.31	11709	.1	.1	55.3
5.31	12334	.1	.1	55.4
5.33	7114	.1	.1	55.5
5.33	18930	.1	.2	55.7
5.43	18527	.1	.2	55.9
5.46	12334	.1	.1	56.0
5.48	18527	.1	.2	56.2
5.51	8192	.1	.1	56.3
5.53	17892	.1	.2	56.5
5.56	11709	.1	.1	56.6
5.59	16785	.1	.2	56.8
5.63	18527	.1	.2	57.0
5.65	18930	.1	.2	57.2
5.66	17892	.1	.2	57.4
5.67	11582	.1	.1	57.5
5.69	9161	.1	.1	57.6
5.72	5994	.0	.1	57.7
5.73	18930	.1	.2	57.9
5.75	9161	.1	.1	58.0
5.77	11709	.1	.1	58.1

5.77	7179	.1	.1	58.2
5.78	8192	.1	.1	58.3
5.80	9161	.1	.1	58.4
5.81	18930	.1	.2	58.6
5.82	12334	.1	.1	58.7
5.83	7114	.1	.1	58.8
5.83	11709	.1	.1	58.9
5.84	18930	.1	.2	59.2
5.88	18930	.1	.2	59.4
5.93	12334	.1	.1	59.5
5.96	18527	.1	.2	59.7
6.00	11709	.1	.1	59.8
6.00	17866	.1	.2	60.0
6.00	25392	.2	.3	60.3
6.00	18527	.1	.2	60.5
6.02	24571	.2	.3	60.8
6.03	18527	.1	.2	61.0
6.05	11709	.1	.1	61.1
6.05	8192	.1	.1	61.2
6.06	18930	.1	.2	61.4
6.07	9161	.1	.1	61.5
6.08	11709	.1	.1	61.6
6.09	80814	.6	.9	62.5
6.16	9161	.1	.1	62.6
6.18	9161	.1	.1	62.7
6.18	18930	.1	.2	62.9
6.18	18527	.1	.2	63.1
6.19	7179	.1	.1	63.2
6.20	16785	.1	.2	63.4
6.20	11582	.1	.1	63.5
6.20	116598	.9	1.3	64.8
6.30	11709	.1	.1	64.9
6.34	11582	.1	.1	65.0
6.41	11709	.1	.1	65.2
6.41	18930	.1	.2	65.4
6.42	18930	.1	.2	65.6
6.42	12334	.1	.1	65.7
6.44	6462	.0	.1	65.8
6.45	6462	.0	.1	65.8
6.46	24571	.2	.3	66.1
6.46	11709	.1	.1	66.2
6.47	13434	.1	.1	66.4
6.49	18930	.1	.2	66.6
6.49	5994	.0	.1	66.7
6.51	24989	.2	.3	66.9
6.52	18527	.1	.2	67.1
6.57	18930	.1	.2	67.3
6.58	7179	.1	.1	67.4
6.63	9161	.1	.1	67.5
6.64	7114	.1	.1	67.6
6.66	7179	.1	.1	67.7
6.67	18527	.1	.2	67.9
6.68	18930	.1	.2	68.1
6.68	37457	.3	.4	68.5
6.69	18527	.1	.2	68.7
6.69	6462	.0	.1	68.8
6.69	55581	.4	.6	69.4
6.72	18328	.1	.2	69.6
6.73	18527	.1	.2	69.8
6.78	18930	.1	.2	70.0
6.83	11709	.1	.1	70.1
6.84	18930	.1	.2	70.3
6.84	11709	.1	.1	70.4
6.87	99341	.7	1.1	71.5
6.90	7179	.1	.1	71.6
6.90	8192	.1	.1	71.7
6.91	9161	.1	.1	71.8
6.93	18527	.1	.2	72.0
6.94	28513	.2	.3	72.3
6.94	17892	.1	.2	72.5
6.95	18527	.1	.2	72.7
6.96	12334	.1	.1	72.8
6.99	12334	.1	.1	73.0
7.00	9161	.1	.1	73.1
7.00	8192	.1	.1	73.2

7.01	18527	.1	.2	73.4
7.04	6462	.0	.1	73.4
7.07	9161	.1	.1	73.5
7.07	14866	.1	.2	73.7
7.08	8192	.1	.1	73.8
7.08	8192	.1	.1	73.9
7.08	8192	.1	.1	74.0
7.11	18930	.1	.2	74.2
7.11	18322	.1	.2	74.4
7.14	8192	.1	.1	74.5
7.15	12334	.1	.1	74.6
7.15	81511	.6	.9	75.5
7.19	12334	.1	.1	75.6
7.21	12334	.1	.1	75.7
7.22	18930	.1	.2	76.0
7.23	12334	.1	.1	76.1
7.27	16785	.1	.2	76.3
7.30	7179	.1	.1	76.3
7.31	9161	.1	.1	76.4
7.32	18527	.1	.2	76.7
7.33	9161	.1	.1	76.8
7.33	347769	2.6	3.8	80.5
7.33	7179	.1	.1	80.6
7.37	11582	.1	.1	80.7
7.37	6462	.0	.1	80.8
7.39	11709	.1	.1	80.9
7.39	33204	.2	.4	81.3
7.41	6462	.0	.1	81.4
7.43	11709	.1	.1	81.5
7.43	8192	.1	.1	81.6
7.43	37457	.3	.4	82.0
7.44	11582	.1	.1	82.1
7.48	12334	.1	.1	82.3
7.49	12334	.1	.1	82.4
7.51	151473	1.1	1.7	84.1
7.51	44876	.3	.5	84.5
7.52	5994	.0	.1	84.6
7.56	18930	.1	.2	84.8
7.56	8192	.1	.1	84.9
7.58	8192	.1	.1	85.0
7.62	18527	.1	.2	85.2
7.63	70456	.5	.8	86.0
7.63	11709	.1	.1	86.1
7.63	7179	.1	.1	86.2
7.66	12334	.1	.1	86.3
7.67	18930	.1	.2	86.5
7.68	19448	.1	.2	86.7
7.68	17892	.1	.2	86.9
7.70	12334	.1	.1	87.1
7.70	18930	.1	.2	87.3
7.74	18930	.1	.2	87.5
7.76	24668	.2	.3	87.7
7.78	14228	.1	.2	87.9
7.80	37054	.3	.4	88.3
7.83	18527	.1	.2	88.5
7.87	277468	2.1	3.0	91.5
7.90	12334	.1	.1	91.7
7.98	9161	.1	.1	91.8
7.99	18930	.1	.2	92.0
8.02	80814	.6	.9	92.8
8.09	18527	.1	.2	93.0
8.11	9161	.1	.1	93.1
8.13	17892	.1	.2	93.3
8.14	11582	.1	.1	93.5
8.17	18527	.1	.2	93.7
8.20	17892	.1	.2	93.9
8.21	18527	.1	.2	94.1
8.22	37054	.3	.4	94.5
8.26	7114	.1	.1	94.5
8.26	7114	.1	.1	94.6
8.27	18527	.1	.2	94.8
8.31	7179	.1	.1	94.9
8.32	24571	.2	.3	95.2
8.34	11709	.1	.1	95.3
8.34	18527	.1	.2	95.5

	8.35	18322	.1	.2	95.7
	8.39	13434	.1	.1	95.8
	8.46	18527	.1	.2	96.1
	8.58	19448	.1	.2	96.3
	8.61	18527	.1	.2	96.5
	8.68	12334	.1	.1	96.6
	8.85	18527	.1	.2	96.8
	8.88	18527	.1	.2	97.0
	9.00	11582	.1	.1	97.1
	9.03	7179	.1	.1	97.2
	9.04	12334	.1	.1	97.3
	9.06	12334	.1	.1	97.5
	9.07	7179	.1	.1	97.6
	9.13	9161	.1	.1	97.7
	9.13	6462	.0	.1	97.7
	9.17	12334	.1	.1	97.9
	9.31	30236	.2	.3	98.2
	9.42	12334	.1	.1	98.3
	9.46	18527	.1	.2	98.5
	9.52	11709	.1	.1	98.7
	9.54	11709	.1	.1	98.8
	10.00	111675	.8	1.2	100.0
	Total	9169178	67.9	100.0	
Missing	System	4336851	32.1		
Total		13506029	100.0		

B.2 INCOME VULNERABILITY INDEX

1. Confirmatory factor analysis

Communalities

	Initial	Extraction
B1_2: The income situation of my household compared to this time last year	1.000	.760
B1_1: The employment situation of my household compared to this time last year	1.000	.731
B1_12: Ability to access money from family/friends or others compared to this time last year	1.000	.455

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings
	Total	% of Variance	Cumulative %	Total
1	1.946	64.883	64.883	1.946
2	.713	23.764	88.647	
3	.341	11.353	100.000	

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Extraction Sums of Squared Loadings	
	% of Variance	Cumulative %
1	64.883	64.883
2		
3		

Extraction Method: Principal Component Analysis.

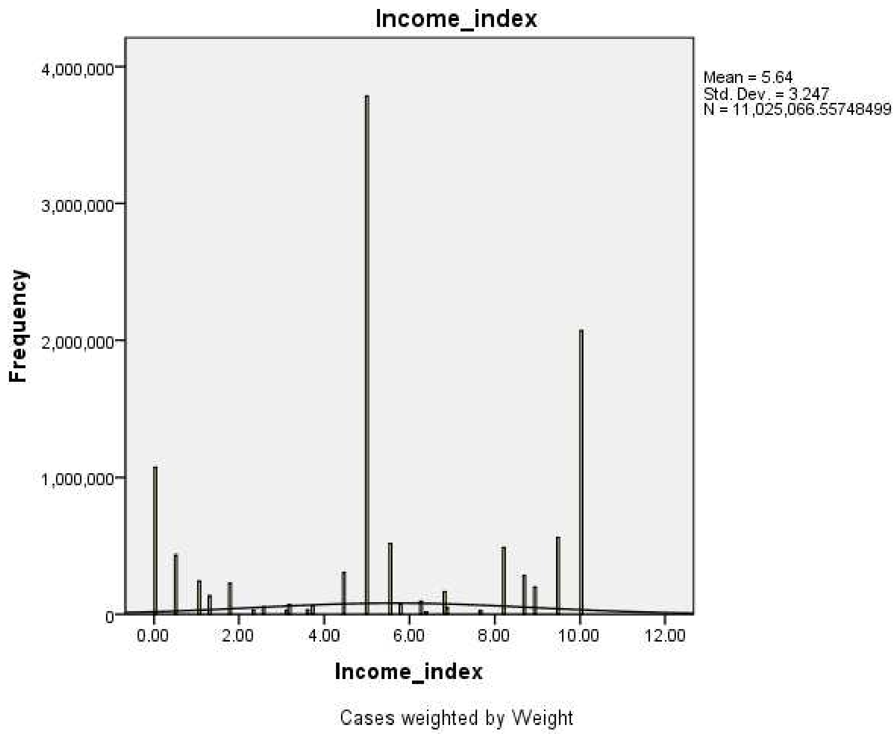
Component Matrix[a]

	Component
	1
B1_2: The income situation of my household compared to this time last year	.872
B1_1: The employment situation of my household compared to this time last year	.855
B1_12: Ability to access money from family/friends or others compared to this time last year	.675

Extraction Method: Principal Component Analysis.
a. 1 components extracted.

