

**THE CHANGING NEEDS OF A HOUSEHOLD'S DEMAND
FOR LIABILITIES OVER THE LIFE COURSE:
FOCUSED ON YOUNG ADULTS**

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Declaration

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I declare that **THE CHANGING NEEDS OF A HOUSEHOLD'S DEMAND FOR LIABILITIES OVER THE LIFE COURSE: FOCUSED ON YOUNG ADULTS** is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

SIGNATURE

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Abstract

South Africans carry high debt levels and many deal with the threat of over-indebtedness. In particular, the debt situation of the youth is of utmost concern. This study was undertaken to gain an understanding of how the liability usage of households fluctuates over the life course. The main objective was to identify and describe how debt is accumulated by young South Africans and how household characteristics and events may be related to the uptake of household liabilities.

This study conducted a comprehensive literature review culminating with the development of a heuristic model that identified variables that may affect household debt uptake. Quantitative statistical analysis techniques were employed on secondary data acquired from the South African Audience Research Foundation's All Media and Products Survey for the years 1999 until 2013.

The findings identified that household debt follows a familiar life cycle pattern. A number of independent variables were shown to affect household debt uptake. Furthermore, certain of these variables are related to the trajectories of the life course.

Key words

- Debt product uptake
- Frameworks for understanding consumption behaviour
- Household debt
- Household debt indicators
- Liabilities
- Life course
- Life stages
- Unsecured debt
- Variables affecting debt uptake
- Youth

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List of abbreviations and acronyms

AMPS	All Media and Products Survey
ATM	Automated teller machine
BASA	Banking Association of South Africa
BMR	Bureau of Market Research
CFVI	Consumer Financial Vulnerability Index
DTI	Department of Trade and Industry
EC	European Commission
FSB	Financial Services Board
GDP	Gross domestic product
HFCS	Household Finance and Consumption Survey
HSRC	Human Sciences Research Council
IASB	International Accounting Standards Board
IFRS	International Financial Reporting Standards
IMF	International Monetary Fund
LCH	Life cycle hypothesis
MAMCA	Media and Marketing Collection Agency
MBD/BMR	MBD Credit Solutions/Bureau of Market Research
NCR	National Credit Regulator
NDP	National Development Plan
NPC	National Planning Commission
NYDA	National Youth Development Agency
OECD	Organisation for Economic Co-operation and Development
OHMSA	Out of Home Media South Africa
PDMSA	Print and Digital Media South Africa
PFRU	Personal Finance Research Unit

PIH	Permanent income hypothesis
REPIH	Rational expectations permanent income hypothesis
SAARF AMPS	South African Audience Research Foundation's All Media and Products Survey
SAARF	South African Audience Research Foundation
SAICA	South African Institute of Chartered Accountants
SAMRA	South African Market Research Association
SARB	South African Reserve Bank
SCF	Survey of Consumer Finance
SNA	System of National Accounts
SPSS	Statistical Package for the Social Sciences
Stats SA	Statistics South Africa
UK	United Kingdom
UN	United Nations
UNISA	University of South Africa
WBG	World Bank Group

CHAPTER 1

INTRODUCTION

1.1. BACKGROUND INFORMATION

“Youth is in danger until it learns to look upon debts as furies”

– Edward G. Bulwer-Lytton (Inspirational quotes, words, sayings, 2015)

Household debt is an area of research that holds great interest for researchers across the globe. The financial difficulties that are endured by many households in South Africa, as well as the rest of the world, are constantly in the spotlight. One only has to watch the daily news to be reminded that the youth in particular are facing extreme financial hardship by taking on too much unsustainable debt. This was at the forefront of the student protests in 2015 at the majority of the universities throughout the country. The students demanded that there should be no increment to university fees for 2016 as they are already unable to afford their fees. Thus, due to outstanding balances on their accounts, the affected students would not be able to obtain their results and consequently be unable to progress with their studies.

South Africa has experienced an increase in the number of people making use of credit and, according to the National Credit Regulator, statistics illustrate that there were 22.84 million credit-active consumers for the fourth quarter in 2014 (NCR, 2014b). According to the Consumer Credit Market Report issued by the National Credit Regulator, the total outstanding consumer debt for the fourth quarter of 2014 was R1.59 trillion (NCR, 2014c). This debt is made up of the following; mortgages, credit cards, vehicle finance, store cards, personal loans, short-term loans, insurance backed loans and developmental credit pension.

National Treasury (2012a) has expressed particular concern about the growth of unsecured lending as a percentage of total consumer borrowing and it appears that households may be using credit to cover monthly living expenses, in other words for consumption purposes. Finmark Trust (2014) has indicated, based on the information obtained from their 2014 survey, that of the people who borrow, mainly from formal institutions, 42 percent used the borrowings to pay for food and

17 percent used the borrowings to pay bills (Finmark Trust, 2014). The National Credit Regulator has also issued a report on research conducted on the increase of unsecured personal loans in South Africa's credit market. One of their conclusions was that further consumer-related research is required to analyse the factors that act as credit demand (NCR, 2012:19).

National Treasury, together with the Banking Association of South Africa (BASA), reached an agreement regarding responsible lending on the 19th of October 2012. The purpose of the agreement was to enhance responsible lending and to prevent households from being trapped in a debt spiral. One of their objectives was to prevent future indebtedness and address current over-indebtedness (National Treasury, 2012a). They announced in April 2013 that changes were being planned to amend the lending rules in respect of unsecured lending (Business Day Live, 2013).

From the aforementioned paragraphs, it appears as though the stakeholders of the credit industry in conjunction with the policymakers are determined to find a solution to the increasing debt problem among South African consumers.

In the preceding discussion, the terms indebtedness and over-indebtedness were mentioned. De Clercq (2013) highlights the difference between these two concepts, explaining that indebtedness refers to the amount of debt and does not take into account whether the debt is affordable or not. Over-indebtedness, on the other hand, is an indicator of whether too much debt has been accumulated and therefore provides an indicator of unaffordable debt (De Clercq, 2013). Therefore, it is not so much that debt is problematic, but as soon as households are unable to service the debt and in turn become over-indebted, the household financial situation becomes difficult.

Various useful indicators may be used when analysing indebtedness. One of the indicators for indebtedness in South Africa is the debt to disposable income ratio. The South African Reserve Bank Quarterly Bulletin for June 2013 announced that South Africa had a debt to disposable income ratio of 75.4 percent (SARB, 2013c). This reflects a drastic fall from 82.4 percent in 2008 following the recession of 2008/2009 and a fall in the prime overdraft interest rates from 15.5 percent in 2008

to 8.5 percent in 2013. Notwithstanding the decrease, the high debt to disposable income ratio is indicative that household debt levels are still too high. It is worth mentioning that South Africa's debt to disposable income ratio compares favourably with a number of developed countries that have much higher debt to disposable income ratios (Meniago, Mukuddem-Petersen, Petersen & Mongale, 2013:482). However, South Africa is a country with many unique problems, such as high unemployment, poor education, slow growth in income earned, lack of household savings, and high income disparities. All these problems exacerbate the unfavourable liability position of households.

Another indicator of household indebtedness is the household debt service ratio. In South Africa the household debt service ratio as a percentage of household income was 7.7 percent, at the end of the second quarter for 2013, which shows an improvement since 2008 when it was 12.5 percent (SARB, 2014a). In spite of this, the improvement is not a result of a decrease in consumer borrowing. On the contrary, household borrowing is increasing but the low interest rate environment has had a favourable effect on repayment of debt. When interest rates rise, this percentage will increase and households will consequently again face hardship in servicing their debt. When households carry excessive levels of debt they face the danger of being exposed to various risks that make them extremely vulnerable to financial hardship. These risks are broadly classified as interest rate risk, investment risk and unemployment risk (Meng & Mounter, 2009:17).

It could be said that high debt levels have an adverse effect on the economy as a whole. An economy in a good financial situation is related to a household sector with favourable debt levels (Meniago et al., 2013:482). Thus, if the debt situation of households improves, the effect on the South African economy would also be positive.

As individuals age, they go through various life stages, for example matriculating, obtaining an education, being employed for the first time, moving into their own house, getting married, having children, and then having their own children leave home. Thus, it can be deduced that people will make use of different types of debt at distinct times during their lives, depending on which stage of the life cycle the household finds themselves in. There are also certain factors that have been

found to influence debt take-up by households; these are classified as socio-demographic characteristics, attitudinal characteristics and economic characteristics (Vandone, 2009:32).

Having provided an outline of the debt situation of South African households, the study will follow a life course approach to gain an understanding of how the demand for liabilities will fluctuate over the life course of households.

The life course approach is well known in the social and applied sciences (Sandoval, Rank & Hirschl, 2009:718). It is a practical framework for understanding how the lives of individuals unfold and how specific events and transitions may affect trajectories over the life course (Elder, 1994). Furthermore, previous empirical research has revealed that the life cycle hypothesis (LCH) provides valuable insight into the pattern of debt holding across the life course (Baek & Hong, 2004; Cox & Jappelli, 1993; Crook, 2003; Debelle, 2004).

To date, the life cycle hypothesis is one of the dominant frameworks for understanding consumption and savings behaviours in economics (Tippett, 2010:16). The life cycle hypothesis predicts that people will smooth their consumption independently of their income and as such may take on more debt in times when income is lower or absent in order to maintain a steady level of consumption (Baek & Hong, 2004:361; Gourinchas & Parker, 2002:7; Schooley & Worden, 2010:267). This appears to be the case with many young adult South Africans taking up debt to finance consumption in order to smooth their consumption expenditure. International studies have reported that unsecured credit is being utilised to meet their financial needs and that young consumers choose to borrow large amounts; causing their saving to be in a negative position in early working life (Gourinchas & Parker, 2002:75). Younger households are also more likely to face liquidity constraints (Debelle, 2004:54).

Young South African adults are in the spotlight of facing financial hardship by taking on high levels of debt and then being unable to repay it. They may face the situation of being in a debt trap from which they cannot escape and may thus face a bleak future in terms of financial wellness as they move through their life course. A report by Finney, Collard and Kempson (2007) for the Personal Finance

Research Centre at the University of Bristol, on borrowing over the life cycle in the United Kingdom (UK), revealed that young adults appeared to be particularly susceptible to intense pressure from society to consume and were prepared to borrow for consumption purposes. It is interesting to note that Gourinchas and Parker (2002:75) reported that consumption lies above income up to the late twenties, thereafter consumption and income both increase from about the age of 30–45 and then consumption drops below income. This aptly explains why the youth of South Africa experience elevated levels of debt.

By acquiring an understanding of the risks households face relating to debt over the life course, this study will assist the National Treasury in developing proactive approaches to debt policy in order to achieve one of their strategic goals as identified in the Consumer Financial Education Strategy Development workshop, namely ensuring household stability (South Africa. KwaZulu-Natal Treasury, 2014). The results of the study will enable the National Credit Regulator to assist consumers with debt counselling procedures, as well as the application of the National Credit Act. This research will contribute to the overall explanation of household debt and could assist financial service providers in making decisions regarding the granting of credit by ensuring that the possible risks to both financial service providers and the consumer are identified. The results could assist consumers in changing their attitudes about borrowing and contribute to their financial discipline during the various life cycle stages. Households will also benefit from gaining information about the determinants of debt holding over the life cycle and its effect on the household's financial well-being.

1.2. PROBLEM STATEMENT

Various stakeholders have expressed concern that South African households' debt burden is increasing at an alarming rate. High debt levels play a large contributing part to households finding themselves in detrimental financial positions.

In addition to households being heavily indebted, the increase in the use of credit coupled with the fact that the household sector has continued to experience elevated levels of financial stress has resulted in households also facing the risk of being over-indebted. This risk is intensified by rising inflation and a sluggish growth in real disposable income (SARB, 2013a).

In particular, various policy decision makers have expressed concern that young South African adults are at great risk of becoming over-indebted (Finmark Trust, 2014; SARB, 2013a; NCR, 2014c). At the root of the problem is the fact that a large number of young adults are facing unemployment. The official unemployment figure in 2013 for the youth stands at 52.9 percent (SARB, 2013a). Also of grave concern is the high debt that many students carry to enable them to study at tertiary institutions. The affordability of this debt is currently in the spotlight as students protest against an increase in student fees.

1.3. PURPOSE AND SIGNIFICANCE OF THE STUDY

Limited research has been done in South Africa on understanding how the holding of households' liabilities fluctuate over the life course and which events and characteristics may have an influence on this debt variation. Of particular concern is the debt holding of young adults, as they are one of the population groups that were identified in the preceding paragraph as having a greater need of intervention to enable them to be financially sound. The stakeholders have the power and authority to intervene and this research will greatly assist them in their efforts to regulate and monitor the credit usage of young adults. This study will also assist in the formulation of fiscal policy.

The purpose of this research study was to identify and describe how debt is accumulated by young adult South Africans and how household characteristics and events may be related to the uptake of household liabilities.

The study aimed to assist in the identification of the extent of the financial demands and challenges at the young adult life stage, including why debt is accumulated by South Africans and which characteristics and events may act as a trigger for households becoming over-indebted.

The research will provide insight to regulatory bodies and policy decision makers including National Treasury, the National Credit Regulator (NCR), and the Banking Association of South Africa, amongst others. The results may assist them in providing and implementing policies whereby the public will be more educated and informed about how to manage household debt and avoid being caught in a debt spiral.

1.4. RESEARCH OBJECTIVES

The objective of the study, which addressed the research problem, was to identify and describe how liabilities are accumulated by young adult South Africans and how household characteristics and events may be related to the uptake of household liabilities.

The following sub-objectives were formulated in order to address the primary research objective:

- 1) To investigate household debt in South Africa based on the available sources. This objective was achieved by:
 - Defining the different definitions relevant to households and household liabilities and discussing the components of household debt (section 2.2).
 - Describing the various indicators used to measure household debt trends (section 2.3).
 - Describing the changing credit situation in South Africa (section 2.4).
 - Describing the situation of the youth in South Africa (section 2.5).
- 2) To review the life course theory based on available sources. This objective was achieved by:
 - Performing a bibliographic search and a discussion of the most important contributions to the literature (section 3.2.2).
 - Discussing the various conceptual frameworks for understanding consumption behaviour (section 3.2.3).
- 3) To obtain a perspective of household debt over the life course based on available sources. This objective was achieved by:
 - Identifying characteristics that may determine a households' participation in the debt market (section 3.3.2).
 - Identifying the reasons for the increase in household debt on an international level (section 3.3.3).

- Discussing the impact of rising household debt (section 3.3.4).
- 4) To identify the characteristics that may determine the holding or use of the different types of household debt by young South African adults. This objective was achieved by:
- Identifying how age affects debt product uptake (section 5.3).
 - Identifying the determinants of holding each type of debt classified as follows according to the AMPS survey: credit card facilities, home loans/mortgage bonds, overdraft facilities, student loans, vehicle finances with a financial institution, and other loans (section 5.3).
 - Identifying, analysing and grouping the factors that are seen to have a statistically significant influence on the pattern of debt holding (section 5.4).

1.5. RESEARCH DESIGN AND METHODS

The main research objective of this study that addresses the research problem is to identify and describe how liabilities are accumulated by young adult South Africans and how household characteristics and events may be related to the uptake of household liabilities.

The researcher conducted this study in two phases. During the first phase of the study, a literature review was performed. The literature review consisted of two sections: the first section (Chapter 2) investigated household debt in South Africa. The second section (Chapter 3) discussed household debt over the life course. The literature review concluded in a heuristic model that indicates a number of independent variables that may affect the debt uptake of a household.

During the second phase of the study, quantitative statistical analysis was conducted on secondary data obtained from the South African Audience Research Foundation's All Media and Products Survey (SAARF AMPS) for the years 1999–2013.

In order to represent the population of South Africa, a large probability sample is taken. The sample has the following characteristics; it is scientifically drawn, multi-

stage and area stratified. Population estimates were used and the sample was weighted up to the total population. The data was collected by means of personal in-home interviews and a new sample was taken for each survey. The SAARF AMPS survey covers the total adult population of South Africa. The AMPS sample is currently amongst approximately 25 100 South African adults (15 years and older) per annum in two national fieldwork waves (January–June and July–December) (SAARF, 2013). The selection of communities, addresses and respondents was done by SAARF AMPS based on their sample design, which was applied throughout the surveys (SAARF, 2013). SAARF employs techniques designed to ensure the validity and reliability of the data collected. Data preparation steps were used to prepare the data for analysis and the individual datasets were combined into one dataset with a population size of 358 645 respondents. The sample was then selected by filtering the population. That is, only 18-year-olds were included in 1999 and 19-year-olds in 2000 until 2013 where only 32-year-olds were included in the sample. This sample selection process ensured that individuals' debt behaviour could be tracked across the life course as the person progressed from 18 to 32 years of age. In order to ensure the validity, reliability and stability of the data, relevant tests were carried out by the researcher and these are discussed in Chapter 4. The diagnostic results to ensure data validity, integrity and stability include neural networks and hierarchical cluster analysis. Also, the ethical approach applied, during the data collection, data cleaning and data preparation, by SAARF was considered by the researcher.

Descriptive and inferential statistics were used to analyse the results of the questionnaires. The descriptive techniques employed in the study were obtained by making use of frequency distributions. Inferential statistics were employed by means of chi-square test for independence and cox proportional-hazards regression models, which form part of event history analysis (Adams, 1996:271).

A longitudinal study was performed, across fifteen years, with reference to the life course approach. The life course approach provides a valuable framework for understanding how individuals' lives unfold over a period of time (Sandoval *et al.*, 2009:717). It is concerned with how certain events, transitions or characteristics affect the sequential order of events that take place (Marshall & Mueller, 2003).

Thus, by making use of a life course approach, valuable information was obtained in identifying why certain events act as predictors of the hazard. The hazard, in this instance, is the take-up of the particular debt product. A Cox proportional-hazards regression model was utilised, as it is an event history method that enables the researcher to predict the length of time it takes for an individual to take up a particular debt product. The independent variables (covariates) that were entered into the cox-proportional-hazards regression model were based on the variables that were indicated in the heuristic model developed by the researcher in the conclusion to the first phase of this study. The dependent variables were credit card debt, home loan debt, overdraft facilities, student loans, vehicle finance and other loans.

1.6. LIMITATIONS OF SCOPE

It should be noted that this study was limited to the financial services that are listed in the AMPS survey. The analysis was performed based on the classification of the financial services as reflected in the AMPS survey. The study was limited to formal debt held by households. The AMPS survey only makes provision for the different types of debt and not for the amount of debt held. Due care was taken to be explicit regarding any limitations encountered during the study.

This study is limited to analysing the debt product uptake of the youth. The reason for this was that this age group appears to be most at risk of being financially vulnerable, as alluded to previously in this section.

1.7. DEFINITIONS

For the purposes of this study, the terms below are defined in the following way:

Definition of a household:

The definition of a household according to the South African Audience Research Foundation All Media and Products Survey (SAARF, 2012) is the definition that is applied in this research, namely:

A household consists either of one person living alone or a group of persons, usually but not always members of one family, who live together and whose expenditure on food and other household items is jointly managed. Boarders and lodgers may be included as members of a household, provided that they have at least one main

meal a day communally. Resident domestic workers are, however, excluded and are regarded as forming a household of one or more persons in their own right.

Definition of household debt:

Household debt refers to a liability or obligation that arises as a result of borrowing money or receiving goods or services on credit. (Prinsloo, 2002:63).

Definition of liabilities:

The terms liabilities and debt are used interchangeably throughout this study. Liabilities are debt and obligations. “Liabilities” is an accounting term and is formally defined by International Accounting Standard 1 (IASB, 2010) as follows:

A liability is a present obligation of the entity arising from past events, the settlement of which is expected to result in an outflow from the entity of resources embodying economic benefits.

Definition of life course:

Elder (1994) describes life course as follows:

The life course generally refers to the interweave of age-graded trajectories, such as work careers and family pathways, that are subject to changing conditions and future options, and to short-term transitions ranging from leaving school to retirement.

Definition of youth:

In South Africa, the National Youth Development Agency (NYDA) was established by Act no. 54 of Parliament in 2008. It describes youth as being between the ages of 14 and 35. Statistics South Africa regard youth as being persons between the ages of 15 and 34 (Stats SA, 2014b). The South African Reserve Bank classifies youth as being 15–24 year-olds (SARB, 2015a). For the purposes of this study, the respondents aged 18–32 are considered as youth due to the availability of reliable data for this age group.

1.8. ETHICAL CONSIDERATIONS

Ethical clearance to conduct the research, involving the secondary data obtained by the South African Audience Research Foundation (SAARF) All Media and

Products Surveys (AMPS), was obtained from the School of Accounting Sciences Ethical Review Committee meeting.

Permission was obtained from SAARF to use the secondary data obtained from the AMPS surveys. SAARF is a member of the South African Market Research Association (SAMRA). SAMRA is a professional association that has a code of conduct to which its members must subscribe. This data is widely used in the financial services industry and is the only data source available that provides answers to many of the financial services research questions. Permission was granted by SAARF to the Bureau of Market Research (BMR) to use their data for their research projects and it is extensively used for this purpose.

SAARF complies with their ethical code and obtains consent from all the participants to the surveys prior to performing the at-home interviews in two national fieldwork waves per annum.

1.9. CHAPTER OUTLINE

This study was conducted in two phases. During the first phase, a literature review was conducted, as described in Chapters 2 and 3. This phase culminated in the development of a heuristic model by the researcher, identifying variables that may affect debt uptake in South Africa. During the second phase, empirical data was analysed, as described in Chapters 4 and 5. The analysis of this empirical data was based on the heuristic model developed during the literature review.

Chapter 1: Introduction

The first chapter provides an introduction and background to the study. The purpose of the study, the research objectives, the problem statement, the significance, motivation, definitions, limitations and brief chapter overviews are presented.

Chapter 2: Household debt in South Africa

The second chapter highlights important findings from the available literature relating to household debt in South Africa. Definitions of key terms are provided and the various components and classifications of household debt are considered. A number of useful indicators used by the stakeholders in the credit industry are

discussed. The chapter includes a description of how household debt has changed following the financial liberalisation process and discusses the situation of the youth with regard to their debt position.

This chapter addresses the first research objective and forms the first part of phase one of the study.

Chapter 3: Household debt over the life course

The third chapter explains the changing needs of a household's demand for liabilities over the life cycle. This chapter outlines life course theory, discusses certain conceptual frameworks for understanding consumption behaviour, and identifies international trends in the holding of household liabilities. It also includes a perspective on household debt over the life course, dealing with characteristics of indebted households, the reasons for the increase in household debt on an international level, and the impact of rising household debt.

This chapter addresses the second and third research objectives and forms the second part of the first phase of the study.

Chapter 4: Research design and methodology

The fourth chapter discusses the research design and methodology applied for the empirical part of this study. A perspective of mainstream accounting research is followed and the researcher maintains an objective viewpoint. The research design is quantitative and a longitudinal study was undertaken in terms of the life course approach.

The study analysed secondary data obtained from the SAARF AMPS for the years 1999–2013. This chapter includes details on the manner in which the empirical study was conducted, including an explanation of how the data was prepared and a description of the sample. The demographic profile of the respondents included in the sample is considered. Ethical considerations are addressed and any limitations of the study are discussed.

This chapter addresses the fourth research objective and forms part of the second phase of the study.

Chapter 5: Research findings

The fifth chapter focuses on the presentation and analysis of the research findings. Inferential analyses of the secondary data from the AMPS questionnaires are conducted, reported on and interpreted.

The chapter provides information of the relationship between age and the take-up of the debt products and the results of the chi-square analyses are presented. The chapter also discusses the results of the Cox proportional-hazards regression model and indicates which of the variables derived from the heuristic model are shown to be statistically significant predictors of debt uptake.

This chapter addresses the fourth research objective and forms part of the second phase of the study.

Chapter 6: Conclusion

The sixth chapter concludes the research. Summaries of the findings are presented and an evaluation of the importance of the research is provided. The limitations to the study and recommendations for further research are considered.

CHAPTER 2

HOUSEHOLD DEBT IN SOUTH AFRICA

2.1. INTRODUCTION

South Africa has experienced an increase in the number of people making use of credit. The National Credit Regulator in the fourth-quarter Credit Bureau Monitor of 2014 revealed that statistics illustrate that there are 22.84 million credit-active consumers (NCR, 2014b). This is indeed a significant increase from the end of September 2007, which was the National Credit Regulator's first release of data, when there were 16.9 million credit-active consumers (NCR, 2007).

Previous research has indicated several reasons as to why consumers take on debt. These include smoothing of consumption during periods when they experience temporary income downturns; when expecting an increase in future income; for financing the purchase of housing or durable items; for financing education or to attend training; for an investment in financial assets when the returns on these assets look promising; and for offsetting excess savings implied by occupational pension rules (Aron & Muellbauer, 2006:32). Some of these reasons for taking on debt will be elaborated on in Chapter 3, which will deal with the various events and transitions that a household experiences as it moves through the various life stages. These events and/or transitions may act as triggers for the household demanding debt at a particular point in time.

One only has to read daily newspapers or watch the daily news to realise that high debt levels may play a large contributing part in households finding themselves in the detrimental financial position that many consumers in South Africa are facing. It is alarming that 9.6 million of the credit-active consumers mentioned above have impaired records (NCR, 2014a). This is a disturbing figure, as it translates into 44.2 percent of all credit-active consumers having impaired records. An impaired record is defined as "A record on which a consumer and/or any of the accounts, are either classified as three or more payments or months in arrears, or which has an "adverse listing", or that reflects a judgement or administration order" (NCR, 2014a). Households who have impaired records are clearly not financially healthy, which could in turn lead the respective household to feeling financially vulnerable.

As explained by De Clercq (2013:164), a number of independent variables could have an effect on a household's perception of being financially vulnerable. She lists the various exogenous variables as being population group, province, gender, age, economic outlook, structure of the household, monetary policies and fiscal policies. The endogenous variables include area in which the household resides, confidence in the economy, health of the consumer, level of education, employment status, level of income, source of income, assets held, liabilities held and expenditure patterns relating to consumption.

Household debt is one of the factors that play a part in determining a country's consumption expenditure and the current lack of growth of consumption expenditure of the South African population is worrying. The Monetary Policy Committee issued a statement in March 2014 stating that, as a result of the slow growth in the rate of both employment and credit extension, the high levels of consumer debt, as well as the higher interest rate environment, the outlook for growth in consumption expenditure is expected to be constrained (SARB, 2014b).

This unfavourable outlook for consumption expenditure does not represent a favourable position with regard to South Africa's economic growth, as household consumption expenditure forms a large component of gross domestic product (GDP), with the ratio of final consumption expenditure by households to gross domestic product being 60.8 percent (SARB, 2014a). De Clercq (2013:31) presents the components of gross domestic product according to Keynes (2008) as follows: gross domestic product is equivalent to investment expenditure plus household consumption expenditure plus government expenditure plus "exports minus imports" plus residual. Dasgupta (2007:476) explains that the value of all the final goods produced by its residents in a year is the country's gross domestic product and is the measurement of an economy's total output (Dasgupta, 2007:476). He also points out that it is widely held that economic growth means growth in real gross domestic product per capita. Following on from this discussion, it is apparent that high debt levels as previously mentioned have an adverse effect on the percentage growth in gross domestic product, which in turn has a detrimental effect on the economy as a whole.

The main research objective of the study, which addressed the research problem, is as follows:

To identify and describe how liabilities are accumulated by young adult South Africans and how household characteristics and events may be related to the uptake of household liabilities.

To achieve the main research objective, this study was carried out in two phases. This chapter together with Chapter 3 forms part of the first phase of this study.

This chapter will address the first research objective of the study (section 1.4):

To investigate household debt in South Africa based on the available sources. This objective will be achieved by:

- Defining the different definitions relevant to households and household liabilities and discussing the components of household debt (section 2.2).
- Describing the various indicators used to measure household debt trends (section 2.3).
- Describing the changing credit situation in South Africa (section 2.4).
- Describing the situation of the youth in South Africa (section 2.5).

2.2. DEFINITIONS AND COMPONENTS OF SOUTH AFRICAN HOUSEHOLD DEBT

This chapter will investigate household debt in South Africa based on the literature. The definitions of a household, household debt and liabilities will be important throughout the study and will be discussed below before providing information on the various classifications of household debt in South Africa.

2.2.1. Household

As households are the focus of this study, it is necessary to arrive at a definition of a “household”. A household is defined by the System of National Accounts (SNA, 2008:462) as;

A group of persons who share the same living accommodation, who pool some, or all, of their income and wealth and who consume certain types of goods and services collectively, mainly housing and food.

The SNA (2008) was produced and released with the assistance of the United Nations (UN), the European Commission (EC), the Organisation for Economic Co-operation and Development (OECD), the International Monetary Fund (IMF) and the World Bank Group (WBG) (SNA, 2008:iii). This definition is therefore widely used throughout the world. Another definition of a household, already mentioned in section 1.7, by the South African Audience Research Foundation's All Media and Products Survey (SAARF, 2012), is similar and states that:

A household consists either of one person living alone or a group of persons, usually but not always members of one family, who live together and whose expenditure on food and other household items is jointly managed. Boarders and lodgers may be included as members of a household, provided that they have at least one main meal a day communally. Resident domestic workers are, however, excluded and are regarded as forming a household of one or more persons in their own right.

2.2.2. Household debt and liabilities

When referring to household debt, Prinsloo (2002:63) states that household debt refers to a liability or obligation that arises as a result of borrowing money or receiving goods or services on credit.

Households utilise credit for a number of reasons and there are various characteristics which influence their participation in the debt market and which will be explored in greater detail in Chapter 3. Thus, households will take on various types of debt depending on the reason for acquiring the debt instrument.

In this study the terms liabilities and debt are used interchangeably. A liability is described by the International Financial Reporting Standards (IASB, 2010) as follows:

A liability is a present obligation of the entity arising from past events, the settlement of which is expected to result in an outflow from the entity of resources embodying economic benefits.

In South Africa, there are various classifications of debt which are similar in concept but which have slight variations. Scheepers (2013:62) points out that when considering household liabilities, an essential characteristic is that the household has a present obligation or the responsibility to perform in a particular manner. She adds that it is therefore necessary that an irrevocable agreement must be in existence to acquire an item on credit and delivery of the item must take place in order for an obligation to arise.

Stakeholders in the credit industry use various classifications. The classifications provided by the following institutions will be examined in detail: the System of National Accounts, the International Accounting Standards Board, the South African Reserve Bank and the National Credit Regulator. The liability classification developed by Scheepers (2013) in the dissertation entitled "Developing a statement of financial position model for the South African household sector" will also be described.

The System of National Accounts 2008 was designed to accommodate the needs of all countries that are at various stages of economic development. It is a statistical framework that has the purpose of providing a comprehensive, flexible and consistent group of macroeconomic accounts for policymaking, research and analysis (SNA, 2008:xlvii). According to the System of National Accounts (2008:230), loans are divided between short term and long term. A short-term loan is classified as a loan that has an original maturity of one year or less and a long-term loan is a loan that has an original maturity of greater than one year. The System of National Accounts also states that it may be valuable to make a distinction between loans that were originally taken out for a period longer than a year but in the current accounting period have less than one year to maturity, and loans that have mortgages as security (SNA, 2008:230).

The International Accounting Standards Board (IASB) is a standard setting foundation and is responsible for the development and maintenance of International Financial Reporting Standards (IFRS), which is a single set of accounting standards that are accepted globally (SAICA, 2010). According to Scheepers (2013:8), International Financial Reporting Standards is the vehicle used both internationally and in South Africa that enhances reliability and ensures

that all the elements can be compared. The various elements comprise assets, liabilities, income, expenditure and equity. Liabilities are classified according to the International Accounting Standards (IAS 1) as either current liabilities or non-current liabilities (IASB, 2010). International Accounting Standards 1 paragraph 69 classifies a liability as current when:

- a) The liability is expected to be settled in its normal operating cycle;
- b) The liability is primarily held for the purpose of trading;
- c) The liability is due for settlement within twelve months subsequent to the reporting period; or
- d) The liability does not have an unconditional right to defer settlement for at least twelve months after the reporting period.

International Accounting Standard 1 paragraph 70 classifies non-current liabilities as all other liabilities.

Currently the South African Reserve Bank (SARB) is the only institution in South Africa that presents a household balance sheet based on macroeconomic data (Scheepers, 2013:320). Household balance sheets play a crucial role as they provide important information regarding household wealth (Walters & National Accounts Division, 2011:69) and they are also necessary for assessment of the distribution of wealth and liquidity (Aron, Muellbauer & Prinsloo, 2007:5). The first official household sector balance sheets were published in the South African Reserve Bank June 2006 Quarterly Bulletin in an article by Aron *et al.* with the title "Estimating household-sector wealth in South Africa" (Kuhn, 2010:66). These household sector balance sheets are compiled on a market value basis from long quarterly time series of wealth estimates (Aron *et al.*, 2006:61) and are the most comprehensive in respect of any emerging market or economy that is in the developmental stage (Aron & Muellbauer, 2013:S163). Kuhn (2010:66) used the above-mentioned estimates for 1975 to 2005 compiled by Aron *et al.* (2006) as a basis for refining the South African Reserve Bank's household balance sheets for the period subsequent to 2005 by taking standard international practice and new sources into account. Information on household debt was gathered from the Bank Supervision Department of the South African Reserve Bank and, subsequent to

2008, more detail has become available following the implementation of the Basel II framework. The South African Reserve Bank classifies household debt as mortgage advances and other debt (Kuhn, 2010:68). Other debt includes open accounts, personal loans, credit card debt and instalment sale and leasing finance extended by banks (Kuhn, 2010:69). The composition of household liabilities according to the South African Reserve Bank's Balance Sheet is reflected in Figure 2.1.

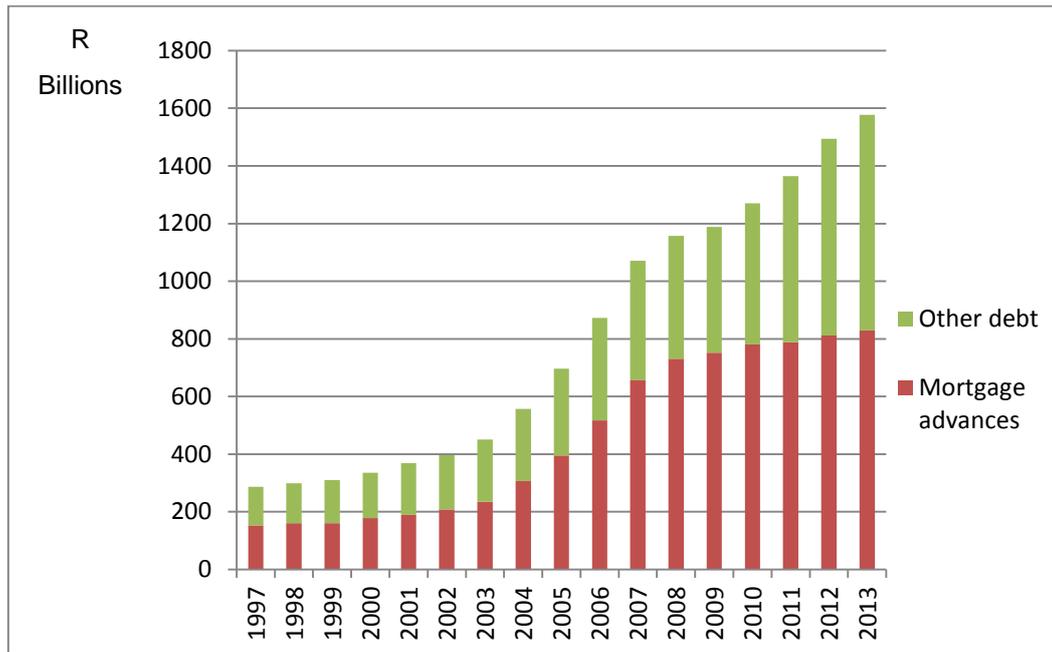


Figure 2.1: SARB's composition of total household liabilities: 1997–2013

Source: SARB, 2013a.

Figure 2.1 reveals the growth in debt from 1997–2013. It is evident that household debt is steadily increasing and that the amount of other debt taken up by households is steadily growing in comparison to mortgage advances, which have gradually increased from 2008. Hence, the growth in total household debt is largely attributable to the surge in other debt.

An extract from Scheepers' (2013) compilation of the South African Reserve Bank's household balance sheet, which includes the source of the information, is reflected in Table 2.1 (Scheepers, 2013:99). The information presented in Table 2.1 is useful in gaining an understanding of the various components and sub-

components. The information was sourced from Kuhn (2010) and Walters and National Accounts Division (2011) (Scheepers, 2013:99).

Table 2.1: SARB’s compilation of liabilities in the household balance sheet

Liabilities	Compilation	Source
Mortgage advances	Loan financing from the commercial banking sector.	Value is obtained from monthly returns provided by the banks.
Other debt	Trade credit (open account credit). Includes retail debt and amounts owing to buy-aid institutions.	Value is obtained indirectly from retail credit sales information.
	Personal bank loans including overdraft facilities and other advances granted.	Value is obtained from monthly returns from the banks.
	Credit card debt.	Value is obtained from monthly returns from the banks.
	Instalment sale agreements and lease agreements. Including commitments of hire purchase agreements and financial lease agreements.	Values are obtained from the banks and hire purchase values are obtained from the trade sector.
	Other personal loans including loans given by long-term insurers.	Values are published in the Quarterly Bulletin.
	Non-bank loans that consist mainly of credit granted by micro-lenders.	Values are obtained from the Micro Finance Regulatory Council (MFRC).

Source: Scheepers, 2013.

According to the South African Reserve Bank Annual Economic Report (SARB, 2013a), the situation with respect to household debt in 2007 is compared to the composition of household debt in 2012 and it is evident from the information reflected in Figure 2.2 that the percentage of other loans has dramatically increased. This phenomenon can also be witnessed when looking at Figure 2.1 above, as unsecured lending forms a large part of other debt. This concern expressed by stakeholders in respect of unsecured lending will be dealt with in section 2.4.

