

ANALYSING THE CONSUMER MARKET MICROSTRUCTURE IN SOUTH AFRICA BY MEANS OF A CONSUMER FINANCIAL VULNERABILITY SURVEY: UNCOVERING THE PREDICTORS OF FINANCIAL VULNERABILITY

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Abstract

As with many developing countries, the consumer macrostructure of South Africa is beset with a number of serious problems including high levels of poverty, a very unequal income distribution, negative personal saving rates and high personal gearing ratios. A consumer financial vulnerability study conducted in 2009 showed that South Africans are generally financially vulnerable, thus confirming these problems in the consumer macrostructure and suggested various reasons for the existence of such problems.

The question could be asked regarding the reasons for such problems in South Africa given the economic progress that has been made during the post-apartheid era. In order to identify the reasons for the said problems, this paper will focus on the endogenous and exogenous predictors of financial vulnerability in South Africa, which could be derived from the said consumer financial vulnerability survey. Predictors of consumer financial vulnerability uncovered by this study include, inter alia, endogenous predictors such as over-indebtedness, bad financial planning, consumers spending more than they earn. Exogenous factors include adverse economic conditions, age and population group. In the analyses that were conducted for this paper, the usual econometric diagnostics (i.e. co-linearity, autocorrelation and underidentification) of postulated relationships were conducted to ensure valid conclusions regarding predictive relationships. By means of such analyses consumer market microstructure dynamics are described to generate results that could be used to provide input to policy and programme formulation as well as the education of personal financial advisors who deal with financially vulnerable customers.

1. BACKGROUND

Concern regarding the high levels of borrowing and low levels of savings as causes of consumer financial vulnerability has been the focus of discussions and research amongst various stakeholders and policymakers. The financial crisis left numerous consumers across the world unemployed and over-indebted with low or no level of savings, thus causing them to feel financially vulnerable. It appears from what is happening in Greece that this situation is still continuing with large numbers of consumers being vulnerable due to negative macroeconomic impacts resulting from fiscal constraints being experienced by countries who used fiscal space to bail out struggling companies.

In its report entitled *European trends in consumer financial vulnerability* the European Credit Research Institute (ECRI) (2008a) defined consumer financial vulnerability (CFV) 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 the consumer experiencing financial vulnerability. Consumers may not currently feel financially vulnerable but could become vulnerable when they become unemployed, unable to service debts or experience financial emergencies.

On a macroeconomic level, several factors could lead to consumers feeling more financially vulnerable. These include:

- the debt-to-income ratio in South Africa increased to 79.8% during the period July 2008 to June 2009 (SARB, 2009);
- consumption expenditure (R1 385 billion) during 2008 was higher than total disposable income (R1 329 billion), indicating that consumers on average spend more than they earn; (SARB, 2009); and
- the wealth-to-disposable income ratio declined from about 3.45:1 in mid-2007 to 2.65:1 in mid-2009, indicating poor financial planning by households; (SARB, 2009).

On a microeconomic level, aspects of the financial situation of consumers that seem to have particularly deteriorated during the period up to June 2009 are the ability of consumers to stick to their budgets, their ability to save and their ability to manage their financial situations:

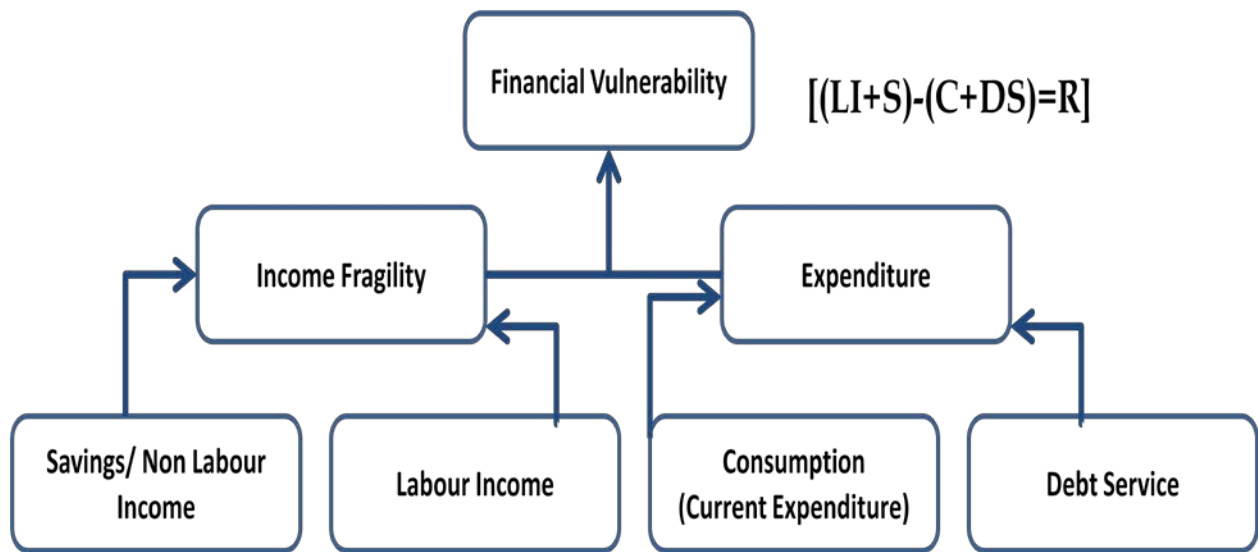
- Household consumption expenditure on nondurable goods (including foodstuffs) declined by 3.4% during the second quarter of 2009 indicating that household financial situations have deteriorated to such an extent that they are cutting back even on foodstuffs (SARB, 2009).

- The general lack of personal financial discipline is also reflected by National Credit Regulator (NCR) (2009) statistics showing that by June 2009 about 15.4 million of a total of 62.3 million consumer accounts had impaired records, while 4.3% of consumer accounts had judgements or administration orders against them.

Other studies conducted on consumer financial vulnerability reported on a variety of variables that could result in consumers feeling financially vulnerable. Disney, Bridges and Gathergood (2008) reported that household indebtedness, income shocks, unemployment, family breakdown, ill health, macroeconomic shocks, interest rates and low savings could all influence the level of consumer financial vulnerability.

FinMark Trust (FinMark) and the Bureau of Market Research (BMR) (2009) identified a range of variables that appear to be strong predictors of financial vulnerability. These 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 such as insufficient savings and/or investments, becoming unemployed, ill health, separation/divorce and bad financial management, as well as external factors such as higher interest rates, price inflation and adverse economic conditions were identified as possible factors influencing the feeling of being financially vulnerable. This relationship is illustrated in figure 1.

FIGURE 1
CONSUMER FINANCIAL VULNERABILITY MODEL



(Source: FinMark/BMR, 2009)

As illustrated above, various variables that could influence the financial vulnerability of households are present on both macro- and microeconomic levels. However, there is a lack of information to identify which households are actually financially vulnerable should they require assistance.

2. RESEARCH PROBLEM AND RESEARCH QUESTIONS

The purpose of this paper is to identify the endogenous and exogenous factors related to financial vulnerability of households with the aim of describing financial microstructure dynamics in South Africa.

To address the research problem it was necessary to determine drivers of various indices and therefore the following questions were posed:

- What are the endogenous and exogenous predictors of the income-index?
- What are the endogenous and exogenous predictors of the savings-index?
- What are the endogenous and exogenous predictors of the consumption expenditure-index?
- What are the endogenous and exogenous predictors of the debt servicing-index?

Following is an overview of existing indices measuring financial consumer vulnerability, concluding with the South African Consumer Financial Vulnerability (CFV) Index (section 3), which forms the basis of the paper. Section 4 discusses the research methodology, while section 5 provides analyses of the index predictors and identifies the main predictors of the four sub-indices. Section 6 concludes with an interpretation of the analyses.

3. OVERVIEW OF CONSUMER FINANCIAL VULNERABILITY INDICES

This section provides a brief summary of the South African consumer financial vulnerability survey and the resulting index completed in July 2009 preceded by information on the European Genworth index on which the South African index is broadly based. The purpose of this discussion is to determine to what level the South African and Genworth indices succeed in identifying the predictors of consumer financial vulnerability.

3.1 Genworth Index

The South African consumer financial vulnerability index is loosely based on the Genworth Index developed by the ECRI and the Personal Finance Research Centre (PFRC) at the

University of Bristol. To measure CFV the European Credit Research Institute developed a CFV index that provides an indication of the share of survey respondents in a specific country who **feel financially vulnerable** relative to the share of people who **feel financially secure** (ECRI/PFRC, 2008b). Multivariate statistical methods were applied to a series of questions included in the Ipsos Mori omnibus survey with the aim of developing an index of financial vulnerability (ECRI/PFRC, 2008b). Initially, the measures included in the survey were, firstly, to determine current financial difficulties, secondly, to identify measures or predictors of financial vulnerability and lastly, to determine the socio-demographic and attitudinal dimensions.

Originally, the following questions were asked of households to obtain useful data from households with financial difficulties:

Current financial difficulties

- How often the household experienced financial difficulties during the preceding 12 months;
- How often the household had been unable to pay bills after a final reminder; and
- How well the household is currently keeping up with bills and credit commitments (ECRI/PFRC, 2008b).

Future financial vulnerability

- Perceptions whether the household can afford more *borrowing*;
- Whether the household has *savings* equivalent to one month's income;
- Expectations of the future financial position of the household (*financial expectations*);

Deteriorating financial circumstances

- The number of *credit* commitments in the household; and
- Whether the household suffered a decline in income during the preceding 12 months (ECRI/PFRC, 2008b).

Measures or predictors of financial vulnerability

- Age
- Family type
- Occupational status
- Number of earners and whether there is a full-time earner in the household

- Housing tenure
- Attitudes towards savings, spending and borrowing (ECRI/PFRC, 2008b).

Based on a cluster analysis, four distinct groups of households were identified as reflected in figure 2, namely Group A (financially vulnerable), Group B (strivers), Group C (circumspect) and Group D (financially secure).

FIGURE 2
GROUPS OF HOUSEHOLDS

		Expectations for the future financial position of household		
		Get better	Stay the same	Get worse
Frequency of expediency financial difficulties	Often or always	B	A	A
	Sometimes	B	C	A
	Hardly ever	D	C	C
	Never	D	C	C

Source: Consumer Financial Vulnerability Technical Report – ECRI/PFRC – June 2008.