2. Reliability

		Income vulnerability index
N	Valid	11025067
	Missing	2480962
Mean		5.6373
Std. Error of Mean		.00098
Median		5.0000
Mode		5.00
Std. Deviation		3.24728
Variance		10.545
Skewness		-.200
Std. Error of Skewness		.001
Kurtosis		-.929
Std. Error of Kurtosis		.001
Range		10.00
Minimum		.00
Maximum		10.00
Sum		62151313.97
Percentiles	25	5.0000
	50	5.0000
	75	8.9500



3. Internal validity

Correlations

			Income vulnerability index	CFVI_income_var1	CFVI_income_var2	CFVI_income_var3
Spearman's rho	Income vulnerability index	Correlation Coefficient	1.000	.943**	.863**	.691**
		Sig. (2-tailed)	.	.000	.000	.000
		N	713	713	713	713
	CFVI_income_var1	Correlation Coefficient	.943**	1.000	.735**	.474**
		Sig. (2-tailed)	.000	.	.000	.000
		N	713	887	887	887
	CFVI_income_var2	Correlation Coefficient	.863**	.735**	1.000	.450**
		Sig. (2-tailed)	.000	.000	.	.000
		N	713	887	887	887
	CFVI_income_var3	Correlation Coefficient	.691**	.474**	.450**	1.000
		Sig. (2-tailed)	.000	.000	.000	.
		N	713	887	887	887

**. Correlation is significant at the 0.01 level (2-tailed).

4. Structural integrity

		Frequency	Per cent	Valid Per cent	Cumulative Per cent
Valid	.00	1072090	7.9	9.7	9.7
	.53	432888	3.2	3.9	13.7
	1.05	241727	1.8	2.2	15.8
	1.29	134540	1.0	1.2	17.1
	1.82	225556	1.7	2.0	19.1
	2.34	30639	.2	.3	19.4
	2.58	55171	.4	.5	19.9
	3.11	28091	.2	.3	20.1
	3.19	73927	.5	.7	20.8
	3.63	33393	.2	.3	21.1
	3.71	62875	.5	.6	21.7
	4.47	304595	2.3	2.8	24.4
	5.00	3786461	28.0	34.3	58.8
	5.53	516409	3.8	4.7	63.5
	5.77	72054	.5	.7	64.1
	6.29	96607	.7	.9	65.0
	6.37	18322	.1	.2	65.2
	6.82	164092	1.2	1.5	66.7
	6.90	50195	.4	.5	67.1
	7.66	26719	.2	.2	67.4
	8.19	486088	3.6	4.4	71.8
	8.71	282059	2.1	2.6	74.3
	8.95	197630	1.5	1.8	76.1
	9.48	561467	4.2	5.1	81.2
	10.00	2071471	15.3	18.8	100.0
	Total	11025067	81.6	100.0	
Missing	System	2480962	18.4		
Total		13506029	100.0		

B.3 SAVINGS VULNERABILITY INDEX

1. Confirmatory factor analysis

Communalities

	Initial	Extraction
B1_10: Money that could be accessed by the household to assist when faced with hardship compared to this time last year	1.000	.735
B1_7: My household's ability to save compared to this time last year	1.000	.721
B5_1: I save money regularly	1.000	.259

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings
	Total	% of Variance	Cumulative %	Total
1	1.715	57.163	57.163	1.715
2	.874	29.118	86.282	
3	.412	13.718	100.000	

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Extraction Sums of Squared Loadings	
	% of Variance	Cumulative %
1	57.163	57.163
2		
3		

Extraction Method: Principal Component Analysis.

Component Matrix[a]

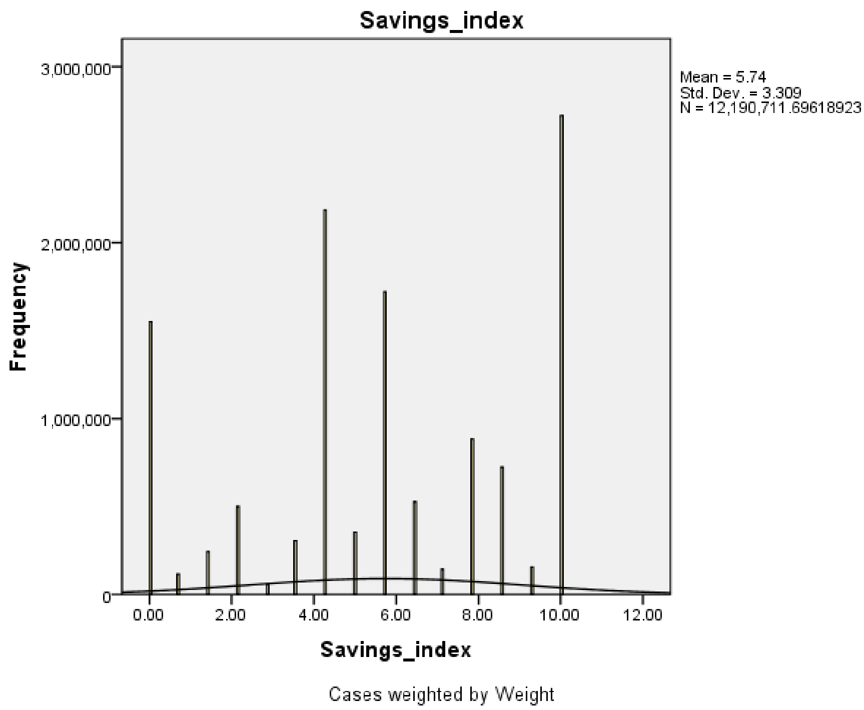
	Component 1
B1_10: Money that could be accessed by the household to assist when faced with hardship compared to this time last year	.858
B1_7: My household's ability to save compared to this time last year	.849
B5_1: I save money regularly	.509

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

2. Reliability

		Savings vulnerability index
N	Valid	12190712
	Missing	1315317
Mean		5.7388
Std. Error of Mean		.00095
Median		5.7100
Mode		10.00
Std. Deviation		3.30891
Variance		10.949
Skewness		-.270
Std. Error of Skewness		.001
Kurtosis		-.993
Std. Error of Kurtosis		.001
Range		10.00
Minimum		.00
Maximum		10.00
Sum		69959820.71
Percentiles	25	4.2900
	50	5.7100
	75	8.5800



3. Internal validity

Correlations

			Savings vulnerability index	CFVI_saving_var1	CFVI_saving_var2	CFVI_saving_var3
Spearman's rho	Savings vulnerability index	Correlation Coefficient	1.000	.897**	.899**	.564**
		Sig. (2-tailed)	.	.000	.000	.000
		N	799	799	799	799
	CFVI_saving_var1	Correlation Coefficient	.897**	1.000	.671**	.313**
		Sig. (2-tailed)	.000	.	.000	.000
		N	799	887	887	887
	CFVI_saving_var2	Correlation Coefficient	.899**	.671**	1.000	.345**
		Sig. (2-tailed)	.000	.000	.	.000
		N	799	887	887	887
	CFVI_saving_var3	Correlation Coefficient	.564**	.313**	.345**	1.000
		Sig. (2-tailed)	.000	.000	.000	.
		N	799	887	887	887

**. Correlation is significant at the 0.01 level (2-tailed).

4. Structural integrity

		Frequency	Per cent	Valid Per cent	Cumulative Per cent
Valid	.00	1550815	11.5	12.7	12.7
	.71	117342	.9	1.0	13.7
	1.42	243798	1.8	2.0	15.7
	2.15	500292	3.7	4.1	19.8
	2.86	58545	.4	.5	20.3
	3.57	304611	2.3	2.5	22.8
	4.29	2184119	16.2	17.9	40.7
	5.00	354100	2.6	2.9	43.6
	5.71	1720316	12.7	14.1	57.7
	6.44	526795	3.9	4.3	62.0
	7.15	144533	1.1	1.2	63.2
	7.86	884411	6.5	7.3	70.5
	8.58	724463	5.4	5.9	76.4
	9.29	155690	1.2	1.3	77.7
	10.00	2720882	20.1	22.3	100.0
	Total	12190712	90.3	100.0	
Missing	System	1315317	9.7		
Total		13506029	100.0		

B.4 EXPENDITURE VULNERABILITY INDEX

1. Confirmatory factor analysis

Communalities

	Initial	Extraction
B1_5: My household's ability to make ends meet compared to this time last year	1.000	.378
B4_11: I frequently have problems making ends meet	1.000	.664
B4_13: I often have to spend more money than I have available	1.000	.558

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings
	Total	% of Variance	Cumulative %	Total
1	1.600	53.348	53.348	1.600
2	.836	27.872	81.221	
3	.563	18.779	100.000	

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Extraction Sums of Squared Loadings	
	% of Variance	Cumulative %
1	53.348	53.348
2		
3		

Extraction Method: Principal Component Analysis.

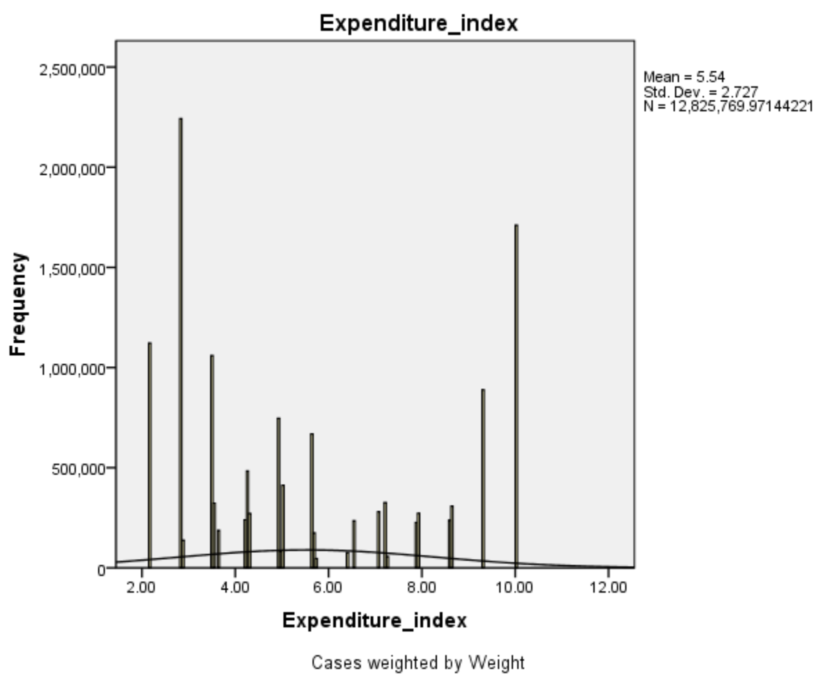
Component Matrix[a]

	Component
	1
B1_5: My household's ability to make ends meet compared to this time last year	-.615
B4_11: I frequently have problems making ends meet	.815
B4_13: I often have to spend more money than I have available	.747

Extraction Method: Principal Component Analysis.
a. 1 components extracted.

2. Reliability

		Expenditure vulnerability index
N	Valid	12825770
	Missing	680259
Mean		5.5377
Std. Error of Mean		.00076
Median		4.9450
Mode		2.84
Std. Deviation		2.72681
Variance		7.435
Skewness		.466
Std. Error of Skewness		.001
Kurtosis		-1.263
Std. Error of Kurtosis		.001
Range		7.84
Minimum		2.16
Maximum		10.00
Sum		71024966.35
Percentiles	25	2.8375
	50	4.9450
	75	7.9200



3. Internal validity

Correlations

			Expenditure vulnerability index	CFVI Expenditure_ var1	B4_11: I frequently have problems making ends meet	B4_13: I often have to spend more money than I have available
Spearman's rho	Expenditure vulnerability index	Correlation Coefficient	1.000	.479**	.726**	.865**
		Sig. (2-tailed)	.	.000	.000	.000
		N	859	859	859	859
	CFVI_expenditure_var1	Correlation Coefficient	.479**	1.000	.261**	.229**
		Sig. (2-tailed)	.000	.	.000	.000
		N	859	887	887	887
	B4_11: I frequently have problems making ends meet	Correlation Coefficient	.726**	.261**	1.000	.376**
		Sig. (2-tailed)	.000	.000	.	.000
		N	859	887	887	887
	B4_13: I often have to spend more money than I have available	Correlation Coefficient	.865**	.229**	.376**	1.000
		Sig. (2-tailed)	.000	.000	.000	.
		N	859	887	887	887