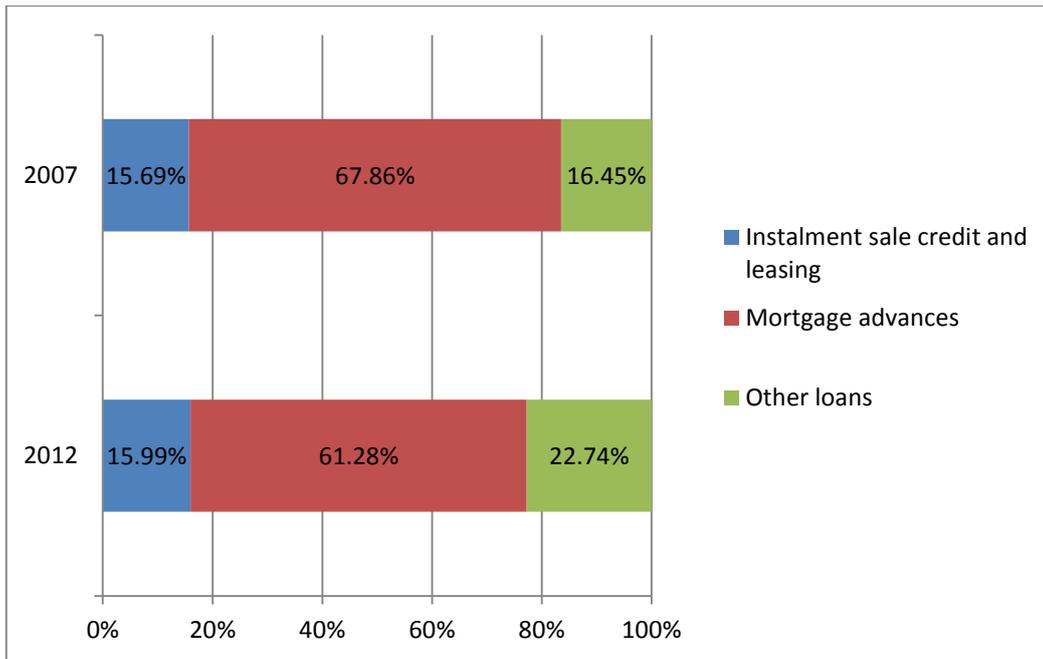


Figure 2.2: SARB’s composition of household debt: 2007 versus 2012

Source: SARB, 2013a.

When looking at the increase in other loans in Figure 2.2, it is evident that the increase is because the percentage of general loans has doubled since 2007. General loans are categorised as part of other loans, as already mentioned. In 2007, general loans contributed just over seven percent to total household debt and in 2013 it contributed 14.8 percent (SARB, 2013a).

The National Credit Regulator (NCR, 2013b) classifies household debt as presented in Table 2.2 and the definition of each of the categories is listed.

Table 2.2: Compilation of household liabilities according to the NCR

Liabilities	Definitions
Mortgage agreements	These are agreements that are secured by a pledge of immovable property.
Secured credit	These are credit transactions that do not fall into any of the other named categories but exclude mortgages and credit facilities. Includes motor vehicle accounts, insurance-backed loans, pension-backed loans, retail furniture accounts, other durable accounts and other security.
Credit facilities	Agreements that meet all the criteria set out in section 8(4) of the National Credit Act. The following are included: credit cards, garage cards, bank overdraft, service agreements, store cards and other facilities.
Unsecured credit transactions	Agreements that are not secured by any pledge or personal security (other than credit facilities or short-term credit).
Short-term credit transactions	This includes agreements not exceeding R8000 and that are repayable within 6 months.
Development credit transactions	Agreements included are educational loans, small business, building or expansion of low income housing, rehabilitation or any other purpose in terms of subsection (2)(a).

Sources: NCR 2013b; Author's own.

As per the National Credit Regulator Consumer Credit Market Report for the fourth quarter in 2008 (NCR, 2008b) and the fourth quarter in 2013 (NCR, 2013b), the total outstanding gross debtors' book on consumer credit is held according to Figure 2.3.

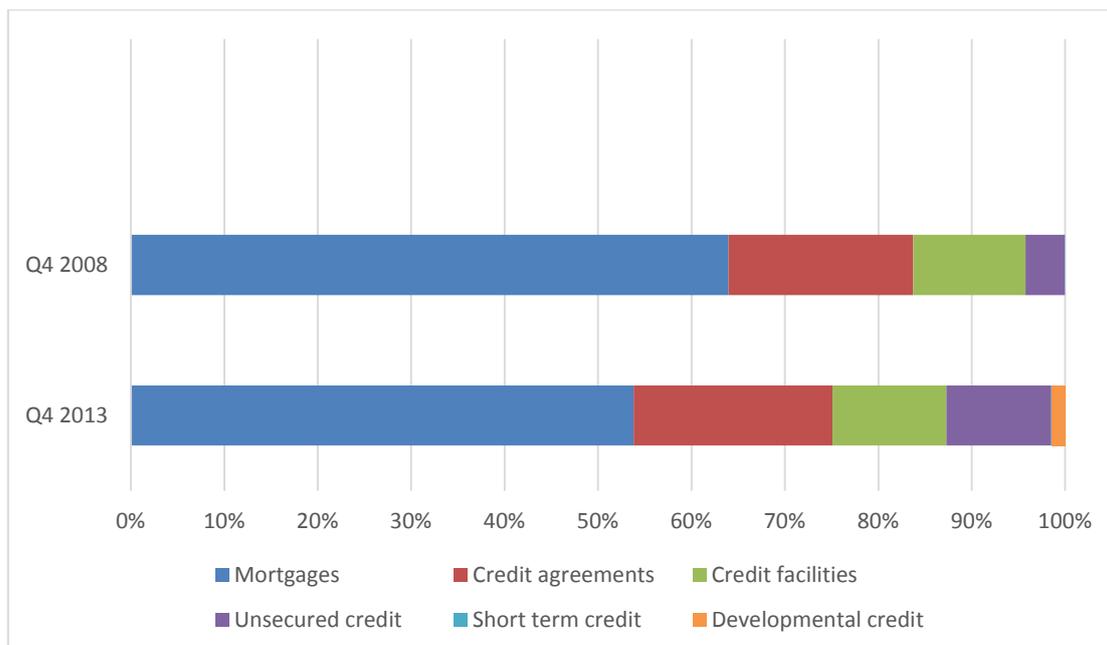


Figure 2.3: NCR’s composition of gross debtors’ book: Q4 2008 versus Q4 2013

Sources: NCR, 2008b & 2013b.

It is evident from Figure 2.3 that the percentage holding of mortgages has decreased considerably. This may be a result of more stringent criteria that have to be adhered to by the banking sector since 2008 (refer to Table 2.7 in section 2.4). Also, as discussed previously, there has been a surge in unsecured lending which, as the name suggests, is not backed by any collateral. In 2008, other credit agreements referred to all credit that was secured, excluding mortgages and credit facilities (NCR, 2008a), and was thus categorised the same as secured credit agreements in 2013.

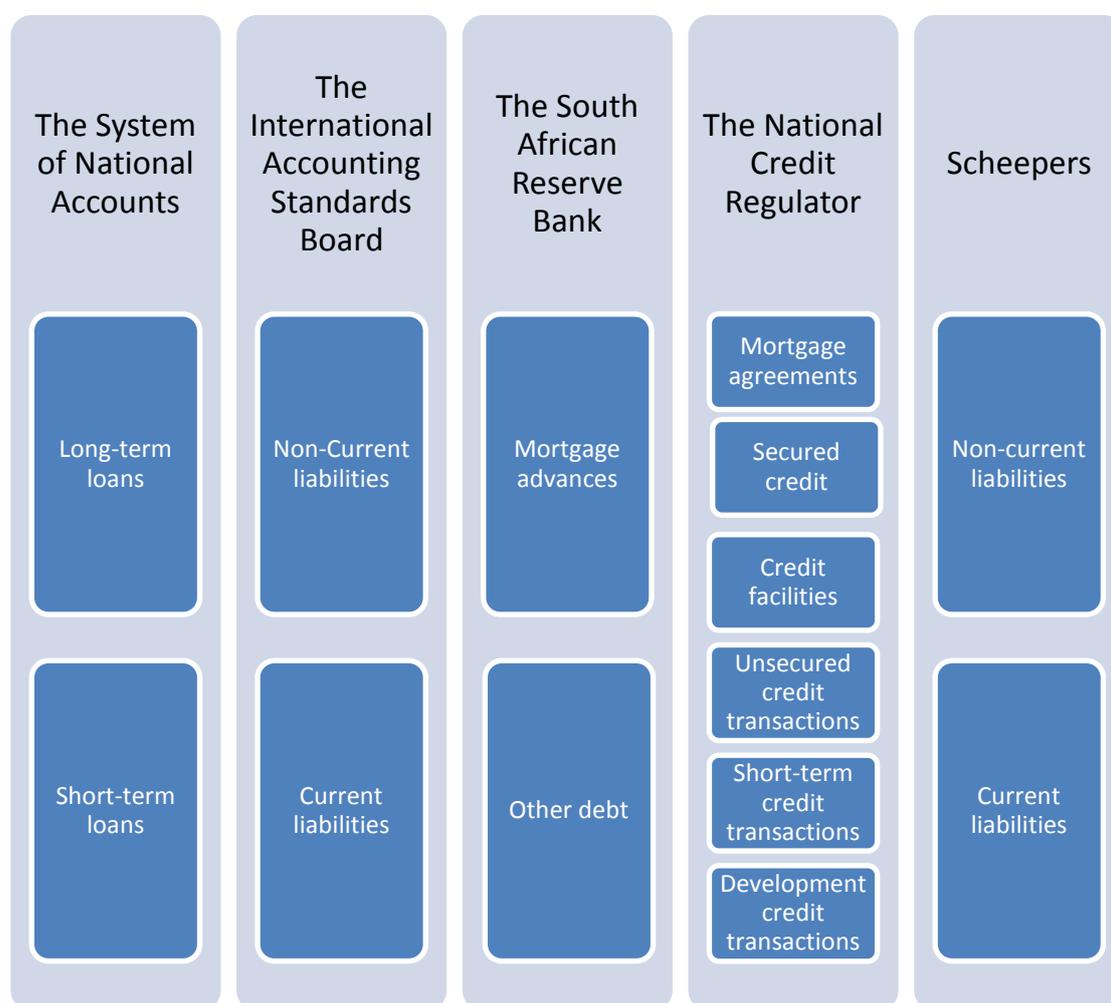
Scheepers (2013:251) prepared a household statement of financial position of households which is in accordance with the requirements of the South African Institute of Chartered Accountants (SAICA) Conceptual Framework (2010a) and which classifies the classes of liabilities as non-current liabilities and current liabilities. Non-current liabilities include mortgage loans on both residential and other property (Scheepers, 2013:266) and financial liabilities which are sub-classified into financing (vehicle finance, content finance, other hire purchase agreements and cell phone contracts) and loans which include all other loan types.

Current liabilities are also sub-classified into household bills, credit card debt, bank overdrafts, store cards and petrol/garage cards (Scheepers, 2013:270).

2.2.3. Summary

This section has explained the definitions of a household and household debt. The classification of liabilities by various institutions and some detail was provided on the percentages of the various debt components. The classification of liabilities, as discussed in this section, is shown in Table 2.3.

Table 2.3: Classification of liabilities



Source: Author's own.

The various role players mentioned in this section have various debt classifications, as shown in Table 2.3. They essentially classify debt as long term or non-current and short term or current. This section has explained how the composition of debt has changed over the last few years. The aftermath of the

financial crisis resulted in a structural change in credit composition. Section 2.4 will discuss the possible reasons for the shift in the composition of household debt over time. However, it is first necessary to deal briefly with the various measurements and indicators to determine whether the shift is problematic or not. Section 2.3 will offer detail on the various indicators that provide valuable information regarding household sector wealth but more specifically to debt uptake by households.

2.3. INDICATORS USED TO MEASURE TRENDS IN HOUSEHOLD DEBT

2.3.1. Introduction

As described in the previous section, the type of debt that households are making use of has changed over the past few years, most notably with an increase in other debt taken up, which is generally unsecured (SARB, 2014c).

Various indicators are available in South Africa that are used by stakeholders to monitor the changes that take place in household wealth and that are useful in gauging the situation of consumers with regard to household debt.

According to Heymans (2008:5) in a review of data collated and published by private and government institutions, there are close to a hundred indicators that relate to South African indebtedness. These institutions include but are not limited to the following: the South African Reserve Bank, the National Credit Regulator, Statistics South Africa, the Financial Services Board and financial institutions. The sections that follow will provide more insight into some of the indicators that have been developed to assist the stakeholders in monitoring the situation of households.

2.3.2. The South African Reserve Bank

The indicators that are sourced from the South African Reserve Bank and that are useful in this study are presented in Table 2.4 together with an explanation of their purpose. The credit market information supplied by the South African Reserve bank is considered one of the most reliable sources available in South Africa (Heymans, 2008:9).

Table 2.4: Indicators sourced from the South African Reserve Bank

Indicator	Calculation	Description	Importance
Debt service ratio	Debt-service cost divided by household disposable income	This ratio measures the cost of servicing debt as a percentage of disposable income.	A high ratio may indicate that households are struggling to service their debts.
Ratio of household debt to disposable income	Household debt divided by household disposable income	This ratio indicates the extent to which household's income levels compare to their debt levels.	A high ratio indicates that households have high debt levels compared to their disposable incomes.

Sources: SARB, 2014a; Heymans, 2008; De Clercq, 2013.

The debt service ratio and the household debt to disposable income ratio described Table in 2.4 above are important in signalling the position of household debt in South Africa. These ratios are closely monitored on a quarterly basis. The movements in the debt service ratio and the household debt to disposable income ratio are illustrated in Figure 2.4.

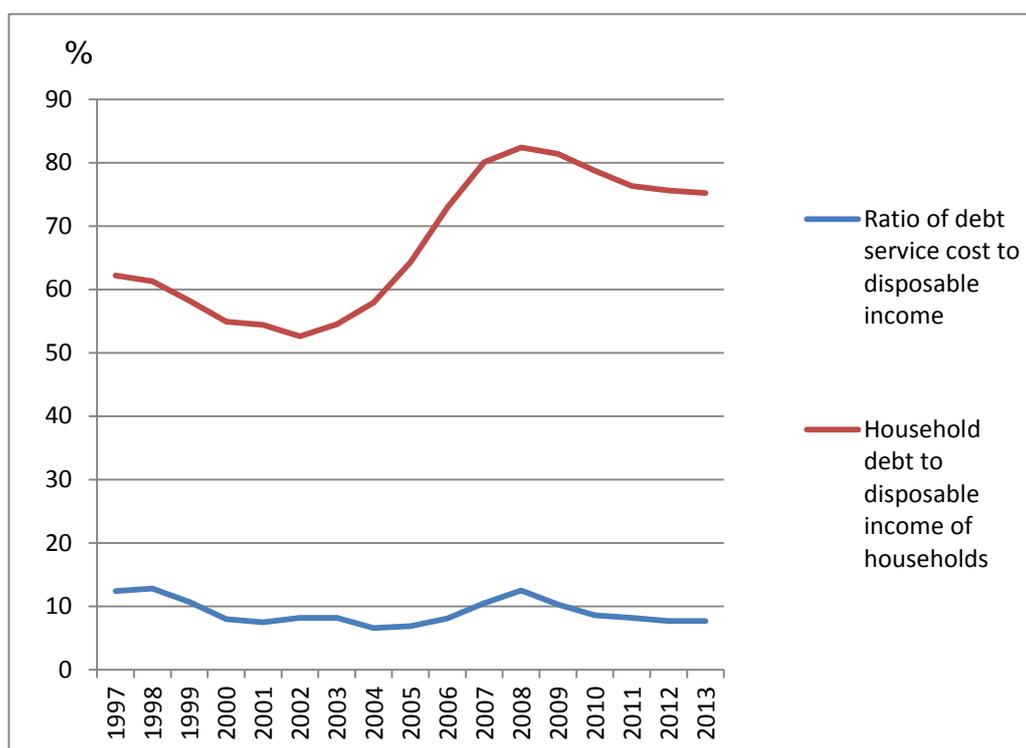


Figure 2.4: Debt service ratio and ratio of household debt to disposable income: 1997–2013

Sources: SARB, 2014a; Author's own.

Firstly, the ratio of debt service cost to disposable income has shown an improvement since 2008 when it was 12.5 percent. It must be mentioned that the improvement was not because of a decrease in consumer borrowing. On the contrary, household borrowing is increasing, as alluded to in section 2.1. However, because of the low interest rate environment the cost to service the debt has remained low. With the continued expected increase in interest rates, the ratio is expected to increase as households endure a higher cost in servicing their debt. The prime overdraft interest rate is in an upward cycle as it was increased to 9.25 percent in July 2014 (SARB, 2015b). This increase has an effect on debt servicing costs and likewise on a household's financial position.

Secondly, the household debt to disposable income ratio has also decreased since 2008, when it was 82.4 percent, following the 2008/2009 recession and the fall in the prime overdraft interest rates from 15.5 percent in 2008 to a low of 8.5 percent from 2012–2014.

Notwithstanding the decrease, the high debt to disposable income ratio is indicative that household debt levels are still too high. The ratio was 62.2 percent in 1997 and this increased to a high of 82.4 percent in 2007, just before the financial crisis. Following on from the crisis, it decreased to 75.2 percent in 2013. The percentage thus increased by 13 percent from 1997–2013. This is indicative that households have high debt levels as compared to their disposable incomes. A number of developed countries have higher debt to disposable income ratios than South Africa. However, South Africa is a country with many unique problems, such as high unemployment, poor education, slow growth in income earned, lack of household savings and high income disparities.

2.3.3. The National Credit Regulator

The National Credit Regulator analyses data of the South African consumer credit market and provides reports on the outcomes of the various indicators. The information is sourced from credit providers, utility service providers and courts (NCR, 2015). These indicators are extremely valuable for the assessment of consumer indebtedness as they provide a more detailed breakdown of debt product uptake compared to the aggregated level provided by the South African Reserve Bank. Table 2.5 presents a selection of these indicators.

Table 2.5: Indicators provided by the NCR

Credit standing of consumers	<ul style="list-style-type: none"> • Current • 1-2 months in arrears • 3+ months • Adverse listings • Judgements and administration orders • Number of credit-active consumers
Credit standing of accounts	<ul style="list-style-type: none"> • Current • 1-2 months in arrears • 3+ months in arrears • Adverse listings • Judgements and administration orders • Consumer accounts
Enquiries	<ul style="list-style-type: none"> • Enquiries due to consumers seeking credit • Enquiries related to telecommunications services • Enquiries for tracing/debt collection purposes • All other enquiries
All enquiries-distribution according to sectors	<ul style="list-style-type: none"> • Enquiries by banks and other financial institutions • Enquiries by retailers • Enquiries by telecommunications providers • Enquiries by debt collection providers • All other enquiries
Enquiries by banks and other financial institutions	<ul style="list-style-type: none"> • Enquiries due to consumers seeking credit • Enquiries done for tracing/debt collection purposes • Enquiries done for other purposes
Enquiries by retailers	<ul style="list-style-type: none"> • Enquiries due to consumers seeking credit • Enquiries done for tracing/debt collection purposes • Enquiries done for other purposes
Enquiries by telecommunication providers	<ul style="list-style-type: none"> • Enquiries related to telecommunications services • Enquiries done for tracing /debt collection purposes • Enquiries done for other purposes
Credit reports issued	<ul style="list-style-type: none"> • Without charge • With charge
Disputes	<ul style="list-style-type: none"> • Disputes lodged • Disputes resolved in favour of complainants • Disputes resolved where credit record remains unchanged

Source: NCR, 2014d.

In terms of the credit standing of consumers according to the Credit Bureau Monitor (NCR, 2014d), good standing is classified as being consumers that have current accounts and are one to two months in arrears. According to the National Credit Regulator (2014e) for the second quarter of June 2014 illustrated in Figure 2.5, it is evident that only 55 percent of consumers are classified in good standing compared to 60.45 percent in the second quarter of 2008 (NCR, 2008c). It is discernible, from the information presented in Figure 2.5, that consumers are increasingly struggling to service their debt, and how the percentage of consumers who are struggling to service their debt has increased.

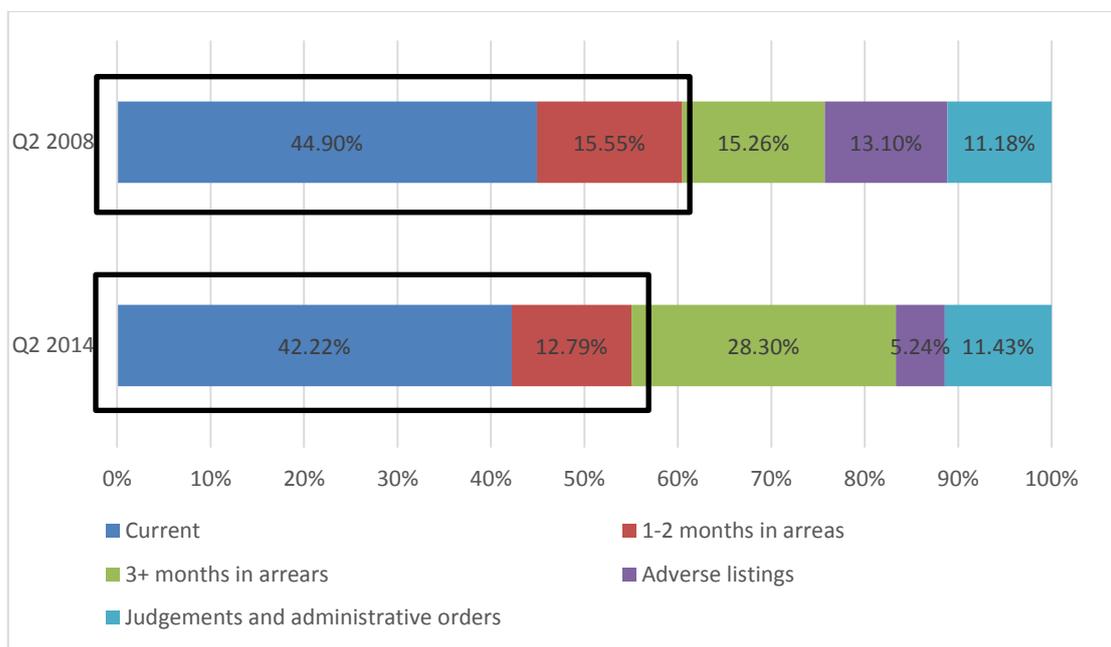


Figure 2.5: NCR’s credit standing of consumers: Q2 2008 versus Q2 2014

Sources: NCR, 2008c & 2014e.

In the quarter ended June 2014, there were 365.76 million enquiries made on consumer records. This was an increase from June 2008, when there 102.54 million enquiries made. This represents a 256.7 percent increase. The breakdown of the type of enquiries made is indicated in Table 2.6.

Table 2.6: Enquiries made on consumer records: Q2 2008 versus Q2 2014

	Quarter ended June 2008 Million	Quarter ended June 2014 Million	Percentage change
Enquiries due to consumers seeking credit	8.90	15.26	71.46%
Enquiries related to telecommunication services	0.60	0.69	15.00%
Enquiries for tracing / debt collection purposes	11.27	14.14	25.47%
All other enquiries	81.77	335.68	310.52%
Total	102.54	365.76	256.70%

Sources: NCR, 2008c & 2014e; Author's own

There has also been an increased demand for credit reports issued to consumers. The total number of credit reports issued was 210 669 in June 2014 compared to 41 057 in June 2008 (NCR, 2008c & 2014e).

2.3.4. Statistics South Africa

Statistics South Africa (Stats SA) is responsible for collecting a large amount of information that is released in certain intervals depending on the purpose of the relevant publication. The Income and Expenditure Survey is conducted by Statistics South Africa every five years. The last survey was conducted between September 2010 and August 2011 and its purpose was to determine what South African consumers spend their money on. Statistics South Africa also releases statistics surrounding many indicators in South Africa and includes data on employment, population, liquidations, judgements, summonses and insolvencies (Stats SA, 2014c). These indicators are useful in gauging the situations that South Africans face and in turn contribute to an understanding of debt patterns of the population. These will not be specifically reported on in this section; however, they are useful to the credit industry role players.

2.3.5. Financial Services Board

The Financial Services Board is an independent institution that was established by statute to supervise the South African Non-Banking Financial Services Industry in the public interest and is responsible for consumer education (FSB, 2014).

In an attempt to identify priority areas for consumer education, the Financial Services Board conducted a national study in 2012 to determine the level of financial literacy of the South African population. The Financial Literacy Report of 2013 prepared by the Human Sciences Research Council (HSRC) for the Financial Services Board based on the national study has as its objective: to provide information about consumers' financial knowledge, skills and behaviours. Their report was based on interviews with 2 518 respondents. One of the questions that the respondents were required to answer and that is of interest to this study was whether they had personally experienced a situation whereby their income did not quite cover their living costs. The responses were reported as follows: in 2012, 45 percent of the people stated that they had been in a situation whereby their living expenses were not covered by their income (Struwig, Roberts & Gordon, 2013:20). Therefore, by inference these people would have to make use of existing resources, by reducing their spending, or accessing credit by making use of current contacts or resources (Struwig *et al.*, 2013:23).

2.3.6. Financial institutions

Similar to the policymakers and national statistical offices, financial institutions also have a vested interest in the state of households' finances. More specific to the debt position of households, the Momentum/Unisa Financial Wellness Index, the Consumer Financial Vulnerability Index, as well as the Credit Health Index can provide some additional indicators regarding the state of household debt.

Firstly, the Momentum/UNISA Financial Wellness Index is a useful tool that has been used in determining the financial wellness of the South African population. Financial wellness is a multidimensional state that is positive and has the characteristics of having a high quality of life and feeling a sense of personal wellness (PFRU, 2013). When determining this index, households were sorted into four groups as follows: Anchored Unwell (these households require major

assistance in order to improve their deeply rooted financially unwell situation); Drifting Unwell (these households' financial situations are not entrenched in a financially unwell situation but their position is highly unstable); Drifting Well (these households' financial position are not stable, however they have opportunities to improve their position); and Anchored Well (these households are financially well) (PFRU, 2013). It is worrying that the average financial wellness index has declined over the last three years from 65.24 points in 2011, which was the first year of the survey, to 64.77 points in 2012 and then to 64.06 points in 2013 (PFRU, 2013). This index is calculated annually by means of an annual survey. The index includes five subcomponents, namely: physical capital (income and expenditure/net income situation), asset capital (liabilities, assets and net wealth), human capital (skills and education), environmental capital (location and dwelling type) and social capital (personal empowerment/ability to take responsibility for own financial situation) (PFRU, 2013). The index indicated that households' physical capital, asset capital and social capital have contributed to the decline over the period of review. Of particular interest to this study is the decline in the asset capital. It was noted that households who were previously Anchored Well became Drifting Well because of their exposure to expensive debt and comparatively fewer assets. It was further shown that the Anchored Unwell and Drifting Unwell households' liabilities exceed their assets and that their debt to income ratios are well in excess of South Africa's average debt to income ratio. It is also apparent that these households face a liquidity risk as they do not have adequate cash available (PFRU, 2013). The Drifting Unwell represent 33.3 percent of households and the Anchored Unwell represent 5.4 percent of households; therefore, the above findings have a profound effect on a large proportion of South Africa's population.

Secondly, the Consumer Financial Vulnerability Index provides information on the cash-flow pressures of South African consumers (MBD/BMR, 2014). For the 2nd quarter of 2014 the index remained at 50.2, which is indicative that consumers felt mildly exposed; however, this is very close to being financially very exposed, as is the case when the score is between 40 and 49.9. The index is calculated by taking consumers' cash flow into account, which is made up of income, expenditure, savings and debt servicing. The subcomponents' readings are all taken into

account when determining the overall score and it is of concern that the debt servicing score was 48.9, which indicates that consumers are financially very exposed when it comes to servicing their debts (MBD/BMR, 2014). The higher interest rate environment contributed to consumers being financially very exposed. This led to a number of consumers facing financial pressure to meet their commitments relating to expenditure, savings and debt and which caused them not to fulfil their payments relating to servicing their debt (MBD/BMR, 2014). This phenomenon is in accordance with the National Credit Regulator’s statistics, which reflect an increase in consumers whose accounts are not in good standing, as reflected in Figure 2.5. Figure 2.6 represents the movement in the Consumer Financial Vulnerability Index (CFVI) from 2009 until the second quarter of 2014.

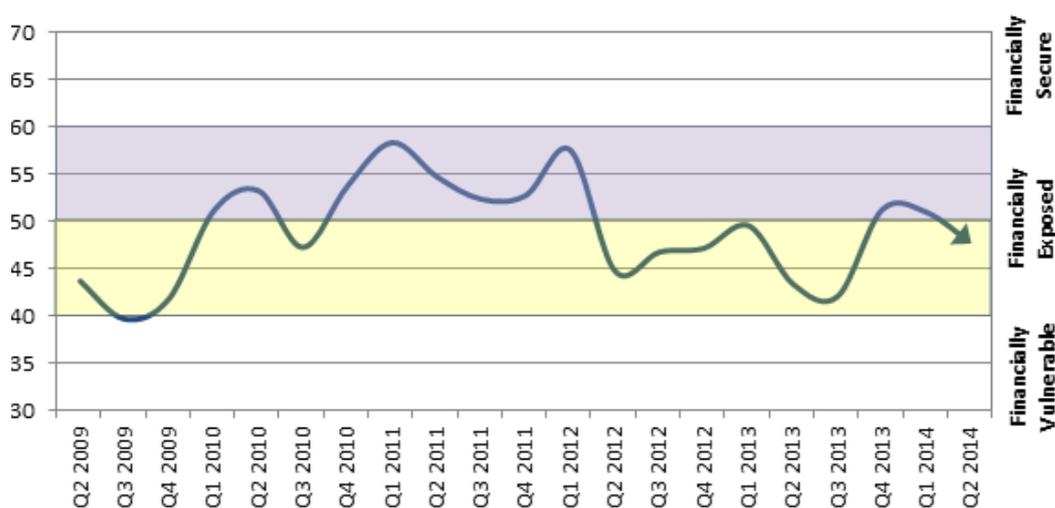


Figure 2.6: Consumer Financial Vulnerability Index

Source: MBD/BMR, 2014.

There is concern that if macroeconomic conditions do not pick up the vulnerability experienced by consumers may worsen because of the repo rate increases, labour strikes and increased consumer price inflation (MBD/BMR, 2014).

Thirdly, the SA Consumer Credit Index as compiled by TransUnion measures consumer credit health in South Africa. It combines macroeconomic variables that are available to the public with borrowing and repayment behaviour of consumers (TransUnion, 2015). The credit health of consumers is measured through combining the following aspects: loan repayment records, use of revolving credit,

estimates of household cash flow, as well as the cost of servicing debt (TransUnion, 2015). The index is based on a 100-point scale, with improving consumer health being indicated by levels above 50 and levels below 50 indicating that consumer health is declining. Therefore 50 is the benchmark level index where there is a break-even level between improvement and deterioration. This index is measured on a quarterly basis.

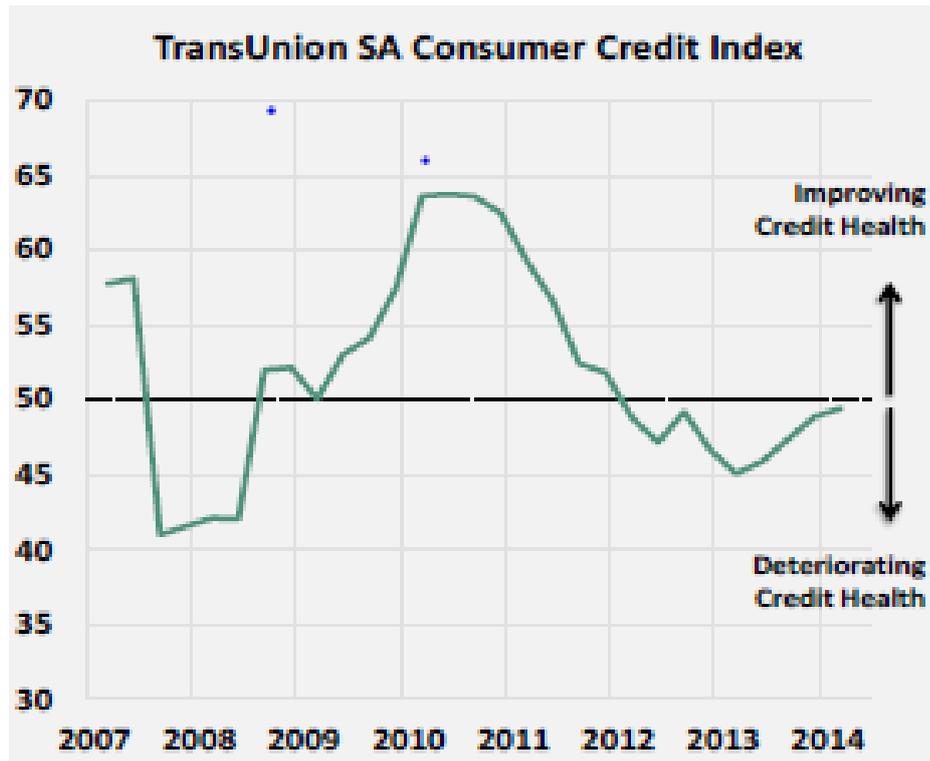


Figure 2.7: TransUnion Consumer Credit Index

Source: TransUnion, 2015.

As can be seen from Figure 2.7, the index has shown an improvement from 2013, but the index is still below 50, which indicates that consumers are not experiencing improved levels of credit health. The ability of consumers to service their current loans within their monthly household budgets is what TransUnion means by the term credit health (TransUnion, 2015). The results relating to the Consumer Credit Index correspond with the results of the first two indicators mentioned in this section.

2.3.7. Summary

A wealth of information can be sourced from all the institutions mentioned in this section as well as many others not specifically mentioned here. The indicators reviewed were from the South African Reserve Bank, the National Credit Regulator, Statistics South Africa and the Financial Services Board, as well as from the Momentum/UNISA Financial Wellness Index, the Consumer Financial Vulnerability index and the Credit Health Index of TransUnion. A consensus can be reached based on the results of these indicators that households are in a position whereby they continue to face financial hardship and experience financial pressure in servicing their debt.

These indicators will continue to provide valuable information regarding the debt situation faced by the people of South Africa, including young adults who may be the most financially vulnerable group.

It appears that the situation with regard to household debt has deteriorated over time; a more in-depth look into the reasons for the changing credit situation is required and will be dealt with in the following section.

2.4. THE CHANGING CREDIT SITUATION IN SOUTH AFRICA

As became evident in the previous section, the increase in household debt in South Africa has become increasingly worrisome to the various stakeholders, especially in light of the fact that many credit consumers face financial pressure in order to service their debt.

Many changes have taken place in South Africa with regard to the credit industry since the 1970s. A number of these changes have coincided with changes in the way in which households make use of debt. This section will provide information on the changes that have taken place in South Africa's finance sector and led to the change in credit conditions, allowing consumers greater access to credit. It will begin with the process of financial liberalisation. Table 2.7 provides a rudimentary timeline of the events that have shaped South Africa's present-day financial sector.

Table 2.7: Events shaping the financial sector in present-day South Africa

1978 and 1985	<ul style="list-style-type: none"> • De Kock commission which encouraged a more market-orientated monetary policy
1980s	<ul style="list-style-type: none"> • Interest and credit controls were removed
1986-1987	<ul style="list-style-type: none"> • Building Societies Act No. 82 of 1986 and amendments led to an intensification of the mortgage market
1989-1990	<ul style="list-style-type: none"> • Demutualisation and takeovers led to stronger competition in the credit market
1990s	<ul style="list-style-type: none"> • Pensions used to provide additional security for housing loans
1990	<ul style="list-style-type: none"> • The Banks Act No. 94 of 1990 was implemented which led to a number of new banking licences being registered
1994	<ul style="list-style-type: none"> • Subsequent to the elections more black South Africans held formal employment and had greater access to credit
1995	<ul style="list-style-type: none"> • Access bonds allowed more flexibility in repaying bonds • Exchange controls on non-residents were removed
1997	<ul style="list-style-type: none"> • Exchange controls on residents were partially eased
1997/1998	<ul style="list-style-type: none"> • Financial crisis partially reversed the financial liberalisation process
1998	<ul style="list-style-type: none"> • More stringent lending practices were imposed on banks
2002	<ul style="list-style-type: none"> • Review of Saambou Bank by South African Reserve Bank and more stringent supervision over banks was imposed
2005	<ul style="list-style-type: none"> • National Credit Regulator established by the National Credit Act No. 34 of 2005
2007	<ul style="list-style-type: none"> • Amendment to the National Credit Act
2007/2008	<ul style="list-style-type: none"> • Global financial crisis took place – South Africa experienced indirect effects
2008	<ul style="list-style-type: none"> • Implementation of the Basel II framework to strengthen the banking and financial sector
2012	<ul style="list-style-type: none"> • The National Credit Regulator expresses concern about the growth in unsecured lending and initiates further research • Banking Association of South Africa and National Treasury sign an agreement to endorse responsible lending
2013	<ul style="list-style-type: none"> • Implementation of Basel III framework
2014	<ul style="list-style-type: none"> • Collapse of African Bank • Affordability assessment guidelines published by Department of Trade and Industry and National Credit Regulator for public comment • Amendment to the National Credit Act • National Credit Amendment Act No. 19 of 2014 signed into law

Source: Author's own.

It is necessary to describe briefly the liberalisation process that unfolded in South Africa and enabled a greater portion of the population to gain access to debt products.

As a background to the financial liberalisation that took place in South Africa, Aron and Muellbauer (2000:17) provide a brief summary as follows: Financial liberalisation was initiated by the South African government, following the 1978 and 1985 reports from the De Kock commission, which advocated a more market-orientated monetary policy. From the 1980s, interest and credit controls were removed and the liquidity ratios of the banks were substantially reduced. In 1986 the Building Societies Act No. 82 of 1986, as well as amendments to the Act in 1987 and 1988, resulted in the intensification of the mortgage market. Then in 1989 to 1990, demutualisation and takeovers led to stronger competition in the credit market. Pensions were made use of in the 1990s to provide additional security for housing loans. Also, in 1990 the Banks Act No. 94 of 1990 was implemented, which led to a number of new banking licences being issued. Subsequent to the 1994 elections, more black South Africans were formally employed and thus had access to credit that was not previously available to them. From 1995 onwards, access bonds provided households with the flexibility of borrowing and paying back up to an agreed limit set by the banks. Exchange controls on non-residents were removed early in 1995 and then exchange controls on residents were somewhat eased after 1997 (Aron & Muellbauer, 2000:17). As a result of liberalisation, a number of new lending opportunities were created in the financial sector, which in turn made it possible for households to increase their borrowing in relation to the income (Prinsloo, 2002:74). Aron and Muellbauer (2013:S163) comment that the effect of credit liberalisation is threefold; firstly, the credit constraints on households are reduced when households participate in smoothing consumption in anticipation of a significant growth in income; secondly, it decreases the deposits that are required by first-time home owners, and lastly, it increases the availability of collateral for home owners who already possess collateral-backed loans.