As shown in figure 2 four distinct vulnerability groups can be identified, ranging from Group A (Financially Vulnerable) – people often being in financial difficulties during the preceding 12 months and not sure that their situation will improve, Group B (Striver) – these households have experienced some financial difficulties during the preceding 12 months but are positive about their situation improving (these households are neither financially vulnerable nor financially secure), Group C (Circumspect) – these households did not often experience financial difficulties during the preceding 12 months, and did not think their financial situations would change during the following 12 months (also not financially vulnerable nor secure), and Group D (Financially Secure) – encompassing those households who seldom, if ever, experienced financial difficulties during the preceding 12 months and expect their financial situation to improve during the following 12 months (ECRI/PFRC, 2008c).

On the basis of the constructed index, the researchers were able to establish that the level of financial vulnerability could be influenced by:

- Gender (in some countries financial security is more evident amongst men than women);
- Age (in some countries a greater proportion of those aged 18 to 39 years reported financial security compared to countries that reported the highest level of financial vulnerability amongst those aged 50 to 69 years);

- Occupational status (there were differences in the level of financial vulnerability amongst manual and clerical workers, and senior or professional occupations);
- Housing tenure (consumers who rent homes were more financially vulnerable than those who owned fixed property);
- Number of earners (households with two income earners were less vulnerable than those with no earners in the household (e.g. retirees));
- Saving (savers appear to be more financially secure than people who not saving);
- Credit (consumers who “prefer to buy things on credit rather than wait and save” reflected higher levels of financial vulnerability) (ECRI/PFRC, 2008c).

Since the original measurement of the Genworth Index in June 2008, it was repeated in November 2008 as well as November 2009. The results of the November 2008 study reflected a decrease in the level of financial security as would be expected in the wake of the global financial crisis and great uncertainty regarding the macro-economic outlook of the various countries. This could largely be contributed to the following (not applicable to all countries reviewed):

- Very high ratio of mortgage debt to GDP (households are highly leveraged – in certain countries their liabilities exceed their assets by approximately 20%);
- House prices have fallen;
- Reduction in private consumption expenditure limiting economic growth;
- Potential and actual job losses (increasing unemployment);
- Devaluation of currencies;
- Stricter credit conditions enforced by financial institutions and regulators;
- Rising commodity prices (e.g. oil and electricity);
- Rising inflation (that results in higher food prices, reducing disposable income);
- Rising interest rates;
- Growing climate of fear (reduction in consumer confidence);
- Declines in exports; and
- Global recession (ECRI/PFRC, 2008d).

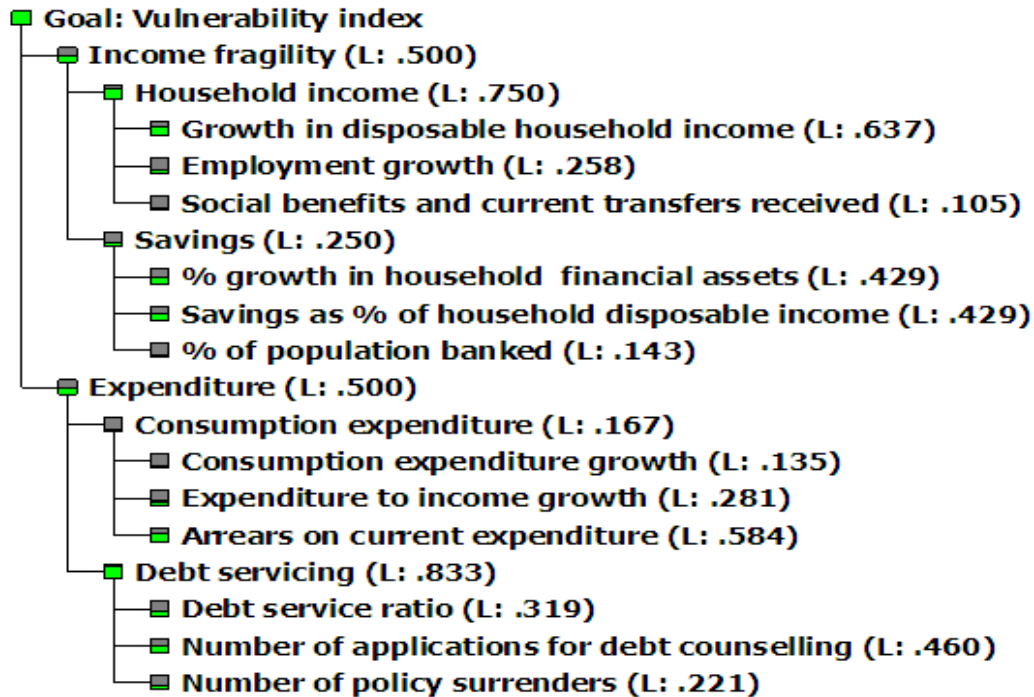
As discussed in the introduction (section 1), most of these trends identified in the European context are also applicable to the South African environment, e.g. high inflation, job losses, falling house prices – thus one can deduce that South African households will reflect the same

levels of financial vulnerability as their European counterparts. The actual level of consumer financial vulnerability was measured through a study commissioned by FinMark Trust and conducted by the Bureau of Market Research (BMR) during 2009 and will be discussed in section 3.2.

3.2 South African Consumer Financial Vulnerability (CFV) Index

A consumer financial vulnerability index for South Africa was constructed during 2009 by FinMark and the BMR based on information obtained from a vast body of literature on consumer financial vulnerability research worldwide. By means of analytical hierarchical process (AHP) modelling techniques, such information was used to construct a CFV index for South Africa. The CFV index derived by means of the AHP is shown in figure 3. It appears from figure 3 that income fragility and expenditure both contribute 50% to the index. As predictors of income fragility, household income predicts 75% and savings 25%. In the case of expenditure, consumption expenditure predicts 16.7% and debt servicing 83.3%.

**FIGURE 3
CONSUMER FINANCIAL VULNERABILITY INDEX**



(Source: FinMark/BMR, 2009)

From the CFV index weights shown in figure 3, the following was derived with respect to the South African CFV index:

- the **consumer income vulnerability sub-index** was computed by using the 'growth in disposable income', 'employment growth' and 'social benefits/transfers' questions in the questionnaire. For index purposes 'growth in disposable income' questions obtained a weight of 0.637, 'employment growth' questions a weight of 0.258 and 'social benefits/transfers' questions a weight of 0.105;
- the **consumer savings vulnerability sub-index** was computed by using the 'growth in financial assets', 'savings as a percentage of household disposable income' and 'percentage of population saving' questions in the questionnaire. For index purposes 'growth in financial assets' obtained a weight of 0.429, 'savings as a percentage of household disposable income' a weight of 0.429 and 'percentage of population saving' a weight of 0.143;
- the **consumer consumption expenditure vulnerability sub-index** was compiled using 'consumption expenditure growth', 'expenditure to income growth' and 'arrears on current expenditure' questions from the questionnaire (see figure 3). The weights applied were 0.135 for 'consumption expenditure growth', 0.281 for 'expenditure to income growth' and 0.584 for 'arrears on current expenditure';
- the **consumer debt servicing vulnerability index** was compiled based on 'debt service ratio', 'number of applications for debt counselling' and 'number of policy surrenders' questions asked to respondents. The weights used for index compilation purposes were 0.319 for 'debt service ratio', 0.460 for 'number of applications for debt counselling' and 0.221 for 'number of policy surrenders'; and
- finally, by bringing the various sub-indices together the **CFV index** was compiled. This was done by using the following weights derived from the model developed (as shown in figure 3): the income vulnerability index score contributed 0.75×0.50 to the index, savings vulnerability contributed 0.25×0.50 , consumption expenditure vulnerability contributed 0.167×0.50 and debt servicing vulnerability contributed 0.833×0.50 to the index. (FinMark/BMR, 2009)

The South African CFV index consists of a 10-point scale varying from 0 to 10, with '0' being indicative of consumers being completely financially secure while '10' is indicative of consumers being completely financially vulnerable. Five CFV groups were identified as shown in figure 4:

**FIGURE 4
GROUPS OF HOUSEHOLDS**

0 – 1.99	2.0 – 3.99	4.0 – 5.99	6.0 – 7.99	8.0 – 10.0
Financially very secure	Financially secure	Somewhat financially vulnerable	Financially vulnerable	Financially very vulnerable

(Source: FinMark/BMR, 2009)

3.3 Research Methodology

The population focused on in this study included all consumers, which included nearly 48.1 million people in South Africa. 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. This resulted in a sample of 976 households (representing an estimated 2 329 consumers).

The data collection conducted was threefold, namely (1) household-level interviews conducted telephonically via the BMR's CATI facility, (2) face-to-face in-house interviews, and (3) key informant interviews conducted telephonically via the CATI system. The household sample (see table 1) consisted of the following two sub-samples:

- 571 households with landlines that were contacted via the BMR's CATI system; and
- 405 households in areas where limited amenities are available via face-to-face interviews.

**TABLE 1
SAMPLE SIZE BY PROVINCE**

Province	CATI		In-house		Total
	n	%	n	%	n
Eastern Cape	52	9.1	70	17.3	122
Free State	28	4.9	40	9.8	68
Gauteng	157	27.5	20	5.0	177
KwaZulu-Natal	80	14.0	35	8.6	115
Limpopo	49	8.6	70	17.3	119
Mpumalanga	21	3.7	60	14.8	81
North West	20	3.5	70	17.3	90
Northern Cape	66	11.6	20	5.0	86
Western Cape	98	17.2	20	5.0	118
Total	571	100.0	405	100	976

The distribution of key informant respondents by type of institution they represent is shown in table 2.

TABLE 2
DISTRIBUTION OF KEY INFORMANTS BY INSTITUTION

Institution	Frequency	Percentage
Municipality	18	31.0
Bank	9	15.5
Furniture store	9	15.5
Clothing store	9	15.5
Micro lender	9	15.5
Insurer	1	1.7
Credit bureau	2	3.4
Debt counselling organisation	1	1.7
Total	58	100.0

In addition to the household sample that was required to populate the CFV index, a sample of key informants was also constructed to obtain information regarding the financial situation of consumers from key informants who could be used for different purposes, namely:

- to explain the CFV findings derived from the household survey;
- 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 CFV in South Africa.