**. Correlation is significant at the 0.01 level (2-tailed).

4. Structural integrity

		Frequency	Per cent	Valid Per cent	Cumulative Per cent
Valid	2.16	1122345	8.3	8.8	8.8
	2.84	2242524	16.6	17.5	26.2
	2.87	138177	1.0	1.1	27.3
	3.51	1060510	7.9	8.3	35.6
	3.54	322988	2.4	2.5	38.1
	3.62	187813	1.4	1.5	39.6
	4.22	240169	1.8	1.9	41.4
	4.27	484232	3.6	3.8	45.2
	4.30	145460	1.1	1.1	46.3
	4.33	126656	.9	1.0	47.3
	4.95	747438	5.5	5.8	53.2
	4.97	83929	.6	.7	53.8
	5.00	412004	3.1	3.2	57.0
	5.62	668136	4.9	5.2	62.2
	5.68	174806	1.3	1.4	63.6
	5.73	46413	.3	.4	64.0
	6.41	76981	.6	.6	64.6
	6.54	235272	1.7	1.8	66.4
	7.08	280650	2.1	2.2	68.6
	7.22	325970	2.4	2.5	71.1
	7.25	57424	.4	.4	71.6
	7.89	226833	1.7	1.8	73.3
	7.92	272727	2.0	2.1	75.5
	8.60	237925	1.8	1.9	77.3
	8.65	308383	2.3	2.4	79.7
	9.32	888890	6.6	6.9	86.7
	10.00	1711116	12.7	13.3	100.0
	Total	12825770	95.0	100.0	
Missing	System	680259	5.0		
Total		13506029	100.0		

B.5 DEBT SERVICING VULNERABILITY INDEX

1. Confirmatory factor analysis

Communalities

	Initial	Extraction
B1_4: The amount my household pays to service debt compared to this time last year	1.000	.002
B4_14: I have considered going to see someone to help me with my debt problems	1.000	.733
B4_15: I have considered cancelling policies to cover debts	1.000	.734

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings
	Total	% of Variance	Cumulative %	Total
1	1.469	48.964	48.964	1.469
2	.999	33.316	82.281	
3	.532	17.719	100.000	

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Extraction Sums of Squared Loadings	
	% of Variance	Cumulative %
1	48.964	48.964
2		
3		

Extraction Method: Principal Component Analysis.

Component Matrix[a]

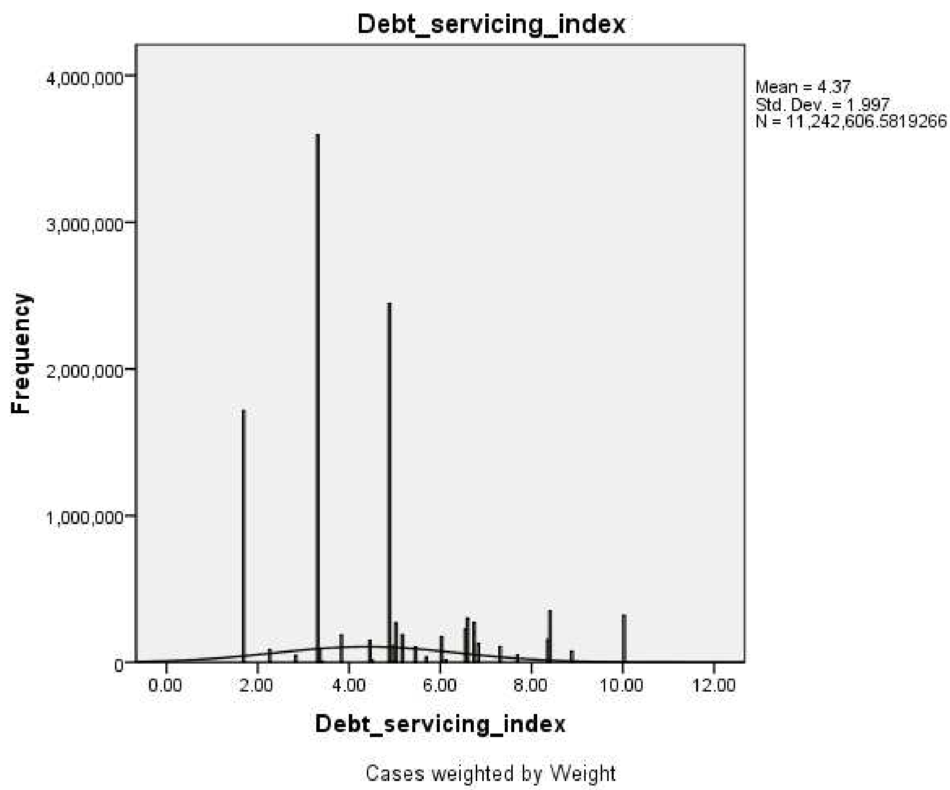
	Component
	1
B1_4: The amount my household pays to service debt compared to this time last year	-.041
B4_14: I have considered going to see someone to help me with my debt problems	.856
B4_15: I have considered cancelling policies to cover debts	.857

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

2. Reliability

		Debt servicing vulnerability index
N	Valid	11242607
	Missing	2263422
Mean		4.3737
Std. Error of Mean		.00060
Median		3.8500
Mode		3.30
Std. Deviation		1.99725
Variance		3.989
Skewness		.845
Std. Error of Skewness		.001
Kurtosis		.464
Std. Error of Kurtosis		.001
Range		8.30
Minimum		1.70
Maximum		10.00
Sum		49172243.37
Percentiles	25	3.2975
	50	3.8500
	75	4.9550



3. Internal validity

Correlations

			Debt servicing vulnerability index	CFVI_debt service_var1	B4_14: I have considered going to see someone to help me with my debt problems	B4_15: I have considered cancelling policies to cover debts
Spearman's rho	Debt servicing vulnerability index	Correlation Coefficient	1.000	.633**	.713**	.570**
		Sig. (2-tailed)	.	.000	.000	.000
		N	735	735	735	735
	CFVI_debtservice_var1	Correlation Coefficient	.633**	1.000	.041	.028
		Sig. (2-tailed)	.000	.	.223	.398
		N	735	887	887	887
	B4_14: I have considered going to see someone to help me with my debt problems	Correlation Coefficient	.713**	.041	1.000	.534**
		Sig. (2-tailed)	.000	.223	.	.000
		N	735	887	887	887
	B4_15: I have considered cancelling policies to cover debts	Correlation Coefficient	.570**	.028	.534**	1.000
		Sig. (2-tailed)	.000	.398	.000	.
		N	735	887	887	887

**. Correlation is significant at the 0.01 level (2-tailed).

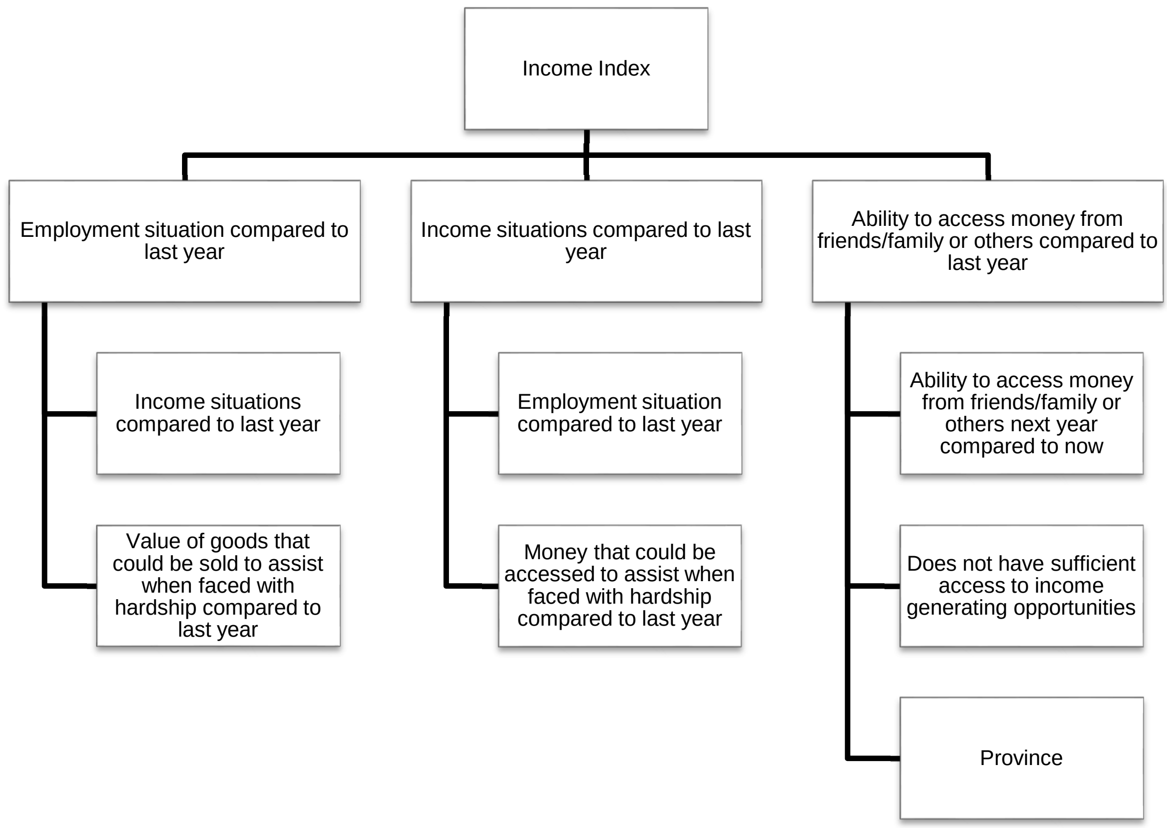
4. Structural integrity

		Frequency	Per cent	Valid Per cent	Cumulative Per cent
Valid	1.70	1716233	12.7	15.3	15.3
	2.26	86043	.6	.8	16.0
	2.85	46618	.3	.4	16.4
	3.30	3597181	26.6	32.0	48.4
	3.36	99018	.7	.9	49.3
	3.41	8192	.1	.1	49.4
	3.85	186543	1.4	1.7	51.1
	4.45	148966	1.1	1.3	52.4
	4.51	18527	.1	.2	52.5
	4.89	2444930	18.1	21.7	74.3
	4.96	113365	.8	1.0	75.3
	5.00	269070	2.0	2.4	77.7
	5.15	188293	1.4	1.7	79.4
	5.45	105590	.8	.9	80.3
	5.71	35675	.3	.3	80.6
	6.04	174567	1.3	1.6	82.2
	6.11	18527	.1	.2	82.3
	6.55	226854	1.7	2.0	84.4
	6.60	300776	2.2	2.7	87.0
	6.75	272135	2.0	2.4	89.5
	6.81	127130	.9	1.1	90.6
	7.30	108539	.8	1.0	91.6
	7.70	49388	.4	.4	92.0
	8.34	155527	1.2	1.4	93.4
	8.41	349207	2.6	3.1	96.5
	8.90	74652	.6	.7	97.1
	10.00	321059	2.4	2.9	100.0
	Total	11242607	83.2	100.0	
Missing	System	2263422	16.8		
Total		13506029	100.0		