The increase in household debt continued its upward spiral until the international financial crisis of 1997–1998 partially reversed the financial liberalisation that had

taken place in the years leading up to 1997. Following this crisis, in 1998 more stringent lending requirements were placed on banks where mortgage lending surpassed an 85 percent loan to value ratio (Aron & Muellbauer, 2013:S171). When in 2002 Saambou Bank was reviewed by the South African Reserve Bank, more stringent control was exercised over the banking sector (Aron & Muellbauer, 2013:S171). Following this, in order to increase regulation over the credit industry the National Credit Regulator was established under the National Credit Act No. 34 of 2005 (National Credit Act). It has the responsibility to carry out education, research and policy development, as well as registration of participants in the industry. It must investigate complaints and ensure that the Act is enforced (South Africa, 2005). In 2008, the world experienced a global financial crisis. Regarding the financial crisis in the United States, it has been well documented that one of the causes of the recession was the sharp increase in household debt to unsustainable levels during the period 2001–2007 (Faria, Wang & Wu, 2009:3). For completeness, Table 2.7 also schematically presents stakeholder initiatives that have been previously discussed.

When looking at the 2007/2008 recession, it can be said that South African banks were largely protected and not that severely affected compared to other countries in the world and that they only experienced the effects through the liquid financial markets and the rand exchange rate (Nel, 2008:45). Thus, South Africa only experienced the indirect effects of the financial crisis (Nel, 2008:45). De Clercq (2013:1) remarks that the situation that South African consumers found themselves in during this crisis was not as harsh as in some countries. However, despite the situation in South Africa, consumers' financial situations still deteriorated on a micro-level during this period leading up to June 2009. Nel (2008:45) comments that the following factors all played a part in allowing South Africa to be relatively sheltered; the conservative nature of the regulatory and credit environment, the National Credit Act which was previously mentioned and which regulates the credit industry, the efficient capitalisation and profitability of the banking system, the fact that South Africa does not have separate "investment bank" regulations, the successful implementation of the Basel II framework for banking supervision, the limited degree of foreign funding in the banking sector, and lastly regulations that prevented bank participation in the assets that were at

the root of the crises. However, as suggested by Aron and Muellbauer (2013:S181), South Africa's banking and financial structure is more similar to the Anglo-Saxon economies than to the other economies in Africa. Therefore, South Africa's economy was and will continue to be affected by global occurrences.

Going back to the timeline presented in Table 2.7, concern expressed by the National Credit Regulator regarding the sustained growth in unsecured lending in a credit environment where many consumers' credit records were impaired led to research conducted by them in 2012. This research was performed in order to gain a greater understanding of the surge in unsecured debt and to obtain reasons for its increase (NCR, 2012). The research revealed that the reasons for the increase in unsecured lending are multidimensional and complex. Included in the reasons, the following stand out: following the financial crisis the mortgage lending market has been more constrained and unsecured loans can be obtained more easily and speedily (NCR, 2012:5). The unsecured loans can be utilised for a variety of purposes: from funding living expenses to financing education and even home renovations. However, unsecured loans are issued at higher interest rates and consumers who take up these loans are more exposed to events that may affect their ability to service the debt. The various risks that consumers may face in acquiring debt will be discussed in section 3.3.4.

National Treasury (2012) has also expressed particular concern about the growth of unsecured lending as a percentage of total consumers' borrowing and it appears that households may be using credit to cover monthly living expenses, in other words for consumption purposes. National Treasury together with Banking Association of South Africa reached an agreement on the 19th of October 2012 as reflected in Table 2.7. The purpose of the agreement was to enhance responsible lending and to prevent households from being trapped in a debt spiral. This included stricter rules regarding lending affordability and more stringent criteria that need to be applied before issuing garnishee orders on employee salaries (SARB, 2014b). One of their objectives is to avoid future indebtedness and focus on current over-indebtedness.

In January 2013, the amended regulations of the Basel III framework were implemented. There are transitional arrangements which will be phased in until

2019 to enable banks to meet the higher standards imposed by the framework. The Basel Committee on Banking Supervision is responsible for developing and issuing guidance and standards in order to increase the stability of the financial sector and particularly the banking sector (Bank for International Settlements, 2014).

As alluded to earlier, South Africa's banking system and financial markets are well developed (Aron & Muellbauer, 2013:S170), but this did not prevent the collapse of African Bank. The situation with regard to African Bank reiterates the importance of planned interventions and continual monitoring and regulation of the industry. The Basel III framework, as mentioned in the previous paragraph, will undeniably assist the banking system of South Africa to provide stability.

Of particular significance, and which was highlighted by the African Bank debacle, is that the unsecured lending industry is in the spotlight and is widely used by the majority of the population as a finance vehicle. Unsecured lending forms a major part of total household debt, as indicated in section 2.3. Its impact on households who already have impaired credit records is also highly significant. For instance, the massacre that took place in Marikana was linked to the unsecured lending industry (Bond, 2013:580). Micro-lenders, formal banks and informal moneylenders in the townships referred to as "Mashonisa" granted loans to the many mineworkers who were already heavily indebted (Bond, 2013:580). It can be said there were other causes for the strike action but it is evident that the mineworkers relied heavily on the unsecured lending industry to make ends meet.

The perceived behaviour of the financial sector in South Africa made it necessary for the Department of Trade and Industry and the National Credit Regulator to develop affordability guidelines. They presented affordability assessment guidelines in June 2013 and advised that changes were being planned to amend the lending rules in respect of unsecured lending. In August 2014, draft regulations were published by the Department of Trade and Industry for public comment, containing criteria that must be adhered to by credit providers before they are able to extend credit to consumers (South Africa, 2014b). After consultation with various stakeholders in the industry, an approach of responsible amnesty was favoured and certain amendments to the National Credit Act were proposed

(SARB, 2013a). On the 20th of May 2014 the National Credit Amendment Act No. 19 of 2014, was signed into law by the President (South Africa, 2014a).

When looking at the success of the various initiatives, it appears that certain of these proposed measures have proved to be successful. According to the South African Reserve Bank Economic Report for 2013, the rapid growth in general loans to households in the form of unsecured lending, which had been rising since 2010, started to slow down towards the end of 2012. This is because the majority of banks started to enforce greater restraint in order to manage their risk exposure and as a result of consumers reaching levels of debt which prevent them from accessing further debt (SARB, 2013a). However, it is obvious from the African Bank experience that consumer over-indebtedness continues to remain a problem among the residents of South Africa (NCR, 2014f). The National Credit Regulator together with the South African Reserve Bank will continue to work closely in order to ensure fair and sound lending methods (NCR, 2015).

Two other initiatives that are briefly mentioned below are the Consumer Financial Education Strategy and the National Development Plan (NDP). The stakeholders of South Africa's financial sector have come together and identified consumer financial education as one of the key focus areas in overcoming the issue of problem debt. These stakeholders include the government departments, financial sector organisations, non-government organisations and the various regulators (South Africa. KwaZulu-Natal Treasury 2014). To this end, the National Treasury established a consumer financial education strategy, which was ratified in July 2013 and officially launched in 2014. This strategy identifies the functions of the various bodies in reforming the financial sector in South Africa as follows: the Reserve Bank is to be in charge of the area of financial stability, the Financial Services Board and the National Credit Regulator will lead in the area of consumer protection, National Treasury to lead in the area of ensuring access to financial services and in the area of combating financial crime, the various enforcement agencies will take the lead (National Treasury, 2012b).

In an initiative by the South African government, the National Planning Commission (NPC) was commissioned to prepare the National Development Plan 2030 (NPC, 2012). The purpose of the National Development Plan is to eliminate

poverty, create employment and reduce inequality by 2030 and the National Planning Commission would advise government on an implementation strategy (NPC, 2012).

From the aforementioned paragraphs, it appears as though all concerned stakeholders are determined to find a solution to the increasing social and financial problems, amongst others, experienced by the majority of the population of South Africa. As explained previously, household debt is an important contributing factor in the overall well-being of the South African economy.

Implementing the various practices mentioned in the section, will mean that consumers will be better educated and protected. These initiatives are therefore also an important tool in protecting households from the harsh effects of being over-indebted. As mentioned before, the total amount of household debt and the number of consumers taking up debt are increasing year on year.

As a past President, Thabo Mbeki once said: South Africa is a country in which there is a great divide and in which two economies co-exist. One is a first-world economy that mostly caters for the elite members of the population who live in urban areas, and the other is more like a third-world economy in which the majority of the population live in extremely basic conditions (Hurwitz & Louis, 2007:108). These people are the majority of the population, who may be the most financially vulnerable.

In summary, there are a number of important research projects and initiatives undertaken by the stakeholders of South Africa in a bid to strengthen regulation over the financial and banking sector. These initiatives are fundamental to protecting the credit industry and consumers. South Africa's financial sector has developed impressively following the process of financial liberalisation, which began in the 1970s. Included in the transformation of the financial sector is the change in the credit conditions that has transpired over recent years and which in turn has had an influence on the types of credit products consumers utilise. The most notable shift is that more consumers are making use of unsecured credit. The various types of household credit, and in particular unsecured credit, are a necessity as they allow people to access services and products; however, it is also

vital that they be educated on the affordability of credit and the dangers of being over-indebted. As the youth of South Africa are the focus of this research, the next section will deal specifically with the state of affairs of this group of people.

2.5. THE SITUATION FACED BY THE YOUTH OF SOUTH AFRICA

The youth in South Africa represent a large percentage of the overall population and as a group they face high unemployment and endure many other difficulties that may hamper their financial stability as they grow older and move through the various life stages. The countrywide student protests of October 2015 were unprecedented as the youth harnessed their power by demanding that their issues be dealt with. The protest actions were called off once the President, Mr Zuma, announced that there would not be any fee increases for 2016. This occurrence has highlighted the fact that the youth of South Africa have various demands and that they are willing to organise mass action to ensure that the difficulties they face on a daily basis are dealt with in the appropriate manner.

The United Nations defines youth as persons aged between 15 and 24 for statistical purposes (UN, 2014). In 1981, the Secretary-General first referred to this definition in his report to the General Assembly and subsequently endorsed the definition of youth. However, it is recognised that the definition of youth is different among the various global societies (UN, 2014). These definitions may change because of demographic, economic, socio-cultural and financial situations in the different societies (UN, 2014). It is also important to distinguish teenagers (15–19 years of age) from young adults (20–24 years of age), as the difficulties experienced relating to health, psychology and sociology may vary between these two groups (UN, 2014). Table 2.8, prepared by the United Nations, reflects the differences in the ages used to describe youth by the various United Nations entities, regional organisations and instruments.

Table 2.8: Differences in the ages used to describe youth

Equity/Regional organisation/Instrument	Age
United Nations Secretariat/United Nations Educational, Scientific and Cultural Organization (UNESCO)/International Labour Organization (ILO)	Youth:15-24 years old
United Nations Habitat (Youth fund)	Youth: 15-32 years old
United Nations Children's Fund (UNICEF)/ World Health Organization (WHO)/United Nations Population Fund (UNFPA)	Adolescent: 10-19 years old Young people: 10-24 years old Youth: 15-24 years old
United Nations Children's Fund (UNICEF)/The Convention on the Rights of the Child	Child until 18 years old
The African Youth Charter	Youth: 15-35 years old

Source: UN, 2014.

In South Africa, the National Youth Development Agency was established by Act no. 54 of Parliament in 2008. It describes youth as being between the ages of 14 and 35. As a result, 55.4 percent of the South African population is represented by the youth (Stats SA, 2014b); hence, it is understandable that they bear a large proportion of the socio-economic challenges such as poverty, inequality, unemployment and poor health (NYDA, 2014). Statistics South Africa (2014b) regard youth as being persons between the ages of 15 and 34. Adults are categorised as being between the ages of 35 and 64 and the working age population as all persons between the ages of 15 and 64 (Stats SA, 2014b).

The unemployment of youth has become a contentious topic (Du Toit, 2003:4). A statistical release, with the title National and Provincial Labour Market: Youth Q1:2008–Q1:2014, revealed that although youth accounts for one in every two of the working age population, their share of employment was considerably lower at 40–45 percent and that the unemployment rate is more than double that of the adult population (Stats SA, 2014b). In accordance with the South African Reserve Bank Annual Economic Report (2013a), the unemployment rate for the youth, which is classified as being 15–24 year-olds, is reported in Table 2.9.

Table 2.9: Unemployment rate for 15–24 year-olds from 2010–2013

	Average for 2010	Average for 2011	Average for 2012	Average for 2013
Unemployment rate	24.9%	24.9%	25.1%	25.2%
Unemployment rate youth (15-24)	50.5%	49.8%	51.5%	52.9%

Source: SARB, 2013a.

Table 2.9 is worrisome in that even though the unemployment rate of South Africa has hovered around 25 percent, it is of particular concern that the youth unemployment rate has been increasing steadily and this highlights the situation that over half of all the youth in South Africa are unable to find employment. Youth unemployment is a phenomenon that is experienced by many countries with the youth unemployment rate being much higher than the adult unemployment rate in the majority of these countries. In most countries, it was double the adult unemployment rate and in some countries three times as high as the adult unemployment rate (Du Toit, 2003:5). In a report issued by the Bureau of Market Research with the title Personal Income Estimates for South Africa 2011–2014, the authors explain that although a quarter of the population falls into the age group of 15–24 years they only earn four percent of total income earned (De Clercq, Van Tonder, Meiring, Wilkinson & Risenga, 2014:19). However, it is important to take cognisance of the fact that many of the people in this age category are still enrolled at educational institutions and do not receive an income (De Clercq *et al.*, 2014:20). Thus when looking at the total unemployment figures for the youth, the above must be taken into consideration.

In South Africa, the figures for 2014 representing unemployment of the youth show that 26.6 percent of persons aged 15–34 reside in households in which no one is employed (Stats SA, 2014b). As a result, many of these youth may have to make use of debt in order to provide for consumption.

Young South Africans are in the spotlight for facing financial hardship by taking on high levels of debt and then being unable to repay it. They may face the situation of being in a debt trap from which they cannot escape and may thus face a bleak future in terms of financial wellness as they move through the various stages of the life course. The National Credit Regulator has also expressed the need to

educate the youth about the negative consequences of taking on excessive amounts of credit and to encourage them to take advantage of accessing a free credit report on an annual basis and thus be able to stay well informed of their credit position (NCR, 2013a). It is satisfying to note that more people are accessing their credit reports, as discussed in section 2.3.3. The situation with respect to the debt holding of the youth of South Africa may be similar to the situation globally. Young adults are considered vulnerable as they are financially less stable and in general show lower levels of financial literacy (Lachance, 2012:539). In the Financial Literacy Report 2013 it was reported the age group which was the least likely to draw up a household budget were people aged 16 to 24 years old (Struwig *et al.*, 2013:14).

On an international level, the problems experienced by the youth have also received attention. Research in the United Kingdom revealed that young adults did not clearly distinguish between needs and wants and were prepared to borrow for everyday discretionary spending (Finney *et al.*, 2007:7). Research conducted in the United States reveals that because of the increasing cost of education and high unemployment amongst the young adults, debt continues to be a problem for young adults (Kim, Chatterjee & Kim, 2012:55).

According to the Financial Services Board's financial literacy survey conducted in 2012, the average financial literacy score for South Africans was 54, but when looking at the age groups 16 to 19 years and 20 to 29 years, their financial literacy scores were 45 and 51 respectively. This is below the average and these groups are thus at high risk of making uninformed decisions regarding the liabilities they acquire and the financial products they utilise. People who have low financial literacy are characterised by being vulnerable to predatory lending, by acquiring unsuitable financial products and being more exposed to financial scams (Struwig *et al.*, 2013:101).

The youth in particular are in danger of living beyond their means and once in a debt spiral it becomes increasingly difficult to escape the effects of over-indebtedness. Thus, it is of particular importance that the youth are educated about credit management as this is the stage when debts start to accumulate as they educate themselves, get married, buy a house and have children.

2.6. CONCLUDING REMARKS

This chapter has addressed the first research objective of the study. The definitions and various classifications of liabilities were dealt with in section 2.2. It was noted that there are many similarities between the definitions. Various indicators that are used by policy decision makers, researchers and analysts were explored in section 2.3. These indicators are extremely useful in determining the household debt position of households. This section revealed that household debt has changed over time and that a number of indicators reveal that South African households are struggling to service their debt. Also, of concern was that it appears that a large proportion of households do not have an acceptable level of financial literacy. Section 2.4 investigated the change in the position of household debt in South Africa following the financial liberalisation that took place; it is evident that together with the transformation of the financial sector came a change in the household debt sector. Section 2.5 stressed the financial vulnerability of the youth in South Africa and emphasised the need for intervention by the authorities.

In conclusion, it is apparent from Figure 2.8 that final consumption expenditure by households was greater than total disposable income of households (SARB, 2014a) from 2006–2013, with the exception of 2012 where it was marginally less. The information presented in Figure 2.8 clearly depicts the situation that households are spending more than they earn and are thus making use of household debt to make ends meet.

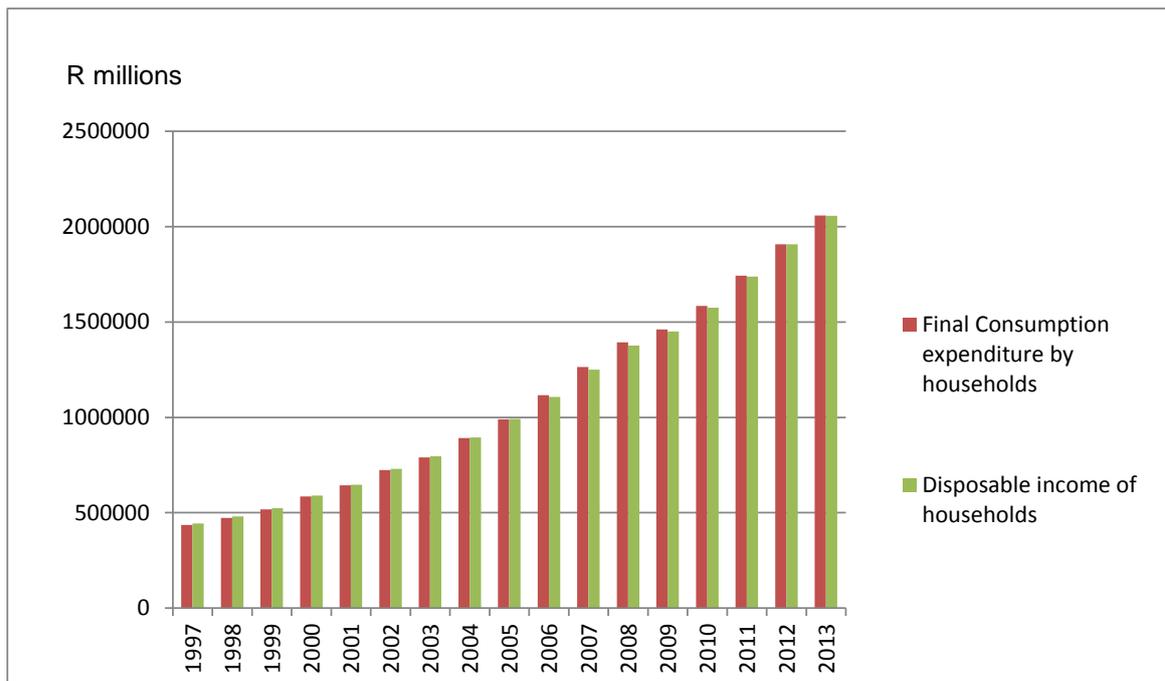


Figure 2.8: Comparison of final household consumption expenditure by households to disposable income of households

Source: SARB, 2014a.

Households will continue to be financially vulnerable while consumption exceeds income. Consequently, it is of utmost significance that the debt position of households continue to be monitored and that in-depth research is carried out to determine the events, transitions and trajectories that may act as a demand for debt during the various life stages. Chapter 3 will discuss the literature regarding household debt during the various life stages.

CHAPTER 3

HOUSEHOLD DEBT OVER THE LIFE COURSE

3.1. INTRODUCTION

Chapter 1 identified that individuals' lives develop over a period of time and that certain events and trajectories are responsible for the changes that are experienced as the individual progresses along the life course. It can also be deduced from this that the financial needs and the composition of a household's liabilities will change as the household progresses through the various life stages.

A number of previous studies have revealed that various socio-demographic, attitudinal and economic characteristics have been found to have an influence on the debt incurred by households. This chapter will investigate, according to the existing literature, how households' demand for liabilities will fluctuate over the life course of the households.

Section 3.2 will include a background to life course theory and introduce the various conceptual frameworks that have been used to explain the consumption behaviour of households. Section 3.3 will give a perspective of household debt over the life course and will include an identification of characteristics that may determine household participation in the debt market, the general increase in household debt, and the impact that increasing debt levels have on households.

The main research objective of the study, which addressed the research problem, was as follows:

To identify and describe how liabilities are accumulated by young adult South Africans and how household characteristics and events may be related to the uptake of household liabilities.

To achieve the main research objective, this study was conducted in two phases. This chapter together with Chapter 2 forms part of the first phase of this study. This chapter will address research objectives two and three of the study (section 1.4) as depicted below.

- To review the life course theory. This objective will be achieved by:
 - Performing a bibliographic search and a discussion of the most important contributions to the literature (section 3.2.2).
 - Discussing the various conceptual frameworks for understanding consumption behaviour (section 3.2.3).

- To obtain a perspective of household debt over the life course. This objective will be achieved by:
 - Identifying characteristics that may determine a households' participation in the debt market (section 3.3.2).
 - Identifying the reasons for the increase in household debt on an international level (section 3.3.3).
 - Discussing the impact of rising household debt (section 3.3.4).

3.2. LIFE COURSE THEORY

3.2.1. Introduction

As a person moves through the life course, a number of distinct phases will be experienced, beginning with the day the person is born and ending the day the person passes away (Preusse, 2012:603). Thus, it can be said that as the course of an individual's life is split into a number of distinct phases, specific routes or trajectories that an individual in a household follows may have an impact on the way in which debt is taken up in the household.

In his study on asset building over the life course, Rank (2008:ES-2) highlights certain factors that affect asset building across this life course and these factors are considered within the context of time, ageing, development and sequencing, all of which epitomise the fundamental nature of the life course perspective. Similarly, insight into the accumulation of liabilities across the life course may be obtained with reference to the life course approach, as saving and borrowing are linked to household income and consumption (Schooley & Worden, 2010:267). A household who borrows prefers current consumption to future consumption, while the opposite is true for a household who wishes to save (Schooley & Worden,

2010:267; Weinberg, 2006:181). The next section will deal with various concepts commonly found in life course theory.

3.2.2. Background to life course theory

There are various concepts such as life stage, life course and life cycle that are used interchangeably in the literature but that could have different interpretations. These terms will be used throughout this chapter and the remaining sections of the dissertation and therefore warrant further explanation.

Firstly, when discussing life stages, the age of the householder is generally used when categorising the life cycle stage (Lee, Park & Montalto, 2000:81). As suggested by Baek and Hong (2004:361), the traditional life cycle hypothesis only considers age when considering saving and consumption behaviour. It is thus of concern that by only taking age into account, the household consumption demands at different stages of the life cycle may not be depicted. Rank (2008:ES-2) goes on to comment that life cycle stages are frequently described in terms of changes in family composition combined with an approximate estimation of the chronological age of an individual. Venter and Stedall (2010:2) point out that the life stage approach is based on the different stages a person is faced with during his or her lifetime. In South Africa, as well as internationally, various authors have diverse descriptions of a person's financial life stages (Venter & Stedall, 2010:6). Even though there are many different opinions on how to categorise life stages, it is commonly agreed that income and expenditure patterns of a household will vary according to life stage (Lafrance & LaRochelle-Côté, 2012:4; Lee *et al.*, 2000:81; Gourinchas & Parker, 2002:49; Venter & Stedall, 2010:6; Yilmazer & DeVaney, 2005:287). Hence, household debt, which is determined by income and expenditure, will also vary over the life cycle.

Characteristics that are typically used in constructing the life stages are age, marriage, and dependent children (Baek & Hong, 2004:363; Rank, 2008:ES-2; SAARF, 2012; Schooley & Worden, 2010:270; Wilkes, 1995:31). Tables 3.1, 3.2 and 3.3 are given as examples of the classification of life stages used during three different studies. Table 3.1 presents Wilkes' (1995:31) criteria for classification, Table 3.2 illustrates the classification criteria used in Baek and Hong's study

(2004:366) and Table 3.3 shows how Schooley and Worden (2010:269) classified life stages in their study.

Table 3.1: Life stages presented in the study performed by Wilkes

Life stages: Under age 35	Life stages: Age 35+ not retired	Life stages: Age 35+ retired
Single	Never married	Single
Married, no children	Married, no children (empty nest I)	Married (empty nest II)
Married, child under age 6 (full nest I)	Married, child under age 6 (delayed full nest)	
Married, child age six or older (full nest II)	Married, child age 6 or older (full nest III)	
Divorced, no children	Divorced, no children	
Divorced, child under age six	Divorced, child under age six	
Divorced, child age six or older		

Sources: Wilkes, 1995; Author's own.

Table 3.2: Life stages presented in the study performed by Baek and Hong

Life stage	Age	Marital status	Children
Young single	17-39	Single	No
Newly married	17-39	Married	No
Full nest I	17-39	Married	Yes
Full nest II	40+	Married	Yes
Empty nest	50+	Married	No
Solitary household	50+	Widowed/Never married/Divorced/ Separated	No
Single parents	17-49	Widowed/Never married/Divorced/Separated	Yes
Childless middle-aged couple	40-49	Married	No

Sources: Baek & Hong, 2004; Author's own.

Table 3.3: Life stages presented in the study performed by Schooley and Worden

Life stage	Age	Marital status	Children
Young single	Under 40	Single	No children under 18 years
Young couple	Under 40	Married or with partner	No children under 18 years
Young family	Under 40	Married or with partner	Children under 18 years
Single parent	Age under 50	Single	Children under 18 years
Middle-aged couple	Age 40-49	Married or with partner	No children under 18 years
Mature family	Age 40+	Married or with partner	Children under 18 years
Mature couple	Age 50 +	Married or with partner	No children under 18 years
Mature single	Age 50 +	Single	No children under 18 years

Sources: Schooley & Worden, 2010; Author's own.

Another example of the categorisation of life stages is reflected in the AMPS, which is conducted by SAARF. SAARF is an independent authority that facilitates, co-ordinates and is responsible for determining the research needs of its stakeholders. The AMPS survey provides comparable multi-media and multi product/brand usage information that is a reflection of the entire complex society of South Africa (SAARF, 2013). The SAARF AMPS survey covers the total adult population of South Africa. The AMPS sample is currently amongst approximately 25 100 South African adults (15 years and older). The data is collected per annum in two national fieldwork waves (January-June and July-December) by means of personal in-home interviews (SAARF, 2013). The life stages used in the AMPS surveys are depicted below in Table 3.4 and Table 3.5. Table 3.4 provides the nine life stages as formulated for the years from 1999–2007 and Table 3.5 provides the eight life stages as formulated for the year 2008–2013. When referring to the eight life stages as formulated by SAARF in the AMPS questionnaire 2008–2013, it is evident that age and compositional changes are taken into account. For example, Young Independent Singles are grouped as individuals up to 34 years old, not living with parents, not married/not living

together and who do not have any dependent children in the household (own or other children) that they are responsible for.

Table 3.4: The nine life stages as depicted by SAARF in the AMPS questionnaire (1999–2007)

Life stage	Age	Living arrangements	Marital status	Dependent children
At-Home Singles	Up to 34 years old	Live with parents	Not Married/Not Living together	No children of their own
Starting Out Singles	Up to 34 years old	Not living with parents	Not Married/Not Living together	No children of their own
Mature singles	35 - 49 years old		Not Married/Not Living together	No children of their own
Couples/ Young couples	Up to 49 years old		Married/Living together	No children of their own
New parents			Married/Living together	With children up to 12 years No children 13 plus years Children of their own who are dependent on them
Mature Parents			Married/Living together	With children – at least one 13+ Children dependent on them
Single Parents			Not married/Not living together	With children of their own who are dependent on them
Golden Nests	50 years plus		Married/Living together	No children dependent on them
Left Alones	50 years plus		Not married/Not living together	No children dependent on them

Sources: SAARF, 2007; Author's own.

Table 3.5: The eight life stages as depicted by SAARF in the AMPS questionnaire (2008–2013)

Life stage	Age	Living arrangements	Marital status	Dependent children
At-Home Singles	Up to 34 years old	Live with parents	Not Married/Not Living together	Do not have any dependent children in the household (own or other children) that the respondent is responsible for
Young Independent Singles	Up to 34 years old	Not living with parents	Not Married/Not Living together	Do not have any dependent children in the household (own or other children) that the respondent is responsible for
Mature singles	35+ years old		Not Married/Not Living together	Do not have any dependent children in the household (own or other children) that the respondent is responsible for
Young couples	Up to 49 years old		Married/Living together	No dependent children in the household (own or other children) that the respondent is responsible for
Mature couples	50+ years old		Married/Living together	No dependent children in the household (own or other children) that they are responsible for
Young family			Married/Living together	With at least one dependent child under 13 years in the household (own or other children) that they are responsible for
Single parent family			Not married/Not living together	With dependent children in the household (own or other children) that they are responsible for
Mature family			Married/Living together	With no dependent children under 13 years in the household (own or other children) that they are responsible for, but with dependent children over the age of 13 years in the household

Sources: SAARF, 2012; Author's own.

It can be seen from the information in Tables 3.1 to 3.5 that parents' age, marital status, whether there are children in the household, as well as the age of the children are suitable indicators of life stage. When examining the youth of South Africa, aged between 18 and 32 years old, it is apparent from Table 3.5 that they could fall into six of the life stages, that is: At-home singles, Young independent Singles, Young couples, Young family, Single parent family and Mature family.

Following on from the classification of life stages as depicted above, it can be said that the life course approach has a prominent history in the social and applied sciences (Sandoval *et al.*, 2009:717; Elder, 1994) and has provided a useful framework for considering how individuals' lives unfold and how particular events and transitions affect these trajectories (Elder, 1994). George (1993:358) comments that life course studies necessitate a longitudinal perspective that is dynamic. As explained by Preusse (2012:603), the conventional life course consists of school education, after that vocational training, which is followed by being employed in an occupation, and then retiring as a pensioner. She adds that corresponding to these stages, people also experience events related to the family, such as living with a partner, being married or having children. Furthermore, various events such as illness, divorce or unemployment may affect the typical life course pattern of events (Preusse, 2012:603).

From the above explanation, it is apparent that, from a life course perspective, development is life-long and no particular life stage can be understood in separation from other life stages (Johnson, Crosnoe & Elder, 2011:274). In other words, life course as explained by Rank (2008:1) is as follows: Over the course of an individual's life, he or she will go through a number of stages: childhood, adolescence, young adulthood, middle age and the senior years. Rank (2008:ES1) explains that the stages tend to correspond with certain economic and social events which begin with primary education in the youth years, advance through marriage, parenthood and career progression and then end with the day the person retires. Thus, the life course refers to social processes which extend over the life span of an individual, especially with regard to family life, education, employment and occupational history (Settersten & Mayer, 1997:251). These concepts are all central to the life course framework. According to Elder (1994:5)

the life course in general refers to the intertwining of trajectories that are age-graded, for example family pathways and work careers that are subject to conditions that change and future options, as well as to short-term transitions that range from leaving school to facing retirement.

In order to gain an understanding of the central concepts in the life course perspective, Hutchison highlights a number of important ideas, including: historical time, cohorts, transitions, trajectories, life events, and turning points (Hutchison, 2005:144). These concepts are illustrated in Figure 3.1.

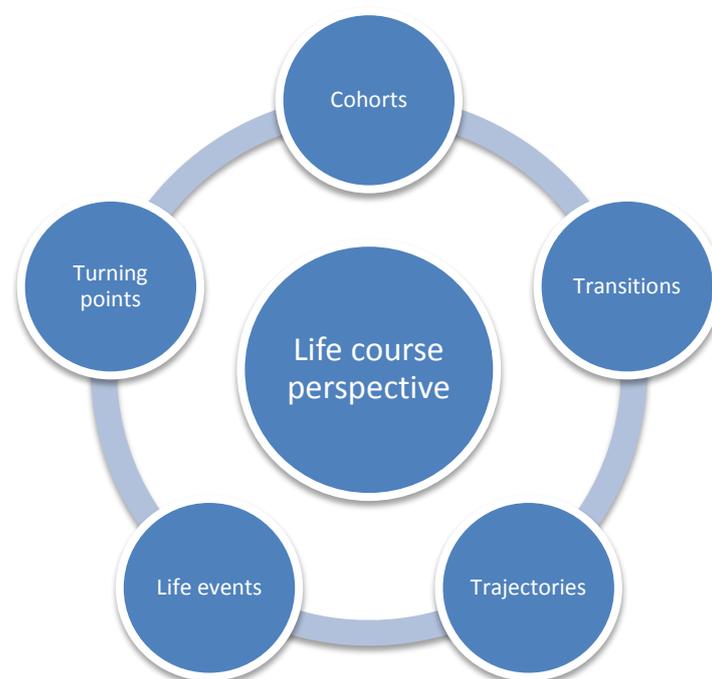


Figure 3.1: Basic concepts of the life course perspective

Source: Author's own.

A cohort is a group of people who were born at the same time in history and who go through particular social changes within a given culture in the same order and at the same age (Hutchison, 2005:144). The Generation Y cohort is an example of a group of people born in a particular period of time, in the 1980s and 1990s.

When looking at transitions that occur across the life course, George (1993:358) explains that transitions refer to discrete changes in status that are limited in duration but the transition may have long-term consequences. She adds that a

number of transitions in roles and statuses will be experienced across the life course (George, 1993). Certain events that take place may cause the household to transition into a new stage (Wilkes, 1995:27). Vermunt (2009) explains that an event is a transition from one state to another, that is, from an original state to a destination state. Transitions and events are short-lived; however, events are usually relatively abrupt changes while transitions are generally more gradual (Settersten & Mayer, 1997:252). The most notable transitions include but are not limited to the following: leaving school, obtaining a tertiary education, being employed permanently for the first time, getting married, and the birth of a first child.

A trajectory is the way in which a process or event develops over a period of time and refers to the sequential order of events, in other words it is a pathway. Trajectories usually involve multiple transitions and are long-term patterns of stability and changes in an individual's life (George, 1993:358; Hutchison, 2005:144). Thus, it can be said that there are particular characteristics that influence an individual's trajectory of the life course. Transitions and trajectories are interconnected in that transitions are embedded in trajectories (George, 1993:358). Trajectories have continuity of direction, even though they are not automatically straight lines and people's lives are made up from a number of intersecting trajectories such as family life trajectories, educational trajectories, occupational trajectories and health trajectories (Hutchison, 2005:144). As mentioned previously, interwoven trajectories make up the life course, so the life course perspective is able to explore multiple pathways that are interdependent (Elder, 1994:5). Most life course research examines transitions rather than trajectories, because longitudinal data which spans long periods of time is scarcer.

A life event is a relatively abrupt change caused by an event that is significant and that requires adaptation and may generate stress (Hutchison, 2005:145). As an example, a life event could be that a person in the household has been retrenched by their long-time employer.

A turning point is a particular life event that generates a lifelong change, not just a temporary detour in the trajectory of the life course (Hutchison, 2005:145). It follows from this that all people experience events differently and that a certain

event may be a turning point in the trajectory of their life course but for another person the same event may just be a life event.

In summary, events trigger transitions and transitions are embedded in the various trajectories. Figure 3.2 presents an example of an educational trajectory and a family life trajectory that are intersected. The educational trajectory is indicated in green and the family life trajectory is indicated in red.

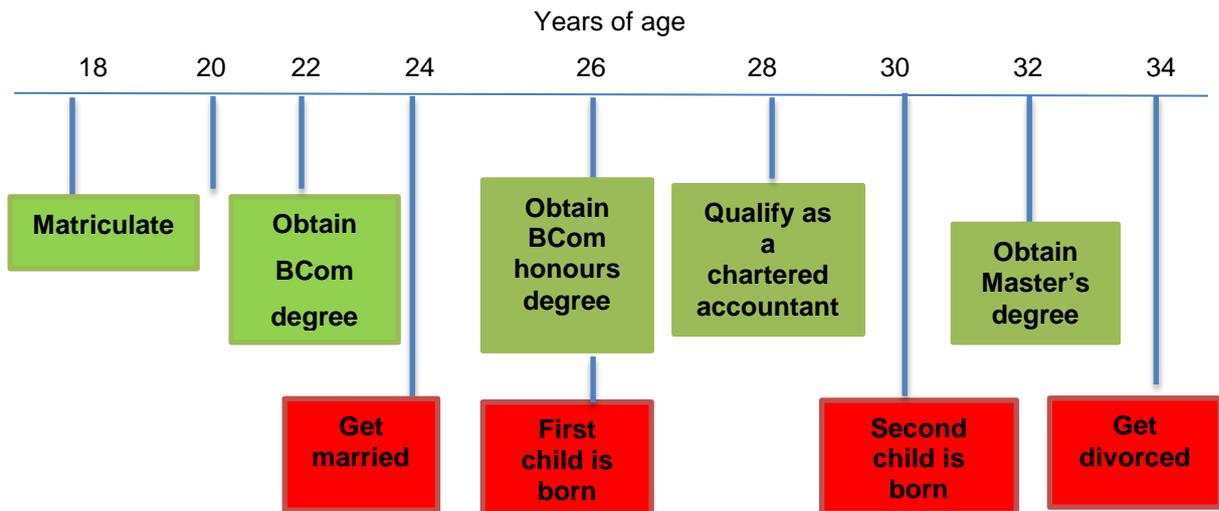


Figure 3.2: An example of an individual's educational trajectory and family life trajectory

Sources: Hutchinson, 2005; Author's own.

It is evident from Figure 3.2 that the educational and the family life trajectory intersect at certain ages. For example, the educational trajectory of this individual involves a number of transitions. These transitions involve matriculating from high school to graduating from university, obtaining an honours degree, qualifying as a chartered accountant and then obtaining a master's degree at the age of 32.