The sample of key informants drawn was as follows:

- municipalities : 2 per province
- banks : 1 per province
- furniture stores : 1 per province
- clothing stores : 1 per province
- micro-lenders : 1 per province
- cellular communications providers : 1 head office
- insurers : 1 head office
- credit bureaux : 2 head offices
- motor industry associations : 1 head office
- debt counsellors : 1 head office

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

The questionnaire consisted of three sections, namely Section A requiring respondents to describe the members of their household, Section B contained questions relating to the household financial status and 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:

- persons in the household;
- banking details;
- improvement in consumers' financial situation over the preceding 12 months;
- determining whether consumers' financial situation will be better or worse the following year;
- financial tools utilised during the preceding 12 months;
- attitudes and views on money;
- attitudes towards saving;
- saving tools utilised during the preceding 12 months;
- reasons for financial difficulties during the preceding 12 months; and
- respondent's biographical background.

As indicated above, an additional questionnaire was constructed for key informants to complete. This questionnaire consisted of two sections, namely consumers' financial situation and respondent details. In the first section, the focus was to determine whether key informants believed that consumers' financial situations improved during the preceding 12 months with respect to employment, income, debt servicing, access to credit, ability to save money, etc. The key informants were also asked to indicate the reasons that could possibly lead to consumers experiencing financial difficulties. In addition, key informants were asked to indicate in terms of

consumers' demographics (income, age, gender, population group) who they thought were the most financially vulnerable or the most financially secure in South Africa.

After populating the above-mentioned sub-indices and overall index, the validity and structural integrity of the sub-indices and overall index were determined by means of factor analysis. The factor loadings obtained were indicative of high levels of validity and structural integrity of the various sub-indices and overall index. The final overall index and sub-indices are based on 10-point scales where '0' is indicative of complete financial security by all consumers while '10' is indicative of complete financial vulnerability by all consumers.

The consumer financial vulnerability index data was captured onto an SPSS file and used to identify the predictors of the four components of the CFV Index, i.e Labour income, Savings/non-labour income, Consumption expenditure and Debt servicing, based on the following conceptual model:

$$(LI + S) - (C + DS) = R$$

where:

<i>LI</i>	= Labour income
<i>S</i>	= Savings/non-labour income
<i>C</i>	= Consumption expenditure
<i>DS</i>	= Debt servicing
<i>R</i>	= Residual

The research results obtained for the purposes of this paper 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 CFV index, i.e. income, savings, expenditure and debt. The results of these analyses are shown and discussed in the next section.

The method of regression analyses used was categorical regression due to the fact that the potential predictor variables ranged in nature from nominal to interval level, necessitating a form of regression that can incorporate predictor variables on a range of measurement levels. For the purposes of this study multiple categorical regression analyses were used to construct a path analysis consisting of different layers of predicting variables.

By means of the said regression analyses a number of diagnostic results were obtained, which were used to construct the said path analysis, 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;
- Durbin-Watson test for autocorrelation; 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;
- High-level F-scores of 1.1 or higher and low-level F-scores of 5 and higher;
- Partial regression contribution of higher than 8%; and
- Low autocorrelation.

The path analyses 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 one 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.

4. Results

4.1 Consumer financial vulnerability index scores obtained

Based on the abovementioned groups, the overall results (on the above-mentioned 10-point scale) of the various sub-indices and CFV index revealed that South African consumers are somewhat financially vulnerable or financially vulnerable when taking the following values of the various indices into account:

- consumer income vulnerability : 7.13 (financially vulnerable)
- consumer savings vulnerability : 7.05 (financially vulnerable)
- consumer expenditure vulnerability : 5.94 (somewhat financially vulnerable)
- consumer debt servicing vulnerability : 5.03 (somewhat financially vulnerable)
- consumer financial vulnerability : 6.13 (financially vulnerable)

(FinMark/BMR, 2009)

Through further analysis of the various sub-indices and overall index scores, the FinMark/BMR study reported that differential levels of vulnerability were experienced by:

- different income groups (large differences between the highest and lowest income groups were found with regard to the income, expenditure and saving sub-indices but not with regard to the debt servicing index);
- gender (it appears that females are more financially vulnerable than males with regard to income and savings);
- province (clear provincial differences with regard to financial vulnerability were identified);
- area (it appears that rural dwellers are the most financially vulnerable, especially with regard to income and savings);
- age (younger and older people were found to be especially vulnerable with respect to income and savings, with young people having increasing expenditure while income increases less rapidly, while older people experience a drop in income as they become older although their expenditure remains relatively the same);
- marital status (divorce or widowhood was found to be a strong predictor of CFV);
- population group (few differences with regard to financial vulnerability were found);
- educational status (consumers with higher levels of education were found to be less financially vulnerable);
- employment status (consumers employed full-time and those self-employed part-time who experienced the highest level of income security were found to be less financially vulnerable compared to people who were employed part-time, self-employed full-time, the unemployed and those who are not economically active);
- source of income (consumers receiving social grants were the most financially vulnerable in South Africa). (FinMark/BMR, 2009)

4.2 Regression results pertaining to predictors of overall CFV index

It appears from the regression analyses conducted that the four sub-indices succeeded in predicting 95.1% of the variance in consumer financial vulnerability. As reflected in table 3 and supported by figure 5, the regression analyses succeeded in predicting consumer financial vulnerability accurately by making use of the income, savings, expenditure and debt indices at a 100% level of certainty. It can also be seen 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 a high level of accuracy with which the various indices predict consumer financial vulnerability.

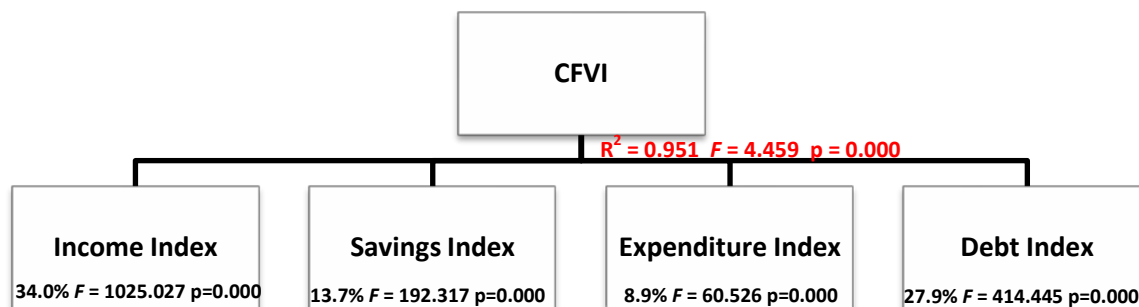
TABLE 3
RESULTS OF THE OVERALL CONSUMER FINANCIAL VULNERABILITY INDEX

Coefficient of determination (R^2)	0.951
F-ratio	4.459
Significant value of F	0.000

A breakdown of the percentage contribution of each of the independent indices in predicting CFV is as follows (see figure 5):

- Income index: 34%
- Savings index: 14%
- Expenditure index: 9%
- Debt index: 28%

FIGURE 5
OVERALL CONSUMER FINANCIAL VULNERABILITY INDEX



Factors such as the high levels of poverty in South Africa and the high unemployment rate could be possible explanations for the strong relationship shown in figure 5 between the income vulnerability sub-index and the CFV index. High consumer price inflation rates regarding necessities (such as food, utilities and housing) give rise to the expenditure index being a strong predictor of CFV. Furthermore, high interest rates associated with rapid growth in unsecured debt and debt-to-income ratios resulting in high debt servicing vulnerability, give rise to the debt servicing index being a strong predictor of CFV. Finally, low levels of savings result in consumers actually dis-saving, resulting in high savings vulnerability. Not having enough savings, especially at retirement, could give lead to an increase in income vulnerability. The various sub-indices are inter-related and should not be seen in isolation, as the circumstances regarding one index could have a domino effect on the others. A further example of the inter-relationship between the various indices is a household that has a large income (thus not vulnerable regarding the income index), but low or no savings (thus high level of vulnerability regarding the savings index), high living standards (i.e. high levels of consumer expenditure – high vulnerability regarding the expenditure index) and high levels of debt (high debt servicing vulnerability), resulting in it being overall financially vulnerable.

Personal Finance (2010:8-21) confirms that income, savings, expenditure and debt servicing are the major predictors of CFV by showing the 10 most common errors consumers make regarding their personal financial management that could lead to an increase in their vulnerability:

- Not planning for the unexpected – according to Personal Finance, most South African's die before the age of 50 and seldom have sufficient life assurance to enable dependants to maintain their standard of living. Life assurance is essential since there is usually no or very little savings to compensate for the loss of income due to the death or disability of a family member;
- Not having short-term insurance – numerous motor vehicles on South African roads are not covered by short-terms insurance. Should the drivers of these vehicles be involved in an accident, the lack of short-term insurance could lead to financial ruin.
- Not belonging to a medical aid scheme – many consumers prefer self-assurance regarding their medical costs, but this could be inadequate in the event of severe/serious medical emergencies;

- Not saving – various sources confirm that South Africans generally have a low savings rate, which may result in insufficient retirement funds. In the light of higher levels of population ageing, the need for adequate retirement provision is essential;
- Inadequate budgeting – the lack of proper budgeting could result in consumers not saving enough and not managing their debt;
- Living off credit – consumers make use of credit facilities to finance their consumption as well as their perceived living standard (enabling them to “keep up with the Joneses”). Such bad financial management could increase financial vulnerability in several ways: should interest rates increase, it will be necessary to pay more to service debts, or, in the event of job losses debts will need to be repaid when there is no source of income;
- Not managing credit or store card debt – this is mentioned as the main reason consumers experience financial hardship. Too much credit and store card debt makes it difficult to make ends meet;
- Not reading loan agreements carefully – one of the main purposes of the National Credit Act is to ensure that consumers are protected from loan sharks. However, it is the responsibility of consumers to ensure that they have read and understand all the clauses of their credit agreements;
- Not following basic rules of investing – good financial management practices such as not investing all your money in the same asset, calculating the risks associated with investments, not being too conservative, not making emotional decisions, being alert to commission-driven products, knowing what the costs of the investment are, not taking the time or effort to determine the validity of investment plans, etc; and
- Not planning for a long life – due to factors such as longevity and inflation, consumers are underestimating the funds they will require at retirement and thus become financially vulnerable at a time when they should be free of debt with adequate income.