ANNEXURE C

DISCUSSION GUIDE

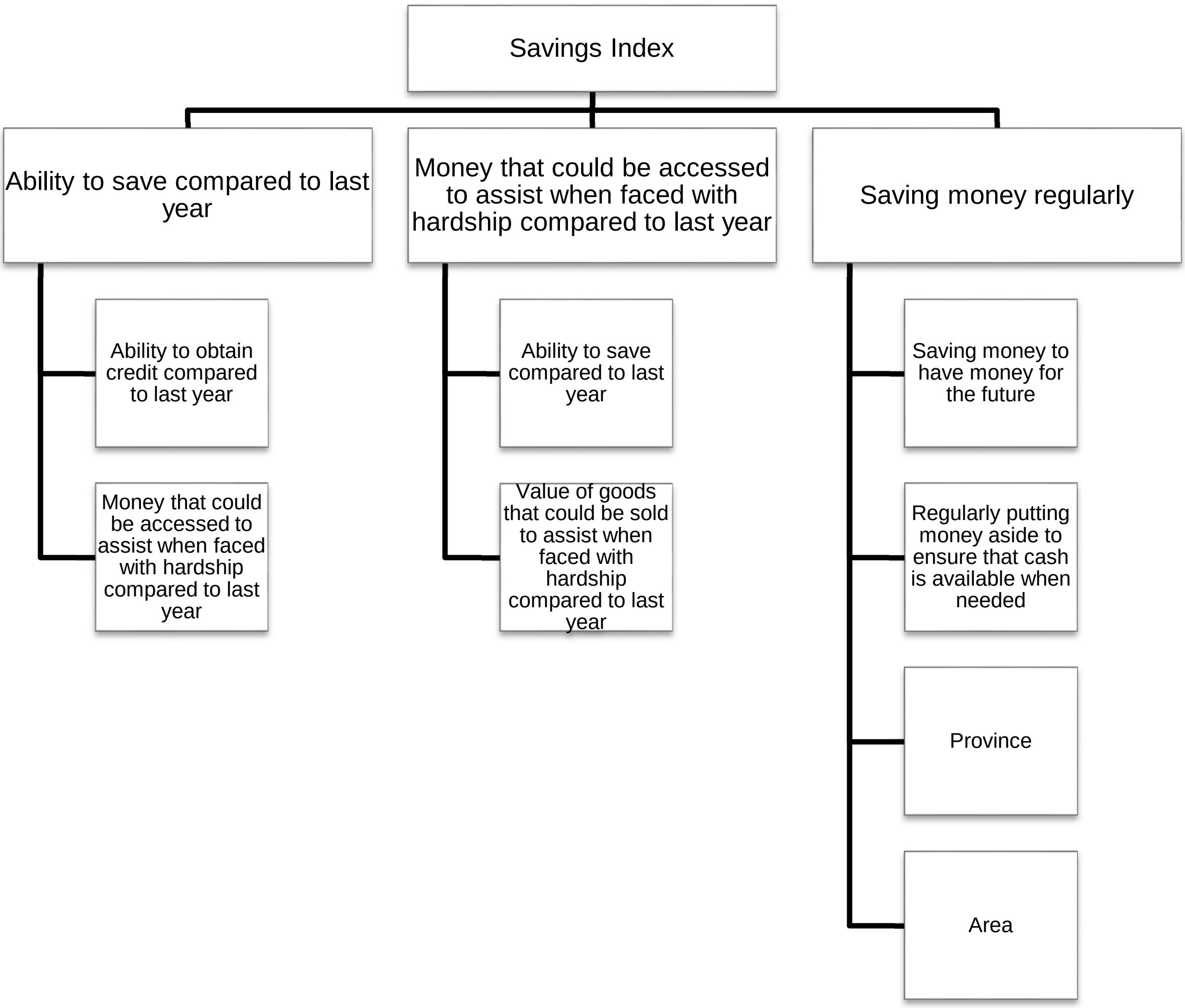
C.1 INCOME VULNERABILITY INDEX DISCUSSION GUIDE



1. What do you believe were the main predictors of income vulnerability in 2009?
2. What changes occurred to the employment situation of households in 2009 compared to 2008?
3. To what extent would the changes in the household's employment situation in 2009 compared to 2008 predict the household's financial vulnerability?
4. What changes regarding the income situation of households occurred from 2008 to 2009?
5. How would the changes in the income situation of the household from 2008 to 2009 influence the income vulnerability of the household?
6. Are you aware of any changes in the value of goods that could be sold by households to assist then when facing hardship in 2009 compared to 2008?
7. What would the impact of the changes in the value of the goods between 2008 and 2009 be on the income vulnerability index?
8. Did any changes occur from 2008 to 2009 regarding the money that households could access to assist when faced with hardship?

9. How would these changes influence the income vulnerability of a household?
10. Do you think it was easier or more difficult for households to access money from friends, family or other sources in 2009 than in 2008?
11. To what extent could this change in access to money predict the income vulnerability of the household?
12. Do you think it would have been easier or more difficult for households to access money from friends, family or other sources in 2010 than in 2009?
13. Why would there be a difference between households having sufficient access to income generating opportunities?
14. Would the demographics of an income earner have any influence on his income vulnerability? If yes – which demographics and why?

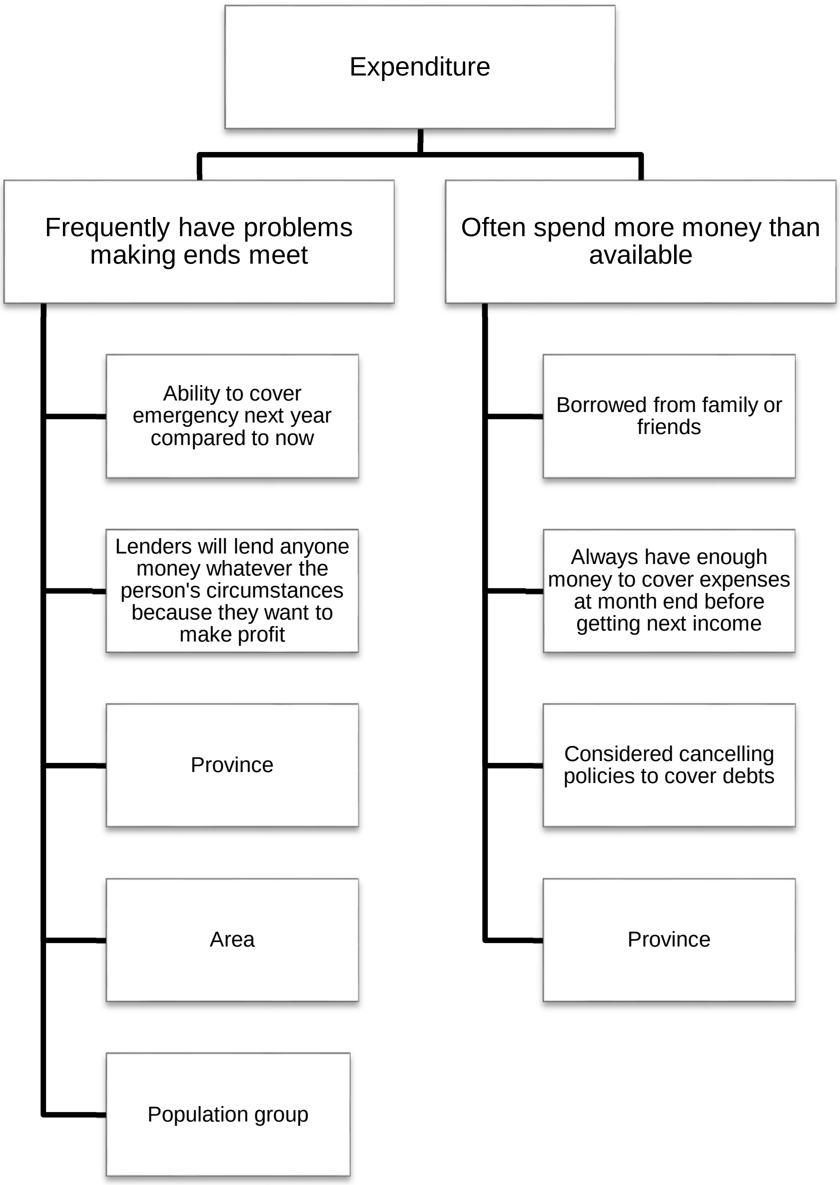
C.2 SAVINGS VULNERABILITY INDEX



1. What do you believe were the main predictors of savings vulnerability in 2009?
2. Do you think households' ability to save improved or deteriorated in 2009 compared to 2008?
    a. Improved – based on what do you think that the households were able to save more in 2009 compared to 2008?
    b. Improved – why would households been able to save more on 2009 compared to 2008?
    c. Deteriorated – based on what do you think that the households were not able to save more in 2009 compared to 2008?
    d. Deteriorated – why were they not able to save more in 2009 than in 2008?
3. To what extent did the money that households were able to access when faced with hardship changed in 2009 compared to 2008? What do you think were the main reasons for the change?

4. What are the main sources of money that could be utilised by households as emergency funds?
5. To what extent would the financial management principle of saving money regularly influence the savings vulnerability of a household?
6. Why would some households save money regularly and other not?
7. Is there a relationship between the household's ability to obtain credit and their savings vulnerability?
8. Other than money that could be accessed to assist when facing hardship, which other practices are you aware of that households use that could influence their savings vulnerability?
9. If we accept that households do save regularly – what would the main reasons for saving be?
10. Would the demographics of a saver have any influence on his savings vulnerability? If yes – which demographics and why?

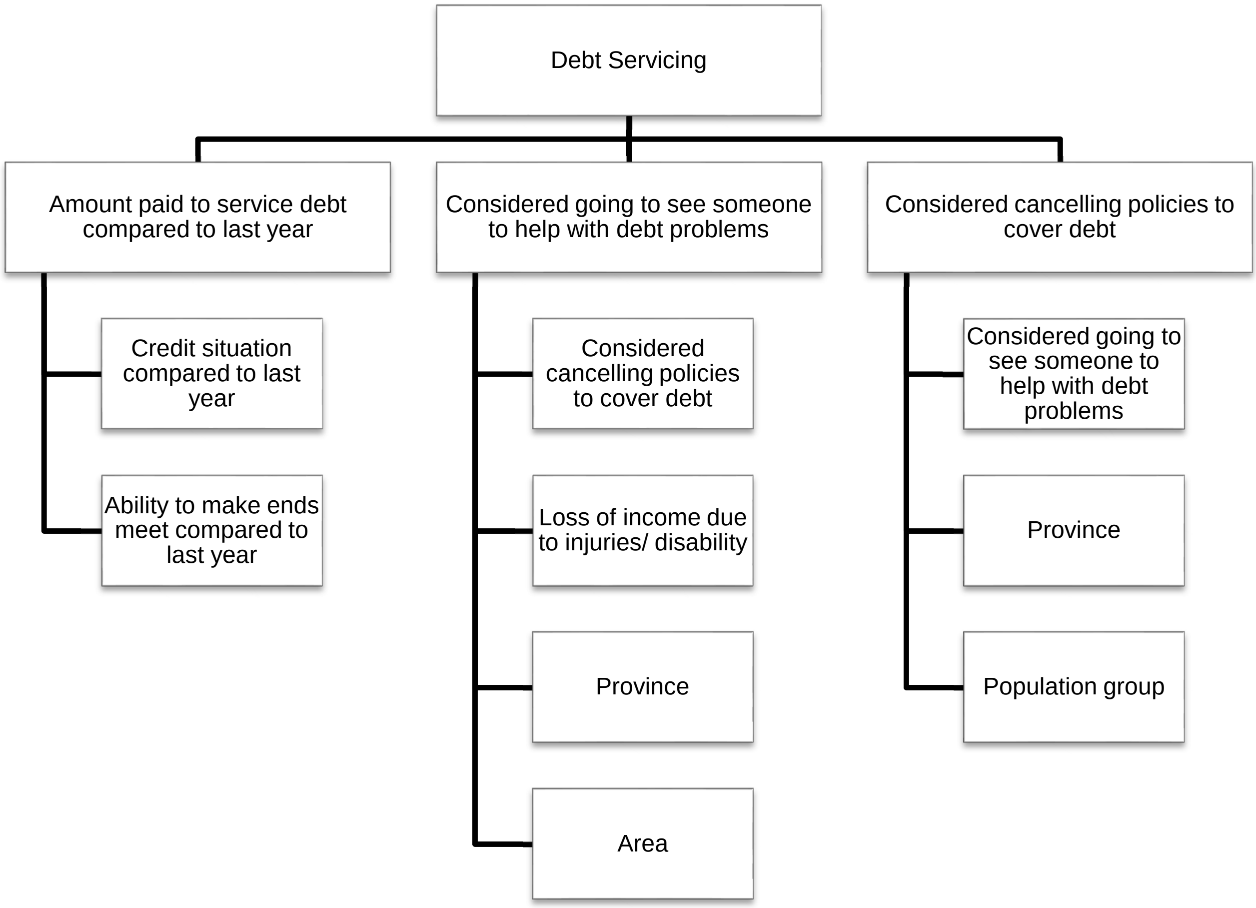
C.3 EXPENDITURE VULNERABILITY INDEX



1. What do you believe were the main predictors of expenditure vulnerability in 2009?
2. Why could the household’s inability to make ends meet be a predictor of the household’s expenditure vulnerability?
3. Do you think that households were better or worse off covering emergencies in 2009 than they would be able to in 2010?
4. Why would the household’s ability to cover emergencies be a driver of the household’s expenditure vulnerability index?
5. How would the households’ perceptions regarding lenders influence their expenditure vulnerability?
6. Why would households spend to “keep up with the Joneses”?