Lastly, some of the literature also refers to the life cycle. The life cycle has been used to explain a sequence of events in life. Population studies explain life cycle as being the reproductive process taking place from one generation to the next (Elder, Johnson & Crosnoe, 2003:5). However, all populations have a life cycle, but only certain people have children (Elder *et al.*, 2003:5). A household's life cycle is represented by the change in the demographic characteristics of a household as it evolves from initial formation to dissolution (Clark & Onaka, 1983:47).

Throughout this study, it will be understood that a household's life cycle will be represented by the change in the demographic characteristics as it evolves as described above.

This section has briefly introduced life course theory and in particular shed light on some of the terminology that will be used going forward in this dissertation. The next section 3.2.3 will present a discussion of various conceptual frameworks that have been developed and proved useful in understanding household consumption behaviour.

3.2.3. Conceptual frameworks for understanding consumption behaviour

This section will discuss the most important contributions to the literature that have added to the understanding of consumption behaviour of households and that in turn have contributed to the understanding of household savings and borrowing behaviours. In an attempt to understand and explain the motives behind consumers' actions, numerous theories have been formulated by researchers, in various disciplines, as a result of the interaction of consumers in the economy (De Clercq, 2013:42). Researchers have made explicit use of these models/theories in accounting for the changes that take place in a households' debt holding (Schooley & Worden, 2010:267; Tippett, 2010:2).

These models incorporate many theories of household saving and borrowing motives and behaviour that link consumption and income (Schooley & Worden, 2010:267). The models have as their theoretical framework that the objective of saving or borrowing is to smooth consumption income in order to achieve constant marginal utility of consumption throughout time (Schooley & Worden, 2010:267). If it is assumed that income increases throughout the working years and then decreases at retirement, young households will borrow, save during middle age and then draw on their savings in retirement (Yilmazer & DeVaney, 2005:287; Baek & Hong, 2004:361). Figure 3.3 is a schematic representation of the theory of consumption smoothing; that is, individuals have earning patterns that increase with age and then decline (Legge & Heynes, 2008). Thus, the theory of consumption smoothing implies periods of borrowing, saving and dissaving.

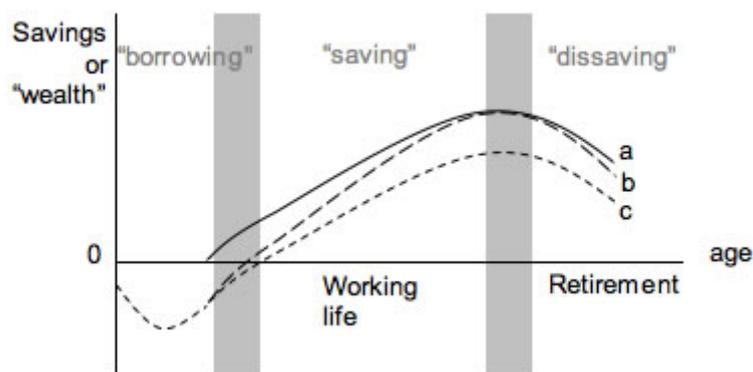


Figure 3.3: The life cycle model

Source: Legge & Heynes, 2008.

Figure 3.3 shows three different pathways in which debt and savings can be accumulated over a person's working life and it brings up the question about individuals who borrow before they have savings and the effect this may have on wealth accumulation over the life course. When comparing 'a' with 'b' it is apparent that 'a' has more income than 'b' to begin with. Therefore, even though their income streams appear to be similar 'a' still accumulates more wealth than 'b'. It is evident that 'c' accumulates less wealth over the life cycle than 'a' as 'c' started off with borrowing in the first place (Legge & Heynes, 2008).

The importance of these life cycle theories from a household debt perspective is that consumption and savings of a household are directly related to the accumulation of assets and liabilities. As an illustration of this principle: in a particular life stage, a household may be in a position to decrease its debt holding and then increase its uptake of assets and savings. In another life stage the household may face a change of events in that the household may be consuming more than it is earning and this will result in it increasing its uptake of liabilities and decreasing its asset accumulation or savings. At this stage cognisance should be taken of the point that if a household continues to use debt or dissave over a lengthy period of time, the household could become over-indebted and in turn experience elevated levels of financial vulnerability as it battles to relieve the financial stress it is experiencing (De Clercq, 2013:43).

The theories that will be dealt with in this section are the life cycle hypothesis, the permanent income hypothesis, the buffer stock model and the rational expectations permanent income hypothesis.

The hypotheses mentioned in the preceding paragraph focus on age as an influencing factor. Conceptually, the life cycle hypothesis and the permanent income hypothesis have been the main frameworks for gaining an understanding of the consumption and savings behaviour of households (Tippett, 2010:16). The life cycle hypothesis is credited to Modigliani and Brumberg (1954) and the permanent income hypothesis is credited to Friedman (1957). These models proclaim that current consumption depends on the present discounted value of future income (Carroll, 1994:111). This can also be explained as follows: people's decisions about current consumption are centred on their expectations of their lifetime income, instead of being based on their current income (Runkle, 1991:73). Therefore, if a household is experiencing low levels of income, they will dissave or access debt to ensure support of their consumption patterns (De Clercq, 2013:43).

The life cycle hypothesis purports that during a household's life cycle variation in income is greater than the variation in consumption or spending (Browning & Crossley, 2001:5; Baek & Hong, 2004:361). Thus, the life cycle hypothesis envisages that individuals smooth consumption across the life stages and hold marginal utility constant (Browning & Crossley, 2001:14). This is because income is low in the early stages of the life cycle, increases to a maximum in the years leading up to retirement, and then decreases during retirement (Schooley & Worden, 2010:267).

The life cycle hypothesis predicts that borrowing will take place preceding entry into the labour market, wealth will be accumulated during the working years, and dissaving will take place during the retirement years (Browning & Crossley, 2001:14). Refer to Figure 3.3 for a schematic representation of this concept. De Clercq (2013:46) goes on to comment that younger people who earn lower incomes will finance their consumption needs with debt with the expectation that they will be able to service the debt in the future once they are earning larger incomes. Hall (1978:971) identifies that consumers estimate their consumption

ability in the long run and then decide on their current consumption as a suitable portion of their long-term consumption estimate.

The permanent income hypothesis is similar to the life cycle hypothesis and complements the life cycle hypothesis (Meniago *et al.*, 2013:483). The difference between the models is that the planning period is finite over the life of the household in the life cycle hypothesis and infinite in the permanent income hypothesis (Schooley & Worden, 2010:267). Carrol and Summers (1991:306) reiterate that the permanent income component should be construed as “the mean income at any age regarded as permanent by the consumer unit in question” and should therefore not be regarded as expected lifetime earnings. A few studies that have found evidence in support of the life cycle and permanent income hypotheses will be described in the paragraphs that follow.

Evidence gathered by Crook (2001:90) in a study carried out from the 1995 Survey of Consumer Finance (SCF) in the United States found that the evidence was in support of the life cycle and permanent income hypotheses; however, he adds that the evidence was not as supportive as earlier studies suggested because it was found that people in younger age groups required more debt as they became older. The purpose of the Survey of Consumer Finance is to provide a comprehensive view of the behaviour of a cross-section of United States households (Board of Governors of the Federal Reserve System, 2015).

Crook also performed a cross-country comparison of the demand and supply for household debt. Crook (2003:25) came to the conclusion that, in all of the countries included in his study, debt holdings by age follow the life cycle pattern. However, he found that the age range where the occurrence and quantity of debt is at its maximum differs between the countries. The familiar life cycle pattern shows that the relationship that households have with debt is that debt rises with age, reaches a maximum during the working life and then declines through to old age (Crook, 2003:2; Debelle, 2004:54; Cox & Jappelli, 1993:209). This is as a result of the experience that most households are subjected to a rising income through their working life and hence debt is likely to be high relative to income early in life, and then slowly decrease with age (Debelle, 2004:54). It is also worth mentioning at this point that in many countries a hump-shaped pattern of

household debt relative to age has been reported and this can be explained by way of the fact that younger households face liquidity constraints and are subsequently required to pay rent whilst saving for a down payment on a house (Debelle, 2004:54). Later, as their income and savings grow, liquidity constraints are subsequently eased and they have the opportunity to borrow larger amounts, which then enables them to purchase their own dwelling (Debelle, 2004:54).

Baek and Hong (2004:361) explain that according to the life cycle hypothesis, although households have variations in income, they decide to keep consumption over their lifetime at a relatively constant level and to keep their income-to-consumption ratios reasonably stable. This results in households saving or dissaving as income increases or decreases (Baek & Hong, 2004:361). In the words of Bryant (1990), debt is dissaving. Following from this is the occurrence that young consumers, who do not face income risk, would prefer to borrow large amounts, so that life cycle saving in early life is negative (Gourinchas & Parker, 2002:75).

Schooley and Worden (2010:267) point out that income plays a key role in the life cycle hypothesis and permanent income hypothesis models and that households who are anticipating a permanent increase in income will in turn reduce their savings and/or borrow against the expected higher income, resulting in an increased level of consumption which is expected to be maintained over time. On the other hand, households who are expecting a permanent decrease in income will reduce their consumption by increasing their savings and/or reducing their debt.

Households may face variations in income as they move through the life cycle. Weinberg (2006:181) suggests that there are two types of variation in income. Firstly, there is an expected pattern of increase in income from young adulthood into middle age and then the decrease in income as the person moves into retirement years. Secondly, there is the less predictable variation in income. These variations may be short term, such as an illness that prevents a person from working for a limited period but from which the person recovers and is able to resume employment, or changes in a household's income that are caused by economic fluctuations. Another example of a less predictable variation in income

could be more permanent, such as a decline in demand for employment in a particular industry in which the worker is employed (Weinberg, 2006:281). Thus, temporary changes in income have no lasting influence on consumption (Schooley & Worden, 2010:267). However, as mentioned above, permanent changes will have an effect on consumption.

In a study of consumer credit in Italy, the United Kingdom and Spain by Vandone (2009:37), it was reported that households smooth consumption over their lifetime and that this is in accordance with the life cycle and permanent income hypothesis.

Schooley and Worden (2010:267) explain that the permanent income hypothesis and the life cycle hypothesis models envisage that households, in order to preserve household consumption, will borrow during a recession and that a decrease in income will result in a lower savings rate or a decline in savings. In other words, they predict that borrowing will increase and saving will decrease during a recession (Schooley & Worden, 2010:267).

The life cycle hypothesis has been extensively used to explain consumption and savings behaviours as indicated above; however, a number of researchers have pointed out its limitations. The three major limitations of the life cycle hypothesis and the permanent income hypothesis are briefly explained as the following:

- Firstly, the basic models do not allow for the presence of children in the household and marital status is not recognised (Schooley & Worden, 2010:267).
- Secondly, the models do not provide for the presence of liquidity constraints (Debelle, 2004:54; Schooley & Worden, 2010:267). A household is liquidity constrained if it is unable to borrow and lend freely (Runkle, 1991:74). This is a position that many households may face early on in their working lives and was identified by Cox and Jappelli (1993:209). Their study was conducted in the United States using the 1982 Survey of Consumer Finance. They found that the difference between desired debt and actual debt is the highest for young households, which is indicative of the fact that young households would benefit the most from reducing liquidity constraints

(Cox & Jappelli, 1993:209). The fact that younger households may face liquidity constraints was mentioned earlier in this section.

- Lastly, the models do not recognise prudence or a precautionary motive of saving (Baek & Hong, 2004:361; Schooley & Worden, 2010:267). Young households may be prudent and this may result in them not borrowing to such an extent in the early life cycle stages. The motive of prudence may also explain why households in later life cycle stages may not reduce assets as quickly. These actions by households in the younger and later stages of the life cycle are not in line with what the life cycle models predict (Schooley & Worden, 2010:267).

A number of researchers have noted that the age profile of consumption and income has an inverted U-shape and that income and consumption are correlated with age variation. Thurow (1969:325) observed that income and consumption patterns have an inverted U-shape (hump shaped) and that both peaked at roughly the same age. Attanasio, Banks, Meghir and Weber (1995:5) and Carrol and Summers (1991:315) found a more or less parallel pattern between the household's income and consumption stream over the life cycle. Attanasio *et al.* (1995:23) noted that the age-profile of consumption is hump-shaped and tracks the age-profile of consumption. Hubbard, Skinner and Zeldes (1995) proclaim that a life cycle model that includes a precautionary motive for saving and social insurance can explain the parallel changes in income and current consumption. They comment that this is an apparent contrast to the life-cycle model of consumer behaviour, which predicts a smooth consumption profile irrespective of the income profile (Attanasio *et al.*, 1995:23). Gourinchas and Parker (2002:67), in their study of consumption over the life cycle using the Consumer Expenditure Survey, also found that consumption is greater than income over the late twenties, thereafter consumption increases with income from age 30 to 45, after which consumption drops significantly below income. They add that in the early to mid-forties households start to build up their liquid wealth and life cycle savings increases in relation to precautionary savings in line with the increase in the asset holding of these households (Gourinchas & Parker, 2002:75). The Consumer Expenditure Survey includes information about a large sample of the United States population about consumption expenditures, demographics, income, and assets (Gourinchas

& Parker, 2002:48). Figure 3.4 shows household income and consumption over the life cycle as described in this paragraph.

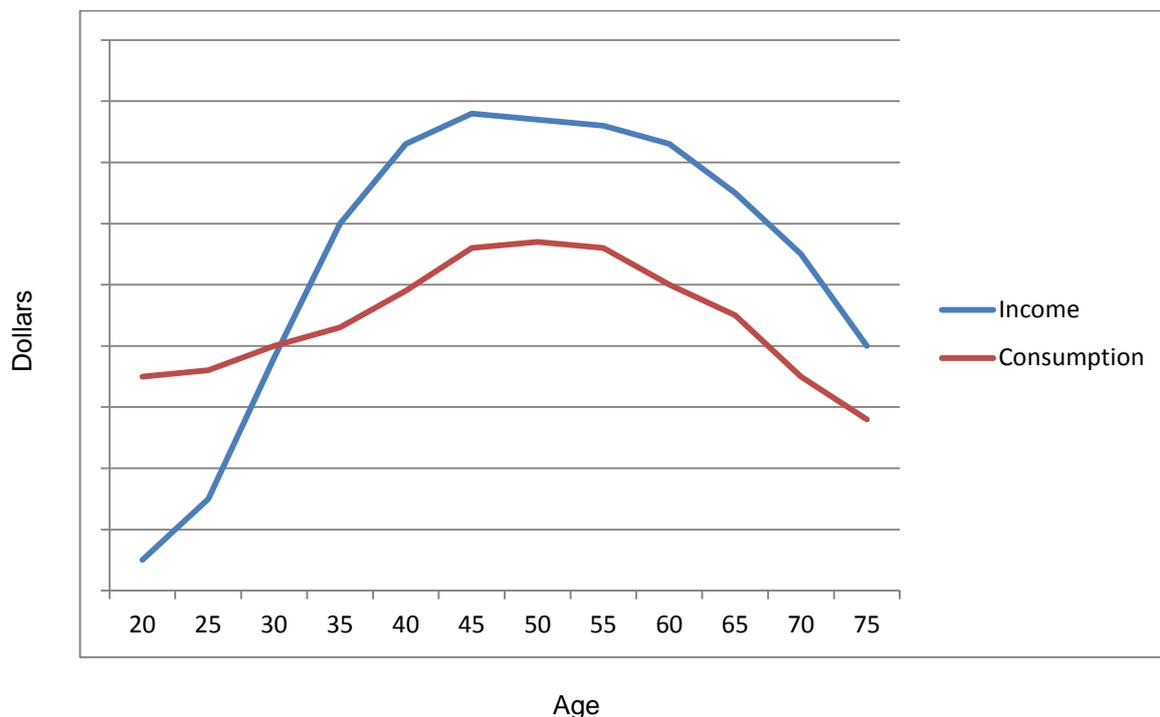


Figure 3.4: Household income and consumption over the life cycle

Sources: Gourinchas & Parker, 2002; Author's own.

Notwithstanding the criticism of the life cycle models as indicated above, Tippet (2010:17) points out that the life cycle and the permanent income hypotheses are beneficial in that they introduce the element of time. She adds that household indebtedness involves a time horizon and is a process that unfolds over the life course. A number of studies have supported the view that the life cycle and the permanent income hypotheses are useful in explaining broad consumption behaviour (Baek & Hong, 2004:381; Carrol & Summers, 1991:335; Cox & Jappelli, 1993:209; Crook, 2001:90; Crook, 2003:25; Schooley & Worden, 2010:273). Carrol and Summers (1991:335) explain that even though they reject the modern uses of these theories, they do not reject the fundamental notion that individuals seek to smooth consumption.

Researchers have also explained household saving and borrowing behaviour in terms of the buffer stock model of Deaton (1991) and Carrol (1992). As explained by Schooley and Worden (2010:267), according to the buffer stock savings model,

assets are held by consumers to protect consumption against fluctuations in income that are unpredictable, as mentioned previously in this section. Households thus retain a target level of wealth, which acts as a barrier against income fluctuations. In contrast, the life cycle hypothesis and the permanent income hypothesis models have no concern for uncertainty in future income (Schooley & Worden, 2010:268).

The other hypothesis that will be briefly dealt with is the rational expectations permanent income hypothesis (REPIH) of Hall (1978). This hypothesis assumes that individuals wish to choose the amount of consumption in each period in order to maximise their utility which is subject to an inter-temporal budget constraint that the present value of consumption must be equal to that of income (assuming no bequests). In other words, the only variable that should affect future consumption should be current consumption (Hall, 1978:1). According to Crook (2003:4), the rational expectations permanent income hypothesis has been adopted explicitly and implicitly by a number of empirical studies investigating the demand for debt. In support of the rational expectations permanent income hypothesis, Aron and Muellbauer (2006:7) purport that since Hall's paper, a powerful influence on empirical work on consumption has been exerted by the rational expectations permanent income hypothesis for an infinitely lived representative agent endowed with rational expectations.

Thus far, this section has outlined the various theories that may affect an individual's consumption choice, including a review of the following models: the life cycle hypothesis, the permanent income hypothesis, the buffer stock model, and the rational expectations permanent income hypothesis. This section included a discussion of the criticism of the basic models and dealt with the importance of the basic life cycle models in understanding the pattern of holding household debt. The next part of this section will identify specific trends in the holding of household liabilities over the life stages.

As pointed out earlier in section 1.1, households will face various financial demands and challenges at each of the different stages in the life cycle. One household in a certain stage of their life cycle may find the challenge of providing finance for their children's education more important than planning for retirement;

the financial challenge for another household in a different stage may be that managing household debt takes precedence over estate planning (Baek & Hong 2004:360). It therefore follows from this that households will have changing liability patterns as they move through the different life stages. If it were not possible for a household to borrow then household consumption would fluctuate extensively over the course of a lifetime (Crawford & Faruqi, 2011:6).

In Chapter 2 (section 2.2), the different types of debt used by households in South Africa were considered. In this paragraph, a brief discussion of the different types of debt will be given based on an international perspective. The two main types of debt incurred by consumers are mortgage debt, which is ordinarily carried by the consumer for a period of 20 to 30 years, and consumer debt. Consumer debt is further considered to consist of instalment loans and amounts owing on credit cards (Yilmazer & DeVaney, 2005:287). It therefore follows from this that different types of debt held by households are associated with the varying needs of the household over the life cycle (Yilmazer & DeVaney, 2005:287). As an example of a type of debt that is related to life stage, Baek and Hong (2004:381) report that life cycle stage plays a more important part in explaining instalment debt as compared to credit card debt. They suggest that this is because instalment debt is taken up for a specific purpose, such as to fund education or purchase a motor vehicle. Debt taken up for a specified goal can thus be significantly related to a particular life stage. On the other hand, credit card debt can be used for a number of purposes regardless of life cycle stage (Baek & Hong, 2004:381).

As pointed out by Cox and Jappelli (1993:209), demand for debt increases until the head of the household approaches the mid-thirties, whereafter demand decreases, demonstrating a pronounced life-cycle pattern. The relevance of age was also identified by Crook (2001), as he investigated the demand for household debt in the United States of America using the 1995 Survey of Consumer Finance. He found that as age increases above 55, the demand for debt decreases (Crook, 2001:89). He adds that his findings were entirely consistent with the life cycle and permanent income hypothesis.

Crook (2003:25), in his cross-country comparison of the incidence of household debt, used data from several different sources across the following countries:

Canada, Japan, United States, Australia, New Zealand, France, Germany, Spain Italy, Netherlands and the United Kingdom. He found, in each of the countries, that when looking at age the familiar life cycle pattern is evident. The proportions of households holding debt rise with age, reach a maximum and then decline through to old age. Crook (2003:3) noted that the proportions as well as the age of the household head differed between the countries. To demonstrate his findings, when analysing the greatest incidence of debt by age between the countries, he reported the following: In the United states the highest incidence of debt was when the household head was between 35 to 44 years; in Canada, when the household head was aged between 25 and 34 years. In Italy, it was greatest at 31 to 40 years. In the Netherlands and Japan the incidence of debt peaking was when the household head was in their 40s (Crook, 2003:3).

A report prepared by Finney *et al.* (2007) for the Personal Finance Research Centre on borrowing over the life cycle in the United Kingdom revealed pertinent information on borrowing across the life stages. Their study focused on three life cycle stages, namely young adults aged 18 to mid-20s, individuals in their family years who are aged mid-20s to mid-50s, and individuals in their post-family years, aged in their 50s to early 70s (Finney *et al.*, 2007:11). In the United Kingdom, in line with global trends, borrowing tends to be the highest among individuals aged between 20 and 50, when the demands of the family budget are greatest, as these are the years when households incur costs of getting married, of setting up home and having children (Finney *et al.*, 2007:19). An interesting fact arising from the study was that young adults are particularly susceptible to social pressure to consume and are prepared to borrow for consumption (Finney *et al.*, 2007:9). They also reported two fundamental ways in which people in the family years became over-committed: firstly, the pressures to provide for all their children's necessities and desires, and secondly, the notion that by obtaining housing equity their future financial needs would be provided for. Their report indicates that credit use declines fairly steeply after the middle years so that it is very low among people over pension age (Finney *et al.*, 2007:19). However, they identified new challenges for the post-family years age group as, in addition to planning for their own retirement, they may also face the costs of caring for their elderly parents, supporting children, and early retirement faced by redundancy. Even though they

potentially face these additional challenges, a protecting feature for this group appears to be their generally cautious attitude towards borrowing (Finney *et al.*, 2007:48), which does not appear to hold true for young adults.

Magri (2007:410), when looking at the Italian household's participation on the debt market, is also of the opinion that the probability of a household demanding a loan increases as the household head approaches age 30, when it will reach a maximum and then decrease by 40 percent at age 53. Vandone (2009:38), in a study of consumer credit in Italy, the United Kingdom and Spain, also confirms that consumer credit is highest among younger households, who borrow in order to ensure constant levels of spending over their lifetimes, as well as to improve their lifestyles.

The Deutsche Bundesbank, in their assessment of the differences of household debt across fifteen euro area countries, found that secured debt tends to peak for cohorts aged 35–44. The study used data from the Household Finance and Consumption Survey (HFCS) between the end of 2008 and the middle of 2011 (Bover, Casado, Costa, Du Caju, McCarthy, Sierminska, Tzamourani, Villanueva & Zavadil, 2014).

From a review of the related literature on the age range when household debt peaks, it is evident that it can be anywhere between 25 and 40 years old and that the ages when household debt is at its greatest vary from country to country. What is of importance and what all of the above-mentioned studies have found, is that debt increases during the working years, reaches a maximum, and then declines as the household moves into retirement.

3.2.4. Summary

In this section, the usefulness of the life course perspective for understanding household debt was discussed (section 3.2.2). This section also included a discussion of the various theories used by researchers to gain an understanding of consumption behaviour of households. In addition, trends from a number of international studies (section 3.2.3) were investigated, indicating that there is consensus among the researchers in this field that a life cycle pattern is observed by many countries. To summarise, it appears that, according to the available

literature, the majority of the research undertaken has come to the same conclusion: that household debt follows a familiar life cycle pattern.

In the next section (section 3.3), a perspective of household debt over the life course will be obtained, where characteristics that determine household participation in the debt market will be dealt with (section 3.3.2), the reasons for the increase in household debt will be discussed (section 3.3.3) and the impact of rising household debt will be examined (section 3.3.4).

3.3. A PERSPECTIVE OF HOUSEHOLD DEBT OVER THE LIFE COURSE

3.3.1. Introduction

As suggested earlier in section 3.2.2, the life course perspective may be useful in gaining an understanding of the determinants of holding liabilities over the life course. Section 3.2.3 depicted that as a household moves through the different life stages, it will experience varying patterns of debt uptake and usage. It follows from this that a household in a certain life stage may correspond with an increased debt burden, and then as it progresses to another life stage the household may find itself in a position where it is able to accumulate savings and/or a decrease in its debt burden. This is illustrated in Figure 3.4 (section 3.2.3), where it can be seen that in times when household consumption is above household income, the household will borrow in order to maintain consumption, and the household will therefore increase its uptake of liabilities.

The usefulness of a life course perspective for policy decision makers such as the National Treasury is as follows: an understanding of the risks households face relating to debt over the life course may possibly assist them in developing proactive approaches to debt policy. In this section the characteristics of households that have been shown to have an influence on a household's participation in the debt market will be explained (section 3.3.2), reasons why there has been an increase in household debt in recent years will be investigated (section 3.3.3), and the impact of rising household debt on households will be discussed (section 3.3.4).

A number of studies have investigated the determinants of holding debt. The results have shown that depending on the specific variable, a household's debt holding could be influenced either positively or negatively, and that certain variables may affect the debt on the demand side or alternatively on the supply side. The studies that are pertinent for this dissertation will be reviewed in the following sections.

3.3.2. Characteristics that determine household participation in the debt market

Borrowing is essentially used throughout life to smooth out income and expenditure ebbs and flows (Finney *et al.*, 2007:7). Previous empirical research has shown that there are socio-demographic characteristics (for example gender, age, educational qualifications), attitudinal (for example risk aversion, credit attitude) and economic characteristics (for example income, financial wealth, total assets) of households that may determine their participation in the debt market (Vandone, 2009:32).

Based on the various empirical studies by international researchers, a number of these characteristics, as mentioned in the preceding paragraph, have been investigated with the view to obtaining an understanding of the determinants of holding debt. The variables that have been found to have an effect on debt holding have been indicated in Table 3.6. The variables in the table have been grouped together to give an overall summary and it has not been specified whether these variables positively or negatively influence debt holding or whether the demand or supply of debt is influenced. More detailed information on the variables applicable to this study will be forthcoming in the remainder of this section. The primary purpose of Table 3.6 is therefore to demonstrate the classification of the variables as socio-demographic, attitudinal and economic.

Table 3.6: Variables that have been shown to have an influence on debt holding

Socio-demographic characteristics	Attitudinal characteristics	Economic characteristics
<ul style="list-style-type: none"> • Age of the household head • Children in the household • Family size • Marital status • Educational qualification • Professional status • Race • Religion • Gender • Suburban households/city dwellers • Employment status/retired 	<ul style="list-style-type: none"> • Risk aversion • Credit attitude • Willingness to borrow 	<ul style="list-style-type: none"> • Household income • Financial wealth/net wealth • Homeowner • Housing assets • Total assets • Non-financial assets • Financial assets

Source: Author's own.

Having introduced (in Table 3.6) the variables that have been shown to have an effect on debt holding, the next part of this section will indicate the specific key variables for each of the studies considered. Table 3.8 provides a summary of the key variables that have been shown to have an influence on the debt holding, based on a number of international studies. Table 3.9 indicates the studies that have dealt with the specific types of debt and complements the information presented in Table 3.8. The purpose of Table 3.7 is to indicate the various abbreviations used in Table 3.8 and Table 3.9.

Table 3.7: Abbreviations of variables used in Table 3.8 and Table 3.9

A	Age of household head	AUS	Australia
CL	Children in the household/Large family size	CAN	Canada
M	Marital status	FRA	France
ED	Educational level/professional qualification	GER	Germany
R	Race/Religion	ITA	Italy
G	Gender	JAP	Japan
L	Living in city/suburban household	NLD	Netherlands
ES	Employment status	NZ	New Zealand
CA	Credit attitude	ESP	Spain
HI	Household income	UK	United Kingdom
NW	Net wealth	US	United States
HO	Home owner/housing assets held		
NFA	Non-financial assets held		
FA	Financial assets held		
ABS	Australian Bureau of Statistics		
BHPS	British Household Panel Survey		
BSFC	UK Baseline Survey of Financial Capability		
EFF	Survey of Household Finances		
NLSY79	National Longitudinal Survey of Youth of 1979		
ODS	Survey of Over-indebtedness in Britain		
RBA	Reserve Bank of Australia		
RBNZ	Reserve Bank of New Zealand		
SCF	Survey of Consumer Finances		
SHIW	Survey of Household Income and Wealth		
SoFIE	The Survey of Family Income and Employment		

Table 3.8: Empirical studies on variables affecting household debt

Author	Data Source	Country	A	CL	M	ED	R	G	L	ES	CA	HI	NW	HO	NFA	FA
Cox & Jappelli, 1993	SCF 1983	US	✓	✓				✓	✓			✓				
Crook, 2003		AUS,CAN,FRA,GER,ITA,JA P,NLD,NZ, ESP, UK,US	✓		✓	✓						✓	✓			
Crook, 2001	SCF 1990-1995	US	✓	✓						✓	✓	✓		✓		
Fabbri & Padula, 2004	SHIW 1989,1995,1998	ITA	✓	✓	✓	✓			✓	✓		✓			✓	✓
Finney, Collard & Kempson, 2007	BSFC 2005 & ODS 2002	UK	✓	✓						✓	✓	✓		✓		
Henderson & Scobie, 2009	RBNZ up to 2007 & SoFIE wave 2 from September 2004	NZ	✓		✓	✓		✓		✓				✓		✓
Lee, Lown & Sharpe, 2007	HRS 2000	US	✓	✓	✓	✓				✓		✓				
Magri,2007	SHIW 1989,1991,1993, 1995,1998	ITA	✓			✓			✓	✓		✓				
Meng & Mounter, 2009	ABS & RBA 1988Q2-2006Q1	AUS										✓		✓		✓
Schooley & Worden, 2010	SCF 2007	US	✓	✓	✓						✓					
Tippett, 2010	NLSY79 1985-2000 (excl. 1991)	US	✓	✓	✓	✓	✓	✓		✓		✓			✓	✓
Vandone, 2009	SHIW 2000-2006,EFF 2002 & 2005 & BHPS 2005	ITA,ESP,US	✓			✓				✓		✓	✓			
Yilmazer & DeVaney, 2005	SCF 2001	US	✓		✓			✓		✓		✓			✓	✓

Source: Author's own.

Table 3.9: Empirical studies on variables affecting specific types of household debt

	Author	Data Source	Country	A	CL	M	ED	R	G	L	ES	CA	HI	NW	HO	NFA	FA
<i>Mortgage debt</i>	Lee, Lown & Sharpe, 2007	HRS 2000	US	✓	✓	✓	✓	✓	✓		✓		✓	✓	✓		
	Yilmazer & DeVaney, 2005	SCF 2001	US	✓	✓	✓			✓		✓		✓		✓	✓	✓
<i>Consumer debt</i>	Lee, Lown & Sharpe, 2007	HRS 2000	US	✓	✓	✓	✓	✓			✓		✓	✓	✓		✓
<i>Instalment loans</i>	Baek and Hong, 2004	SCF 1998	US	✓	✓	✓	✓	✓			✓	✓	✓			✓	✓
	Chien & DeVaney, 2001	SCF 1998	US			✓	✓					✓			✓		
	Yilmazer & DeVaney, 2005	SCF 2001	US	✓		✓	✓		✓		✓		✓			✓	✓
<i>Credit cards</i>	Baek & Hong, 2004	SCF 1998	US	✓	✓	✓	✓	✓			✓	✓	✓		✓	✓	✓
	Chien & DeVaney, 2001	SCF 1998	US		✓	✓	✓					✓	✓				
	Yilmazer & DeVaney, 2005	SCF 2001	US	✓	✓	✓	✓	✓			✓		✓			✓	✓

Source: Author's own.

It is evident from Table 3.8 that the key variables affecting the take-up of debt are age of the household head, children in the household, which also equates to a large family size, marital status, educational level including professional status, being employed, and household income. Other variables have also been shown to have an influence on debt use. These are gender, living in the city as opposed to living in the suburbs, whether the head of the household is risk averse or has a favourable attitude to borrowing, whether the household owns its own home, the holding of non-financial assets, and the financial assets held by the household.

The remainder of this section will provide more detail on certain of the studies mentioned in Table 3.8. The following studies will be examined in more detail: Crook (2001), Chien and DeVaney (2001), Yilmazer and DeVaney (2005), Finney *et al.* (2007), Magri (2007), Vandone (2009), Schooley and Worden (2010).

A household has less demand for debt when the head of the household is relatively averse to risk (Crook, 2001:83) and the net worth of the household was found to have a significant negative effect on demand (Crook, 2001:91). Crook (2001:89) identified that a household has a greater demand for debt when its income is higher, when it is a homeowner, when the size of the family is larger and when the head of the household is working.

Chien and DeVaney (2001:177) reported that across all adult age categories, those with an education had a positive attitude towards borrowing. Other variables found to have an influence on the probability of demanding a loan are household income, which increases the demand for debt and also reduces the probability of being constrained.

Yilmazer and DeVaney (2005:296) found that the probability of holding debt, as well as the amount of debt compared to total assets declines with the age of the household head for all types of debt. Their study also showed, on the one hand, a negative effect for financial assets on both the probability of holding debt and the amount of debt compared to total assets. On the other hand, their study showed that the amount of non-financial assets held by the household has a significant positive effect on both the probability of holding secured debt, as well as the amount of secured debt compared to total assets. Household demographics,

especially household income, education, marital status, being self-employed and being retired have significant effects on the probability of holding secured and unsecured debt and the amount of these categories of debt compared to total assets (Yilmazer & DeVaney, 2005:298). Their study also included an investigation into the amounts of mortgage debt and credit card balances held by older households. Their study did not support the allegation that older households accumulate excessive amounts of debt, although there has been speculation regarding this practice by older households (Yilmazer & DeVaney, 2005:301).

Finney *et al.* (2007:19) state that their research is consistent with previous research and it was found that there is a clear relationship between the presence of children, higher levels of income in the household, and higher levels of credit use.

Magri (2007:401) identified that the head of the household's age acts as a demand factor, rather than just as a variable influencing the lender's choice, while it is not essentially important for the bank's decision on the supply side. The results of the study also found that education, which should reflect the income profile during the life cycle, is important in determining the supply of debt by institutions. Household income is positively correlated with the probability of demanding a loan and the number of income earners decreases the probability of demanding a loan (Magri, 2007:424). It was also reported that self-employed workers have a greater tendency of applying for credit, though they are more frequently rationed by lenders (Magri, 2007:424).

Vandone (2009) carried out a study of the social, demographic and economic characteristics of indebted households that concentrated on Italy, Spain and the United Kingdom for the period 2000–2006 (Vandone, 2009:32). The results for age and education variables for the three countries are consistent with the life cycle and permanent income theories, which is that the demand for credit is influenced by the demand of the households to improve their lifestyles by smoothing consumption over their lifetime (Vandone, 2009:370). A higher level of education is a proxy of rising future earnings and is therefore positively correlated to the amount of debt contracted (Vandone, 2009:40). Households with lower levels of net wealth, those who have higher incomes, and those that are employed have

higher levels of consumer credit (Vandone, 2009:40). The results of Vandone's (2009) study confirm that a household's participation in the credit market is mostly motivated by the demand on the part of households, in accordance with specific characteristics and conditions, to use debt, according to life-cycle theories, which is to distribute income and spending over time in a way of ensuring better economic welfare. However, the study found that there is a group of households that exist with lower levels of income, lower levels of net wealth and less favourable financial situations that use consumer credit as a way of making ends meet (Vandone, 2009:42). According to life cycle theory, on the one hand, individuals borrow in order to smooth out consumption over time, as well as to improve their living standards, while on the other, additional explanations beyond the standard life-cycle model suggest that individuals may actually not be borrowing to maximise intertemporal utility, but to cope with conditions of financial difficulty (Vandone, 2009:32).

Schooley and Worden (2010:272) used the 2007 Survey of Consumer Finance for their analysis. Their study revealed a number of determinants of the household decision to participate in the consumer debt market. As predicted by the personal income and the life cycle hypothesis, the life cycle stage of a household significantly affects its probability of participating in the consumer debt market. The results reflect that as households' progress into their family formation years in which children are added, the need for consumer spending increases above income streams (Schooley & Worden, 2010:274). They found that a household's credit attitude has a significant impact on the probability of it participating in the debt market. The result indicated that households who consider that it is acceptable to borrow to in order to cover living expenses or for purchasing luxury items are much more likely to use consumer credit and have a higher consumer debt burden. They also reported that households who did not have a consistent saving rule are more likely carry consumer debt than households who do not make use of a saving rule (Schooley & Worden, 2010:274). Households earning at least one full-time income are 147 percent more likely to have consumer debt and homeowners are 21 percent more likely to have consumer debt than those who do not own their own home (Schooley & Worden, 2010:274).

The above-mentioned studies have highlighted that there are certainly specific household variables that have greater influence on the household's decision to participate in the debt market than other variables.

Table 3.10 below presents a ranking of the variables from most to least influential based on the studies mentioned in Table 3.8.

Table 3.10: Ranking of variables shown to have an influence on debt holding

VARIABLES	RANKING	NUMBER OF STUDIES
Age of the household head	1	12
Household income	2	11
Employment status	3	9
Marital status/Education level/Large family size/Number of children	4	7
Financial assets	5	5
Housing assets/Gender	6	4
Risk aversion/Credit attitude/Non-financial assets	7	3
Net wealth	8	2
Race/Religion	9	1

Source: Author's own.

Having pointed out the characteristics of households who make use of debt, the next section will investigate the general increase in household debt that has taken place globally (section 3.3.3).

3.3.3. Increase in household debt

Household borrowing has increased considerably since the 1980s in a number of developed countries (Debelle, 2004:51). The increase is evident in absolute terms, as well as relative to household income (Debelle, 2004:51). When looking at the key contributing factors, it is evident that the favourable housing markets, sound financial markets that provided low interest rates and the ease of access to capital

all played a role in the increase in household debt (Worthington, 2008:70). Worthington (2008:70) adds that the other factors that played a contributing role were financial deregulation, liberalisation and technological innovation. The change in the position of household debt in the South African context was discussed in section 2.4.