The results in table 4 show that each sub-index is successfully predicted by other CFV variables, i.e:

- 98.4% of the variance in the income sub-index is predicted by 3 CFV variables (see figure 6);
- 99.8% of the variance in the savings sub-index is predicted by 3 CFV variables (see figure 6);
- 94.2% of the variance in the consumption expenditure sub-index is predicted by 2 CFV variables (see figure 6); and

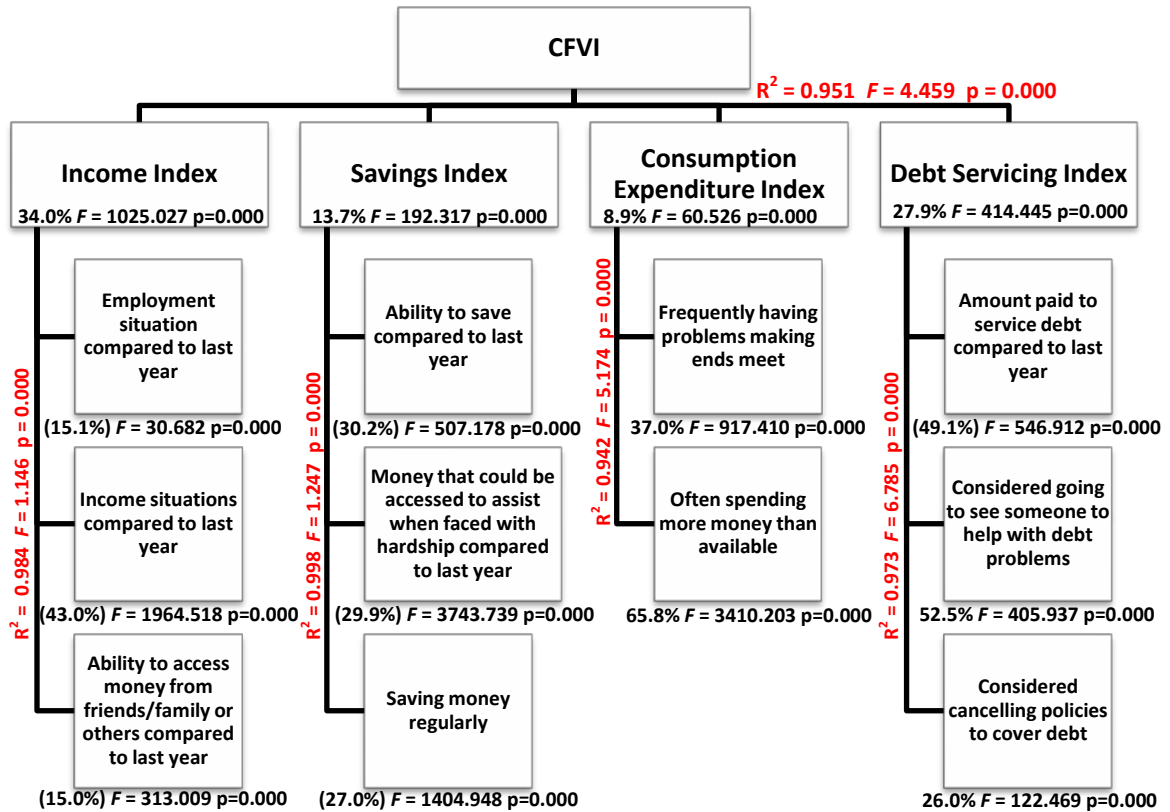
- 97.3% of the variance in the debt servicing sub-index is predicted by 3 CFV variables (see figure 6).

TABLE 4
RESULTS OF THE FOUR SUB-INDICES

Index	Coefficient of determination (R²)	F-ratio	Significant value of F	Part correlations
Income Index	0.984	1.146	0.000	0.340
Savings Index	0.998	1.247	0.000	0.137
Consumption expenditure Index	0.942	5.174	0.000	0.089
Debt servicing Index	0.973	6.785	0.000	0.279

As can be seen from figure 6, the regression analyses succeeded in predicting four sub-indices by identifying three variables as predictors for the income sub-index, three predictors of the savings sub-index, two predictors of the consumption expenditure sub-index and three predictors of the debt servicing sub-index.

**FIGURE 6
PREDICTORS OF THE FOUR SUB-INDICES**



It is evident from figure 6 that the main predictors of the income sub-index are employment (15% of variance in income-index), income (43%) and the ability to access money from friends or family (15%), which, combined, successfully predicted 98.4% of the income sub-index. The implication of this is that income vulnerability is less impacted on by employment than would have been expected, but to a larger extent by the ability of households to obtain income from a wide variety of sources. A more detailed breakdown of the drivers of income vulnerability will be provided in section 4.2.

Turning to savings, figure 6 illustrates that the main predictors of the savings sub-index are the ability to save (30% of variance in savings-index), money that could be accessed when facing hardship (30%) and saving money regularly (27%). This implies that the three variables identified have a similar impact on the savings index (approximately a third each) and sound financial management principles of not only having the ability to save, but actually saving on a

regular basis cannot be underestimated. A more detailed breakdown of the drivers of the savings vulnerability will be provided in section 4.3.

Figure 6 reflects the two main predictors of the expenditure sub-index as frequently having problems making ends meet (37% of variance in consumption expenditure-index), and often spending more money than available (66%). These results are in line with what was reported by Personal Finance (see section 4.2) as being amongst the most common errors made by consumers when managing their finances. A more detailed breakdown of the drivers of the consumption expenditure vulnerability will be provided in section 4.4.

With regard to the debt servicing index three main predictors were identified (see figure 6), namely the amount paid for debt servicing (49% of variance in debt servicing-index), contemplating going to see someone to help with debt problems (52%) and considering cancelling policies to cover debt (26%). The amount of debt servicing had a strong impact on the level of consumer financial vulnerability debt as illustrated by the exposure to debt increasing enormously over the past few years as reflected by SARB figures, namely the debt-to-income ratio in South Africa increased from around 57% in 2004 to 79.8% by June 2009 (DTI, 2010 & SARB, 2009). In their attempts to address this bigger exposure to debt, consumers are exploring coping mechanisms such as debt counselling to assist them and thereby reduce their level of debt servicing vulnerability. Cancelling insurance policies is also being explored by consumers in an attempt to address their vulnerability. A more detailed breakdown of the drivers of the debt servicing vulnerability will be provided in section 4.5.

4.3 Income index

In explaining the predictors of the income sub-index shown in figure 6, it is important to note that, the BMR's income and expenditure database shows that during 2009 about 91% of adult consumers in rural areas earned R50 000 pa or less, compared to 72% of non-metro area urban consumers and 62% of metro area urban consumers (Coetzee, 2009). The FinMark/BMR study (2009) reported that differential levels of vulnerability were experienced by the different income groups. For example, the consumer financial vulnerability of consumers earning in excess of R8 000 pm was at 5.69 far lower than that of consumers earning less than R2 000 pm whose index score was 7.03.

The FinMark/BMR study (2009) reported that employment status was a strong predictor of CFV, especially for full-time employed and self-employed part-time consumers (who are often part of double-income households) who experience the highest levels of income security. High levels of income vulnerability were experienced by consumers who were employed part-time, self-employed full-time, unemployed and those who were not economically active. These groups were more exposed to the full impact of the economic recession, i.e. many business owners (self-employed full-time) experience firsthand the impact of contracting markets.

In addition, the FinMark/BMR (2009) study evaluated the effect of the source of income on the financial vulnerability of participants. It appears from the results of that analysis that consumers receiving social grants were the most financially vulnerable.

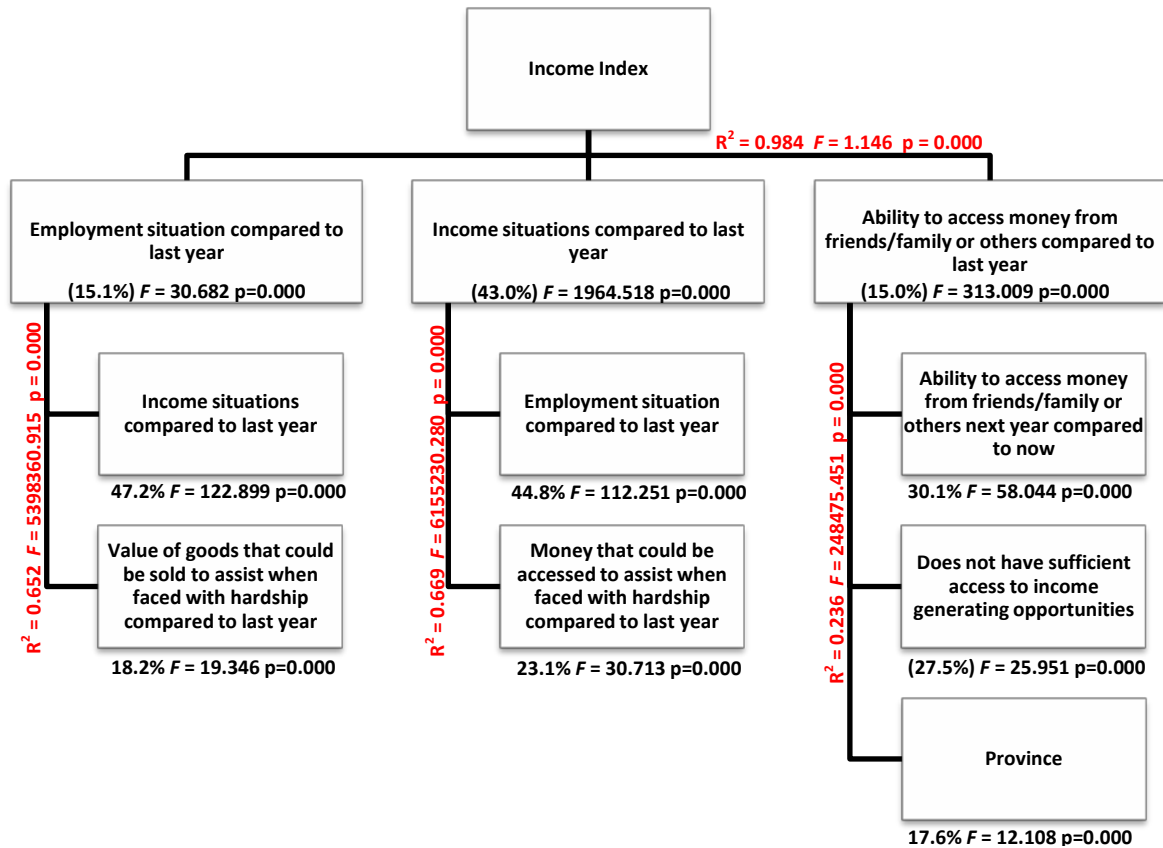
The Income-index contributed 34.0% (see figure 5) to the overall consumer financial vulnerability index and three statistically significant predictors of the income index were identified by means of regression analysis as shown in table 5.