7. Could spending to “keep up with the Joneses” predict the expenditure vulnerability of a household?
8. Why would household’s fixed monthly obligations of debt repayment (such as pay back of money borrowed from family or friends) be a driver of the household’s expenditure vulnerability?
9. Do households always have enough money to cover their expenditure between pay cheques?
10. Why would the household’s lack of funds to cover all their expenditure between pay cheques be a driver of the household’s expenditure vulnerability?
11. What sources do households use to finance their expenditure and/or debt?
12. Would the demographics of a household have any influence on his expenditure vulnerability? If yes – which demographics and why?

C.4 DEBT SERVICING VULNERABILITY INDEX



1. What do you believe were the main predictors of debt servicing vulnerability in 2009?
2. Were there any differences in the amounts households paid to service their debt in 2009 compared to 2008?
3. How would this change in amount of debt servicing drive the debt servicing vulnerability of a household?
4. What factors could have an effect on the credit situation of a household in 2009 compared to 2008?
5. What would the result of these factors be on the debt servicing vulnerability of the household?
6. Do you think households were better able to make ends meet in 2009 compared to 2008?
7. Why would the fact that households are considering to get help with their debt problems make them more or less financially vulnerable?
8. What would the influence on the debt vulnerability index of a household be should the household be considering cancelling policies as a method of covering debt?

9. Why could the loss of income due to injuries or disability be a predictor of the debt vulnerability index?
10. Would the demographics of a household in debt have any influence on his debt servicing vulnerability? If yes – which demographics and why?

ANNEXURE D

CATEGORICAL REGRESSION RESULTS

		Dependent variable	Independent variables	Adjusted R^2	F-score	Sig.	Part
	CFVI	Consumer Financial Vulnerability Index		.951	4.459	.000	
			Income_index		1025.027	.000	.340
			Savings_index		192.317	.000	.137
			Expenditure_index		60.526	.000	.089
			Debt servicing_index		414.445	.000	.244
	Income_I	Income vulnerability index		.984	1.146	.000	
			B1_1: The employment situation of my household compared to this time last year		30.682	.000	-.151
			B1_2: The income situation of my household compared to this time last year		1964.518	.000	-.430
			B1_12: Ability to access money from family/friends or other compared to this time last year		313.009	.000	-.150
	Saving_I	Savings vulnerability index		.998	1.247	.000	
			B1_7: My household's ability to save compared to this time last year		507.178	.000	-.302
			B1_10: Money that could be accessed by the household to assist when faced with hardship compared to this time last year		3743.739	.000	-.299
			B5_1: I save money regularly		1404.948	.000	-.270
	Expen_I	Expenditure vulnerability index		.942	5.174	.000	
			B4_11: I frequently have problems making ends meet		917.410	.000	.370
			B4_13: I often have to spend more money that I have available		3410.203	.000	.658
	DebtS_I	Debt servicing vulnerability index		.973	6.785	.000	
			B1_4: The amount my household pays to service debt compared to this time last year		546.912	.000	-.491
			B4_14: I have considered going to see someone to help me with my debt problems		405.937	.000	.525

			B4_15: I have considered cancelling policies to cover debts		122.469	.000	.260
1.1	Employ_LY	The employment situation of my household compared to this time last year		.652	5398360.915	.000	
			B1_2: The income situation of my household compared to this time last year		122.899	.000	.472
			B1_11: The value of the goods that could be sold by the household to assist when faced with hardship compared to this time last year		19.346	.000	.182
1.2		The income situation of my household compared to this time last year		.669	6155230.280	.000	
			B1_1: The employment situation of my household compared to this time last year		112.251	.000	.448
			B1_10: Money that could be accessed by the household to assist when faced with hardship compared to this time last year		30.713	.000	.231
1.3		The credit situation of my household compared to this time last year		.580	3604903.706	.000	
			B1_6: My household's ability to obtain credit compared to this time last year		39.115	.000	.249
			B1_10: Money that could be accessed by the household to assist when faced with hardship compared to this time last year		49.400	.000	.299
1.4		The amount my household pays to service debt compared to this time last year		.703	6014673.455	.000	
			B1_3: The credit situation of my household compared to this time last year		71.421	.000	.321
			B1_5: My household's ability to make ends meet compared to this time last year		71.809	.000	.322
1.5		My household's ability to make ends meet compared to this time last year		.756	5266252.849	.000	
			B1_4: The amount my household pays to service debt compared to this time last year		56.881	.000	.244
			B1_9: My household's ability to survive hard financial times compared to this time last year		22.526	.000	.155
			B1_11: The value of the goods that could be sold by the		40.603	.000	.230

			household to assist when faced with hardship compared to this time last year				
1.6		My household's ability to obtain credit compared to this time last year		.714	4115480.032	.000	
			B1_3: The credit situation of my household compared to this time last year		16.242	.000	.156
			B1_5: My household's ability to make ends meet compared to this time last year		34.802	.000	.249
			B1_11: The value of the goods that could be sold by the household to assist when faced with hardship compared to this time last year		20.924	.000	.197
1.7		My household's ability to save compared to this time last year		.667	5406783.911	.000	
			B1_6: My household's ability to obtain credit compared to this time last year		42.275	.000	.263
			B1_10: Money that could be accessed by the household to assist when faced with hardship compared to this time last year		68.278	.000	.326
1.8		The extent to which my household needs credit to survive compared to this time last year		.571	1260969.251	.000	
			B1_7: My household's ability to save compared to this time last year		276.968	.000	.625
			B10_3: The members of my household generally feel financially stressed		23.014	.000	-.176
			Province		26.483	.000	.161
1.9		My household's ability to survive hard financial times compared to this time last year		.726	4833654.471	.000	
			B1_5: My household's ability to make ends meet compared to this time last year		14.395	.000	.178
			B1_8: The extent to which my household needs credit to survive compared to this time last year		20.553	.000	.174
			B1_10: Money that could be accessed by the household to assist when faced with hardship compared to this time last year		17.286	.000	.200
1.10		Money that could be accessed		.765	9248778.964	.000	

		by the household to assist when faced with hardship compared to this time last year	B1_7: My household's ability to save compared to this time last year		23.242	.000	.210
			B1_11: The value of the goods that could be sold by the household to assist when faced with hardship compared to this time last year		120.660	.000	.508
1.11		The value of the goods that could be sold by the household to assist when faced with hardship compared to this time last year		.845	1.245	.000	
			B1_10: Money that could be accessed by the household to assist when faced with hardship compared to this time last year		463.055	.000	.657
			B1_15: Changes to the household structure bringing about an improved situation		11.842	.000	.108
1.14		Changes to the household structure bringing about a worse off situation		.587	1113149.010	.000	
			B1_10: Money that could be accessed by the household to assist when faced with hardship compared to this time last year		5.771	.003	.143
			B1_15: Changes to the household structure bringing about an improved situation		72.291	.000	.516
			Province		20.083	.000	.151
1.15		Changes to the household structure bringing about an improved situation		.674	1547981.231	.000	
			B1_11: The value of the goods that could be sold by the household to assist when faced with hardship compared to this time last year		24.867	.000	.237
			B1_14: Changes to the household structure bringing about a worse off situation		79.670	.000	.426
			Province		55.083	.000	.234
2.2		The income situation of my household next year, compared to now		.727	6674910.708	.000	
			B2_3: The credit situation of my household next year, compared to now		45.739	.000	.412
			B2_9: My household's ability to survive hard financial times next year, compared to now		18.411	.000	.250
2.3		The credit situation of my		.758	4593902.258	.000	

		household next year, compared to now	B2_2: The income situation of my household next year, compared to now		10.658	.000	.170
			B2_4: The amount my household pays to service debt next year, compared to now		7.888	.000	.170
			B2_6: My household's ability to obtain credit next year, compared to now		10.791	.000	.197
2.4		The amount my household pays to service debt next year, compared to now		.659	1825820.039	.000	
			B2_3: The credit situation of my household next year, compared to now		410.661	.000	.755
			Province		16.859	.000	.160
2.5		My household's ability to make ends meet next year, compared to now		.734	6859279.370	.000	
			B2_3: The credit situation of my household next year, compared to now		33.231	.000	.321
			B2_9: My household's ability to survive hard financial times next year, compared to now		48.726	.000	.364
2.6		My household's ability to obtain credit next year, compared to now		.775	8465943.982	.000	
			B2_7: My household's ability to save next year compared to now		82.092	.000	.394
			B2_8: The extent to which my household will need credit to survive next year compared to now		23.233	.000	.197
2.7		My household's ability to save next year compared to now		.809	6811014.179	.000	
			B2_5: My household's ability to make ends meet next year, compared to now		22.181	.000	.211
			B2_6: My household's ability to obtain credit next year, compared to now		15.364	.000	.245
			B2_8: The extent to which my household will need credit to survive next year compared to now		18.231	.000	.188
2.8		The extent to which my household will need credit to survive next year compared to now		.668	5233551.525	.000	
			B2_7: My household's ability to save next year compared to now		104.865	.000	.361
			B2_10: Money that could be accessed by the household to		35.572	.000	.222

			assist when faced with hardship next year compared to now				
2.9		My household's ability to survive hard financial times next year, compared to now		.768	5948987.548	.000	
			B2_5: My household's ability to make ends meet next year, compared to now		30.069	.000	.189
			B2_10: Money that could be accessed by the household to assist when faced with hardship next year compared to now		61.148	.000	.281
			B2_13: Ability of the household to cover emergency next year compared to now		8.165	.000	.120
2.10		Money that could be accessed by the household to assist when faced with hardship next year compared to now		.788	7275738.092	.000	
			B2_9: My household's ability to survive hard financial times next year, compared to now		186.196	.000	.539
			B2_14: Changes to the household structure bringing about a worse off situation		19.524	.000	.173
2.11		The value of the goods that could be sold by the household to assist when faced with hardship compared to now		.694	1744155.261	.000	
			B2_12: Ability to access money from family/friends or others next year compared to now		41.971	.000	.297
			B2_13: Ability of the household to cover emergency next year compared to now		49.511	.000	.331
			Province		27.301	.000	.128
2.12		Ability to access money from family/friends or others next year compared to now		.701	1498175.339	.000	
			B2_11: The value of the goods that could be sold by the household to assist when faced with hardship compared to now		54.777	.000	.346
			B2_14: Changes to the household structure bringing about a worse off situation		16.319	.000	.193
			Province		8.417	.000	.131
2.13		Ability of the household to cover emergency next year compared to now		.719	1629469.833	.000	
			B2_9: My household's ability to survive hard financial times next year, compared to now		21.422	.000	.261
			B2_11: The value of the goods that could be sold by the household to assist when faced with hardship compared to now		25.907	.000	.218

			B2_12: Ability to access money from family/friends or others next year compared to now		12.048	.000	.142
			Province		27.291	.000	.182
2.14		Changes to the household structure bringing about a worse off situation		.656	1197072.964	.000	
			B2_6: My household's ability to obtain credit next year, compared to now		31.737	.000	.291
			B2_12: Ability to access money from family/friends or others next year compared to now		47.859	.000	.360
			Province		12.988	.000	.120
3.12		Borrowed from or obtained a personal loan – from Mashonisa, micro-loans		.107	143352.599	.000	
			B3_12A: Loan from stokvel/ burial society		11.266	.000	.196
			B5_9: I worry about my financial situation all the time		17.879	.000	-.122
			Province		31.153	.000	.204
3.13		Loan from stokvel/burial society		.191	209099.832	.000	
			Employment		16.530	.000	.129
			B10_3: The members of my household generally feel financially stressed		47.426	.000	-.198
			B10_4: It is difficult to escape periods of financial difficulty		15.884	.000	.142
			Province		103.485	.000	.344
3.14		Borrowed from family or friends		.161	250959.149	.000	
			B3_12A: Borrowed from or obtained a personal loan – from Mashonisa, micro-loans		28.318	.000	.237
			B10_10: My household does not have sufficient access to training on financial matters		27.107	.000	-.215
			Province		34.181	.000	.184
4.1		If I can get more credit I am likely to spend more		.450	737718.230	.000	
			Employment		7.398	.000	.111
			B4_2: If I can afford more credit, I will take it		270.918	.000	.604
			B4_10: People should make sure their family has enough to live on before paying any money they owe		13.905	.000	.126
			Province		46.363	.000	.165