The increase in household debt culminated in the United States subprime mortgage crisis and the house price bubble which started in 2007/2008 and which escalated into a financial crisis that spread globally to many countries from 2008–2009 (Allen & Giovannetti, 2010:2; Martin, 2011:587). The result was that many of these countries faced a recession for the first time in almost two decades, and as highlighted by Imbs (2010:328), the universal consequence of the recession was that it drew comparisons to the Great Recession.

It follows from this that these countries faced a serious financial situation and one of the major contributing factors was the unprecedented levels of household debt. Having mentioned the catastrophic implication of high levels of borrowing, a brief overview of the reasons for the increase in household debt and of the financial crisis that followed will now be discussed.

As pointed out by Allen and Giovannetti (2010:2), the start of the crisis can be attributed to the low interest rate policies that were implemented by the Federal Reserve Bank and other central banks following the collapse of the technology stock bubble. The low interest rates mentioned above coupled with high house prices led households in turn to borrow to finance consumption and when the value of housing started to decline, the realisation set in that households were over-leveraged and that household savings levels were too low (Allen & Giovannetti, 2010:2). Thus, an increase in household debt has the effect of decreasing household savings. A consequence of households realising that they were over-leveraged was that they began saving in order to increase their assets and to pay off the debt they had accumulated in the preceding ten years leading up to the financial crisis (Allen & Giovannetti, 2010:2).

According to Debelle (2004:51), the rise of household debt can be attributed to the lower interest rates, as well as easing of liquidity constraints. Barba and Pivetti

(2008:119) explain that until the beginning of the 1980s, household debt was constrained by credit rationing, as was the case in South Africa. They comment that financial liberalisation which took place over the past 25 years and the simultaneous easing of liquidity constraints on households made it possible for households to increase their level of borrowing to achieve a more acceptable path of consumption over their life cycle. The process of financial liberalisation in South Africa was described in greater detail in section 2.4.

DeBelle (2004:52) used data across different countries and he explained that the growth in household debt in most developed countries has exceeded that of income. This is evident in the increase in many countries' household debt to income ratio, which measures household gross debts (liabilities) as a percentage of household gross disposable income (Meng & Mounter, 2010:5). Barnes and Young (2003:7) state that United States households' debt relative to income has increased to new high levels in recent years. DeBelle (2004:52) found that household indebtedness rose significantly in the 1980s in Japan, France and the United Kingdom, and in the 1990s in the Netherlands and Australia.

De Clercq (2013:82) explains that the effect of the financial crisis on South Africa was that the economy shrank, unemployment increased, the share price on the JSE plunged and the rand/dollar exchange rate weakened from about R6/United States dollar to R11.82/United States dollar in October 2008. She adds that the weaker exchange rate resulted in the increase of import prices and this resulted in an increase in consumer price inflation (De Clercq, 2013:82). However, as mentioned in section 2.4, South Africa was largely protected from the financial crisis and only experienced the indirect effects.

Trends in the South African household debt to income ratio have already been discussed in section 2.3.2; however, at this point it is worth mentioning that although South Africa has a high debt level, its household debt to disposable income ratio compared to other developed countries is favourable. However, South Africa is a country with many unique problems, such as high unemployment, poor education, slow growth in income earned, lack of household savings and high income disparities. According to De Clercq (2013:89), two of the main causes of financial vulnerability in South Africa are the high unemployment level and the lack

of ability of the economy to create additional jobs. This implies that many South Africans make use of the social grant system; the most notable change in the composition of household income between 1993 and 2008 is that the portion of households receiving income from state grants has more than doubled in this period (Leibbrandt, Finn & Woolard, 2012:27). South Africa has one of the largest income inequalities in the world, and this has increased from 1990–2008 (Ortis & Cummins, 2011:19, 21). All the above-mentioned problems exacerbate the unfavourable liability position of households and young South African adults in particular are in the spotlight of facing financial hardship by taking on high levels of debt and then being unable to repay it. The situation of the youth in South Africa was discussed in section 2.5; in particular, the high level of unemployment endured by this group of the population was highlighted. They may encounter the situation of being in a debt trap from which they cannot escape and despite consumer protection laws, such as the National Credit Act, may thus face a bleak future in terms of financial wellness as they move through their life course.

Household debt is largely related to housing (Barnes & Young, 2003:15; Meng & Mounter, 2009:14). Thus, there is a close association between the rise in the debt to income ratio since the early 1980s and the increase in mortgage debt (Barnes & Young, 2003:12). This is evident in most countries, as the majority of the increase in household debt has been attributed to borrowing for housing (Debelle, 2004:52).

When specifically looking at the situation in the United Kingdom, Finney *et al.* (2007:10) suggest that the United Kingdom is experiencing unprecedented levels of outstanding unsecured credit and outstanding mortgages. According to Meng and Mounter (2009:30), since the late 1980s Australia has experienced a sharp decrease in household saving and a build-up of household debt.

As mentioned previously in section 3.3.2, there is concern that households are making use of debt to finance monthly living expenses. Debelle (2004:37) also identified that there has been an increase in borrowing by existing mortgage holders against their housing equity to finance consumption. He adds that the increase in borrowing assisted in maintaining consumption through the global slowdown. A possible reason for the increase in indebtedness can be its relation to

the housing wealth effect in which households borrow against their home equity to finance their consumption (Faria *et al.*, 2009:3).

It is worth mentioning that the increased labour market instability and growing wage inequality alluded to previously has also had an impact on rising household debt (Tippett, 2010:21). South Africa has one of the largest wage inequalities in the world and this is resulting in much of the population facing a struggle to make ends meet (De Clercq, 2013:241).

Having illustrated that household debt has increased substantially since the 1980s in the majority of the most influential economies and that by contrast savings has diminished, the impact of rising household debt on households will be evaluated next in section 3.3.4.

3.3.4. Impact of rising household debt on households

In the previous section, the reasons for the increase in household debt were presented. This section will explain the impact of rising household debt on households.

As explained by De Clercq (2013), indebtedness is an indicator of the amount of debt but does not indicate whether the debt is affordable or not. She explains that over-indebtedness is an indicator of too much debt being taken on and is therefore an indicator of unaffordable debt (De Clercq, 2013). Of concern, therefore is not only the indebtedness of households but also whether the households are over-indebted. In other words, high debt levels are not necessarily problematic, unless there is not sufficient income available to service the debt. What is of significance here is that individuals are able to recognise when debt is becoming problematic and that households are able to mitigate the risks and reduce further borrowing (Finney *et al.*, 2007:41).

On the one hand, it is possible that a number of households may have accumulated debt to such levels that it is no longer possible for them to service the debt from their available income. On the other hand, there may be households who are on the borderline of being able to service their debt but who are then extremely vulnerable to unexpected shocks (Henderson & Scobie, 2009:1).

Borrowing can enhance household welfare; however, international experience has shown that excessive indebtedness and more relaxed lending practices can result in households being more vulnerable to adverse shocks, which could also result in an increase to the risks of the financial system (Crawford & Faruqui, 2011:4). Barba and Pivetti (2009:121) go on to explain that a cycle of indebtedness may be created by these adverse shocks, such as unexpected reductions in income flows or sudden changes in interest rates.

It can be said that households face three different kinds of risks in acquiring debt and they tend to strike households jointly in an economic downturn (Meng & Mounter, 2009:17). Households who hold excessive levels of debt are more susceptible to these risks and they in turn can lead to households facing grave financial situations. The risks are classified as follows: interest rate risk, investment risk and unemployment risk (Meng & Mounter, 2009:17). The result of the above-mentioned risks is that a household's ability to repay the debt may be jeopardised (Barba & Pivetti, 2009:121). Each of these risks will be dealt with briefly in the following paragraphs.

As mentioned previously in section 3.3.3, household debt is largely related to housing. Therefore, the impact of greater indebtedness is that households will be more sensitive to movements in interest rates and in particular if the movements take place unexpectedly (Debelle, 2004:51). In countries where household mortgage rates are more fixed, these households are sheltered from the direct effects of policy interest rate changes and with the subsequent result that the end-holder bears the risks of the mortgage (Debelle, 2004:37). However, in countries where mortgage rates are mostly variable, such as Ireland, Spain, Australia and the United Kingdom, the effects of increased household indebtedness have the potential of being much greater, as the households themselves bear the direct risk of interest rate variations (Debelle, 2004:59, Meng & Mounter, 2009:17). The possibility of interest rate risk is enhanced by two factors, namely a change in the interest rate regime and inflation (Debelle, 2004:55). In South Africa, households mostly make use of variable-rate mortgage agreements; however, they have the option of entering into fixed rate agreements. As a result, the majority of South Africans are susceptible to interest rate risk.

Investment risk can be explained as follows: As households borrow for housing investment, if house prices increase then the increased value of the houses will be able to cover the finance costs and household wealth will increase (Meng & Mounter, 2009:17). However, if the rate of increase in the house process is slow or if house prices fall, households will bear the loss (Meng & Mounter, 2009:17). The turmoil in the United States housing markets was created by banks approving loans for housing that households could not afford, based on their actual income (Dickerson, 2007:142). The lenders approved these loans because housing prices were increasing and the increased values of the houses in turn protected the banks' interest in the consumers' homes (Dickerson, 2007:136). It follows from this that if the borrower was unable to repay the loan, the bank could sell the home or encourage refinancing of the mortgage to get lower monthly repayments. However, with the downturn in the economy and the falling houses prices, this was no longer the situation and the various financial institutions and banks saw themselves facing a financial crisis, which was previously pointed out in section 3.3.3.

Unemployment is the most significant negative shock to household income (Meng & Mounter, 2009:17). In times of unemployment, households may struggle to make mortgage payments. Also, as reported by Meng and Mounter (2009:17), a number of studies have claimed that unemployment risk is greater for households with housing loans as they are often unable to move to new locations in search of employment. Empirical studies in the United States have shown that medical debts, a divorce or an interruption of employment have caused the majority of bankruptcies in the United States (Dickerson, 2007:146).

Among developed countries, the phenomenon of rapidly rising household indebtedness has shown an association with a marked fall in the rate of household saving (Barba & Pivetti, 2009:114). Thus, the increase in household debt is inextricably linked to the decrease in the household saving rate, which in itself results in an economy not being in a favourable state and as such presents a problem for the policy decision makers of the respective countries.

3.3.5. Summary

In this section, the characteristics of indebted households (section 3.3.2) were investigated, where it became evident that there are certain socio-demographic, attitudinal and economic characteristics that influence a household's decisions to participate in the debt market. The increase in household debt (section 3.3.3) was dealt with and the impact of rising household debt (section 3.3.4) was highlighted, which included the risks which are faced by households when they acquire debt.

3.4. CONCLUDING REMARKS

This chapter has addressed research objectives two and three of the study. Based on a literature review of international studies, section 3.2 gave background information on life course theory and dealt with a number of conceptual frameworks that have been developed to assist in understanding the consumption behaviour of households. Section 3.3 dealt with a perspective of household debt over the life course of a household.

Internationally, based on the empirical research available, it is evident that the amount and type of household debt held by households will vary as the respective household moves through the various life stages. It has also been proven that specific characteristics have an effect on the debt holding of households in each of the life stages.

Based on the literature review performed in this chapter, the causal variables that may influence the uptake of debt were used to create a heuristic model of variables affecting debt uptake. The heuristic model is shown in Table 3.11.

Table 3.11: Heuristic model of variables affecting debt uptake



Debt uptake		
Age over 45 years	Age of the household head	Age between 25 and 44 years
Early and late life stages	Life stages	Middle life stages
Lower levels of income	Household income	Higher levels of income
Not employed and retired	Employment status	Employed and self-employed
Single	Marital status	Married
Lower level of education	Education	Higher level of education
Smaller family size	Family size	Larger family size
Fewer children	Number of children	More children
Higher value of financial assets	Financial assets	Lower value of financial assets
Non-home owner	Housing assets	Home owner
Unfavourable attitude to risk	Risk aversion	Favourable attitude to risk
Lower level of non-financial assets	Non-financial assets	Higher level of non-financial assets
Higher levels of net wealth	Net wealth	Lower levels of net wealth

Source: Author's own.

The age of the head of the household has an effect on debt usage by the household, thus debt will be lower when the individual is younger, will reach a maximum and then decline as the individual nears retirement. The early life stages are associated with less debt usage. The later life stages are also associated with less demand for debt. The middle life stages are when households face the greatest financial challenges. This is the stage in a household's life when various life events are experienced, such as getting married and having children and then having to educate children. On the one hand, as households' earn higher levels of income they have been shown to have a greater demand for debt; on the other hand, households who earn lower levels of income have lower formal debt uptake. Households who are permanently employed have a greater debt uptake. The reasoning may be there that they are the people who qualify for loans. People who are not employed and who are retired have a lower take-up of loan facilities. Married people seem to have a greater demand for debt products than their single counterparts. Individuals who have higher levels of income have a greater demand

for debt than individuals who have lower levels of income. The literature revealed that households that have more family members make use of debt to a larger extent than households who have fewer family members. The literature mostly deals with the value of financial assets, thus as individuals have a higher value of financial assets, they seem to use less debt as opposed to individuals who have lower monetary values of financial assets who make greater use of debt. Homeowners are more inclined to make use of debt as opposed to households who pay rent to landlords. Households headed by individuals who have a favourable attitude to risk have a greater propensity to take on higher levels of debt. Those who are generally risk averse are not as eager to take on debt. Higher monetary values of non-financial assets are characterised by households taking on more debt on the one hand and on the other hand households who have non-financial assets of lower monetary value are less prone to take on debt. Lower levels of net wealth are associated with households who have higher levels of debt. Higher levels of net wealth are associated with households taking on less household debt.

Chapter 4 will describe the research methodology applied to determine whether the household variables presented in the heuristic model have a relationship to the holding or use of the different types of debt by young South Africans.

CHAPTER 4

RESEARCH DESIGN AND METHODOLOGY

4.1. INTRODUCTION

The primary functions of research methodology are, firstly, to dictate and control data acquisition and secondly, to analyse and extract meaning from the data acquired (Leedy & Ormrod, 2013:5). This chapter describes the research design and methodological approach applied in this study for obtaining, analysing and extracting the necessary data in order to address the research objectives (section 1.4).

To achieve the main research objective of identifying and describing the accumulation of liabilities by young adults in South Africa, supported by the determination of how certain household and events may relate to liability uptake, this study was carried out in two phases. A literature review was conducted during the first phase, as presented in Chapters 2 and 3. During the second phase, empirical data was analysed, as described in Chapters 4 and 5. The basis on which this empirical data was analysed is the heuristic model developed during the literature review.

Phase 1 addressed research objectives 1–3 by means of the literature review. The literature review concluded with the heuristic model as illustrated at the end of Chapter 3 (Table 3.11), but repeated here for the sake of convenience in Table 4.1.

Phase 2 addressed the fourth research objective and this will be described in Chapters 4 and 5. The heuristic model indicated in Table 4.1 was used during analysis of the data presented in Chapter 5. All the variables reflected in the model were analysed with the exception of risk aversion, non-financial assets and net wealth, as the data was not available in the data collection instrument. The SAARF AMPS surveys were the data collection instruments for the empirical analysis.

Table 4.1: Heuristic model of variables affecting debt uptake



Debt uptake		
Age over 45 years	Age of the household head	Age between 25 and 44 years
Early and late life stages	Life stages	Middle life stages
Lower levels of income	Household income	Higher levels of income
Not employed and retired	Employment status	Employed and self-employed
Single	Marital status	Married
Lower level of education	Education	Higher level of education
Smaller family size	Family size	Larger family size
Fewer children	Number of children	More children
Higher value of financial assets	Financial assets	Lower value of financial assets
Non-home owner	Housing assets	Home owner
Unfavourable attitude to risk	Risk aversion	Favourable attitude to risk
Lower level of non-financial assets	Non-financial assets	Higher level of non-financial assets
Higher levels of net wealth	Net wealth	Lower levels of net wealth

Source: Author's own.

This chapter begins with a description of how the literature review was performed (section 4.2). In section 4.3 the research methodology and design will be discussed. Section 4.4 discusses the data preparation, which deals with all the steps involved in preparing the data, as well as a description of the sample. Ethical considerations will be discussed in section 4.5. Section 4.6 outlines any limitations of the research.

4.2. LITERATURE REVIEW

Critical analysis of the literature is the area that is most distinctive in linking methodology with method (Ryan, Scapens & Theobald, 2002:181). The literature reviewed in this dissertation offers a significant contribution to the objective of the study.

The rationale behind a literature review is to provide a theory base for the readers, to present a survey of published works that are applicable to the current study, and to offer an analysis of the secondary literature sources (Hofstee, 2006:91). Hofstee

(2006:91) explains a number of reasons for the importance of the literature review, namely: to establish your credentials, that is, to convince your readers that you are well read in your respective field; to demonstrate the existence of a theory base; to indicate how your work applies to previously published work; to demonstrate the significance of your study; and lastly, that the results of your study will result in new knowledge. Leedy and Ormrod (2013:51) report that the literature review has the benefit of providing information on how methodological and design issues have been handled in previous studies, and introduces measurement tools that have been effectively used beforehand.

The literature review of this study focused on sources that provided relevant information on household debt of the South African population as a whole, providing insight into the situation faced by the youth living in this country. In addition, international empirical research supplied a perspective on the principles behind the research of household debt over the life course.

The literature related to this study was obtained by making use of the University of South Africa's (UNISA) electronic library, the subject librarian at UNISA, various online databases, Google Scholar, government publications and reference lists of researchers whose work was consulted.

4.3. RESEARCH METHODOLOGY AND DESIGN

4.3.1. Introduction

A paradigm is a “model or frame of reference for observing and understanding” (Babbie, 1990:375) and is described by Neuman (2006:81) as a general and organising framework that includes the following: basic assumptions, main issues, quality research models and methods whereby answers are pursued. Creswell and Plano Clark (2011:39) explain that a paradigm is made up of a community of specialists who have shared generalisations, belief systems and values. Having scientific work fit within a paradigm implies that it is acceptable to rely on standard indicators, concepts and theories that have been refined by numerous researchers through their research projects (Gilbert, 2008b:34).

The term that is favoured by Creswell and Plano Clark (2010:39) is “worldview”, which is suggestive of the notion that researchers have shared beliefs and values. They comment that worldviews differ with regard to the following: ontology, epistemology, axiology, methodology and rhetoric (Creswell & Plano Clark, 2011:41). The following paragraph will briefly explain how the first four aspects mentioned above were applied to this research.

Ontology is concerned with studying categories of existence of particular objects (Gilbert, 2008a:510), thus it is concerned with the nature of reality (Hopper & Powell, 1985:431). The researcher takes the position of being objective for the purpose of this study. Epistemology is related to the nature of knowledge and is concerned with how the knowledge is obtained and transmitted and the forms it can take (Hopper & Powell, 1985:431); therefore, it has to do with the relationship between the researcher and the research subject. Chua (1986:603) states that epistemology is concerned with positivism *versus* anti-positivism. The researcher in this study assumed the position of a positivist, as explained later in this section. Axiology refers to the roles of values in research (Creswell & Plano Clark, 2011:42). The measures that ensured that ethical principles were applied in this research are dealt with in section 4.7. Methodology is concerned with the actual manner in which research is carried out and includes the consideration and explanation of the logic applied behind research methods and techniques (Welman, Kruger & Mitchell, 2005:2). The research methodology followed in this study is described in section 4.3.2. Having explained worldviews, this section goes on to explain the various approaches used in social research.

As written by Ryan *et al.* (2002:9), accounting and finance research is commonly accepted as being social scientific research. This is because social issues are investigated, using standards of scientific enquiry as opposed to applying standards of scientific enquiry into natural phenomena, which is the field of the natural sciences and physics (Ryan *et al.*, 2002:9). Neuman (2006:80) explains that there are three approaches in social research, which are based on the social science re-evaluation that began in the 1960s, and that the approaches have been simplified from complex arguments. The approaches are positivist, interpretive social science and critical social science. As suggested by Gaffiken (2007:1),

mainstream accounting research has been dominated by positivist research, which is descriptive, since the 1970s. Hopper and Powell (1985) developed the taxonomy of accounting and finance research as described below. This taxonomy was considered useful by the researcher when deciding on the research method to be adopted in this study.

Hopper and Powell (1985:432) adapted Burrell and Morgan's framework into the Hopper and Powell's (1985) taxonomy of accounting research as depicted in Figure 4.1. The framework is based on two dimensions, namely: assumptions about the nature of social science and the assumptions based on the nature of society. Four elements in turn make up the social science dimension, and these are assumptions about ontology, epistemology, human nature and methodology (Hopper & Powell, 1985:431). Ontology, epistemology and methodology have already been briefly described, so it is only necessary to deal with human nature. Human nature is concerned with the relationship between human beings and their environment (Hopper & Powell, 1985:431) and thus determinism *versus* voluntarism (Chua, 1985:603). According to Burrell and Morgan's framework, the two assumptions yield four paradigms, namely: radical humanist, radical structuralist, interpretive and functionalist. Hopper and Powell combine the two radical paradigms (radical humanism and radical structuralism) and obtain the taxonomy of accounting research (Chua, 1985:603; Ryan *et al.*, 2002:40). It is also suggested by Chua (1985:613) that in addition to mainstream accounting research, there are two other worldviews and these are interpretive and critical.

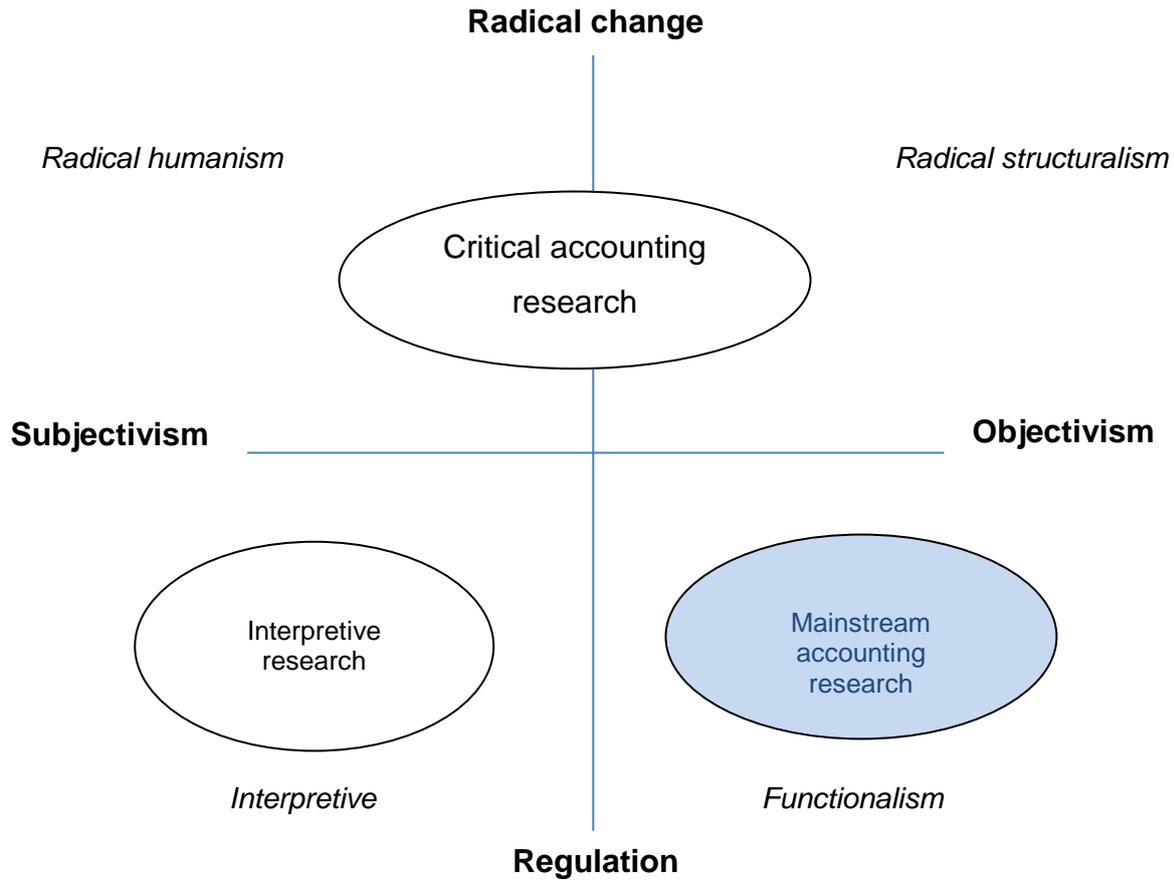


Figure 4.1: Taxonomy of accounting research

Source: Ryan, Scapens & Theobald, 2002:40.

On the surface, the distinction between quantitative and qualitative research is that the former makes use of measurement (Bryman, 2012:35); however, many researchers are of the opinion that distinguishing research as either quantitative or qualitative is based on the fundamental differences presented in Table 4.2 (Bryman, 2012:35).

Table 4.2: Fundamental differences between quantitative and qualitative research

	Quantitative	Qualitative
• Principal orientation to the role of theory in relation to research	Approach is deductive; emphasis is placed on the theories being tested	Approach is inductive; emphasis is placed on the theories being generated
• Epistemological orientation	Incorporates practices of the natural science model – emphasis is placed on positivism	Rejects the practices of the natural science model – emphasis is placed on interpretivism
• Ontological orientation	Views social reality as objective	Views social reality as constructive

Source: Bryman, 2012:36.

This study used the approach of positivism. Positivist social science is associated with the discovery of causal laws by using empirical observations and the researcher remains neutral and objective, thus remaining value free and detached while examining evidence (Neuman, 2006:86). Thus, the current study followed the perspective of mainstream accounting research. This approach favours quantitative methods of data analysis in order to provide a basis for generalisations (Chua, 1986:611; Ryan *et al.*, 2002:41). A researcher concerned with mainstream accounting research has an objective viewpoint and is concerned with regulation (Ryan *et al.*, 2002:41). Based on the overall research objective of this study, namely to identify the characteristics that may determine the holding or use of the different types of household debt by young South African adults, a quantitative research methodology was adopted. Insight into the accumulation of liabilities across the life course can be obtained with reference to the life course approach. Information regarding the life course approach was given in section 3.2.2. A longitudinal study was performed on individuals who belong to a certain cohort. Longitudinal designs are applicable when it is required to investigate changes due to the passing of time (Welman *et al.*, 2005:94) and are performed by the collection of data from the same set of persons at various points in time (Allum & Arber, 2008:372; Welman *et al.*, 2005:94). This implies that the debt holding of individuals who were 18 years old in 1999 can be studied until they are 32 years old in 2013 as they move through various transitions. The concepts of cohorts and

transitions were explained in section 3.2.2. The transitions embedded in the trajectories of the life course were analysed, including certain life events that may be experienced. An event history model is useful in focusing on given transitions but does not provide insight on the various trajectories of the life course. An event history model may be useful in revealing why household debt follows a particular pattern based on the events that take place over the life course of a household. In addition, it can supply insight into the risk factors that contribute to households facing more financial pressure in some stages than those faced in others. This study, in particular, will shed light on the risk factors faced by young adults that may cause them to take up a particular debt product. The holding of liabilities by households was explicitly investigated, with the emphasis being on the variables that were shown to have a significant influence on the uptake of a particular debt product.

4.3.2. Research design

A research design includes procedures that enable the collection, analysis, interpretation and reporting of data (Creswell & Plano Clark, 2011:53). Secondary data consists of indirect evidence obtained from primary sources (Singleton & Straits, 2010:416). As mentioned in section 4.3.1, based on the research objective of this study, a quantitative research methodology was adopted and the research method implemented was secondary data analysis.

Secondary data analysis was performed on data obtained by the SAARF AMPS for the years 1999–2013.

The advantages of carrying out secondary analysis are explained as follows by Bryman (2012:313):

- Good quality data can be available at a substantially lower cost than if the researcher collects the data.
- The datasets can be of extremely good quality.
- The datasets can provide an opportunity for researchers to conduct longitudinal research.

- Large datasets can offer an opportunity for providing subgroups and samples that are nationally representative.
- As less time is spent than in collecting new data, it allows the researcher more time for data analysis.
- It can allow for the reanalysis of data by using different techniques from those that were originally conducted.

Apart from the advantages of carrying out secondary analysis of data, it is equally necessary to deal with the limitations of secondary analysis, as mentioned by Bryman (2012:315):

- The researcher may experience an absence of familiarity with the secondary data that will take some time to become familiar.
- The datasets may be complex and large and the researcher will have to take time to acquaint themselves with the data.
- The researcher who makes use of secondary data does not have control over the quality of the data.
- The data may lack a key variable or variables.

The above-mentioned advantages and disadvantages were considered when electing to make use of the data from the SAARF AMPS surveys. After deliberation, it was found that the choice of secondary analysis of the data was well suited to this study. Of particular note was the fact that datasets produced by SAARF are of a high quality and various institutions, including the Bureau of Market Research at UNISA, make use of the AMPS data in their research. The AMPS datasets are very large and include a wealth of information. For the purposes of this study, it was decided to only use certain sections, as described in Tables 4.3, 4.4 and 4.5 of section 4.4.1.1. As mentioned by Allum and Arber (2008:391), the challenges and opportunities when conducting secondary data analysis is to use the existing datasets creatively by applying theory and conceptualisation skills in order to address sociological issues, thereby analysing the datasets in a different way from both a theoretical and statistical viewpoint (Allum & Arber, 2008:391).

In summary, this study was quantitative based on the explanations given in section 4.3.2, secondary data analysis was performed as explained in the preceding paragraph, and certain descriptive and inferential statistical analyses were performed. Non-parametric statistical tests, chi-square independence tests and Cox proportional-hazards regression models were applied, as they do not make assumptions about the underlying population distribution and are best suited when analysing nominal data. Chi-square independence tests were utilised to indicate the relationship between age and the debt product uptake and Cox proportional hazard regression models were applied to determine which of the independent variables would have a predictive effect on the take-up of a particular debt product. The reasons why these techniques were best suited to this study are explained in section 4.4.4.2 and 4.4.4.3.

This study is unique in that it aimed to use survival analysis in the context of take-up of debt to predict at what age the take-up of a particular debt product would be exercised by young adults in South Africa. The study utilised data in order to make an analysis of how an individual person's debt holding patterns may be influenced by their age and various characteristics, as indicated in the heuristic model in Table 4.1.

4.4. DATA PREPARATION

This section will firstly describe the process followed to evaluate the identified source of the secondary data (being the AMPS survey) for suitability to achieve the outcomes of this study (section 4.4.1). Once the assessment of the identified data source was established, the process in preparing the datasets for purposes of this study will be described (section 4.4.2), the process of constructing the sample sets will be provided in section 4.4.3; finally, the data analysis applied to answer the main research objective will be explained in section 4.4.4.

The four steps involved in the data preparation process are illustrated in Figure 4.2.

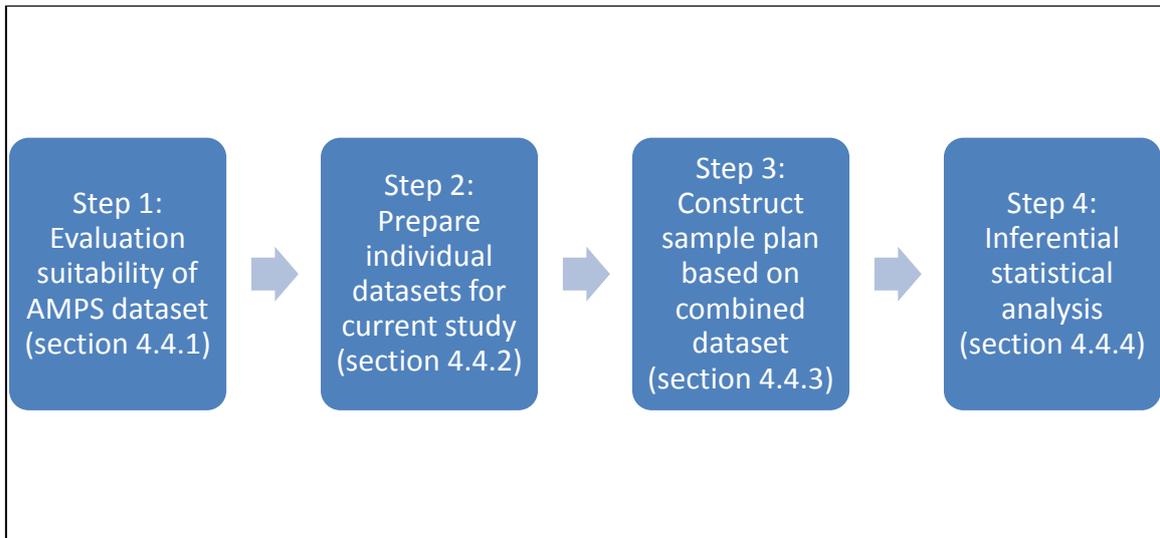


Figure 4.2: Data preparation process

Source: Author's own.

4.4.1. Step 1: Evaluation of the suitability of the secondary datasets (AMPS datasets)

This section will provide evidence that the AMPS surveys incorporate all the required variables from the heuristic model developed and illustrated in Table 4.1. In addition, the validity and the reliability of the data collection process by SAARF will be examined and it will be determined if the individual datasets have the necessary level of integrity required for further analyses to take place. The process followed in this step is indicated in figure 4.3.

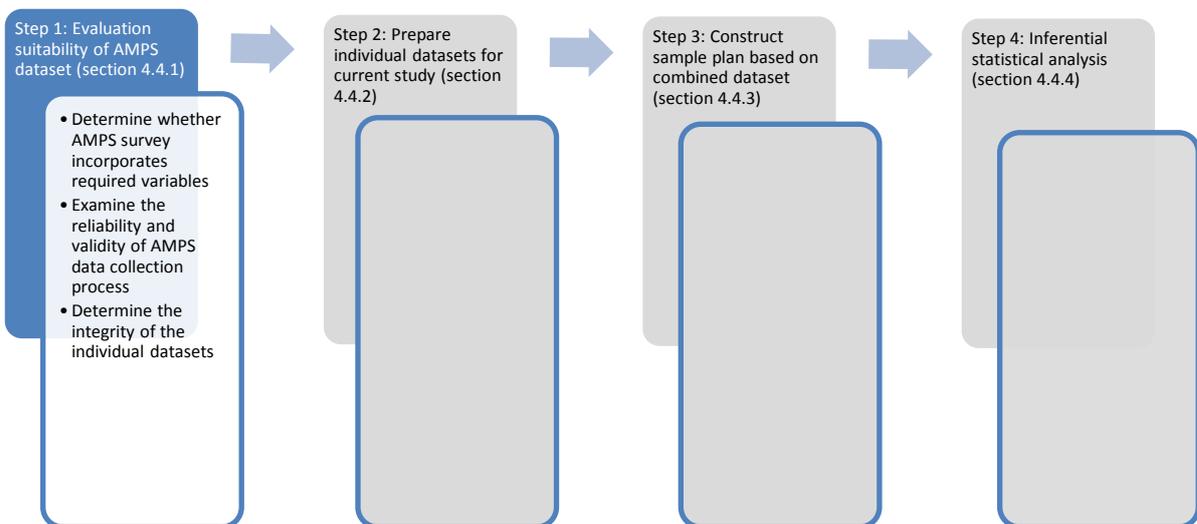


Figure 4.3: Data preparation process: Step 1

SAARF is an independent authority that facilitates, co-ordinates and is responsible for determining the research needs of its stakeholders (section 3.2.2). According to the SAARF Stakeholders' report (South Africa. SAARF, 2013), it is a non-profit, joint industry committee responsible for serving the following industries: marketing, media and advertising. It is further responsible for providing information used in target marketing and provides media, product and brand research that assists the stakeholders to buy and sell advertising space. All the data collected is available in the public domain (South Africa. SAARF, 2013). At the time of this study, SAARF received the majority of its funding from the following organisations: Media and Marketing Collection Agency (MAMCA), Print and Digital Media South Africa (PDMSA) and Out of Home Media South Africa (OHMSA). One of SAARF's products is the All Media and Products Survey (AMPS).

SAARF collects data from AMPS surveys conducted on a six-monthly basis and a twelve-month database is prepared each year by combining the six-monthly surveys from the respective year, namely January–June and July–December. The universe of the AMPS survey is represented by virtually the total adult population living throughout the urban and rural areas of South Africa. Adults are classified as being 15 years and older, as elaborated on in section 2.5. The AMPS sample is currently amongst approximately 25 400 South African adults (15 years and older) per annum in two national fieldwork waves (January–June and July–December). The AMPS surveys contain a host of topics and before any data analyses could be conducted it was therefore firstly necessary to determine whether the variables identified in the heuristic model were included in the dataset as portrayed in the following section.

4.4.1.1. Determination whether AMPS questionnaire included required variables

The SAARF AMPS questionnaires included the following sections: A–Cinema, B–Readership, C–Electronic Media, D–Out of Home Advertising, E–Cellphone, F–Digital, G–Motor Vehicles, H–Your Home, J–Activities, K–Financial Services, L–Furniture/Appliances, M–Food and Groceries, N–Travel, P–Clothing, Q–Cosmetics, R–Life stage, T–Durables and PD–Personal Data.

For this study, based on the heuristic model identified in the conclusion to Chapter 3 and indicated in Table 4.1 (section 4.1), data collected from the following sections was utilised: Section H–Your Home, Section J–Activities, Section K–Financial Services, Section R–Life stage and Section PD–Personal data, as illustrated by Tables 4.3, 4.4 and 4.5 below.

Table 4.3: Dependent variables required: Liability uptake per type of liability product

Type of liability product		Section in AMPS questionnaire
DEBT UPTAKE	Credit Card	K2 (Financial Services)
	Home Loan	
	Overdraft	
	Student Loan	
	Vehicle Finance	
	Other Loan	

Table 4.4: Independent variables required as per heuristic model

Independent variables identified in heuristic model	Section in AMPS questionnaire
AGE OF HOUSEHOLD HEAD	PD8 (Personal data)
LIFE STAGES	PD1,PD7,PD8,R1-R9 R1-R9 (Children/age of children/dependents),R14
HOUSEHOLD INCOME	PD12 (Household income) PD13 (Personal income)
EMPLOYMENT STATUS	PD2,PD3,PD4A (Work status/Self-employed/Occupation)
MARITAL STATUS	PD1 (Personal data)
EDUCATION	PD9 (Personal data)
FAMILY SIZE	PD10 (Total people living in the household)
NUMBER OF CHILDREN	R1-R9 (Life stage)
FINANCIAL ASSETS	K1,K9,K10 (Financial services)
HOUSING ASSETS	H2 (Your home)
RISK AVERSION	Not included
NON-FINANCIAL ASSETS	Not included
NET WEALTH	Not included

The AMPS datasets did not contain the necessary data relating to the following variables: risk aversion, non-financial assets and net wealth; for this reason, these were not analysed. The heuristic model did not include the following variables that were included in the AMPS datasets in Table 4.5: life events and currently living

with your parents; however, based on the objective of this study, the researcher considered them to be relevant to the various life events that could influence debt update and they were therefore included in the analyses.