TABLE 5
RESULTS OF THE INCOME INDEX

Variable	Coefficient of determination (R²)	F-ratio	Significant value of F	Part correlations
Employment situation compared to last year	0.652	5398360.915	0.000	(0.151)
Income situation compared to last year	0.669	6155230.280	0.000	(0.430)
Ability to access money from friends/family or others compared to last year	0.236	248475.451	0.000	(0.150)

A breakdown of the percentage contribution of each of the three variables is as follows (see figure 7):

FIGURE 7
INCOME INDEX



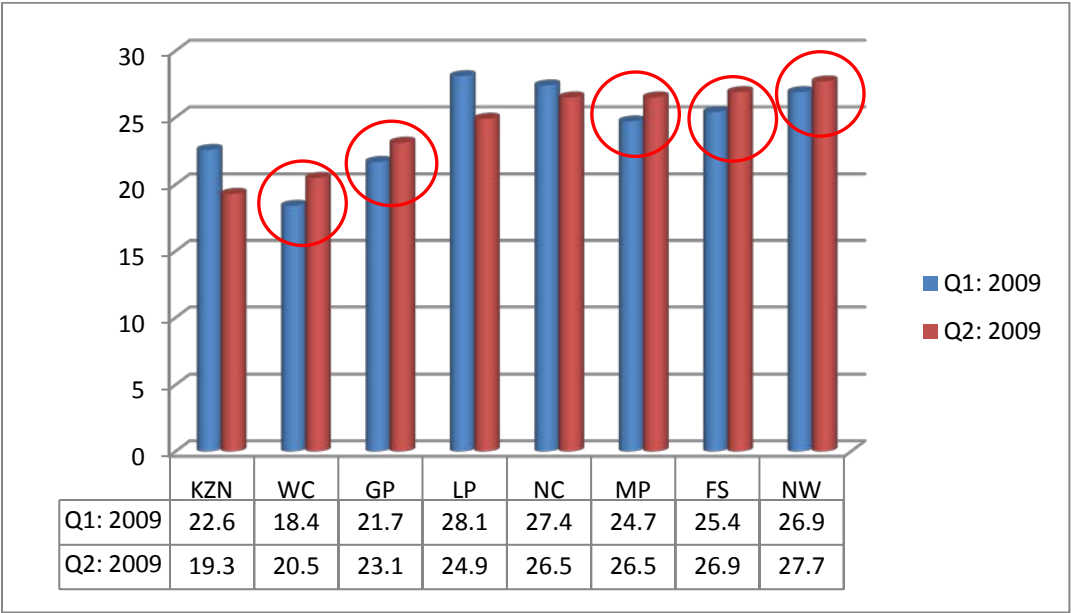
It is interesting to note from figure 7 that in contrast to many other countries, it would appear that the income situation (43%) and not employment (15%) of South African households is the main variable that influences income vulnerability. The employment situation of the household and its ability to access money from other non-employment sources such as friends or family, appears to have the same level of influence on its income vulnerability (both 15%).

The number of persons in the labour force in South Africa decreased by 325 000 in the second quarter of 2009 and 267 000 jobs were lost between the first and second quarters of 2009 with most of the job losses reported in the private household sector (StatsSA, 2009a). The bulk of the job losses occurred in Gauteng (28.7%), the Western Cape (25.1%) and KwaZulu-Natal (21.3%), increasing the income vulnerability of South Africans as these three provinces combined provide almost 65% of employment in South Africa (StatsSA, 2009a). This decline in jobs resulted in an increase in the number of people discouraged from finding a job (now being classified as not economically active and not unemployed). This phenomenon is also reflected

in figure 7 as it appears that consumers are beginning to rely on their ability to endure from survival activities as well as from money from friends or family as a source of income rather than employment itself.

In addition to the large number of job losses during the second quarter of 2009, the unemployment rate increased in five of the nine provinces of South Africa as reflected in figure 8. This supports the view illustrated in figure 7 that households are exploring other avenues as sources of income as employment is no longer guaranteed. This finding is confirmed by a comparison of the results of the 2002 and 2009 General Household Surveys, which show that salaries and wages as a source of household income stagnated proportionally during this period. According to available 2002 and 2007 Stats SA General Household Survey data, the number of households receiving social grants and pensions increased from 2 130 000 in 2002 to 6 325 000 in 2009, which is indicative that more and more households are becoming dependent on social grants as a source of income and not on actual employment (StatsSA 2003 & StatsSA 2008).

FIGURE 8
UNEMPLOYMENT RATE PER PROVINCE



(Source: StatsSA, Quarterly Labour Force Survey, Quarter 2, 2009)

It is also evident from figure 7 that consumer's views on their current financial situation are strongly influenced by their future financial expectations. Family financial transfers are the core of financial support for several households as being their only source of income. In many instances the main source of income for households is social grants and money being redistributed by other family members, for example, a grandparent raising the grandchildren while the parents are working at a different location. As more and more household members are unable to provide income, they realise that they can longer rely on a guaranteed source of income, which increases their financial vulnerability.

The households' income situation compared to the previous year, the employment situation as well as the ability to access money from friends, family or other sources were identified as the main drivers of the income vulnerability index. These drivers were influenced by the value of goods that households can sell when faced with financial difficulty and are obliged to obtain other sources of income.

4.4 Savings index

A common belief is that due to the high levels of poverty, South Africans are not able to save. This belief was proven partly wrong by the extensive study conducted by the Financial Diaries project, which researched the financial lives of the poor by interviewing households several times in the course of a year and documenting their financial activities. These researchers concluded that the poor were utilising several formal (such as bank accounts, pension and/or provident funds, insurance, funeral plans) and informal (such as stokvel/umgalelo, burial society, saving-in-house) financial products to assist in their day-to-day financial interactions. The only concern regarding several of these mechanisms was the incorrect use of some of the products, i.e. a savings account is used as a transaction account and therefore not for actual long-term savings. The savings habit is also more short-term focused to address specific needs such as education fees or Christmas gifts rather than long-term or for retirement. (Financial Diaries, 2007a)

Contrary to expectations, the Financial Diaries project also reported that rural households were using almost the same number of financial instruments as were urban households. However, the impact on rural areas necessitated financial management practices that were not necessarily the safest or most productive. Due to the lack of banking facilities, many households

keep their money at home, or if the money was deposited in a bank account a once-off withdrawal was made as it was not possible to have quick access to the funds in the event of an emergency. This practice also exposed the poor to high security risks as it may become common knowledge that certain amounts of cash were kept at households, leading to burglaries and theft and hard-earned money being lost (Financial Diaries, 2007a). Difficulties to save by consumers living in rural areas may be due to circumstances and not necessarily bad financial management, which may result in their being financially vulnerable.

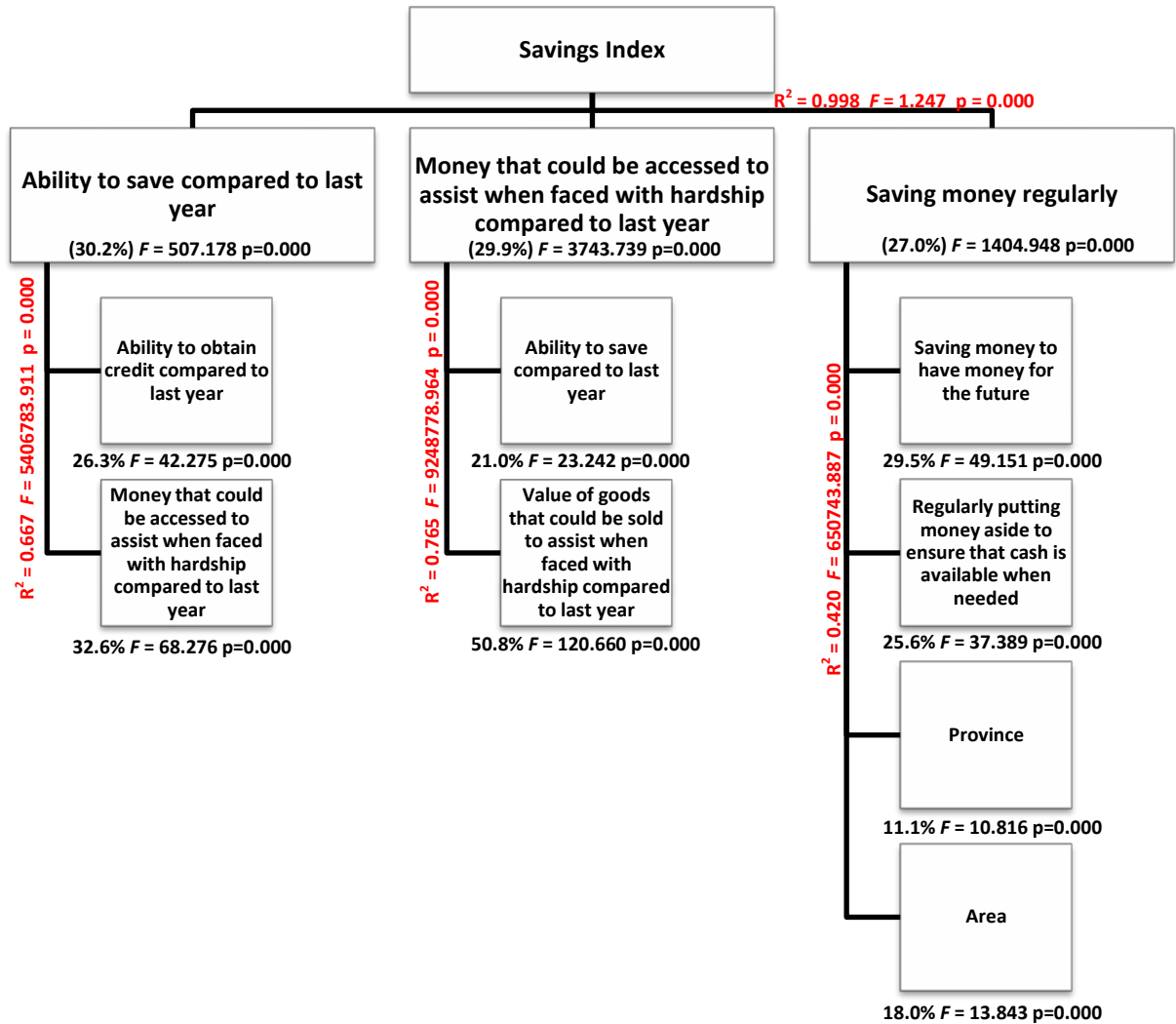
From the abovementioned discussion, it can be deduced that the reasons for some consumers not saving are not necessarily due to bad financial management but as a result of other factors such as a lack of access to formal saving instruments. It was important, however, for this study to determine what the predictors of CFV relative to saving are as the Savings-index contributed 13.7% (refer figure 5) of the overall consumer financial vulnerability index. Three predictors of the savings index were identified as reflected in table 6.