4.2		If I can afford more credit, I will take it		.471	564727.042	.000	
			Employment		8.386	.000	.101
			B1_3: The credit situation of my household compared to this time last year		7.936	.000	.108
			B5_12: I save money for my old age		11.625	.000	-.149
			B9_11: Pensions not being paid/received		17.887	.000	.128
			Province		16.216	.000	.122
			B4_1: If I can get more credit I am likely to spend more		209.630	.000	.594
4.8		Lenders will lend anyone money whatever the person's circumstances because they want to make profit		.144	101296.747	.000	
			B2_3: The credit situation of my household next year compared to now		10.626	.000	.166
			B2_13: Ability of the household to cover emergency next compared to now		5.498	.000	-.134
			B10_15: High interest rates impacted very badly on my household's financial situation during the past 12 months		10.032	.000	.162
			Province		25.105	.000	.219
			Population group		10.181	.000	.165
4.10		People should make sure their family has enough to live on before paying any money they owe		.195	105829.016	.000	
			How many people are there in your household?		23.260	.000	.188
			B4_1: If I can get more credit I am likely to spend more		25.857	.000	.209
			B6_16: Giving money to a person I can trust (money guard)		14.837	.000	.127
			Province		53.898	.000	.259
			Population group		13.946	.000	.129
4.11		I frequently have problems making ends meet		.294	270459.795	.000	
			B2_13: Ability of the household to cover emergency next year compared to now		31.285	.000	-.202
			B4_8: Lenders will lend anyone money whatever the person's circumstances because they want to make profit		15.487	.000	.153
			Province		58.583	.000	.270

			Type of area		27.723	.000	.239
			Population group		15.763	.000	.151
4.13		I often have to spend more money than I have available		.194	243448.911	.000	
			B3_14A: Borrowed from family or friends		15.293	.000	.175
			B5_7: I always have enough money to cover expenses at month end before I get my next income		14.450	.000	-.165
			Province		61.062	.000	.237
			I have considered cancelling policies to cover dents		12.881	.000	.201
4.14		I have considered going to see someone to help me with my debt problems		.331	477971.584	.000	
			B4_15: I have considered cancelling policies to cover debts		79.558	.000	.428
			B9_04: Loss of income due to injuries/disability		18.375	.000	.170
			Province		17.640	.000	.114
			Area		13.232	.000	.170
4.15		I have considered cancelling policies to cover debts		.286	451213.629	.000	
			B4_14: I have considered going to see someone to help me with my debt problems		113.419	.000	.479
			Province		22.429	.000	.159
			Population group		13.819	.000	.106
5.1		I save money regularly		.420	650743.887	.000	
			B5_11: I save money to have money for the future		49.151	.000	.295
			B5_17: I regularly put money aside to ensure that I have cash available when needed		37.389	.000	.256
			Province		10.816	.000	.111
			Area		13.843	.000	.180
5.4		I saved a fixed amount of my money each month		.434	864466.802	.000	
			B5_5: I save on a regular basis for a specific annual expenditure		29.865	.000	.240
			B5_6: I save as much as I can for unforeseen events, no matter how far ahead they may happen		28.382	.000	.236
			Province		43.521	.000	.230
5.5		I save on a regular basis for a specific annual expenditure		.387		.000	
			B5_4: I saved a fixed amount		187.796	.000	.510

			of my money each month				
			B10_2: My household from time to time is not able to pay its bills		10.047	.002	-.114
			Province		50.971	.000	.300
5.6		I save as much as I can for unforeseen events, no matter how far ahead they may happen		.603	1466071.260	.000	
			B5_1: I save money regularly		33.149	.000	.220
			B5_5: I save on a regular basis for a specific annual expenditure		122.694	.000	.433
			B9_18: Unexpected expenses		16.012	.000	-.129
			Province		15.585	.000	.100
5.7		I always have enough money to cover expenses at month end before I get my next income		.190	351461.552	.000	
			B10_2: My household from time to time is not able to pay its bills		67.372	.000	-.352
			Province		39.183	.000	.212
5.8		I'm willing to take more risks to get higher returns on my money		.334	451160.957	.000	
			Employment		10.539	.000	.124
			B5_6: I save as much as I can for unforeseen events, no matter how far ahead they may happen		27.128	.000	.218
			B5_20: I am prepared to accept a higher level of risk for my saving in return for a higher possible return		61.439	.000	.336
			Province		13.451	.000	.172

5.9		I worry about my financial situation all the time		.508	2321853.017	.000	
			B5_10: I worry about ways to save more money		153.055	.000	.499
			B5_19: I prefer to feel that my money is easily accessible rather than committing it for the long term		11.323	.000	.121
			B10_1: My household struggle financially		48.904	.000	.255
5.10		I worry about my financial situation all the time		.451	925585.605	.000	
			B5_6: I save as much as I can for unforeseen events, no matter how far ahead they may happen		10.401	.000	.118
			B5_9: I worry about my financial situation all the time		256.886	.000	.602
			Province		13.910	.000	.107
5.11		I save money to have money for the future		.589	1615692.400	.000	
			B5_1: I save money regularly		24.396	.000	.174
			B5_12: I save money for my old age		209.198	.000	.520
			Province		24.095	.000	.107
5.12		I save money for my old age		.584	1355339.884	.000	
			Employment		34.025	.000	.158
			B5_11: I save money to have money for the future		508.167	.000	.690
			Province		14.859	.000	.101
5.17		I regularly put money aside to ensure that I have cash available when needed		.385	769020.262	.000	
			B5_1: I save money regularly		27.472	.000	.240
			B5_5: I save on a regular basis for a specific annual expenditure		37.127	.000	.280
			Province		27.233	.000	.167
5.19		I prefer to feel that my money is easily accessible rather than committing it for the long term		.334	616648.732	.000	
			B5_9: I worry about my financial situation all the time		33.062	.000	.201
			B5_20: I am prepared to accept a higher level of risk for my saving in return for a higher possible return		124.012	.000	.426
			Province		47.571	.000	.206
5.20		I am prepared to accept a higher level of risk for my saving in return for a higher possible return		.270	556028.129	.000	
			B5_8: I'm willing to take more risks to get higher returns on my money		90.112	.000	.425

			Province		16.862	.000	.177
6.10		Medical fund		.212	1159359.542	.000	
			B3_1A: Credit card		58.471	.000	.315
			B10_4: It is difficult to escape periods of financial difficulty		47.830	.000	.305
6.15		Saving money at home		.101	148711.592	.000	
			B9_03: Low income		11.935	.000	-.130
			Province		68.401	.000	.283
6.16		Giving money to a person I can trust		.060	69310.031	.000	
			Employment		8.590	.000	.178
			Province		14.063	.000	.168
8		Timescale regarding saving		.183	226399.700	.000	
			Employment		21.403	.000	.223
			B6_6: Endowment/ savings/ investment/ retirement annuity policy		95.547	.000	.303
			Province		58.182	.000	.180
9.3		Low income due to sickness or medical reasons		.396	423627.613	.000	
			B1_6: My household's ability to obtain credit compared to this time last year		8.996	.000	.103
			B5_17: I regularly put money aside to ensure that I have cash available when needed		21.436	.000	-.178
			B6_15: Saving money at home		9.330	.002	.110
			B9_05: Loss of income due to sickness or medical reasons		64.884	.000	.304
			B10_9: My household does not have sufficient access to credit		29.984	.000	.204
			Province		27.754	.000	.171
9.4		Loss of income due to injuries/ disability/ sickness/ medical problem of household member		.509	1271913.700	.000	
			B9_07: Additional financial burden due to injuries/ disability/ sickness/ medical problems of household member		91.151	.000	.467
			B9_21: Not receiving money from a family member supporting the household		41.236	.000	.251
			Province		20.220	.000	.143
9.5		Loss of income due to sickness or medical reasons		.535	1410340.209	.000	
			B9_03: Low income due to sickness or medical reasons		19.255	.000	.155
			B9_07: Additional financial burden due to injuries/		114.235	.000	.544

			disability/ sickness/ medical problems of household member				
			Province		22.474	.000	.127
9.6		Loss of income due to death of an income earner		.620	5500350.159	.000	
			B9_05: Loss of income due to sickness or medical reasons		118.747	.000	.461
			B9_14: Funeral expenses		41.013	.000	.256
9.7		Additional financial burden due to injuries/ disability/ sickness/ medical problems of household member		.565	1168341.067	.000	
			B9_04: Loss of income due to injuries/ disability/ sickness/ medical problem of household member		26.253	.000	.206
			B9_05: Loss of income due to sickness or medical reasons		44.158	.000	.289
			Province		13.120	.000	.108
			Area		16.736	.000	.117
9.8		Spending more than you earn		.576	1066150.535	.000	
			B9_09: Major necessary expenses		204.166	.000	.549
			B9_13: Business related problems		12.690	.000	.162
			Province		28.994	.000	.163
9.9		Major necessary expenses		.594	1645841.452	.000	
			B9_08: Spending more than you earn		137.483	.000	.451
			B9_18: Unexpected expenses		42.834	.000	.253
			Province		29.232	.000	.129
9.10		Child / disability grants from government not being paid/ received		.174	317028.778	.000	
			B9_21: Not receiving money from a family member supporting the household		52.151	.000	.364
			Province		31.154	.000	.172

9.11		Pensions not being paid / received		.309	355845.975	.000	
			B4_1: If I can get more credit I am likely to spend more		21.919	.000	-.135
			B4_2: If I can afford more credit, I will take it		16.058	.000	.132
			B9_07: Additional financial burden due to injuries/ disability/ sickness/ medical problems of household member		18.691	.000	.197
			B9_08: Spending more than you earn		9.175	.000	.114
			B9_14: Funeral expenses		12.780	.000	.164
			Province		30.049	.000	.178
9.14		Funeral expenses		.506	1151580.417	.000	
			Loss of income due to death of an income earner		43.067	.000	.282
			B9_07: Additional financial burden due to injuries/ disability/ sickness/ medical problems of household member		31.469	.000	.278
			Province		19.787	.000	.130
9.15		Not having sufficient savings to draw on		.477	821365.475	.000	
			Employment		28.097	.000	.144
			B9_18: Unexpected expenses		233.351	.000	.480
			B10_11: My household does not have sufficient access to affordable goods		27.857	.000	.146
			Province		17.549	.000	.106
9.18		Unexpected expenses		.532	729876.372	.000	
			Employment		18.487	.000	.124
			B9_15: Not having sufficient savings to draw on		167.092	.000	.422
			B10_15: High interest rates impacted very badly on my household's financial situation during past 12 months		21.385	.000	.116
			Province		65.477	.000	.246
			Area		15.646	.000	.113
			Population Group		21.183	.000	.141
9.19		Not receiving cash income		.451	652236.967	.000	
			Employment		11.879	.000	.102
			B5_9: I worry about my financial situation all the time		25.184	.000	.127