**Table 4.5: Independent variables of interest
(not required as per heuristic model)**

Independent variables of interest not included in the heuristic model		Section in AMPS questionnaire
Life events	Changed jobs in the past 12 months	J (Events in the past 12 months)
	Got married in the past 12 months	
	Moved in the past 12 months	
	Spent money on education in the past 12 months	
	Currently living with your parents	R14

The majority of variables identified in the heuristic model are included in the dataset, with the exception of the risk aversion, non-financial assets and net wealth variables. It was therefore decided that it was still worthwhile to utilise the datasets, as per the limitations of secondary data identified, as an identical match is not always possible.

4.4.1.2. Evaluation of the reliability and validity of the AMPS data collection process

In order to represent the population of South Africa, the AMPS universe is measured by SAARF drawing a large, scientifically, multi-stage, area stratified probability sample (SAARF, 2015). By making use of population estimates, the sample is weighted up to the total population and the findings can be examined by looking at both percentages and thousands of people (SAARF, 2015). The data is collected by means of personal at-home interviews. A new sample is taken for each survey and the size of the universe is calculated each year. Thus, even though the universe differs between years, SAARF report that the consistency observed from one survey to the next is remarkable because of using percentages (SAARF, 2015).

In order to ensure the validity and reliability of the data collected, SAARF makes use of a statistical margin of error calculation when considering the results based on incidence of use. Therefore, the margin of error refers to the level to which the sample corresponds to the universe it represents (SAARF, 2015). A 95% confidence level is used by SAARF. The margin of error must be within a certain range as calculated by the margin of error formula. The boundaries of the confidence interval are obtained by subtracting from and adding a quantity to the estimated value to obtain the precision estimate. Thus, the sample size error may not exceed the precision estimate (SAARF, 2015).

In conclusion, the datasets were considered valid and reliable due to the variety of tests and measures as well as the ethical approach applied during the AMPS data collection, data cleaning and data preparation processes. However, it was necessary to ensure that the data identified for purposes of this study was valid and reliable and the process followed to determine this will be discussed in the following section. More information in this regard can be obtained from the SAARF's website, namely www.saarf.co.za.

4.4.1.3. Evaluation of the integrity of the individual AMPS datasets

This is a longitudinal study performed on individuals who belong to a certain cohort; for this reason, the AMPS surveys provide the necessary data in order to perform a life course study in which the respondents' age across the life course increases from 18 to 32 years of age. Thus, the AMPS questionnaires for the years 1999–2013 were utilised, with age being the proxy for time. The Bureau of Market Research at UNISA is a subscriber to the AMPS data and provided the necessary datasets for the years 1999–2013.

It is necessary to describe the datasets briefly prior to proceeding to explain the process involved in preparing the individual datasets. The datasets all cover a 12-month period from January–December, with the exception of the years 2004, 2005 and 2006. In 2004, only one survey was conducted covering January–June 2004, in 2005, only one survey was conducted with the fieldwork covering March–September 2005, and in 2006 the survey that was conducted covered the period February–June 2006. This presented a problem, but in order to counteract the setback, it was decided to make use of the combined datasets as follows: 2004

included the period January–June 2003 and January–June 2004, 2005 included the period January–June 2004 and January–June 2005 and 2006 included the period January–June 2005 and January–June 2006 (SAARF, 2013). The dataset sizes for the various years are reflected in Table 4.6.

Table 4.6: Dataset sizes

Year	Number of respondents	Percentage of total number of respondents
1999	17 118	4.8
2000	15 805	4.4
2001	28 915	8.1
2002	29 791	8.3
2003	25 114	7.0
2004	24 489	6.8
2005	24 407	6.8
2006	24 813	6.9
2007	21 068	5.9
2008	21 083	5.9
2009	25 170	7.0
2010	25 160	7.0
2011	25 160	7.0
2012	25 108	7.0
2013	25 444	7.1
Total	358 645	100.0%

The sample sizes for 1999 and 2000 are significantly smaller than for the other years. This was verified with the information presented in the database and found to be correct.

The statistical computer program SPSS 23.0 Statistics was used to manage and analyse the data. Datasets for each respective year were created in SPSS using data extracted from the SAARF datasets. It was considered appropriate at this stage to perform neural networks on the individual datasets for each of the years from 1999–2013 in order to determine if each of the datasets was reliable. Neural networks, a data mining tool, were performed on each of the datasets using the multilayer perceptron. The multilayer perceptron is a function of independent variables that results in the prediction error of dependent variables or outputs being minimised (SPSS Inc., 2015). Thus, neural networks are able to produce quick results that indicate if the datasets are stable and are viable for more

detailed analysis. The model summaries for each of the datasets were examined with the assistance of a specialist in demographic and econometric modelling and a senior computer specialist, both from the Bureau of Market Research at UNISA.

When determining whether the results of the neural networks were satisfactory, it was accepted that the error predictions should be below five percent, but that a ten percent error prediction would also be considered acceptable. The cross entropy error shows the error that the network attempts to minimise (Islam, Zhou & Li, 2009). Accepting a ten percent error prediction means that the correct prediction is above 90 percent, which is high. Individual datasets for all the years were within the acceptable limits, with the exception of 2002, 2005 and 2008. These years had problems with certain categories of data; however, with the assistance of the senior computer specialist these issues were resolved by recoding the string variables to numeric values and the neural networks were redone, thereafter it was determined that the individual datasets for these years were also suitable to use in the data analysis. All the datasets were therefore considered appropriate to use for the purpose of this study and the process of preparing the individual datasets for purposes of further analyses could commence – this process will be described in section 4.4.2.

4.4.2. Step 2: Data preparation of the individual datasets

Having obtained evidence that all the datasets were suitable, preparation of the individual datasets was the next step in the process. This involved extracting the variables from each of the datasets, ensuring comparability of the datasets over the period of analysis and performing data integrity tests. The process followed is indicated in figure 4.4.

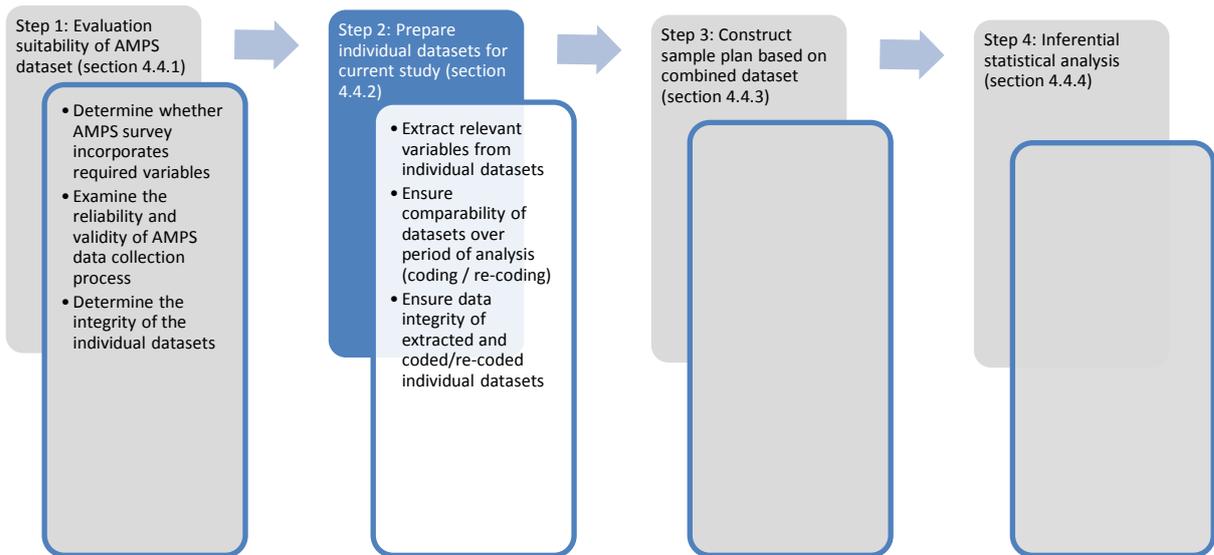


Figure 4.4: Data preparation process: Step 2

4.4.2.1. Ensuring extraction of comparable variables across all the different datasets

The variables identified in section 4.4.1.1 were extracted from the datasets and exported to Excel files that were created in Microsoft Excel 2010. A separate Excel file was created for each of the years from 1999–2013. The structure of the Excel spreadsheets was prepared according to Table 4.7.

Table 4.7: Structure of Excel spreadsheets

Variables identified in heuristic model	Other variables analysed -not in the heuristic model	Amps section name and reference	Consistently coded across all the years		Necessary to create a new variable for purposes of analyses	
			Yes	No	Yes	No
CREDIT CARD		Financial services K2	Yes			No
HOME LOAN		Financial services K2	Yes			No
OVERDRAFT		Financial services K2	Yes			No
STUDENT LOAN		Financial services K2	Yes			No
VEHICLE FINANCE		Financial services K2	Yes			No
OTHER LOAN		Financial services K2	Yes			No
AGE OF HOUSEHOLD HEAD		Personal data PD8	Yes			No
LIFE STAGES		Life stage R1-R9/ Personal data PD1,PD7,PD8,R1-R9		No	Yes	
HOUSEHOLD INCOME		Personal data PD12, PD13		No	Yes	

Variables identified in heuristic model	Other variables analysed -not in the heuristic model	Amps section name and reference	Consistently coded across all the years		Necessary to create a new variable for purposes of analyses	
			Yes	No	Yes	No
EMPLOYMENT STATUS		Personal data PD2,PD3,PD4A	Yes			No
MARITAL STATUS		Personal data PD1	Yes			No
EDUCATION		Personal data PD9	Yes			No
FAMILY SIZE		Personal data PD10		No	Yes	
NUMBER OF CHILDREN		Life stage R1-R9		No	Yes	
FINANCIAL ASSETS		Financial services K1,K9,K10		No	Yes	
HOUSING ASSETS		Your Home H2	Yes			No
	Life events	Activities J		No	Yes	
	Currently living with your parents	Life stage R14	Yes			No

Table 4.7 shows the variables that were consistent across the years and it indicates which variables were not consistent across the years and which required the researcher to make a decision on the coding to be applied in order to make them consistent for data analysis purposes. Certain variables had to be re-coded into new variables in order to achieve the research objectives. The next section will describe the process of recoding that was followed by the researcher in the Excel spreadsheets.

4.4.2.2. Coding and re-coding to ensure comparability of variables across all the different datasets

Coding is the process of assigning numbers or symbols to the various categories of variables (Singleton & Straits, 2010:500). The codebooks were prepared for all the variables identified in Table 4.7 in section 4.4.2.1. The data was recoded in each of the separate worksheets for the years 1999–2013 according to the codebooks. Where applicable, nominal measurements were used for the measurement of the variables in this study, with the exception of counting of the number of financial assets held by the respondents and the total females and males in the households to which a scale was assigned. Nominal level

measurements are used when there are a limited number of distinct categories that are separate (Neuman, 2006:199).

- **Coding of dependent variables**

Table 4.8 indicates the coding for the dependent variables. All the dependent variables had a dichotomous outcome. A non-occurrence of an event was coded as “0” and an occurrence of an event was coded as “1”. No further recoding was necessary for these variables because they were consistent across the years.

Table 4.8: Codebook for dependent variables

Type of liability product		Numerical code	Variable label
DEBT UPTAKE	Credit card	0	No
	Home loan		
	Overdraft		
	Student loan	1	Yes
	Vehicle finance		
	Other loan		

It is necessary to mention that certain of the dependent variables were only included in the surveys of the latter years as follows: overdraft, vehicle finance and student loans from 2007 (from age 26) onwards and home loans from 2002 (from age 21) onwards.

- **Coding of independent variables that were consistent across the years**

Table 4.9 indicates the coding for the independent variables that were consistent across all the various years. These variables did not need any further re-coding following the initial coding process undertaken by the researcher in order to prepare them for the final analyses. Age of the head of the household was not recoded.

Table 4.9: Coding of the independent variables that were consistent across the years

Variables identified in heuristic model		Numerical code	Variable label
Age of the household head		Actual age	Age
Employment status	Work status	1	Working Full-Time
		2	Working Part-Time
		3	Not Working – Housewife
		4	Not Working – Student
		5	Not Working – Retired
		6	Not Working – Unemployed
		7	Other
	Self employed	0	No
		1	Yes
	Occupation	1	Administrative and Managerial
		2	Agriculture
		3	Artisans and Related
		4	Clerical and Sales/Managerial
		5	Not Active
		6	Production and Mining
		7	Professional and Technical
		8	Service
9		Transport and Communication	
10		Other	
Marital status		1	Single
		2	Married or Living Together
		3	Widowed
		4	Divorced
		5	Separated
Level of education		1	No Schooling
		2	Some Primary School
		3	Primary School Completed
		4	Some High School
		5	Matric
		6	Artisans Certificate Obtained
		7	Technikon Diploma/Degree Completed
		8	University Degree Completed
		9	Professional
		10	Secretarial
		11	Technical
		12	Other
Housing assets		1	Rented
		2	Owned
		3	Other (co-owned/company owned)

- **Coding of independent variables that were not consistent across the years**

Tables 4.10 to 4.14 indicate the coding for the independent variables that were not consistent across all the various years and needed further re-coding and the creation of new variables in order to prepare them for the final analyses. The coding and the creation of new codes for these variables will be discussed in the following order: life stages, household income, family size, children (up to and including 12 years of age and children/dependents over the age of 13) and financial assets.

- **Life stages**

As explained in section 3.2.2, Tables 3.4 and 3.5, the AMPS surveys classification of the life stages for the years 1999–2007 was somewhat different to the classification of the life stages for the surveys 2008–2013. In order to counteract the differences in the classification, the researcher examined the definitions in order to make the life stage variables comparable for all the concerned years. Table 4.10 indicates the initial coding of the life stages by the researcher, column 2 gives the coding for the years 1999–2007 and column 4 gives the coding for the years 2008–2013. The final column indicates the final coding used in the data analysis.

Table 4.10: Recoding of the life stage variables to make them comparable across all the surveys

AMPS: 1999–2007		AMPS: 2008–2013		Final codes to ensure comparability in merged dataset	
Item description	Codes	Item description	Codes	Item description	Codes
At-Home Singles	9	At-Home Singles	1	At-Home Singles(1 & 9)	1
Starting Out Singles	10	Young Independent Singles	2	Young Independent Singles (2 &10)	2
Mature Singles	11	Mature Singles	3	Mature Singles (3 &11 & 17)	3
Couples	12	Young Couples	4	Young Couples (4 &12)	4
New Parents	13	Mature Couples	5	Mature Couples (5 & 16)	5
Mature Parents	14	Young Family	6	Young Family (6 & 13)	6
Single Parents	15	Single Parent Family	7	Single Parent Family (7 & 15)	7
Golden Nests	16	Mature Family	8	Mature Family (8 & 14)	8
Left Alones	17				

- **Household income**

In terms of the heuristic model, household income and personal income were identified as variables that could be used to determine their effect on the uptake of debt.

Because this study spanned 15 years, the income groups differed slightly between the years and the researcher therefore had to re-code the variables into comparable groups as the first step and then further recode them into a smaller number of groups in the second step. The process followed is indicated in Table 4.11.

Table 4.11: Recoding of household income and personal income to make them comparable across all the survey years

Variable	Initial coding		Final codes to ensure comparability in merged dataset	
	Numerical code	Variable label	Numerical code	Variable label
Household income	1	R 1 - R 499	1	R 1 - R 9 999
	2	R 500 - R 599		
	3	R 600 - R 699		
	4	R 700 - R 799		
	5	R 800 - R 899		
	6	R 900 - R 999		
	7	R 1 000 - R 1 099		
	8	R 1 100 - R 1 199		
	9	R 1 200 - R 1 399		
	10	R 1 400 - R 1 599		
	11	R 1 600 - R 1 999		
	12	R 2 000 - R 2 499		
	13	R 2 500 - R 2 999		
	14	R 3 000 - R 3 999		
	15	R 4 000 - R 4 999		
	16	R 5 000 - R 5 999		
	17	R 6 000 - R 6 999		
	18	R 7 000 - R 7 999		
	19	R 8 000 - R 8 999		
	20	R 9 000 - R 9 999		
	21	R 10 000 - R 10 999	2	R 10 000 - R 19 999
	22	R 11 000 - R 11 999		
	23	R 12 000 - R 13 999		
	24	R 14 000 - R 15 999		
	25	R 16 000 - R 19 999		

Variable	Initial coding		Final codes to ensure comparability in merged dataset	
	Numerical code	Variable label	Numerical code	Variable label
	26	R 18 000+	3	R 20 000+
	27	R 20 000+		
	28	R 20 000 - R 24 999		
	29	R 25 000 - R 29 999		
	30	R 30 000 - R 39 999		
	31	R 40 000+		
Personal income	0	No Income	0	No Income
	1	R 1 - R 499	1	R 1 - R 9 999
	2	R 500 - R 599		
	3	R 600 - R 699		
	4	R 700 - R 799		
	5	R 800 - R 899		
	6	R 900 - R 999		
	7	R 1 000 - R 1 099		
	8	R 1 100 - R 1 199		
	9	R 1 200 - R 1 399		
	10	R 1 400 - R 1 599		
	11	R 1 600 - R 1 999		
	12	R 2 000 - R 2 499		
	13	R 2 500 - R 2 999		
	14	R 3 000 - R 3 999		
	15	R 4 000 - R 4 999		
	16	R 5 000 - R 5 999		
	17	R 6 000 - R 6 999		
	18	R 7 000 - R 7 999		
	19	R 8 000 - R 8 999		
	20	R 9 000 - R 9 999		
	21	R 10 000 - R 10 999	2	R 10 000 - R 19 999
	22	R 11 000 - R 11 999		
	23	R 12 000 - R 13 999		
	24	R 14 000 - R 15 999		
	25	R 16 000 - R 19 999		
	26	R 18 000+	3	R 20 000+
	27	R 20 000+		
	28	R 20 000 - R 24 999		
	29	R 25 000 - R 29 999		
	30	R 30 000 - R 39 999		
	31	R 40 000+	2	R 10 000 - R 19 999
	35	R 16 000 - R17 999		

During the second step of the recoding process for both household income and personal income, R18 000 plus was recoded into the R20 000 plus category for 1999 because this was the maximum monthly salary category for this survey year.

- **Family size**

The surveys made provision for the respondents to indicate the number of males and females currently living in the household in the various age categories, as well as the total males and total females living in the household. The datasets also showed the total of all the males and females living in the household. These were measured by making use of a scale measurement level.

The age categories differed slightly between some of the years but this was not a limitation as the researcher was only interested in the total number of people living in the household for the purpose of the study. However, certain of the datasets had missing information with regard to the totals, so the researcher created a variable for these years called Total Male and Female. This involved adding the number of males and females from the various age categories. This was carried out for the years 1999–2002. This ensured that the data was comparable across all the years.

Table 4.12: Recoding of total males and females living in the household to make it comparable across all the survey years

Variable	Scale
Total males and females living in the household	1-30

- **Dependent children up to the age of 12 and children/dependents older than the age of 13**

The surveys reflected individual categories for age groups of own children, children currently living with you, children dependent on you, dependents that are not your own children (older or younger than you) and dependents who are currently living with you. As this study was concerned with life stage, what is of importance is whether the household has children/dependents up to 12 years of age and whether the household has children/dependents who are 13 years and older. Thus, the variables were combined to show whether the head of the

household had any dependent children that were twelve years old and younger and dependents that were older than 13 years of age to be used as part of the life stage identification. The coding for the above-mentioned is indicated in Table 4.13.

Table 4.13: Coding for children in the household to make them comparable across all the survey years

Initial coding			Final codes to ensure comparability in merged dataset		
Variable	Numerical code	Variable label	Variable	Numerical code	Variable label
Young or Unmarried Children	0	No	Dependent children up to the age of 12	0	No
	1	Yes		1	Yes
Age group of young or unmarried children	Various options of age groups into which the young or unmarried children fall. Indicate 0 for no and 1 for yes in each category		Dependents older than the age of 13	0	No
Age group of young or unmarried children living with you	Various options of age groups into which the young or unmarried children living with the respondent fall. Indicate 0 for no and 1 for yes in each category			1	Yes
Age group of young or unmarried children dependent on you	Various options of age groups into which the dependents fall. Indicate 0 for no and 1 for yes in each category		Other dependents	0	No
Other dependents	0	No		1	Yes
Age group of dependents living with you	Various options of age groups into which the other dependents living with the respondent fall. Indicate 0 for no and 1 for yes in each category				

- **Financial assets**

The surveys reflected individual categories for the following financial assets: unit trusts, stock exchange, ATM Card, debit card, investment/deposit accounts,

savings, retirement annuity and total endowment (endowment with life cover and endowment with no life cover). The variables were coded as shown in Table 4.14.

Table 4.14: Coding for financial assets

Initial coding			Final codes to ensure comparability in merged dataset		
Variable	Numerical code	Variable label	Variable	Numerical code	Variable label
Unit Trusts	0	No	Number of financial assets	0	No financial assets
Stock Exchange				1	1 financial asset
ATM Card	1	Yes		2	2 financial assets
Debit Card				3	3 financial assets
Investments				4	4 financial assets
Savings				5	5 financial assets
Retirement Annuity				6	6 financial assets
Total Endowment				7	7 financial assets
				8	8 financial assets

The financial assets held were added and a new variable was created called “Number of financial assets”. These were measured by making use of a scale measurement level with the minimum being 0 and the maximum being 8 financial assets held.

- **Coding of independent variables that were of interest (not included in the heuristic model)**

Table 4.15 indicates the coding of the independent variables that were of interest to the study but that were not included in the heuristic model.

Table 4.15: Coding of independent variables of interest

	Variable	Numerical code	Variable label
Life events	Changed jobs in the past 12 months	0	No
	Got married in the past 12 months		
	Moved in the past 12 months		
	Spent money on part-time or correspondence education in the past 12 months		
	Respondents currently living with parents	1	Yes

The surveys for the years 2008–2013 included separate questions for money spent on part-time education and money spent on correspondence education. These two variables were combined to “Spent money on part-time or correspondence education in the past 12 months” for these years to make them comparable with the preceding nine years.

The recoding process described in this section ensured that the variables were comparable across the different years. Following the recoding process, it was once again necessary to conduct integrity tests to ensure that the original integrity was not jeopardised during the recoding process and therefore neural networks were conducted on each of the separate datasets.

4.4.2.3. Data integrity tests to ensure data quality of recoded datasets

Datasets for each respective year were created in SPSS using the coded data from each of the Excel spreadsheets. The researcher carried out neural networks on the recoded datasets for each of the years from 1999–2013 in order to determine if each of the datasets was reliable. The results of the neural networks indicated in Table 4.16 exhibited that the datasets were reliable as the overall percentage correct predictions were above 95 for the years 2001–2013. The years of 1999 and 2000 were also acceptable, as the overall percentage incorrect was below 10 percent, which is considered acceptable.

Table 4.16: Neural Network results of individual datasets

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Sample	Overall Percent Correct														
Training	93.8%	94.3%	95.4%	95.6%	95.9%	96.4%	96.3%	95.8%	96.7%	96.7%	97.2%	97.5%	97.6%	97.5%	97.5%
Testing	93.2%	93.7%	95.2%	95.8%	95.9%	96.2%	96.2%	95.5%	96.4%	96.5%	97.1%	97.4%	97.4%	97.2%	97.7%

Source: Author’s calculations.

4.4.3. Step 3: Construct sample plan based on combined dataset

The previous section showed that the individual datasets had data integrity and the individual datasets were ready to be merged into one dataset because all the variables were in the same sequence and comparable across the years. In order

to prepare the data in the datasets for analysis the following steps were performed as indicated in Figure 4.5.

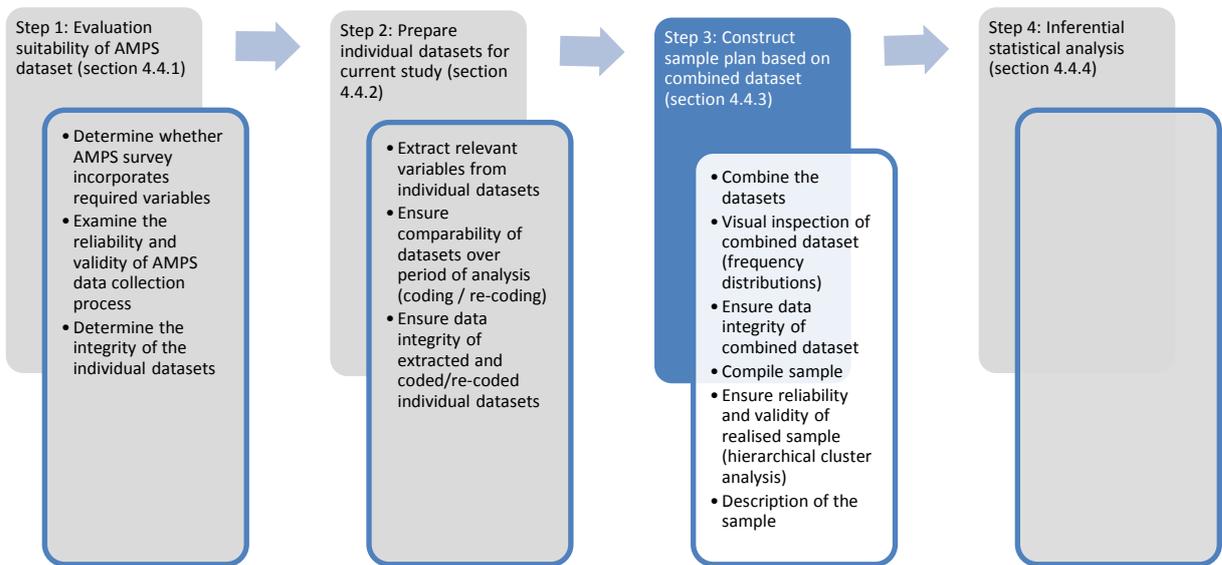


Figure 4.5: Data preparation process: Step 3

4.4.3.1. Combining the datasets

Following the favourable results of the neural networks, the 15 data files were merged into one dataset. The dataset was not weighted. According Dickens (1990:333), if the group sizes are large and the individual error terms are largely correlated, weighted estimates may be inefficient. A sample should be representative with respect to all the variables being measured in a survey and thus be a miniature of the population from which it came (Bethlehem, 2009:23). In this study, because the samples selected by SAARF are representative of the South African population and, in addition, the surveys do not have the problem of “no responses” and they are not completed online, it was considered appropriate not to weight the data. Table 4.17 indicates the combined dataset from which the final sample was selected. Before selecting the final sample, it was necessary to review the quality of the data.

Table 4.17: Cross tabulation of year by age

Year * Age Cross-tabulation

Year	Respondent's age														
	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
1999	515	432	383	445	384	378	400	415	370	389	360	348	415	315	398
2000	560	469	437	404	383	397	376	374	373	336	369	356	439	267	356
2001	970	892	839	869	747	725	678	696	625	654	696	632	719	529	640
2002	1 090	1 042	1 023	953	870	788	766	764	661	700	648	641	691	520	658
2003	917	879	911	838	702	752	612	655	539	593	590	534	607	429	593
2004	889	873	866	807	703	693	630	642	526	544	544	533	595	418	530
2005	833	803	798	737	681	677	642	629	552	517	507	558	585	428	511
2006	866	761	775	737	701	692	620	616	556	499	505	549	555	435	557
2007	712	645	660	630	647	583	549	536	424	521	406	461	432	352	429
2008	719	636	605	593	545	585	530	563	441	452	405	406	429	328	473
2009	851	815	811	727	688	686	665	661	575	544	545	547	524	386	481
2010	805	769	817	696	651	616	618	659	593	561	583	503	619	382	447
2011	699	776	757	752	688	621	615	699	614	570	568	506	559	430	469
2012	679	664	712	722	698	700	667	600	577	554	580	608	564	403	562
2013	680	662	677	705	653	715	686	633	548	558	591	557	601	459	526
Total	11 785	11 118	11 071	10 615	9 741	9 608	9 054	9 142	7 974	7 992	7 897	7 739	8 334	6 081	7 630

Source: Author's own.

4.4.3.2. Visual inspection of data quality

Data verification was performed on the combined data set to ensure that it was clean, accurate and of good quality. Data cleaning is the process that includes the detection and resolution of coding errors and transmission errors (Singleton & Straits, 2010:502). A senior computer specialist from the Bureau of Market Research at UNISA assisted the researcher with this function to ensure that any errors were detected and resolved. As the variables were mostly nominal, descriptive frequencies were conducted on the data. The descriptive statistics employed in this study were obtained by using frequencies for the categorical variables. Cross tabulations were carried out in order to investigate the tables that showed errors. Any errors reflected in the frequency tables were corrected by recoding the data, and correcting labelling issues, and any missing values were investigated in order to obtain the reasonability thereof.

After resolving all the errors, it was concluded that the data in the merged dataset passed the visual inspection tests performed by means of the frequency distributions and the data integrity tests on the combined dataset could be carried out as explained in the next section.

4.4.3.3. Evaluation of data integrity of combined dataset

A multilayer perceptron was once again conducted, this time on the combined dataset. The purpose was to reflect the prediction error of the target variables and to determine the quality of the dataset. The results of the neural network are provided in Table 4.18.

The model summary illustrated in Table 4.18 below includes more detail when compared to the way in which the results were indicated in Table 4.16. This is because the researcher wanted to illustrate the percentages relating to each of the dependent variables separately for the combined dataset from which the sample was extracted.

Table 4.18: Output from Neural network on combined dataset

Model Summary			
Training	Cross Entropy Error	15113.162	
	Average Percent Incorrect Predictions	3.0%	
	Percent Incorrect Predictions for Categorical Dependents	Credit Card	7.5%
		Home Loan	3.1%
		Overdraft	3.1%
		Other Loan	1.4%
		Student Loan	.5%
		Vehicle Finance	2.4%
Stopping Rule Used	1 consecutive step(s) with no decrease in error ^a		
Training Time	0:00:40.67		
Testing	Cross Entropy Error	6429.331	
	Average Percent Incorrect Predictions	2.9%	
	Percent Incorrect Predictions for Categorical Dependents	Credit Card	7.3%
		Home Loan	3.0%
		Overdraft	2.8%
		Other Loan	1.4%
		Student Loan	.5%
		Vehicle Finance	2.6%

Source: Author's calculations.

The results indicate that the dataset was solid, as the average incorrect predictions for training was 3 percent and for testing 2.9 percent, well below the five percent, which is considered acceptable; thus the sample could be selected as described in the following section.

4.4.3.4. Compile a sample plan

The combined dataset in Table 4.17 was for all the ages across all the years. In order to obtain the sample it was necessary to filter the data. The life course approach was followed in this study and the data was filtered as follows in order to obtain the final sample: 18-year-old respondents were selected for 1999, 19-year-olds for 2000, 20-year-olds for 2001, 21-year-olds for 2002, 22-year-olds for 2003, 23-year-olds for 2004, 24-year-olds for 2005, 25-year-olds for 2006, 26-year-olds for 2007, 27-year-olds for 2008, 28-year-olds for 2009, 29-year-olds for 2010, 30-year-olds for 2011, 31-year-olds for 2012 and 32-year-olds were selected for 2013. For the purpose of this study, it is evident that age is the proxy for time. The cross tabulation for the filtering is demonstrated in Table 4.19.

Table 4.19: Cross tabulation of the filtered dataset

Year * Age Cross-tabulation															
Year	Respondent's age														
	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
1999	515	432	383	445	384	378	400	415	370	389	360	348	415	315	398
2000	560	469	437	404	383	397	376	374	373	336	369	356	439	267	356
2001	970	892	839	869	747	725	678	696	625	654	696	632	719	529	640
2002	1 090	1 042	1 023	953	870	788	766	764	661	700	648	641	691	520	658
2003	917	879	911	838	702	752	612	655	539	593	590	534	607	429	593
2004	889	873	866	807	703	693	630	642	526	544	544	533	595	418	530
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2006	866	761	775	737	701	692	620	616	556	499	505	549	555	435	557
2007	712	645	660	630	647	583	549	536	424	521	406	461	432	352	429
2008	719	636	605	593	545	585	530	563	441	452	405	406	429	328	473
2009	851	815	811	727	688	686	665	661	575	544	545	547	524	386	481
2010	805	769	817	696	651	616	618	659	593	561	583	503	619	382	447
2011	699	776	757	752	688	621	615	699	614	570	568	506	559	430	469
2012	679	664	712	722	698	700	667	600	577	554	580	608	564	403	562
2013	680	662	677	705	653	715	686	633	548	558	591	557	601	459	526
Total	11 785	11 118	11 071	10 615	9 741	9 608	9 054	9 142	7 974	7 992	7 897	7 739	8 334	6 081	7 630

Source: Author's own.

From Table 4.19, it can be noted that the total sample size selected was 8 841 respondents (the darker blue blocks across the years show the number of respondents selected for each age group). Table 4.20 is a summary of the sample selected in each age group.

Table 4.20: Summary table of respondents

Age	Number of respondents
18	515
19	469
20	839
21	953
22	702
23	693
24	642
25	616
26	424
27	452
28	545
29	503
30	559
31	403
32	526
Total	8 841

After selecting the sample, it was necessary to ensure that the sample data was valid and reliable as described in the next section.

4.4.3.5. Final validity and reliability of the sample

Reliability is concerned with the concept that measures implemented by the researcher are repeatable and are thus consistent (Bryman, 2012:46). When considering quantitative research, Bryman (2012:169) indicates that reliability refers to the following factors:

- Stability is concerned with whether the measure is stable over time.
- Internal reliability is concerned with the consistency of the indicators that make up the scale or index.
- Inter-observer consistency is concerned with subjective judgement which is exercised in recording of observations.

Validity, on the other hand, is concerned with whether the conclusions generated from the research have integrity (Bryman, 2012:47), in other words whether the measure actually measures the concept at hand. Following on from the description of these concepts is the fact that validity presumes reliability, in that if the measures are not reliable then they cannot be valid (Bryman, 2012:173).

Based on the neural network performed in section 4.4.3.3, it can be concluded that the data is consistent. One final analysis that was conducted was the hierarchical cluster analysis. This was done in order to satisfy the requirement that the data is valid and that the credit usage patterns of the respondents will broadly be very similar. Hierarchical cluster analysis is an exploratory tool that reveals relationships between variables. The results are indicated in Table 4.21.

Table 4.21: Hierarchical cluster analysis

Case	Proximity Matrix					
	Matrix File Input					
	Credit Card	Home Loan	Overdraft	Other Loan	Student Loan	Vehicle Finance
Credit Card	1.000	.928	.922	.921	.922	.926
Home Loan	.928	1.000	.972	.970	.979	.972
Overdraft	.922	.972	1.000	.972	.977	.965
Other Loan	.921	.970	.972	1.000	.979	.969
Student Loan	.922	.979	.977	.979	1.000	.974
Vehicle Finance	.926	.972	.965	.969	.974	1.000

Source: Author's calculations.

The results reveal that the variables are similar to each other and have integrity. All the debt products have a result greater than 0.9, indicating that a strong linear relationship exists between them and that their usage patterns are very similar.

In conclusion, it can be said that the data used in this study is valid and reliable. The next section will provide a detailed description of the sample.

4.4.3.6. Description of realised sample

Figure 4.6 shows the breakdown of the type of debt held by the respondents as they get older.

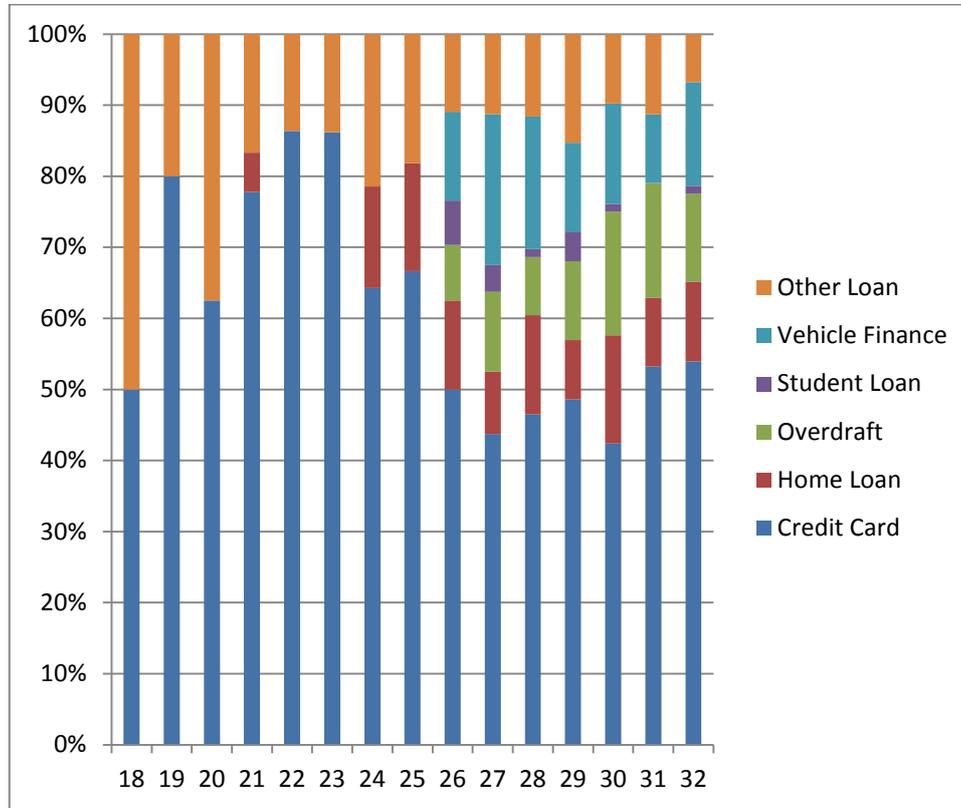


Figure 4.6: Overall debt usage

Source: Author's calculations.