TABLE 6
RESULTS OF THE SAVINGS INDEX

Variable	Coefficient of determination (R²)	F-ratio	Significant value of F	Part correlations
Ability to save compared to previous year	0.667	5406783.911	0.000	(0.302)
Money that could be accessed to assist when faced with hardship compared to previous year	0.765	9248778.964	0.000	(0.299)
Saving money regularly	0.420	650743.887	0.000	(0.270)

Three variables with similar importance were identified as being the main drivers of the savings index (see figure 9), namely the ability to save compared to the previous year (30.2%), money that could be accessed to assist when faced with hardship (29.9%) and saving money regularly (27.0%). The results shown in table 6 indicate that savings vulnerability is determined by short-term (money that could be accessed during emergencies), medium-term (current ability to save) and long-term (saving money regularly) factors. In a research project focusing on savings conducted by the BMR during 2009, it was shown that saving money regularly is especially important with respect to retirement savings while the bulk of consumers do not save for emergencies. Should an emergency arise retirement savings are used, thus negatively impacting on retirement security (BMR 2010).

**FIGURE 9
SAVINGS INDEX**



As discussed, low income earners (as reported by the Financial Diaries researchers) are saving for short term goals and not actually for retirement or unforeseen circumstances such as illness, disability or loss of income (Financial Diaries, 2007c). In the FinMark/BMR study (2009) respondents were probed regarding their reason for not saving, which elicited responses such as that they were struggling to make ends meet or did not have sufficient money to save. With a poverty rate of about 47% (SAIRR, 2007) there may be good reason for respondents feeling this way as short-term saving is not regarded as actual saving (resulting in wealth creation) but as survival.

According to SARB (2009), the *national savings ratio* or gross saving as a percentage of gross domestic product increased slightly from 15.0 % in the third quarter of 2008 to 16.5 % in the second quarter of 2009. This improvement can largely be attributed to consumers spending less in real terms as they learnt to survive on available funds. Consumers' ability to obtain credit was also impacted on by the strict enforcement by financial institutions of the Credit Act, making it difficult for consumers to access credit. This can be seen from the decrease of credit-active consumers in good standing from 10.15 million in the first quarter in 2009, to 9.94 million in the second quarter in 2009 (NCR, 2009a).

The rate of household saving as a percentage of their disposable income (-0.6) for the second quarter of 2009 reflects that they were spending more than their disposable income, thus preventing them from saving. Households realised that they would have to drop their standard of living to survive and explore other avenues of financial aid. The value of goods that could be sold to assist households in difficult financial times was one such possibility. This is supported by the Association for Savings and Investment South Africa (ASISA, 2010), which reported that in 2009 a total of 5.2 million policies lapsed (3 million first year policies and 2.2 million policies in their second year). The value of the policies that lapsed in their first year was R2.9 billion and those in their second year amounted to R3.3 billion. Households having less money to save are also reflected in the decrease in real growth in bank deposits by households, namely 0.6% in the second quarter of 2009 as reported by SARB (SARB, 2009a).

The ability to save money regularly is dependent on earning an income that allows the consumer to have excess money after essential expenditure. Having sufficient income could be severely hampered by employment opportunities in the province of residence as only two of the nine provinces in South Africa experienced an increase in the labour force participation rate for the second quarter of 2009 (see table 7):

TABLE 7
LABOUR FORCE PARTICIPATION RATE

Province	Jan – Mar 2009	Apr – Jun 2009	Qrt to Qrt change
Western Cape	69.1	68.3	-0.8
Eastern Cape	46.0	46.9	0.9
Northern Cape	54.2	54.5	0.3
Free State	58.5	56.7	-1.8
KwaZulu-Natal	51.2	47.8	-3.4
North West	55.6	53.8	-1.8
Gauteng	72.2	71.9	-0.3
Mpumalanga	56.4	55.2	-1.2
Limpopo	40.7	38.8	-1.9

(Source: StatsSA, Quarterly Labour Force Survey, Quarter 2, 2009)

In conclusion, the ability to save, the availability of money that can be accessed in financial difficulties and saving money on a regular basis are the leading factors that influence CFV with regard to saving. These factors, in turn are influenced by the ability to obtain credit, other sources of income (money or goods that can be sold), having aside money for emergencies, the province of residence of a consumer, as well as the area. All these variables are subject to various macro- and microeconomic variables that have demonstrated high levels of volatility during the period Q3 2008 to Q2 2009 making households even more financially vulnerable.

4.5 Expenditure index

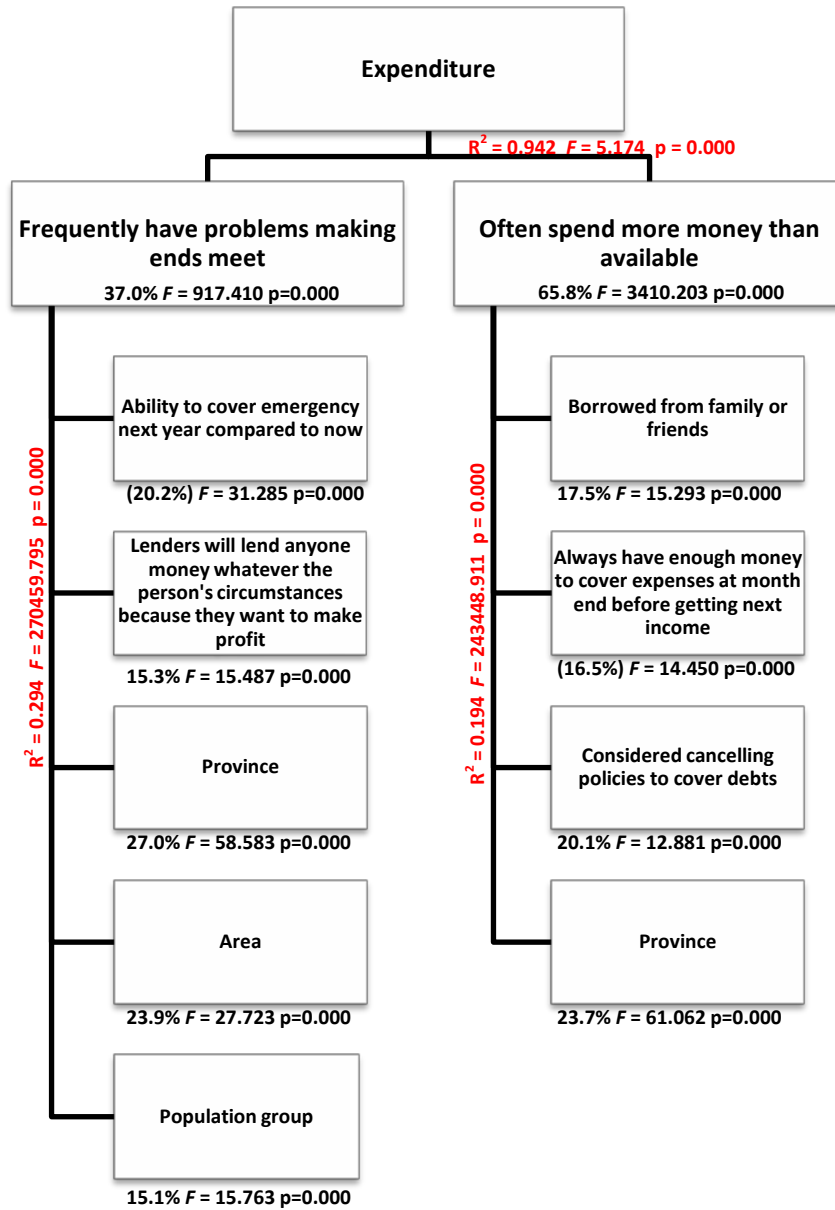
The Expenditure-index contributed 8.9% (see figure 5) to the overall consumer financial vulnerability index and two predictors of this index were identified. The two variables were further regressed to determine the construct path, the results of which are reflected in table 8.

TABLE 8
RESULTS OF THE EXPENDITURE INDEX

Variable	Coefficient of determination (R ²)	F-ratio	Significant value of F	Part correlations
Frequently have problems making ends meet	0.294	270459.795	0.000	0.370
Often have to spend more money than is available	0.194	243448.911	0.000	0.658

A breakdown of the percentage contribution of each of the two variables in predicting the expenditure index is illustrated in figure 10, which shows that spending more money than what is available was the biggest contributor (65.8%) to the expenditure index, followed by not being able to make ends meet (37.0%).