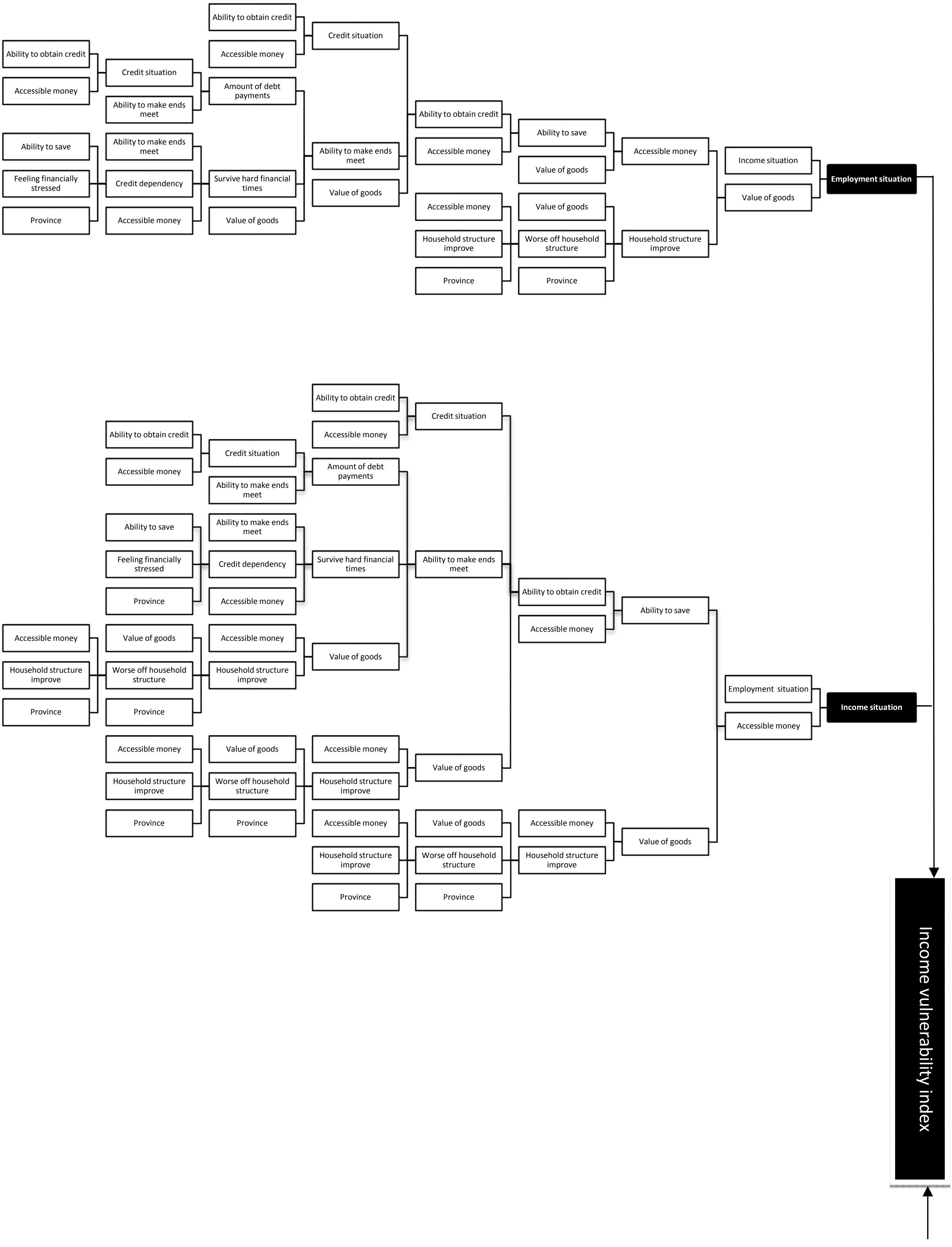
			B9_10: Child/ disability grants from government not being paid / received		11.578	.000	.139
			B9_21: Not receiving money form a family member supporting the household		106.080	.000	.401
			Province		26.404	.000	.159
9.20		Increase in household size		.340	366159.058	.000	
			Employment		19.632	.000	.139
			B9_06: Loss of income due to death of an income earner		64.121	.000	.329
			B9_10: Child/ disability grants from government not being paid / received		17.863	.000	.162
			B10_8: I believe that over the long-term, my household's financial situation will improve		28.145	.000	.156
			Province		27.897	.000	.157
			Population group		8.303	.000	.102
9.21		Not receiving money form a family member supporting the household		.501	1132228.957	.000	
			B9_04: Loss of income due to injuries/ disability/ sickness/ medical problem of household member		65.419	.000	.292
			B9_19: Not receiving cash income		84.225	.000	.357
			Province		48.179	.000	.227
10.1		My household struggle financially		.639	1996143.386	.000	
			B5_9: I worry about my financial situation all the time		12.157	.000	.114
			B10_3: The members of my household generally feel financially stressed		392.387	.000	.654
			Province		30.742	.000	.157

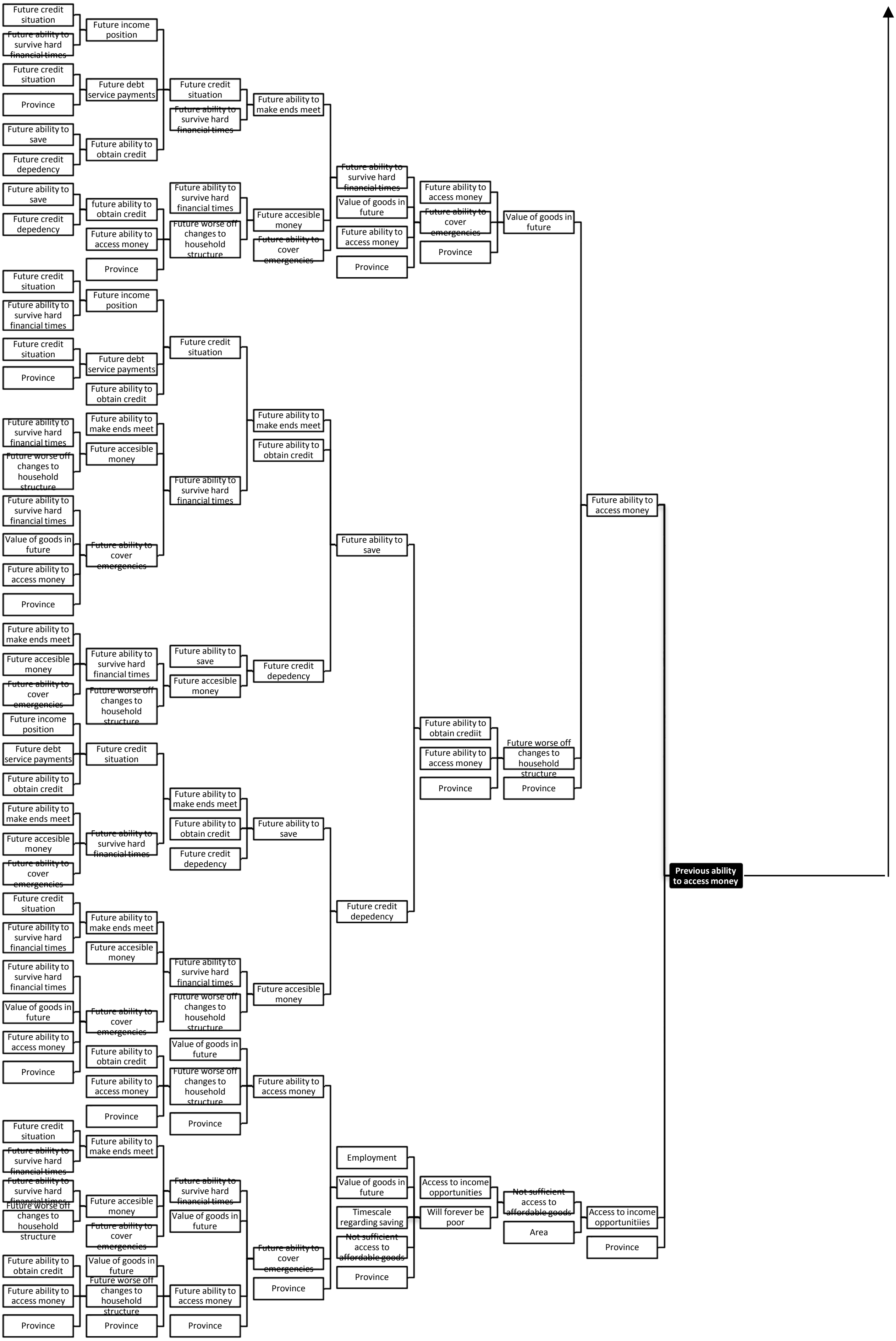
10.2		My household from time to time is not able to pay its bills		.584	1395586.156	.000	
			B1_11: The value of the goods that could be sold by the household to assist when faced with hardship compared to this time last year		24.448	.000	-.155
			B10_3: The members of my household generally feel financially stressed		460.736	.000	.634
			Province		41.158	.000	.165
10.3		The members of my household generally feel financially stressed		.713	2392872.969	.000	
			B10_1: My household struggle financially		54.975	.000	.265
			B10_2: My household from time to time is not able to pay its bills		37.095	.000	.193
			B10_4: It is difficult to escape periods of financial difficulty		34.420	.000	.190
			Province		49.083	.000	.127
10.4		It is difficult to escape periods of financial difficulty		.496	4333087.975	.000	
			B6_10: Medical fund		12.295	.000	.137
			B10_3: The members of my household generally feel financially stressed		299.161	.000	.624
10.9		My household does not have sufficient access to credit		.494	4393588.686	.000	
			B9_20: Increase in household size		22.390	.000	.180
			B10_12: My household does not have sufficient access to income generating opportunities		329.217	.000	.626
10.10		My household does not have sufficient access to training on financial matters		.562	4339174.573	.000	
			B10_2: My household from time to time is not able to pay its bills		35.612	.000	.178
			B10_12: My household does not have sufficient access to income generating opportunities		273.415	.000	.529
10.11		My household does not have sufficient access to affordable goods		.581	6251632.334	.000	
			B10_12: My household does not have sufficient access to income generating opportunities		297.472	.000	.583
			B10_14: My household will		35.791	.000	.177

			forever be poor				
10.12		My household does not have sufficient access to income generating opportunities		.568	3552373.034	.000	
			B10_11: My household does not have sufficient access to affordable goods		440.286	.000	.654
			Area		16.479	.000	.134
10.14		My household will forever be poor		.379	355315.930	.000	
			Employment		8.836	.000	.130
			B2_11: The value of the goods that could be sold by the household to assist when faced with hardship compared to now		22.886	.000	-.175
			B8: Timescale regarding saving		19.494	.000	.172
			B10_11: My household does not have sufficient access to affordable goods		99.271	.000	.390
			Province		24.758	.000	.143
10.15		High interest rates impacted very badly on my household's financial situation during the past 12 months		.289	211501.283	.000	
			Employment		9.497	.000	.117
			B1_12: Ability to access money from family/friends or others compared to this time last year		11.148	.000	-.145
			B9_18: Unexpected expenses		27.288	.000	.225
			Province		15.988	.000	.199
			Area		12.707	.000	.209
			Population group		22.099	.000	.142