It must be taken into consideration that as the study spanned a period of fifteen years certain of the dependent variables were only included in the surveys of the latter years, as follows: overdraft, vehicle finance and student loans from 2007 (from age 26) onwards and home loans from 2002 (from age 21) onwards. Figure 4.6 indicates that debt composition changes over time as the respondents get older as they are utilising more credit products.

In addition to the debt uptake, the demographic profile of the respondents as well as the sample distribution based on the variables in the heuristic model will be discussed in the paragraphs below. The following characteristics of the respondents, based on the heuristic model, will be discussed: life stage, household income, employment status, marital status, level of education, family

size/total people living in the household, children and/or dependents, financial assets and housing assets. The characteristics of interest to the researcher but not included in the heuristic model will also be described, namely: life events such as changed jobs in the past 12 months, got married in the past 12 months, moved in the past 12 months and spent money on education in the past 12 months, and respondents who are currently living with their parents (this is also included when categorising the life stage but is dealt with separately as well).

- **Life stage**

Figure 4.7 illustrates that as the respondents age and experience household compositional changes, they move from one life stage to the next. These include moving out of their parents' home, getting married/living together, and having children. For example, 37.45 percent of 32 year olds are young families, which is vastly different from 18 year olds where 84.08 percent of the respondents are at-home singles.

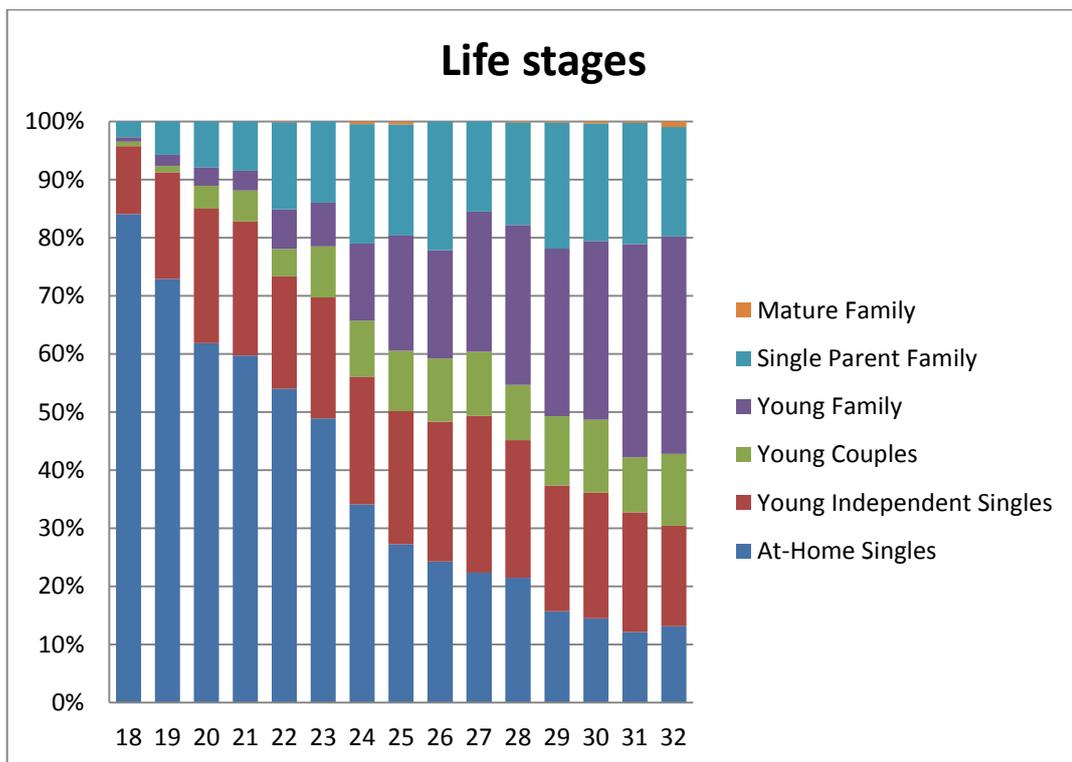


Figure 4.7: Life stages of respondents

Source: Author's calculations.

- **Household Income**

A number of international studies have indicated that higher levels of income can affect the uptake of debt by a household. The respondents were asked to indicate their monthly household income and monthly personal income. The results of the respondents' income levels are indicated in Figures 4.8 and 4.9.

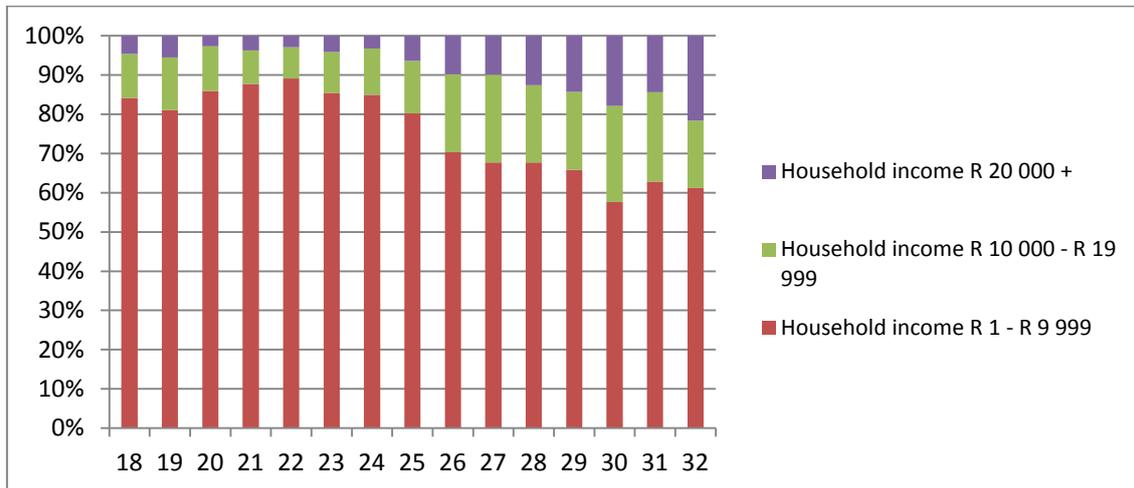


Figure 4.8: Household income

Source: Author's calculations.

In the 18–25 year-old age groups, more than 80 percent of the respondents have a household income of less than R10 000. This is alarming and is indicative of the financial struggles which many endure and why the literature has indicated that many of the youth have to resort to taking on debt to cover living expenses. As the head of the household ages above 26 it appears that a greater percentage of them move into higher income brackets; however, the results depict that just over 60 percent of 32-year-olds earn between R1 and R9 999, whereas at least 80 percent of respondents 25 years old and younger earn between R1 and R9 999.

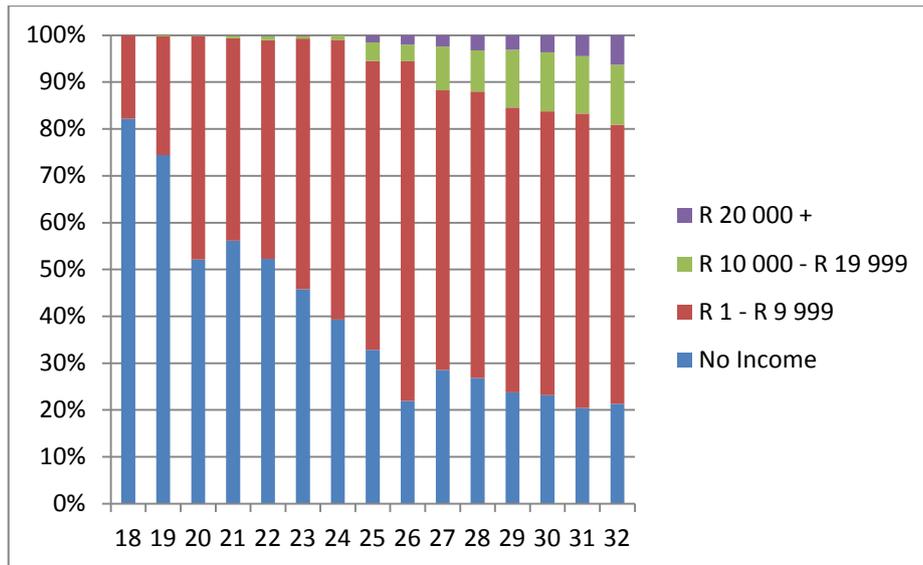


Figure 4.9: Personal income

Source: Author's calculations.

The percentages reflected in Figure 4.9 present a situation where a large percentage of the youth up to the age of 24 earn no personal income. As the individuals' age increases, it appears as though their prospects to earn higher incomes improve with each passing year.

- **Employment status**

In terms of employment status, the following will be considered: whether the respondents are working full time, working part time and not working, whether they are self-employed or not and the type of sector in which they are employed. The respondents were asked whether they were working full time, working part time, not working because of being a housewife, not working as a result of being a student, not working because of being retired, and not working as a result of being unemployed. Figure 4.10 illustrates the work status of the respondents.

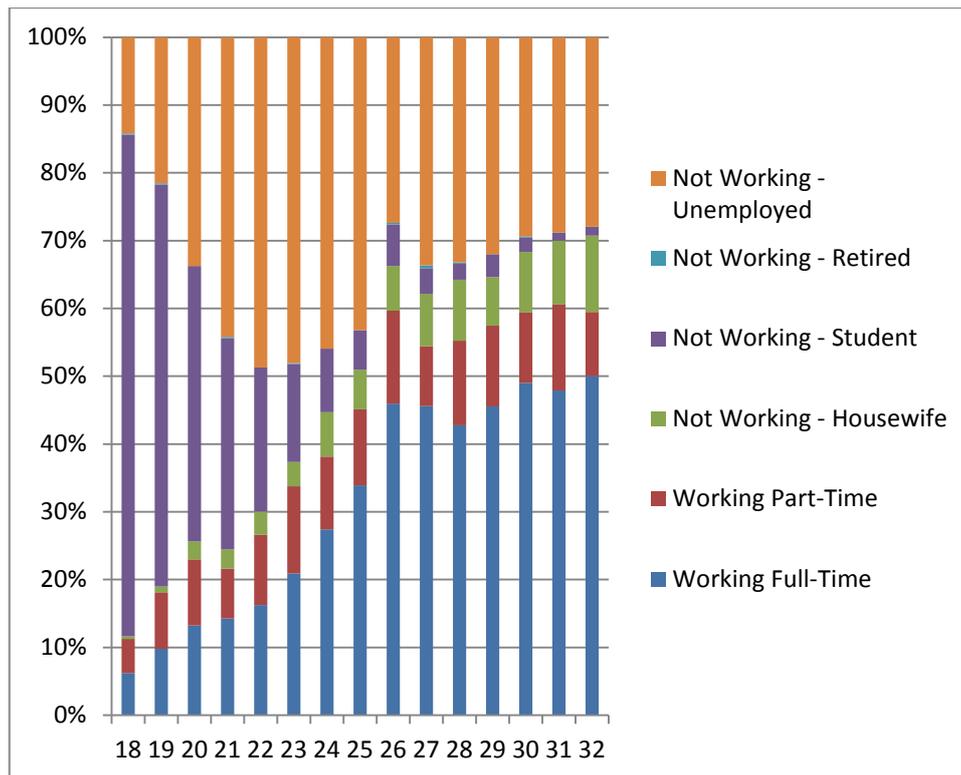


Figure 4.10: Work status in numbers

Source: Author's calculations.

The percentage of students who are not working is high for the respondents aged 18 to 21. It is also noticeable that the percentage of respondents who are unemployed is above 40 percent in the age category 21 to 25. It appears that from age 26 the unemployment figures tend to drop to below 40 percent. Section 2.5 dealt with youth unemployment. According to figures released by the South African Reserve Bank, the unemployment rate for the 15 to 24-year-olds for 2013 is 52.9 percent. The unemployment results reported in this study are alarmingly high and this seems to be in line with the figures released by the South African Reserve Bank.

Self-employed people represent the minority of the respondents; however, the number of people who are self-employed reflects a general upward trend as the respondents' age, as indicated in Figure 4.11.

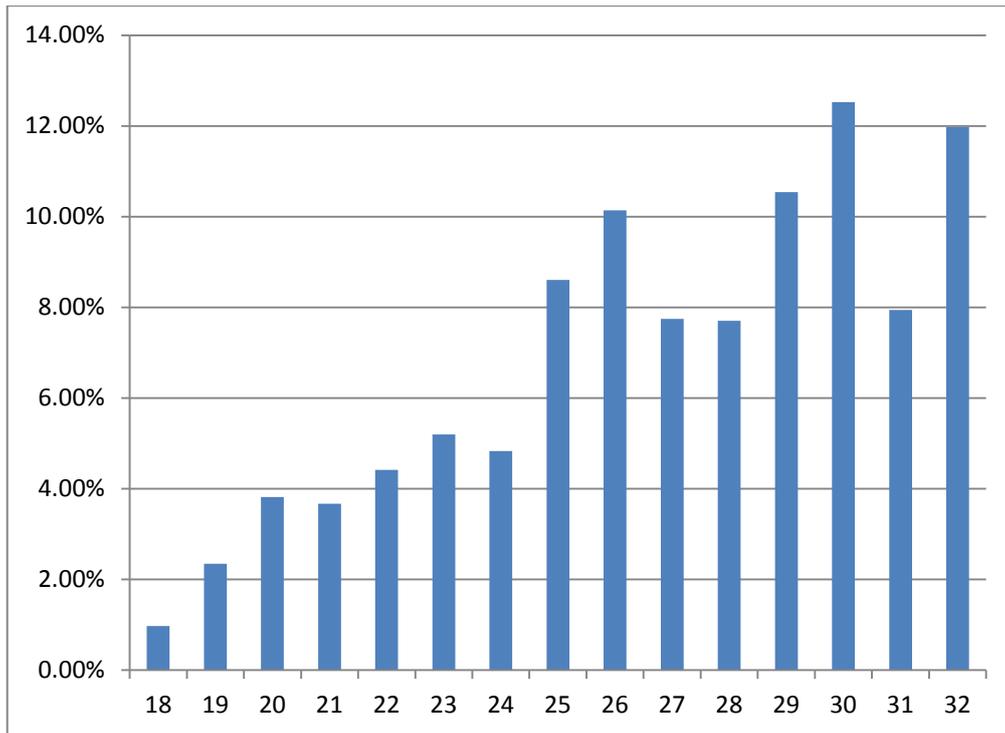


Figure 4.11: Respondents who are self-employed

Source: Author's calculations.

The respondents were asked to supply the type of work they perform. Of the 8 841 respondents, 5 378 indicated that they were not active and did not specify their occupations. The respondents who supplied their occupations were employed mainly in clerical and sales/managerial positions, production and mining, professional and technical, service and agriculture industry.

- **Marital status**

The marital status of the respondents is indicated in Figure 4.12.

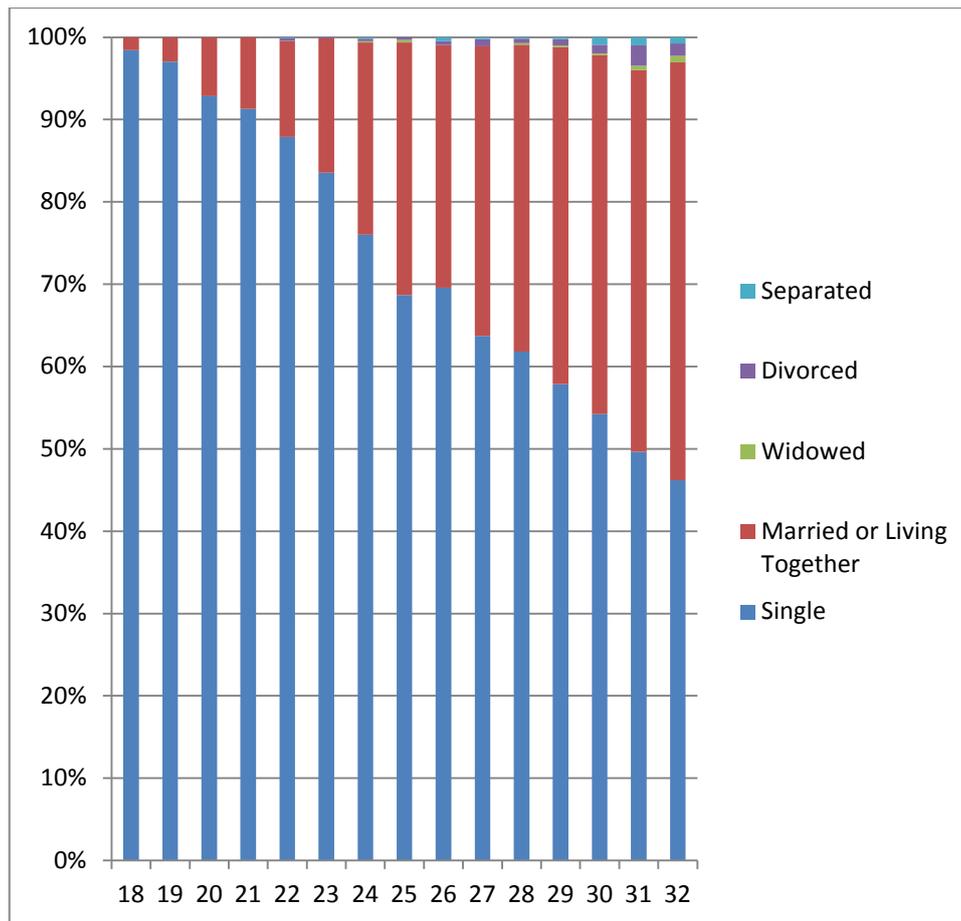


Figure 4.12: Marital status of respondents

Source: Author's calculations.

The 18-year-olds are mostly single and then as they move over the life course towards 32 years of age a greater percentage of them get married. As can be expected when examining the youth, the number of respondents who are divorced, widowed or separated is low.

- **Level of education**

The respondents' level of education per age group is provided in Figure 4.13.

After the age of 20, close to 40 percent of the respondents have a matriculation certificate. As the respondents age, the results show that greater numbers obtain some tertiary education, which also seems to be in line with their increases in income.

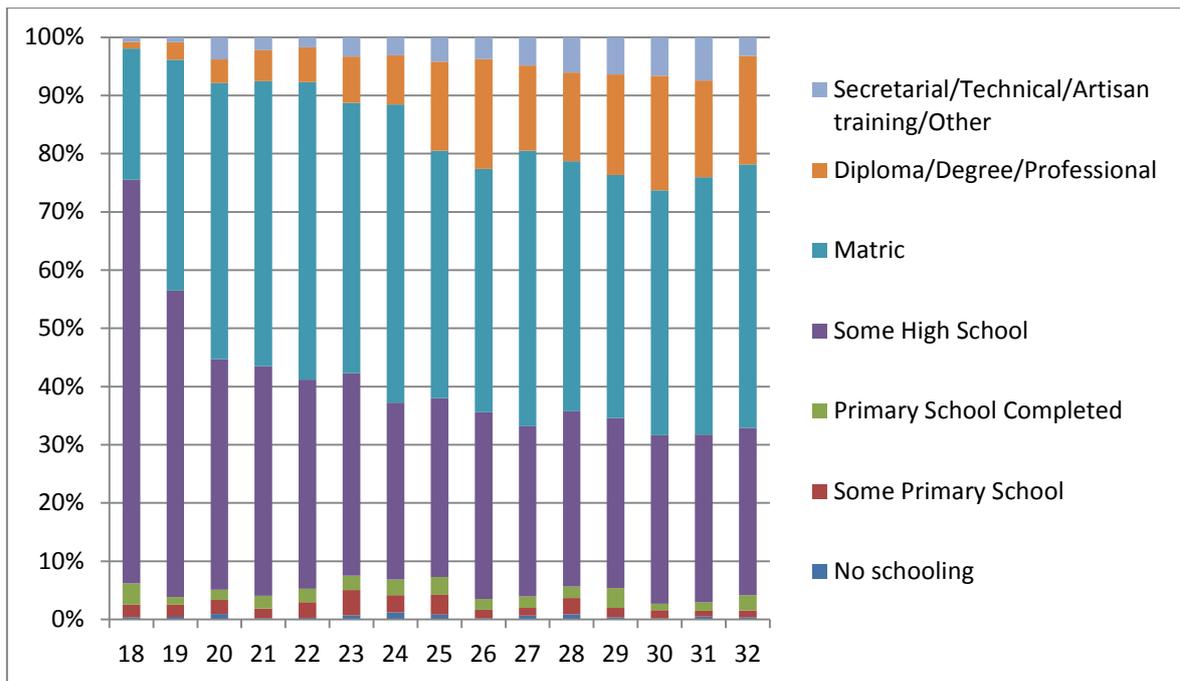


Figure 4.13: Level of education

Source: Author's calculations.

- **Total people living in the household**

Household size is a predictor of households having an increased desire for debt, as shown in the conclusion to the literature review. A larger family size is correlated with an increased debt uptake and a smaller family size with less uptake of debt.

For the purposes of this study, in order to reflect the size of the households, the respondents were divided into the following groups as indicated in Figure 4.14. The basis for the decision to group as follows was that the information was sparsely distributed and the groupings would make the table easier to interpret.

- Households with between one and four people.
- Households with between five and eight people.
- Households with between nine and twelve people.
- Households with more than thirteen people.

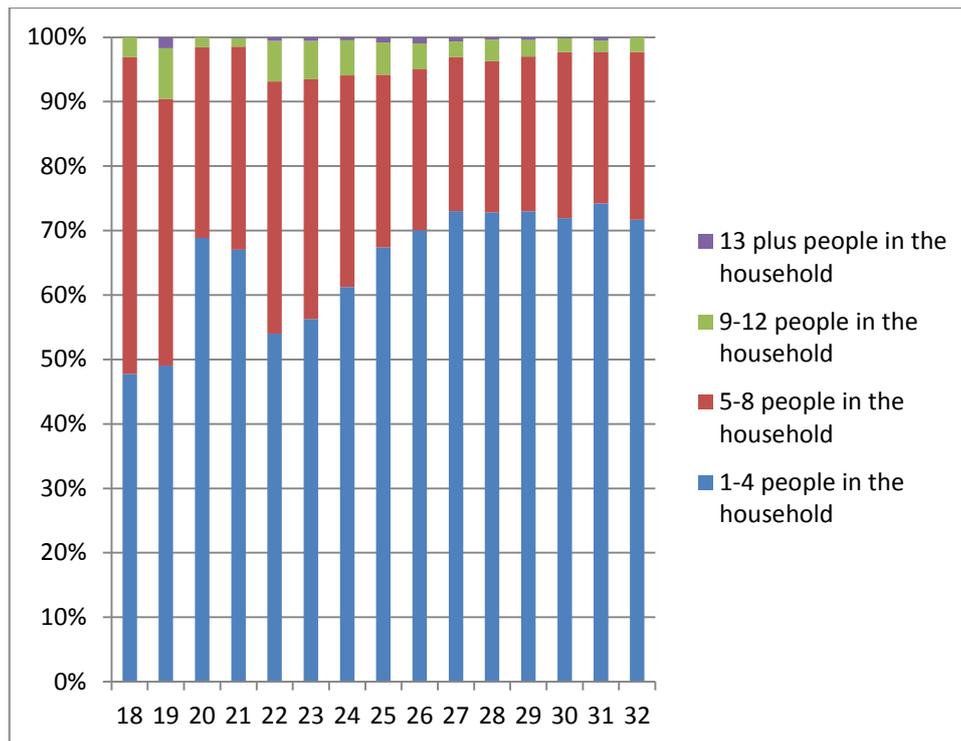


Figure 4.14: Household size

Source: Author's calculations.

Figure 4.14 illustrates the change in the family size of the respondents as they age. It can be seen that from age 20 when the respondents may leave their parents' household there is greater proportion who live in households with fewer than five people.

- **Children and other dependents**

SAARF takes the ages of the children and/or dependents into account when categorising the life stages. For this reason, Figure 4.15 indicates the distribution of the respondents who have children in the household who are up to and including 12 years of age and who are dependent on them. It also indicates respondents who have children and/ or other dependents who are over 13 years of age.

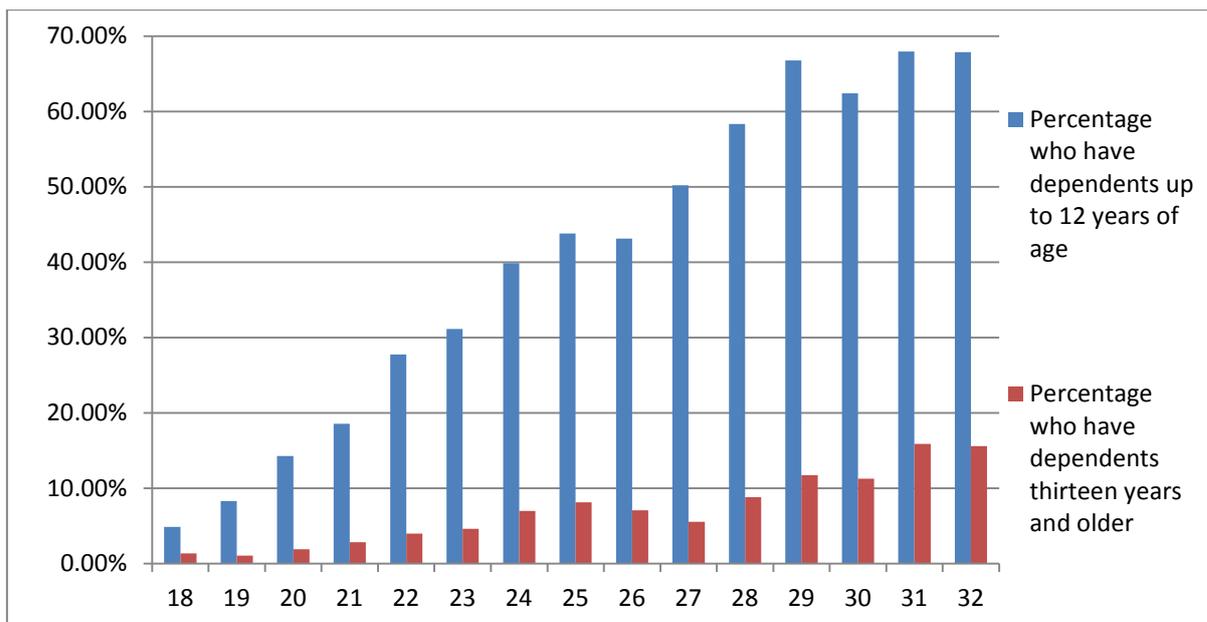


Figure 4.15: Respondents who are responsible for dependents

Source: Author's calculations.

It is evident that there are households headed by younger individuals who have dependents who are thirteen years and older. The reason for this may be that many young adults are responsible for caring for elderly family members', also there is an occurrence of child-headed households who have siblings who are dependent on them. The trend reflects that as the respondents' lives unfold, the trajectory of their life is influenced by the transition into parenthood. The literature review concluded by reflecting that studies have shown that the number of children and dependents in a household is positively related to the uptake of debt as indicated.

- **Financial assets**

According to the literature, the number of financial assets that are utilised by households is indicative of the debt usage patterns of the respective households. An increased number of financial assets utilised is associated with decreased debt uptake; on the other hand, fewer financial assets is correlated with increased uptake of debt.

The respondents were asked to advise whether they made use of certain financial assets described as follows in the questionnaire: unit trusts, investment on the

stock exchange, automated teller machine (ATM) card, debit card, investments in unit trusts or a mutual fund, savings and endowment policies (including both endowment with life cover and endowment without life cover) and retirement annuity. This research is only interested in the eight financial assets as mentioned in this paragraph. Other policies such as life cover, funeral insurance and medical insurance are beyond the ambit of this study.

The number of financial assets that the respondents utilised was recorded and the information is presented in Figure 4.16.

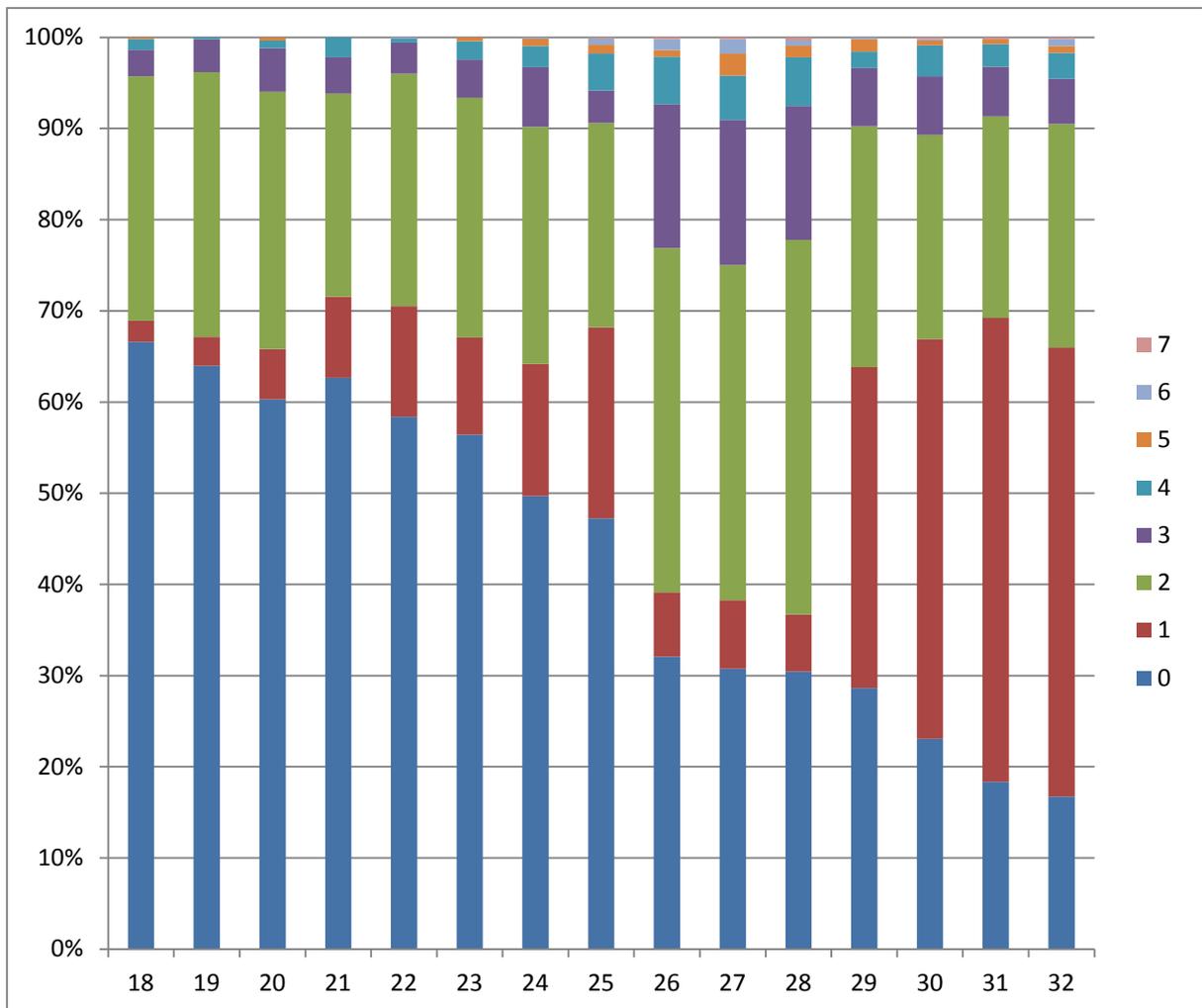


Figure 4.16: Number of financial assets

Source: Author's calculations.

It is apparent that as individuals age the percentage of respondents having no financial assets decrease as different types of financial assets are taken up for a

variety of purposes. It is also evident that as the respondents age, additional financial assets are utilised up until the age of 28 and then as they get older it appears as though a greater percentage of the respondents revert back to having one or two financial assets. A reason for this phenomena may be that as individuals age they may utilise higher value debt and as a result not be in a position to take up additional financial assets. Thus, individuals may not have the resources to save and as a result, the respondents take up fewer financial assets and utilise more debt.

- **Housing assets**

The literature reveals that homeowners have an increased demand for liabilities as opposed to non-homeowners. The respondents were requested to advise whether they owned property or rented property. They were also given the option of indicating whether they co-owned property or resided in property owned by their company. Figure 4.17 reflects the home ownership patterns of the respondents.

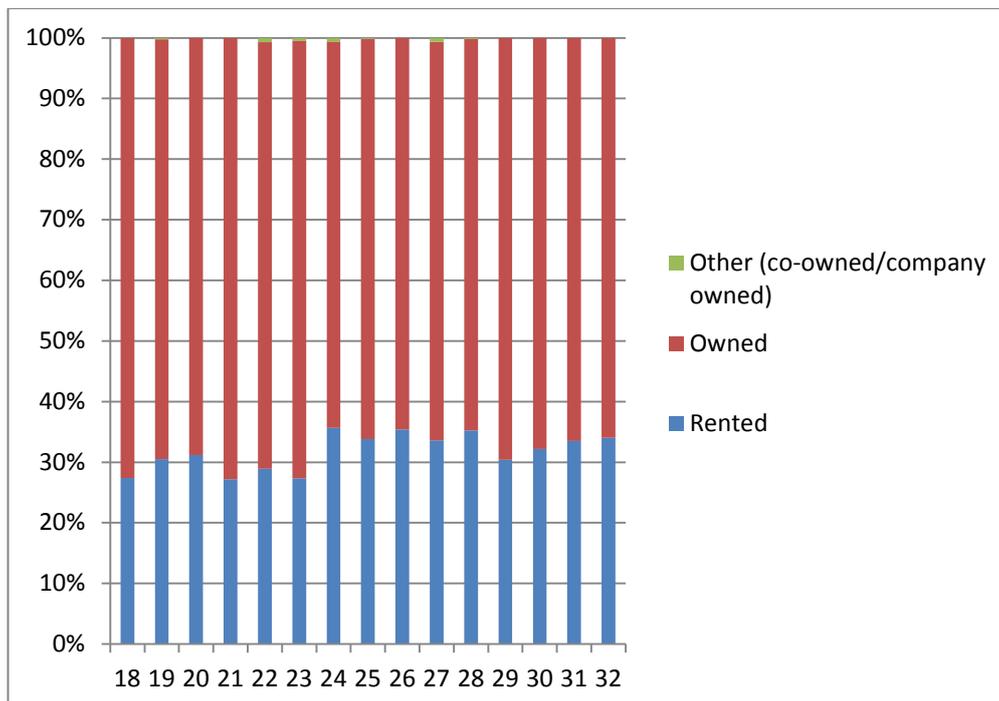


Figure 4.17: Housing assets

Source: Author's calculations.

- **Life events in the past 12 months**

The respondents were requested to indicate whether they had completed certain activities in the past 12 months. The activities included the following: moved into another house or flat, changed jobs/started a new job, spent money on correspondence or part-time education and got married. This study is interested in these activities, as they are events that cause transitions over the life course of a household. Figure 4.18 indicates the percentage of respondents who affirmed performing the respective activities in the past twelve months.

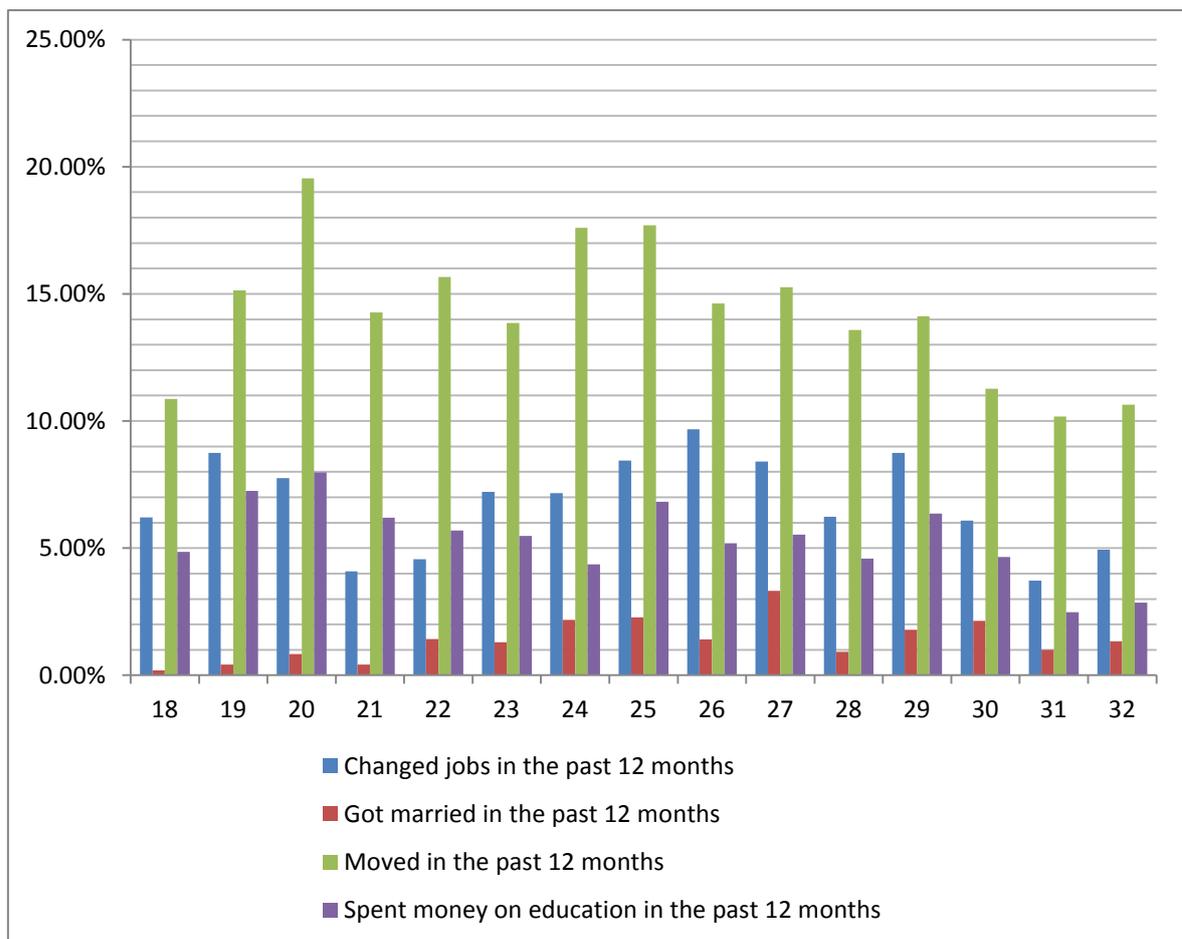


Figure 4.18: Life events in the past 12 months

Source: Author’s calculations.