**FIGURE 10
EXPENDITURE INDEX**



As discussed in the savings index, the Financial Diaries researchers reported on households saving for short-term needs but not being prepared for unexpected expenditure, which has a severe impact on very poor households. Households are often obliged to contribute to out-of-household funeral expenditure, traditional feasts, assisting others who have no income, as well as for weddings and births of friends or family. Such unexpected expenditure is then funded from the household's own limited funds, which then often forces the household to obtain the required funds from other external sources such as loans or other forms of credit (Financial Diaries, 2007a). Such a situation could have a detrimental effect on the household taking into account that the source of income for most of these households is also under severe pressure and could increase the households' income, saving, expenditure and debt servicing vulnerability.

Aspects of the financial situation of consumers that appear to have deteriorated particularly during the second quarter of 2009, were the ability of consumers to stick to their budgets, their ability to save and their ability to manage their financial situation. This finding is confirmed by statistics provided by SARB (2009) showing that household consumption expenditure on nondurable goods (including foodstuffs) declined by 12.2 % during the first quarter of 2009, indicating that the financial situations of households have deteriorated to such an extent that households are even cutting back on foodstuffs. The decline in expenditure can also be attributed to the large number of job losses (refer to the income index) resulting in consumers having to tighten their belts to survive.

Furthermore, consumers are not only having to save on food but are also restricting other expenses as reflected by the 4.5% decline in new vehicle sales between June and July 2009. Real retail trade sales contracted at a seasonally adjusted rate of 3.6 % in the second quarter of 2009 compared with the first quarter. On a year-on-year basis, retail sales declined by 6.7 % in June (SARB, 2009).

Another factor identified as having an effect on the financial vulnerability regarding expenditure, is the effect of the sub-prime crisis as reflected in consumers' perceptions that lenders are profit-driven and do not necessarily have the consumer's best interests at heart. The responsibility of sound financial management and ensuring the correct use of credit remains the core of the problem as consumers are not all adequately financially literate to make the correct financial decisions.

4.6 Debt servicing index

The researchers from the Financial Diaries studies also reviewed the debt servicing practices of the poor in South Africa. They concluded that households in urban and peri-urban areas were more inclined to formal debt while households in rural areas tended to use more informal debt. What is reassuring to note is that the researchers observed that the majority of the poor households in their study were not over-indebted, although high levels of indebtedness were prevalent among medium- and high-income households in urban areas compared to over-indebtedness amongst all income groups in rural areas (Financial Diaries, 2007b).

The FinMark/BMR (2009) study reported on the top 10 reasons believed by key informants as causing financial vulnerability (see table 9). The most important reason identified by the study is the fact that consumers are over-indebted, followed by the fact that consumers spend more than they earn, and bad financial planning.

TABLE 9
KEY INFORMANTS: TOP 10 REASONS FOR FINANCIAL VULNERABILITY

Reason	Percentage consensus
Too much debt	63.8
Spending more than they earn	60.3
Bad financial planning	46.6
Low income	43.1
Not having sufficient savings to draw on	43.1
Carrying debts of partner/spouse/family/friends	41.4
Adverse economic conditions	41.4
Unforeseen necessary expenses	39.7
Drop in income	39.7
Job loss	36.2

(Source: FinMark/BMR, 2009)

The FinMark/BMR study (2009) confirmed that consumer debt servicing vulnerability was the highest in non-metro urban areas where indebtedness levels comparable to the metro areas were found.

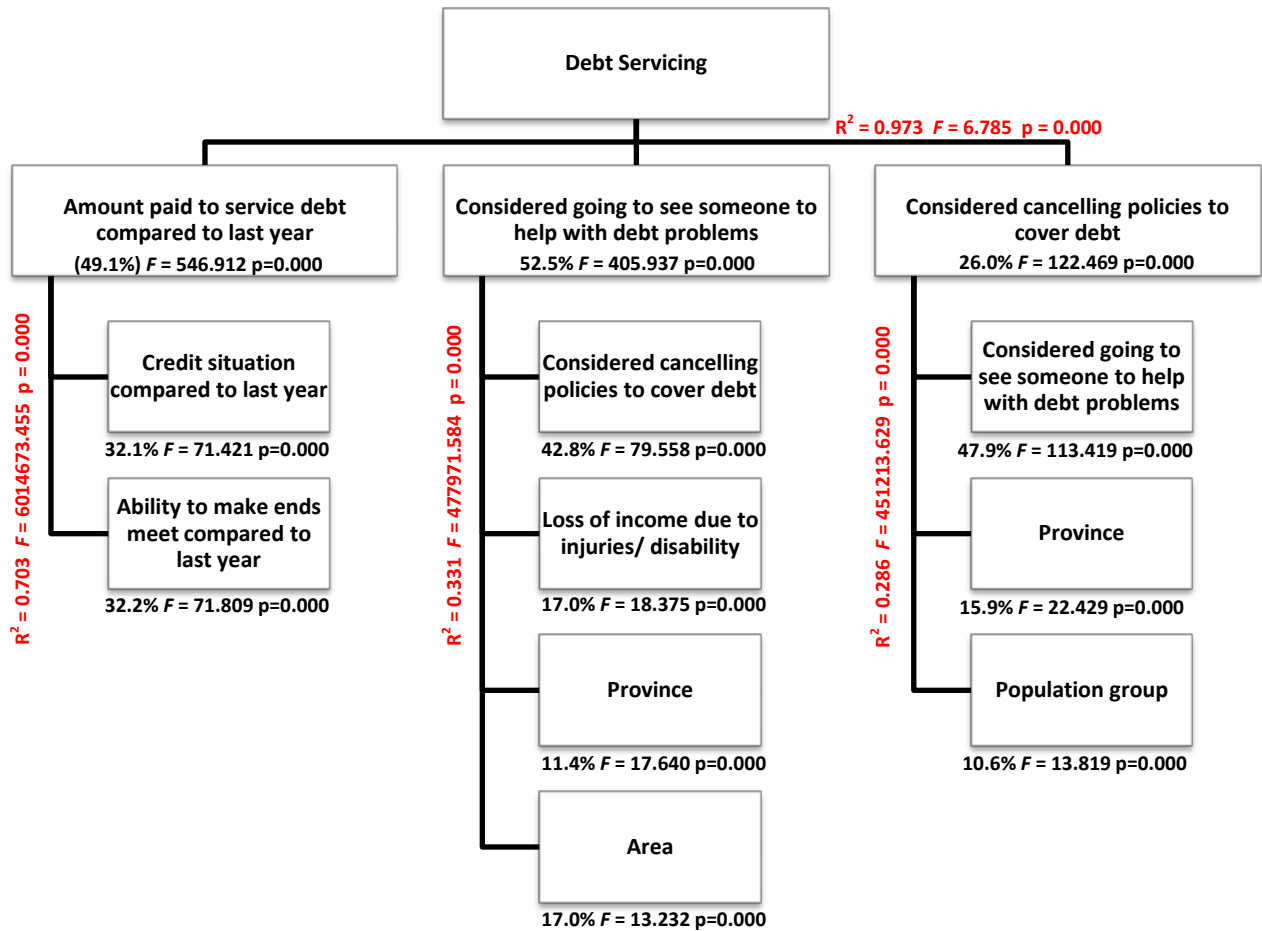
As the debt servicing index is the second largest contributor to the overall consumer financial vulnerability index, i.e. 27.9% (refer figure 5) it is important to understand the underlying drivers of this index. Should these issues be addressed in advance, it may assist consumers in better managing their finances and not becoming deeply over-indebted. Three predictors of the expenditure index were identified, namely the amount of debt servicing compared to the previous year (49.1%), contemplating debt counselling (52.5%) and considering cancelling policies to cover debt (26.0%). These three variables were further regressed to determine the construct path and the results are reflected in table 9.

**TABLE 9
RESULTS OF THE DEBT SERVICING INDEX**

Variable	Coefficient of determination (R²)	F-ratio	Significant value of F	Part correlations
The amount paid to service debt compared to previous year	0.703	6014673.455	0.000	(0.491)
Considered going to see someone to help with debt problems	0.331	477971.584	0.000	0.525
Considered cancelling policies to cover debts	0.286	451213.629	0.000	0.260

A breakdown of the underlying drivers of each of the three variables predicting the debt servicing index is reflected in figure 11:

FIGURE 11
DEBT SERVICING INDEX



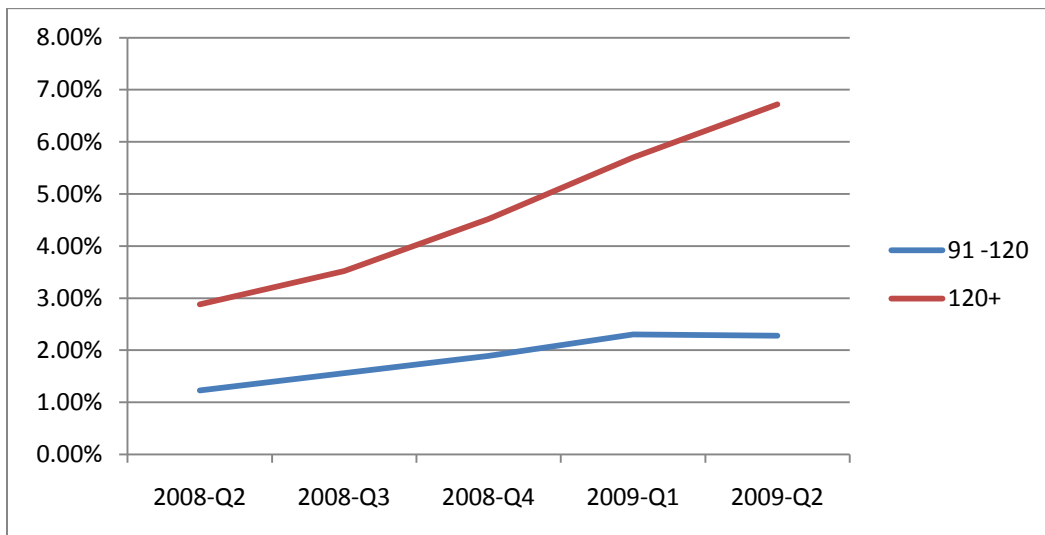
It appears from figure 11 that the ability of consumers to service their debt is dependent on their current credit situation as well as their ability to make ends meet. This finding shows that should consumers be experiencing expenditure constraints due to not being able to access additional credit or not having sufficient income to obtain necessities, they tend to cut back on debt repayments.