ANNEXURE E

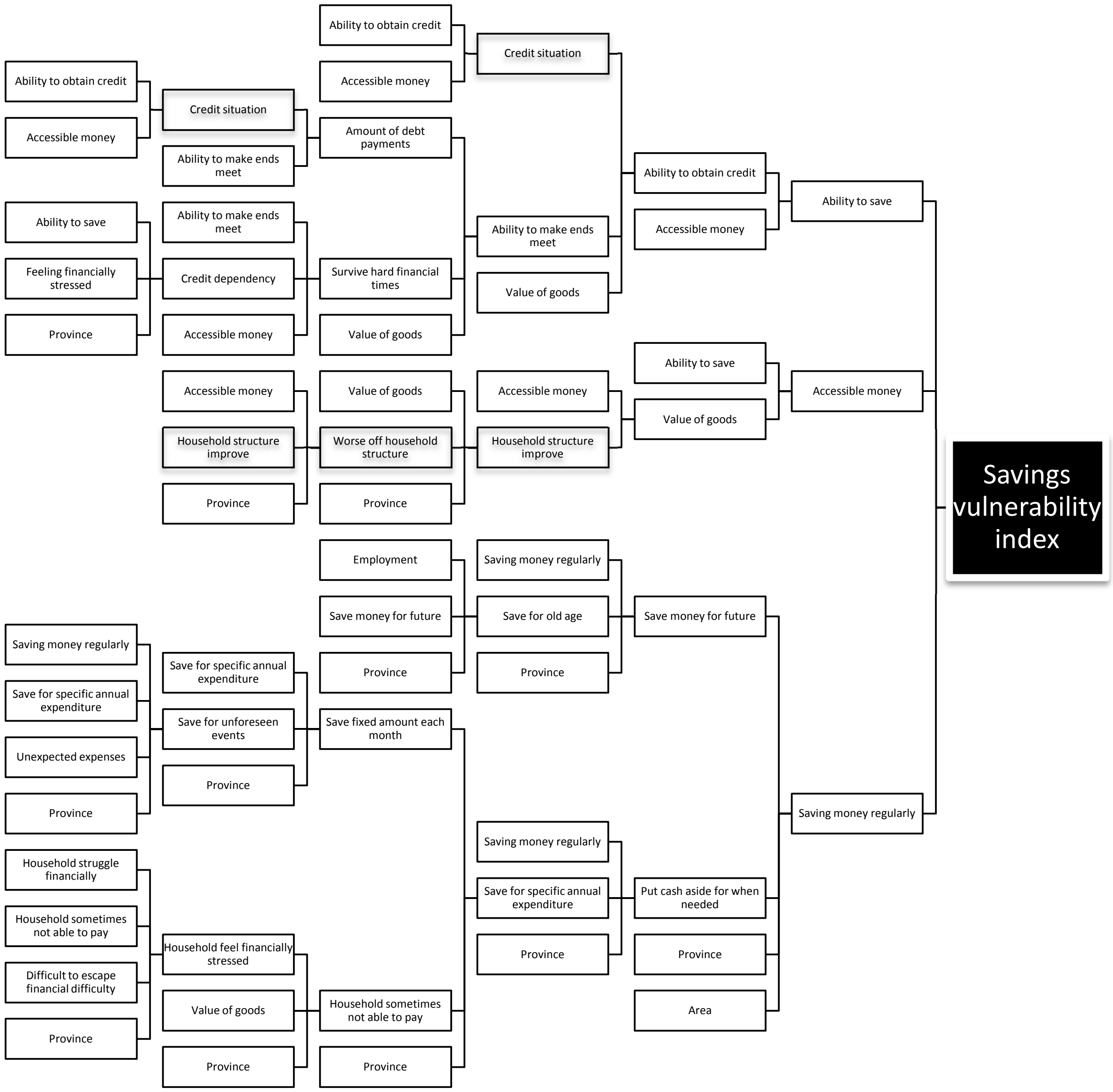
DIAGRAM OF CAUSAL CHAIN OF THE INCOME VULNERABILITY INDEX





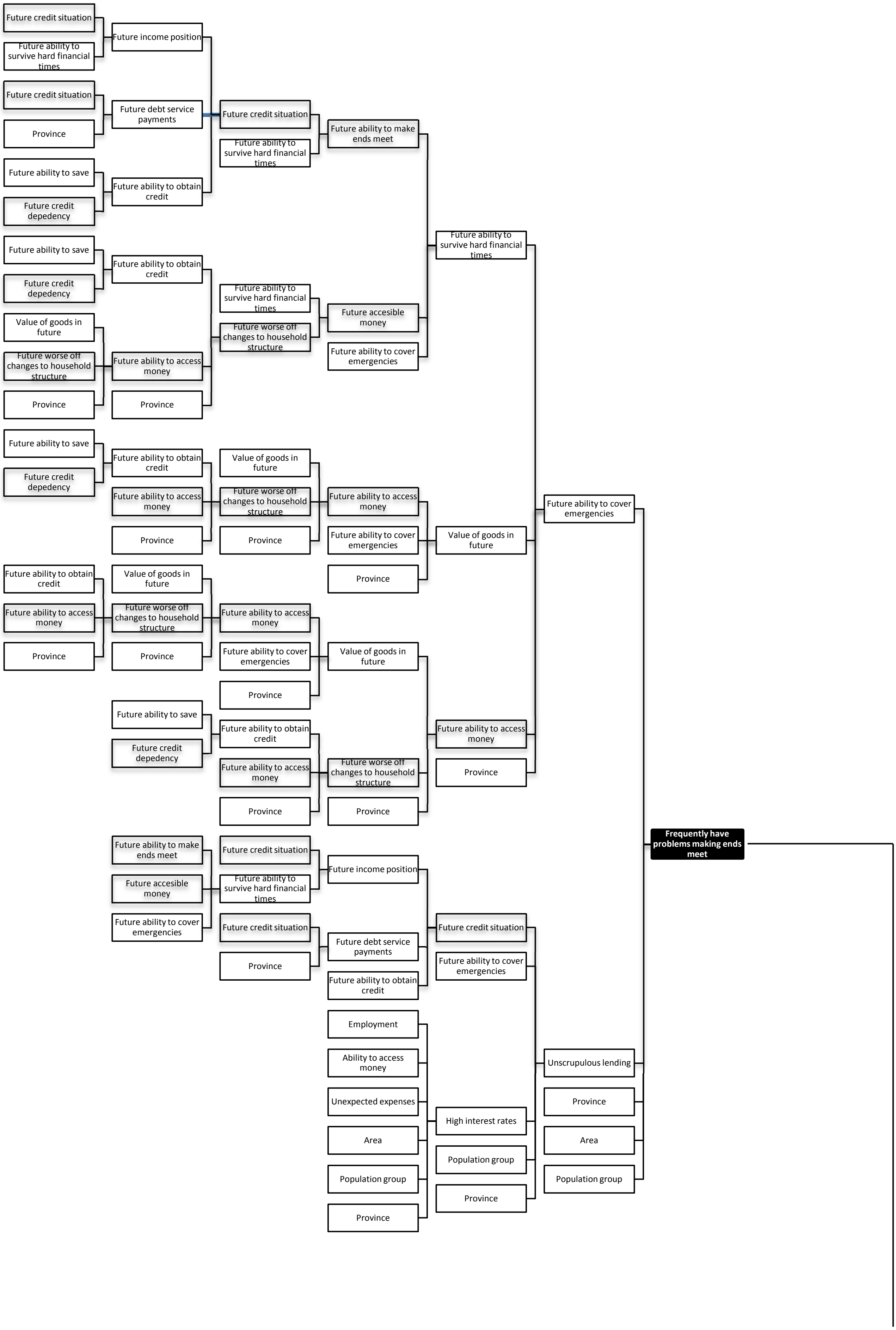
ANNEXURE F

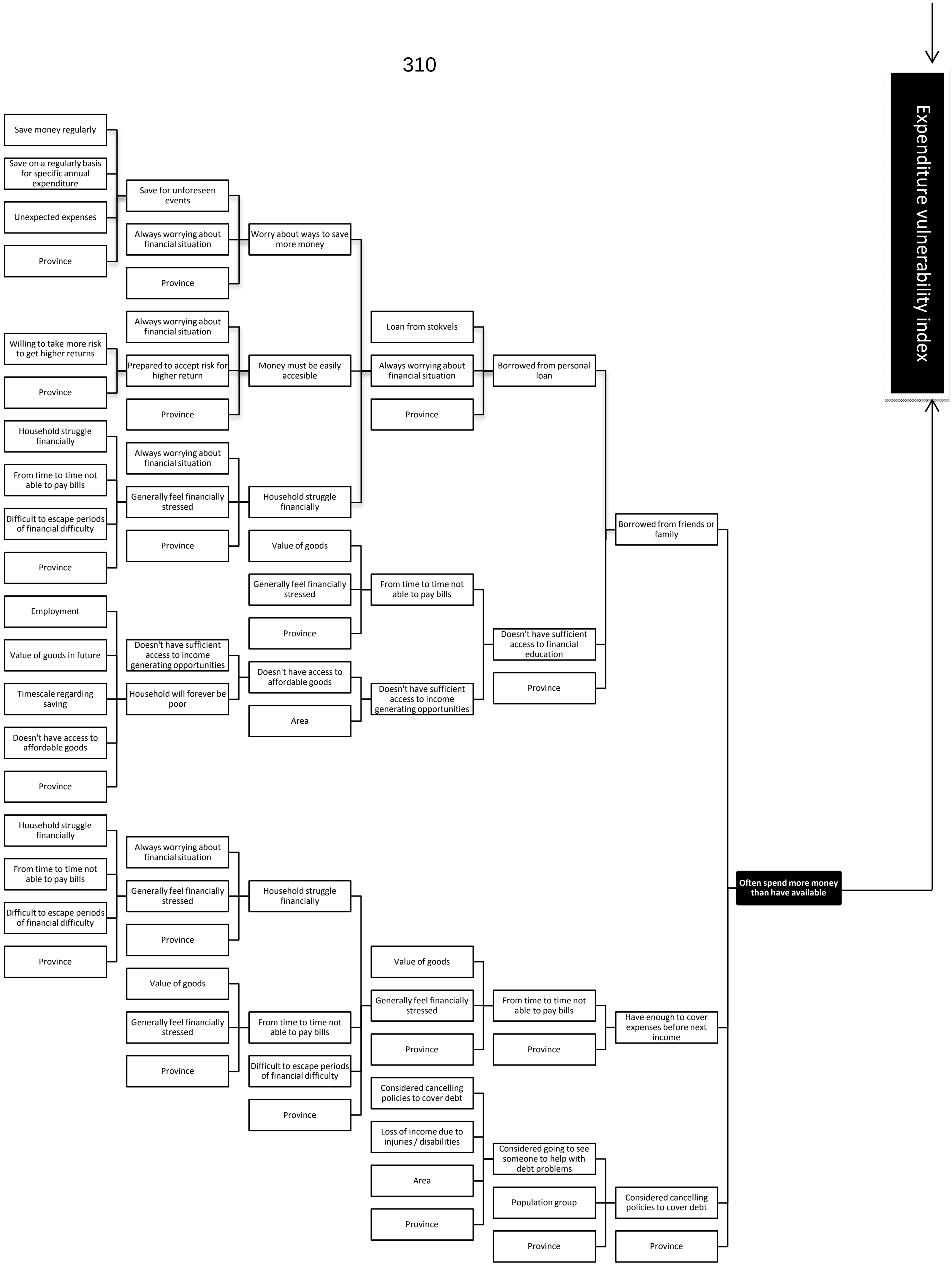
DIAGRAM OF CAUSAL CHAIN OF THE SAVING VULNERABILITY INDEX



ANNEXURE G

DIAGRAM OF CAUSAL CHAIN OF THE EXPENDITURE VULNERABILITY INDEX




Expenditure vulnerability index
Save money regularly
Save on a regularly basis for specific annual expenditure
Unexpected expenses
Province
Save for unforeseen events
Always worrying about financial situation
Province
Worry about ways to save more money
Always worrying about financial situation
Willing to take more risk to get higher returns
Prepared to accept risk for higher return
Province
Province
Money must be easily accesible
Loan from stokvels
Always worrying about financial situation
Province
Borrowed from personal loan
Household struggle financially
From time to time not able to pay bills
Difficult to escape periods of financial difficulty
Province
Always worrying about financial situation
Generally feel financially stressed
Province
Household struggle financially
Value of goods
Generally feel financially stressed
Province
From time to time not able to pay bills
Borrowed from friends or family
Employment
Value of goods in future
Timescale regarding saving
Doesn't have access to affordable goods
Province
Doesn't have sufficient access to income generating opportunities
Household will forever be poor
Doesn't have access to affordable goods
Area
Doesn't have sufficient access to income generating opportunities
Doesn't have sufficient access to financial education
Province
Household struggle financially
From time to time not able to pay bills
Difficult to escape periods of financial difficulty
Province
Always worrying about financial situation
Generally feel financially stressed
Province
Household struggle financially
Often spend more money than have available
Value of goods
Generally feel financially stressed
Province
From time to time not able to pay bills
Difficult to escape periods of financial difficulty
Province
Value of goods
Generally feel financially stressed
Province
From time to time not able to pay bills
Province
Have enough to cover expenses before next income
Considered cancelling policies to cover debt
Loss of income due to injuries / disabilities
Area
Province
Considered going to see someone to help with debt problems
Population group
Province
Considered cancelling policies to cover debt
Province