The predictor of consumers seeking help with debt problems was also investigated as can be seen in figure 11. The predictors in this regard indicate that consumers tend to seek advice when they are in a desperate situation due to loss of income or when they have reached the situation where they consider cancelling policies to make ends meet.

The amount of debt servicing has a severe impact on the level of CFV as demonstrated by the fact that the debt servicing to household disposable income ratio increased from about 6.5% in 2005 to about 10% by mid-2009 (StatsSA, 2010). During the period 2007 to 2009 the percentage of credit active consumers with impaired records increased from 34.6% to 44.1% (NCR, 2010).

The tendency of being unable to make ends meet is also reflected in figure 12, which was derived from information provided by the National Credit Regulator (2009) as the number of accounts 120 and older increased from 3.81% in 2008 to 6.72% in 2009.

FIGURE 12
AGE ANALYSIS OF DEBTORS BOOK (90+)

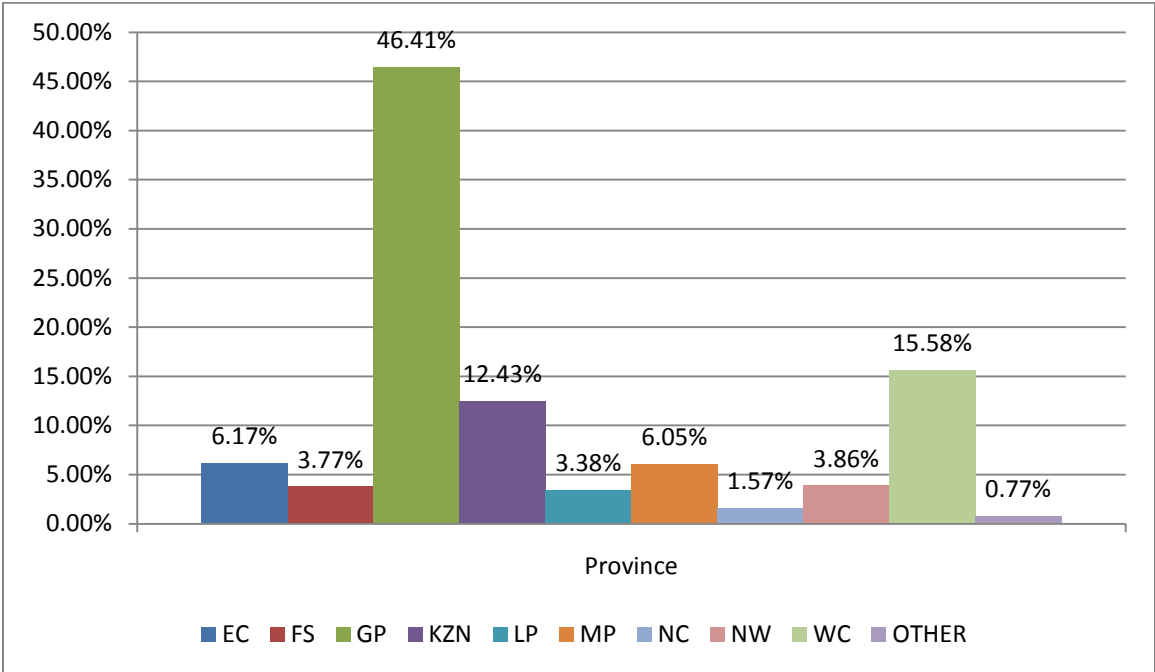


(Source: Compiled from statistics provided by the NCR, 2009)

With the introduction of the National Credit Act, the support to over-indebted consumers was a main priority for the NCR and according to statistics from them 160 000 consumers had applied for debt counselling since the implementation of the Act, with an average of 7 500 new applications per month (NCR, 2010). Consumers are acknowledging that they are not capable of coping with their current financial situation and are seeking assistance in this regard. Taking into account, however, that only 160 000 consumers have applied, a lot still needs to be done in making consumers aware of available assistance.

Taking into account that the most jobs were lost in Gauteng, the Western Cape and KwaZulu-Natal during the second quarter of 2009 (StatsSA, 2009) it is alarming to note from figure 13 that R20.67 billion (46.41%) of the total disbursements for credit transactions of R44.54 billion in 2009-Q2 was to borrowers in Gauteng. The second largest share of credit granted went to the Western Cape with R6.94 billion (15.58%) while KwaZulu-Natal received R5.53 billion (12.43%) of credit transactions granted. This supports the view that consumers are funding their living expenses by incurring debt.

FIGURE 13
PROVINCIAL DISTRIBUTION OF CREDIT TRANSACTIONS GRANTED, Q2 2009



As a result of the implementation of the National Credit Act obtaining credit has become far more difficult for consumers and has had a direct impact on their ability to make ends meet. This necessitated consumers to seek advice in managing their financial problems, negotiate extended debt servicing periods as well as consider cancelling policies to cover debt.

5. OVERVIEW AND CONCLUDING REMARKS

The results of this study clearly show that there are a number of variables in the financial microstructure that are strong predictors of the level of consumer financial vulnerability among South Africans. Furthermore, the results are also confirmed by various other data sources including StatsSA, the South African Reserve Bank, the National Credit Regulator, the South Africa Savings Institute and FinMark Trust.

What is firstly clear with regard to the predictors of consumer financial vulnerability is that the various variables:

- conjointly impact on CFV;
- enhance or deepen one another in their impacts on CFV;
- are interlinked with a number of feedback loops and spurious variables ensuring high levels of multiplier effects between predicting variables. However, it should be noted that being interlinked does not necessarily imply high levels of autocorrelation or co-integration as shown in this study;
- differentially impact on the CFV in different provinces, age groups, income groups and skills levels.

The major predictors of CFV in South Africa appear to be (1) high levels of unemployment, (2) high poverty rates, (3) high debt and debt servicing ratios, (4) low savings rates, (5) bad financial planning due to low financial literacy, (6) cancelling policies to cover debts, (7) consumers living beyond their means and (8) a breakdown of inter-household and community-level health transfer mechanisms.

Based on the results of this study the question arises regarding what needs to be done to address the high levels of financial vulnerability experienced by consumers. It appears from this study that South African consumers are generally financially vulnerable brought about by high poverty rates, income inequalities, slow job creation growth, job losses, low savings, expenditure outstripping income on a regular basis, too much debt and high debt servicing burdens. Although macroeconomic policy measures to address financial vulnerability were mostly focusing on increasing income via job creation and higher levels of economic growth, a variety of microeconomic policy measures are required to address high levels of financial vulnerability in South Africa. Such measures include:

- ensuring free education to all learners up to grade 12 (35.7% of school age youth are not at school due to insufficient funds);
- mass-based financial literacy programmes;
- liberalising the labour market to ensure higher elasticity between GDP growth, employment growth and income growth;
- changing the tax regime to encourage savings, i.e. by removing tax on savings returns;
- restructuring the social wage system in South Africa to ensure that recipients become more financially secure instead of financially vulnerable;
- institutionalising a broad-based debt counselling and debt management system;
- ensuring that municipalities become a reliable, effective and efficient wealth transfer mechanism in South Africa; and
- ensuring that a broad-based CFV intelligence system is implemented.

6. REFERENCES

- Association for Savings and Investment South Africa. 2010. *SA life industry shows clean bill of health - Media release 4 March 2010*. Retrieved May 14, 2010, from Association for Savings and Investment South Africa: www.asisa.org.za
- Coetzee, M. 2009. BMR income and expenditure database (Electronic database).
- Department of Trade and Industry. 2010. Household debt to disposable income of households at current prices. Seasonally adjusted - March 1969 to December 2009.
- Disney, R. B. 2008. *Drivers of over-indebtedness*. Nottingham: Centre for Policy evaluation, University of Nottingham.
- DTI, see Department of Trade and Industry.
- ECRI, see European Credit Research Institute.
- European Credit Research Institute. 2008a. *European trends in consumer financial vulnerability*. ECRI and the PFRC.
- European Credit Research Institute. 2008b. *CFV Technical Report*. ECRI and the PFRC.
- European Credit Research Institute. 2008c. *The Genworth Index - Volume 1 - June 2008*. ECRI and the PFRC.
- European Credit Research Institute. 2008d. *The Genworth Index - Volume 2 - November 2008*. ECRI and the PFRC.
- Financial Diaries. 2007a. *Debt and household finance*. Centre for Social Science Research.
- Financial Diaries. 2007b. *Findings in Brief*. Centre for Social Science Research (CSSR).
- Financial Diaries. 2007c. *Grant recipient households - how do they manage their money?* Centre for Social Science Research.
- FinMark Trust & Bureau for Market Research. 2009. A consumer financial vulnerability (CFV) index for South Africa. Midrand: FinMark
- National Credit Regulator. 2009. *Credit bureau monitor, Second quarter / June 2009*. Midrand: NCR.
- National Credit Regulators. 2010. *NCR Task Team on Debt Counselling*. Midrand: NCR.
- NCR see National Credit Regulator.
- Personal Finance. 2010. 10 worst financial mistake you can make. *Personal Finance*, Vol 43, pp8-21.
- PFRC see Personal Finance Research Centre.
- SAIRR see South African Institute for Race Relations.
- SARB see South African Reserve Bank.

South African Institute for Race Relations. 2007. *South African survey online: Business and employment*. Johannesburg: SAIRR.

South African Reserve Bank. 2009. *Quarterly bulletin, September 2009*. Pretoria: SARB.

Statistics South Africa. 2003. *General Household Survey, 2003*. Pretoria: StatsSA.

Statistics South Africa. 2007. *Statistics of liquidations and insolvencies - July 2007*. Pretoria: StatsSA.

Statistics South Africa. 2008. *General Household Survey, 2007*. Pretoria: StatsSA.

Statistics South Africa. 2009. *Quarterly employment statistics (QES), March 2009*. Pretoria: Stats SA.

Statistics South Africa. 2009. *Quarterly Labour Force Survey, Quarter 2, 2009*. Pretoria: Stats SA.

Statistics South Africa. 2010. *Statistics of liquidations and insolvencies - March 2010*. Pretoria: StatsSa.