The percentage of respondents who changed jobs in the past 12 months remain below 10% throughout all the ages, however it appears as if fewer respondents change jobs after the age of 30. The percentage of respondents who got married in the past 12 months steadily increases until age 27, thereafter it decreases. The

respondents who moved in the past 12 months increases until age 25 and then decreases from that age onwards. From the age of 30 it is evident that fewer respondents spend money on education in the preceeding 12 months. This can be attributed to the fact that the majority of people have finished studying by this age.

- **Respondents currently living with parents**

As expected, the percentage of young adults who live with their parents is high and this can be attributed to the explanation of the position faced by youth as explained in section 2.5. Briefly, the youth are described as having to face many socio-economic challenges, including but not limited to poverty, inequality and unemployment.

Figure 4.19 reflects the percentage of respondents per age group who live with their parents.

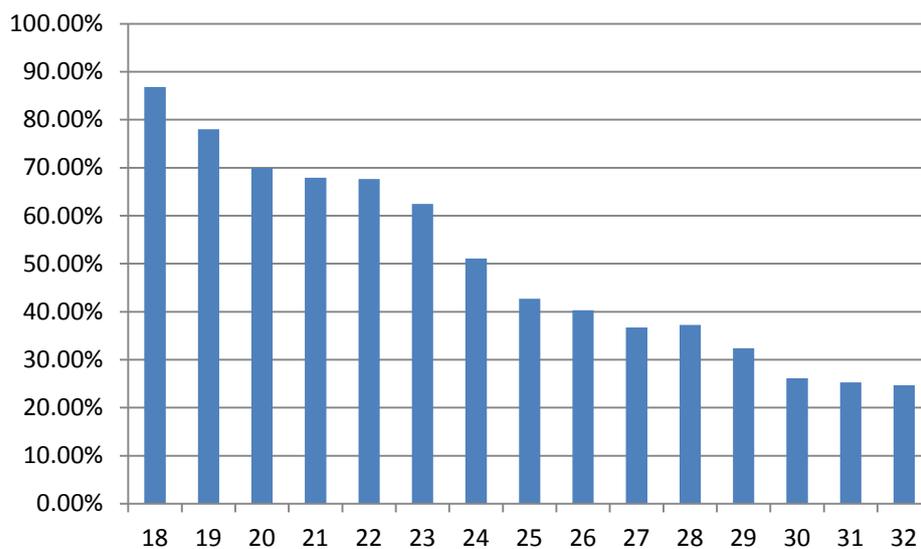


Figure 4.19: Respondents who live with their parents

Source: Author’s calculations.

This section has dealt with the events and characteristics that might result in debt uptake. These characteristics were briefly described. In order to achieve the research objective, the following section will discuss the inferential statistical analyses conducted.

4.4.4. Step 4: Data Analysis

The previous section explained how the sample plan was constructed and culminated in describing the sample. This section will describe the process of visual inspection and correlations performed to determine the statistical significance of the variables; finally, the analyses carried out to predict debt uptake will be discussed. These steps are indicated in figure 4.20.

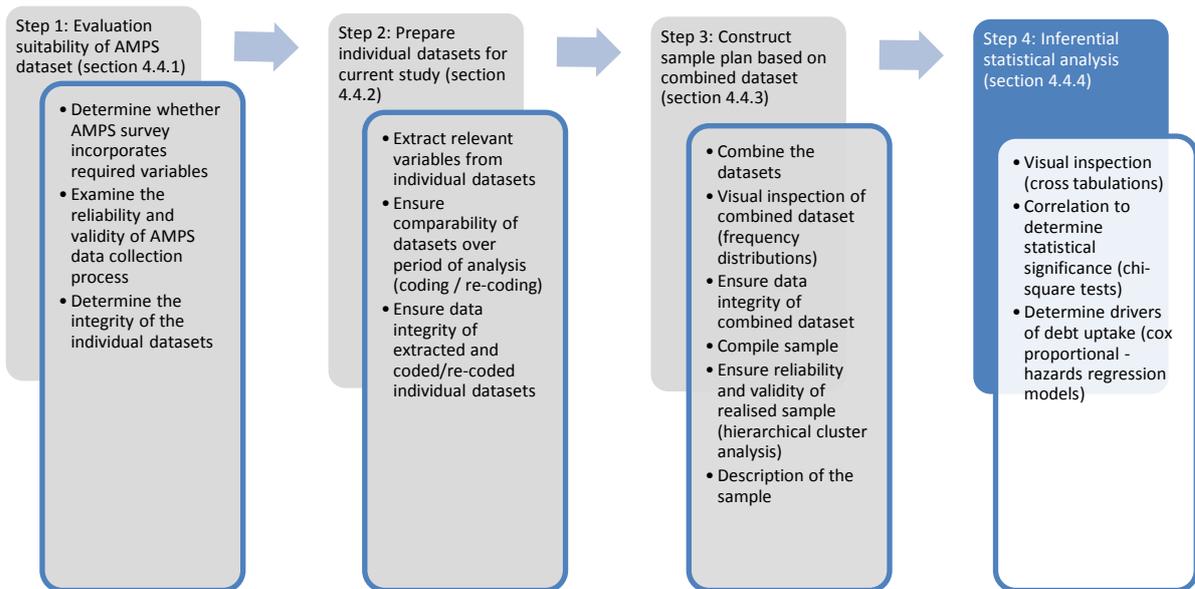


Figure 4.20: Data preparation process: Step 4

The statistical techniques used in this study are classified as non-parametric, as these techniques are ideal when using data that is measured nominally. Non-parametric techniques are less strict about the assumptions regarding the underlying population distribution (Pallant, 2013:221). These tests do not have the requirement that the variables be normally distributed and are also referred to as being “distribution free” tests (Newton & Rudestam, 1999:181).

Statistical analysis is mainly concerned with descriptive statistics and inferential statistics. On the one hand, descriptive statistics has to do with the description of the sample information (section 4.4.3.6); on the other hand, inferential statistics is related to generalising the sample information to the population (Newton & Rudestam, 1999:54).

4.4.4.1. Visual inspection of data

Visual inspection of the sample was performed in order to determine if there appears to be a relationship between age and debt product uptake of each of the six debt products.

In order to carry out the visual inspection, cross tabulations were employed. Cross tabulations were carried out for debt product uptake by age for each of the debt products, namely: credit cards, home loans, overdraft, student loans, vehicle finance and other loans. The results of the cross tabulations are presented in section 5.3.

4.4.4.2. Chi-Square test for independence

The chi-square test for independence is employed when exploring the relationship between two variables that have two or more categories in each (Pallant, 2013:225). In this study, the chi-square test was performed to determine the association between age and debt product uptake and the following research hypothesis was formulated:

H_0 : There is no statistically significant relationship between age and debt product uptake.

H_A : There is a statistically significant relationship between age and debt product uptake.

The aim of the chi-square test for independence is to determine if there is a statistically significant relationship between each of the debt products and age. There will therefore be six sub-hypotheses relating to: credit cards, home loans, overdraft, student loans, vehicle finance and other loans. These will be analysed in section 5.3. When conducting the chi-square test for independence, the assumption is made that the lowest expected frequency in a cell is five. If there is a violation of the assumption that the lowest expected frequency should be 5 or more, then it is suggested that the Fisher's Exact Probability test be conducted (Pallant, 2013:225). This test can be generated automatically in the output from SPSS when performing the chi-square test. The Fisher's exact test is useful, when dealing with small sample sizes, in determining whether two dichotomous

variables are significantly correlated (Leedy & Ormrod, 2013:301). In order to be statistically significant the asymptotic significance must be below 0.05.

4.4.4.3. Cox proportional-hazards regression model

The study made use of the Cox proportional-hazards regression model to explore the relationship between the uptake of debt and a number of explanatory variables.

The Cox proportional-hazards regression model forms part of survival or event history techniques (Adams, 1996:271). Survival analysis quantitatively determines the effect that a group of variables has on the time to an event occurring (Ansell, Harrison & Archibald, 2007:395). As mentioned by Ansell *et al.* (2007:395), survival analysis has been widely used in areas such as medicine and industry, but it can also be useful in a study of this nature in order to determine which of the independent variables have predictive effect for the hazard taking place; that is, the dependent variable (which is the particular debt product uptake). The dependent and independent variables that are components of this model are listed in 4.4.1.1. Before going on to discuss how the model was applied to this study, background information on the model will be discussed, including various assumptions and advantages associated with using this type of model.

The Cox regression model was presented by Sir David Cox in 1972 in a paper entitled "Regression models and life tables". In this paper, he introduced the proportional hazards model (Mills, 2011:86). This model is called a semi-parametric model as it is flexible and the researcher does not have an obligation to choose a specific probability distribution beforehand (Mills, 2011:90). The model does not make an assumption regarding the shape of the hazard function (Mills, 2011:12) and a distinct advantage of this model is that a parameter estimate (β) may still be produced notwithstanding the baseline hazard which is not specified (Mills, 2011:91). Another facet of this model, which makes it applicable to this study, is that it does not take censored subjects into account (Mills, 2011:88). The censored objects in this study are the "0" values; that is, the particular debt product that is not taken up by the respondent.

Age of the respondents acted as the identifier and the independent variables were analysed in order to determine whether they are predictors for the uptake of the dependent variables. Thus, survival analysis was used to determine the impact of the independent variables on the time to the occurrence of an event, which is the take-up of the debt product. The proportional hazards model makes the assumption that the time to an event taking place is described by the hazard function. The formula for the proportional hazards model is given as follows (Mills, 2011:87):

$$h_i(t) = h_0(t)\{\exp(\beta_1 x_{i1} + \dots + \beta_k x_{ik})\}$$

Where the hazard for an individual (*i*) at time (*t*) is the product of two factors, namely the baseline hazard and an exponential function which describes the effect that takes place as a result of the covariates (SPSS Inc., 2015). With *x* representing the covariates, $h_0 t$ is the unspecified baseline hazard function. The unspecified baseline hazard function may be interpreted as hazard function for which all the covariates have a zero value (Mills, 2011:87) and is thus independent of the covariates.

For this study, the elements of the equation can be explained as follows with regard to credit card uptake:

i = credit card

t = age

x = the independent variables/covariates (life stage, number of financial assets, housing assets, currently living with parents, children /dependents up to 12 years of age, children/dependents 13 years plus, level of education, household income, personal income, marital status, family size, work status, self-employed, occupation, changed jobs in the past 12 months, got married in the past 12 months, moved in the past 12 months, spent money on education in the past 12 months)

$h_0 age$ = the baseline hazard which is the probability of taking up credit card debt when all the independent variables are zero

The baseline hazard shape over time is determined by the baseline hazard. Covariates have the function of determining the overall degree of the function. The baseline hazard is time dependent, whereas the covariate effect remains the same for all time points (SPSS Inc., 2015). The Cox proportional-hazards regression model has the following assumption: the hazard ratio for an individual is a fixed proportion of the hazard for all other individuals (Mills, 2011:88), thus the ratio of any two individuals at any time is the ratio of the covariate effects (SPSS Inc., 2015) and will remain constant over time (Mills, 2011:88). Thus, the hazards should be parallel to each other (Mills, 2011:88, Kembo, 2009:49).

Survival analysis may be useful for policy decision makers and stakeholders, as it will assist them in gaining insight into when households are most likely to take on a particular debt product. For the purposes of this study, when assessing the results of the Cox regressions analyses the statistical significance of the relationship and the beta coefficient are of importance. Statistical significance in a sample indicates the probability of the researcher finding a relationship and proving that the results are unlikely to be the result of chance factors (Neuman, 2006:371). The levels of significance were performed at the following levels: $p < .5$, $p < .05$ and $p < .01$. The beta coefficient (β) is representative of the amount of change in the dependent variable resulting from one change in the independent variable, along with all other independent variables being held constant (Newton & Rudestam, 1999:266). The beta coefficient may be positive or negative, with a positive value denoting an increase in the probability of the hazard occurring and a negative value denoting a decrease in the probability of the hazard occurring. The higher the beta coefficient, whether positive or negative, the greater the prediction effect of the independent variable on the dependent variable. Thus, the coefficient reveals that on the one hand, when the hazard function is greater than 0, then the hazard, which is the event which is experienced, increases; on the other hand, if the hazard is less than 0, then the hazard decreases (Mills, 2011:96). In line with other regression models, the impact of the outcome will be influenced by the variables that have been chosen to be included or excluded in the analysis (Ansell *et al.*, 2007:400).

In order to carry out the analysis, the Survival command in SPSS 23.0 was used to construct the Cox Regression, using the combined dataset, which was filtered as

described in 4.4.3.4 to obtain the sample for the analyses. The commands as shown below in Figure 4.21 for credit card were carried out for each of the other five debt products, namely: home loans, overdraft, student loans, vehicle finance and other loans. For a description of the covariates, refer to section 4.4.2.1.

```
COXREG Exact_Age
  /STATUS=Credit_Card(1)
  /METHOD=ENTER Lifestage Count_financial_products Housing_assets Live_with_Parents
  Child_dep_up_to_12_Y Child_dep_13_plus_Y Education XHHINC XPINC Marital_status Total_M_and_F
  Work_Status Self_employed Occupation Changed_Jobs Got_Married Moved Education_PT_C
  /PLOT HAZARDS
  /CRITERIA=PIN(.05) POUT(.10) ITERATE(20).
```

Figure 4.21: Cox Regression

Source: Author's own.

The results of the cox regressions carried out will be discussed in section 5.3 and section 5.4.

4.5. ETHICAL CONSIDERATIONS

The Bureau of Market Research has obtained permission from the South African Audience and Research Foundation (SAARF) to use the secondary data for their various research projects, and it has been extensively used for this purpose. SAARF complies with their ethical code and obtains consent from all the participants to the surveys prior to performing the at-home interviews. SAARF is a member of the South African Market Research Association (SAMRA). SAMRA is a professional association and has a code of conduct to which all its members subscribe.

Ethical clearance for the purposes of this study, utilising secondary data, was granted by the Ethics Review Committee of the School of Accounting Sciences.

4.6. LIMITATIONS

This study was limited to the debt products listed under financial services in the AMPS surveys and thus included only formal debt held by households. The analysis was performed based on the classification of the financial services as reflected in the AMPS survey. The AMPS surveys make provision only for the

different types of debt held and no provision is made for the monetary value of debt held.

As the study spanned a period of 15 years, certain of the dependent variables were only included in the surveys of the later years. This was explained in section 4.4.3.6. The years 2007 and 2008 included a separate category for micro loans and these were combined with other loans for the respective years.

The sample was selected in accordance with the life course approach, as the intention of the study was to track the debt uptake of an 18-year-old as the person moves through the life course and attains the age of 32. A limitation of the study is that as the sample is drawn separately for each year by SAARF, the respondents are not the same from one year to the next. This limitation is overcome as the samples elected by SAARF are representative of the entire population of South Africa and hence it is assumed that the cohorts selected are typical of the population as a whole.

SAARF mention the target market should not be defined too narrowly, as this could lead to a sample not being robust enough (SAARF, 2015). In this study, the sample selection (section 4.4.3.4) appeared to be sufficient for the purpose of the research conducted.

4.7. CONCLUDING REMARKS

The research design and methodology used in this study have been described in this chapter. The primary research objective was to identify the characteristics that may determine the holding or use of the different types of household debt by young South Africans. Chapter 5 will present the findings of the empirical investigation, the results will be analysed and interpreted by indicating debt product uptake according to the respondents' age, and the results of the Cox proportional-hazards regression models will be discussed.

CHAPTER 5

RESEARCH FINDINGS

5.1. INTRODUCTION

This study had the following main objective: to identify and describe how liabilities are accumulated by young adult South Africans and how household characteristics and events may be related to the uptake of household liabilities.

In order to achieve this objective, sub-objectives were formulated. The literature review addressed the first three research objectives and the fourth research objective will be addressed in this chapter. Inferential analyses of the secondary data from the AMPS questionnaires as described in Chapter 4 will be conducted.

The results presented in this chapter will provide information on the visual inspection of the sample to determine if there appears to be a relationship between age and credit uptake. Furthermore, the results of the chi-square tests for independence indicating whether there is a correlation between the respective debt products and age will be dealt with. This chapter will also deal with the results of the cox proportional-hazards regression models. Finally, this section will provide detailed information on the variables that have a significant relationship to the use of debt products and the beta values will be compared to determine which of the independent variables have the strongest contribution to explaining the uptake of the particular debt product.

This chapter will address research objective four of the study (section 1.4) as depicted below:

- To identify the characteristics that may determine the holding or use of the different types of household debt by young South African adults.

This objective will be achieved by:

- Identifying how age affects debt product uptake.
- Identifying the determinants of holding each type of debt classified as follows per the AMPS survey: credit card facilities, home

loans/mortgage bonds, overdraft facilities, student loans, vehicle finances with a financial institution and other loans.

- Identifying, analysing and grouping the factors that are seen to have a statistically significant influence on the pattern of debt holding.

Before presenting the results, the coding of the variables used in the analysis will be indicated, for ease of reference, in the next section.

5.2. VARIABLES USED IN THE ANALYSIS

The covariates (variables) used in the analysis were selected based on the results of the heuristic model developed in section 3.4 (Table 3.11) and are incorporated in Table 5.1.

Table 5.1: Covariates included in the analysis

Dependent variables	Independent variables
Variables identified in the heuristic model	
Credit card	Life stage
Home loan	Household income (monthly household income and personal monthly income)
Overdraft	Employment status (work status, self-employment status and occupation)
Student loan	Marital status
Vehicle finance	Education
Other loans	Family size (Total males and females living in the household/Family size)
	Children and dependents (Children who are dependents up to 12 years of age and dependents who are 13 years and older)
	Number of financial assets
	Housing assets
Variables of interest not included in the heuristic model	
	Life events (experienced in the past 12 months — changed jobs, got married, moved and spent money on part-time or correspondence education)
	Currently living with your parents

Source: Author's own.

5.3. DEBT PRODUCT UPTAKE

This section will discuss the results of the inferential analyses for each of the six debt products. Debt product uptake according to the respondent's age, the results of the chi-square tests for independence, as well as the results of the Cox proportional-hazards regression models will be dealt with in this section.

As identified in the conclusion to Chapter 3, individuals aged between 25 and 44 have a correlation with an increased demand for debt and individuals aged over 45 have a decreased demand for debt.

Section 3.2.3, which dealt with conceptual frameworks for understanding consumption behaviour, revealed that various theories have attempted to explain the debt holding of households over the life cycle. Of particular interest, as explained by Gourinchas and Parker (2002:67), is that consumption lies above income over the late twenties, increases with income from age 30–45 years and then consumption falls significantly below income. The literature revealed that when looking at age of the household head it is apparent that demand for debt increases until a certain age, reaches a maximum, and then declines as the individual approaches old age. It was apparent that the age at which the household head experiences the highest levels of debt varies from country to country (Crook, 2003:3). This is logical when considering the diverse social and economic conditions experienced in countries across the globe.

The following sub-sections will look at the results relating to each of the six debt products. The results of the chi-square analyses for independence and the cox proportional-hazards regression models will also be presented in the sub-sections to which they relate. The debt products listed according to the AMPS questionnaires are credit cards, home loans, overdraft facilities, student loans, vehicle finance and other loans. These are indicated in Table 5.1 as the dependent variables.

5.3.1. Credit card uptake

The results from the visual inspection of credit card usage per age group are indicated in Figure 5.1.

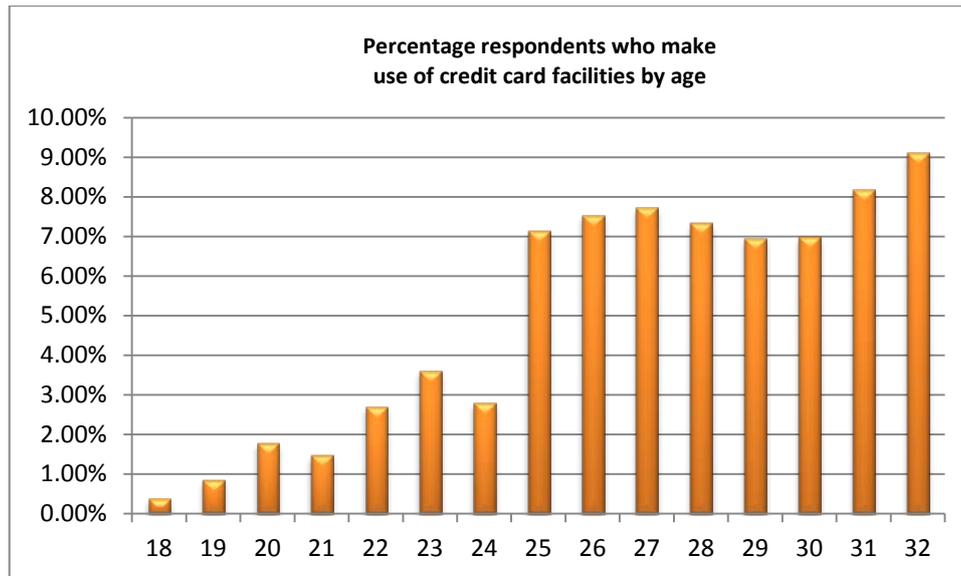


Figure 5.1: Respondents making use of credit card facilities

Source: Author's calculations.

The trend is in line with the literature that states that credit card usage increases with age. The reason for the dramatic increase in the use of credit cards from age 24 may be directly linked to the high unemployment rate that the youth of South Africa face. Section 2.5 presented the findings that in 2014, 52.95 percent of 18–24 year-olds were unemployed. Thus, individuals are more likely to find employment after attaining the age of 24 and subsequently be in a position to apply for credit. However, as indicated in section 2.5 there is the awareness that a large number of the individuals are enrolled in various educational institutions and for that reason not seeking employment. Studies have also suggested that there is a concern that households make use of credit cards to finance monthly household living expenses; this was discussed in section 3.3.3. Another factor to be taken into account when looking at the debt usage patterns of the youth is that research has found that they are prepared to take on debt for everyday discretionary spending.

Section 4.4.4.2 explained the methodology relating to the chi-square test for independence. This test was performed in order to determine the relationship between age and the take-up of credit card debt.

Sub-hypothesis 1

H_{01} : There is no statistically significant relationship between age and credit card uptake.

H_{A1} : There is a statistically significant relationship between age and credit card uptake.

Table 5.2 indicates the results of sub-hypothesis 1.

Table 5.2: Chi-square test Credit card and Age

	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-Square	172.605 ^a	14	.000
Likelihood Ratio	190.929	14	.000
Linear-by-Linear Association	151.466	1	.000
N of Valid Cases	8841		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 18.37.

Source: Author's calculations.

The null hypothesis can be rejected, as it is evident that there is a statistically significant relationship between age and credit card uptake based on a 0.000 asymptotic significance level. Thus, as individuals become older, they will start using credit cards, as there is a statistically significant relationship between age and the take-up of credit card debt.

The chi-square confirmed the association between age and credit card usage but it is not evident which characteristics or events will actually result in the individual starting to use credit cards. The Cox regression model was used in order to assess the ability of the covariates/variables to predict the take up of credit card debt. As mentioned in section 4.4.4.3, the following are important for the purposes of this study when statistically analysing the results: beta coefficient (β) and statistical significance.

This section will include a description of the effect of each variable on the uptake of the credit cards. The information will be presented in such a manner that the situation concerning a typical household will be outlined based on the results of

the Cox regression model. The interpretation is based on the direction of the relationship as indicated by the sign of the beta coefficient (β) and the coding of variables as discussed in section 4.4.2.2. A negative beta coefficient (β) may be interpreted to show that the variable's categories with lower coding values tend to have a greater demand for debt, while a positive beta coefficient (β) indicates greater demand for debt by the categories with higher coding values.

The results of the impact of the independent variables on the use of credit cards are presented in Table 5.3.

Table 5.3: Impact of the independent variables on the usage of credit cards by the respondents

	β	SE	Wald	df	Sig.	Exp(β)
Life stage	-.013	.043	.096	1	.757	.987
Number of financial assets	.583	.041	202.012	1	.000 ***	1.791
Housing assets	-.248	.120	4.287	1	.038 **	.780
Currently living with your parents	.490	.159	9.515	1	.002 ***	1.633
Children/dependants up to 12 years	-.592	.154	14.742	1	.000 ***	.553
Children/dependants 13 years plus	-.308	.196	2.466	1	.116	.735
Level of education	.124	.035	12.254	1	.000 ***	1.132
Household income	.360	.089	16.194	1	.000 ***	1.433
Personal income	-.211	.092	5.266	1	.022 **	.810
Marital status	.003	.110	.001	1	.978	1.003
Family size	-.137	.045	9.178	1	.002 ***	.872
Work status	-.244	.047	26.634	1	.000 ***	.784
Self employed	-.020	.152	.016	1	.898	.981
Occupation	-.016	.024	.449	1	.503	.984
Changed jobs in the past 12 months	.182	.165	1.223	1	.269	1.200
Got married in the past 12 months	.522	.237	4.834	1	.028 **	1.685
Moved in the past 12 months	.152	.135	1.255	1	.263	1.164
Spent money on education in the past 12 months	.359	.167	4.608	1	.032 **	1.431
*p<0.1, **p<0.05, ***p<0.01						

Source: Author's calculations.

In accordance with the life cycle model, a household's life stage has an impact on its participation in the credit card market. Life stages used in the analysis are determined by the age of the head of the household, living arrangements, marital status and dependent children, as well as the age of the dependent children living

in the household (see section 3.2.2). Based on the coding of the life stage variable as indicated in Table 4.10, the above results reveal that households headed by at-home singles, followed by young independent singles and then mature singles have an increased demand for credit card debt.

As a household accumulates more financial assets there is a positive effect on the holding of credit card facilities. The heuristic model predicts that as the value of a household's financial assets increase, there is a negative effect on the uptake of credit. It appears as though this result is not as predicted by the heuristic model in Table 4.1, but what is of importance is that the financial assets of a household are indeed a valuable predictor of credit card use. In addition, the studies in the literature have mostly focused on monetary values of financial assets and this study is concerned with number of financial assets utilised by households. Households that pay rent to landlords are more likely to make use of credit cards as opposed to homeowners. Households headed by respondents who currently live with their parents are more likely to make use of credit card facilities than those who do not live with their parents. When looking at the overall position relating to households who have dependent children up to and including 12 years of age and households who have dependents older than 13 years of age, it appears as though they have less demand for credit card facilities than households who do not have any dependents or who have fewer dependents. This is corroborated by the life stage results that show that singles have the greatest demand for credit card debt. However, it must be kept in mind that dependents are included when determining the particular life stage that a household falls into, as discussed above. As the head of the household becomes more educated, there is a positive effect of the use of credit card facilities, this is in line with the heuristic model in Table 4.1. Household income has a positive effect on the likelihood of taking on credit card facilities, which is in line with the heuristic model in Table 4.1. Thus, as a household earns more income, it is more likely to utilise credit card facilities. A reason could be that as earning potential increases, so too does the willingness of financial institutions to supply credit card facilities. It is interesting to note that personal income has a negative effect on the particular household making use of a credit card. A reason behind this may be that if a respondent is experiencing financial difficulty, that particular person may be assisted by another

family member, resulting in the respondent not having to make use of credit card facilities. The head of the household's marital status does not appear to have a statistically significant effect on the need for credit card facilities. Households that consist of more people tend to have less use for credit card facilities. A reason for this could be that larger households are often found in poorer rural communities where there is a shortage of housing; consequently, more people are required to live in one dwelling to make ends meet. These people may furthermore not qualify for credit card facilities due to low levels of income or, alternatively, may participate in the informal lending industry. This is not in line with the heuristic model in Table 4.1, which predicts that as the family size gets larger, so too does the demand for debt. The heuristic model is based on international studies and, as mentioned in section 2.5, the South African youth face a situation that is unique when compared to other first world countries. In terms of the work status of a household head, people working full-time are most likely to make use of credit cards on the one hand, and people who are not working are least likely to use credit cards at the other extreme – also in line with the heuristic model in Table 4.1. A self-employed person is less likely to hold a credit card as they tend to have an inconsistent stream of income and therefore may not qualify for a credit card. The occupation of an individual is not statistically significant in explaining credit card use. Households headed by individuals who have experienced the following events during the past 12 months — changing jobs, getting married, moving house and spending money on part-time or correspondence education — are more likely to make use of credit card facilities. The activities mentioned are useful in determining the events that may drive households to participate in the credit card market. The statistical significance relating to the various variables will be discussed in greater detail in section 5.4.

When examining the results of the Cox regressions the hazard function is important. The hazard function depicted in Figure 5.2 predicts how the uptake of credit card takes place as the respondents age.

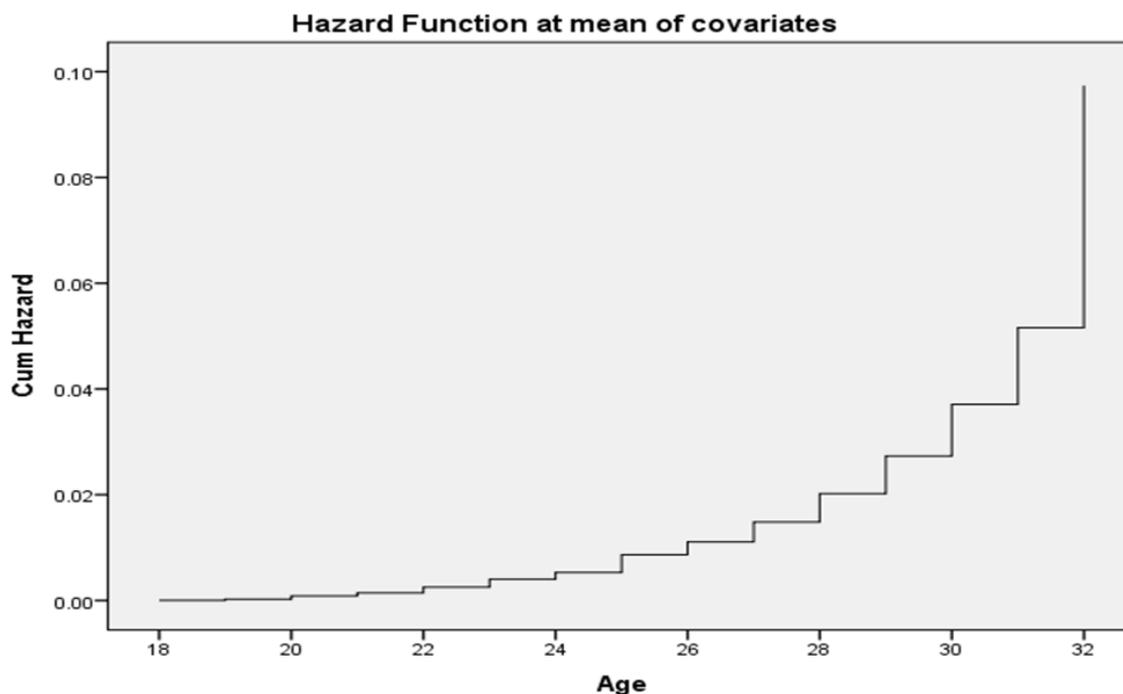


Figure 5.2: Hazard function for credit card use

Source: Author's calculations.

Figure 5.2 indicates that the respondents have an increased probability of taking up credit cards from approximately 25 years of age, which steadily increases as individuals age. As expected, and referring back to the heuristic model in Table 4.1, the probability of holding this type of debt therefore increases as the head of the household gets older.

5.3.2. Home loan uptake

The pattern of the take-up of home loans by the respondents is indicated in Figure 5.3. As was previously mentioned in section 4.4.3.6 and 4.6, the questionnaires evolved over the years to include more comprehensive information on the various debt categories. Home loans are indicated separately on the questionnaires from 2002 onwards, thus information is only presented from age 21–32 for this debt category.

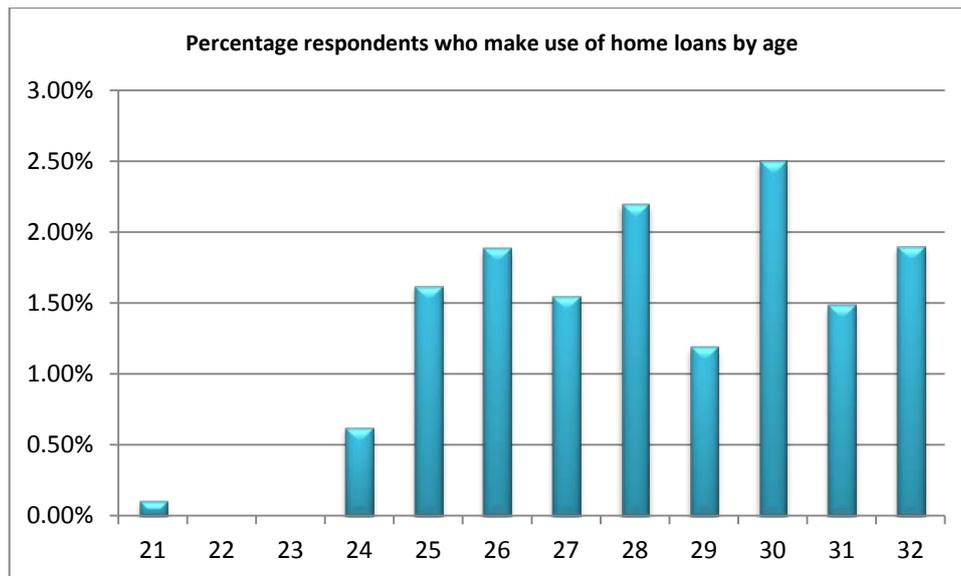


Figure 5.3: Respondents making use of home loans

Source: Author's calculations.

It is evident that as the respondents age they have an increased need to obtain financing for the purchase of dwellings in which to reside. This follows on from the life course approach that as individuals age, they get married or move in with their partners and children are added to the family unit. This in turn leads to the family wanting a house to call their own.

The literature revealed that a number of countries reflect a hump-shaped pattern of debt relative to age. This can be explained as follows: young households face liquidity constraints and thus rent while saving for a down payment on a dwelling. In turn, as they age, they have an increase in savings and liquidity restraints are lessened. They are subsequently in a position to borrow money in order to purchase a home dwelling (Debelle, 2004:54). The findings in this study are congruent with the available literature.

It should also be remembered that Debelle (2004:37) identified a phenomenon where existing mortgage holders access further debt against their housing equity to finance consumption needs.

Sub-hypothesis 2

H_{02} : There is no statistically significant relationship between age and home loans uptake.

H_{A2} : There is a statistically significant relationship between age and home loans uptake.

Table 5.4 indicates the results of sub-hypothesis 2.

Table 5.4: Chi-square test Home loan and Age

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	49.733 ^a	11	.000
Likelihood Ratio	66.140	11	.000
Linear-by-Linear Association	34.503	1	.000
N of Valid Cases	7018		

a. 2 cells (8.3%) have expected count less than 5. The minimum expected count is 4.48.

Source: Author's calculations.

The null hypothesis can be rejected, as it is evident that there is a statistically significant relationship between age and home-loans uptake based on a 0.000 asymptotic significance level. Thus, as individuals become older, they will start using home loans, as there is a statistically significant relationship between age and the take-up of home loan debt.

Following the chi-square test's confirmation of the association between age and home-loan usage, it was necessary to determine which characteristics or events would actually cause the individual to start using home loans.

The results of the impact of the independent variables on the use of home loans are presented in Table 5.5. Interpretations are made in a similar manner than was done for the demand for credit cards.

Table 5.5: Impact of the independent variables on the usage of home loans by the respondents

	β	SE	Wald	df	Sig.	Exp(β)
Life stage	.156	.113	1.885	1	.170	1.168
Number of financial assets	.729	.095	58.500	1	.000 ***	2.073
Housing assets	1.512	.344	19.318	1	.000 ***	4.534
Currently living with your parents	-1.158	.643	3.239	1	.072 *	.314
Children/dependants up to 12 years	-.401	.369	1.180	1	.277	.670
Children/dependants 13 years and plus	.583	.331	3.107	1	.078 *	1.792
Level of education	.099	.101	.962	1	.327	1.104
Household income	-.133	.265	.253	1	.615	.875
Personal income	-.019	.251	.006	1	.941	.981
Marital status	.021	.254	.007	1	.935	1.021
Family size	-.362	.145	6.232	1	.013 **	.696
Work status	-.455	.179	6.478	1	.011 **	.634
Self employed	-.099	.328	.092	1	.762	.905
Occupation	-.045	.058	.609	1	.435	.956
Changed jobs in the past 12 months	.433	.381	1.294	1	.255	1.543
Got married in the past 12 months	.178	.528	.114	1	.736	1.195
Moved in the past 12 months	-.019	.318	.004	1	.952	.981
Spent money on education in the past 12 months	.804	.357	5.076	1	.024 **	2.234
*p<0.1, **p<0.05, ***p<0.01						

Source: Author's calculations.

As a household progresses through the various life stages, it has an increased demand for home loan debt. As a household accumulates more financial assets, there is a positive effect on the holding of home loan facilities. The discussion in section 5.3.1 likewise applies to mortgage loans. Households who own the property they reside in have the highest probability of holding home loans. This is as expected and accords with the heuristic model in Table 4.1. Households who are headed by respondents who currently still live with their parents have a reduced probability of taking on home loan debt. Households who have dependent children up to the age of 12 years have less demand for home loans, as opposed to households who have dependents older than 13 years. Accordingly, more mature families have a greater demand for this type of debt product. Level of education is positively associated with home loan usage and is in line with the heuristic model in Table 4.1. Household income has a low predictive effect on the

likelihood of taking on home loan facilities, with lower income households having less demand for home loan facilities. Personal income has a low predictive effect on the particular household making use of home loan. Thus, as the head of the household earns more income he/she is more likely to utilise home loans as a debt facility. Marital status is not statistically significant in explaining the take-up of home loan debt. Larger households are less likely to hold mortgage debt, with the reason being similar to the explanation given in section 5.3.1. Respondents who are employed full-time are the most likely to take up mortgage debt – in line with the heuristic model in Table 4.1. Self-employed individuals, as opposed to individuals who work for other organisations/people, are less likely to make use of home loan debt. Occupation is not statistically significant in explaining the usage of home loans. Households headed by individuals who have experienced the following events during the past 12 months are more likely to make use of mortgage debt: changing jobs, getting married, moving house. Households headed by individuals who have spent money on part-time or correspondence education in the past 12 months are less likely to make use of home loan debt. These activities mentioned are valuable in determining the events that may drive households to participate in the home loan sector. The statistical significance relating to the various variables will be discussed in greater detail in section 5.4.

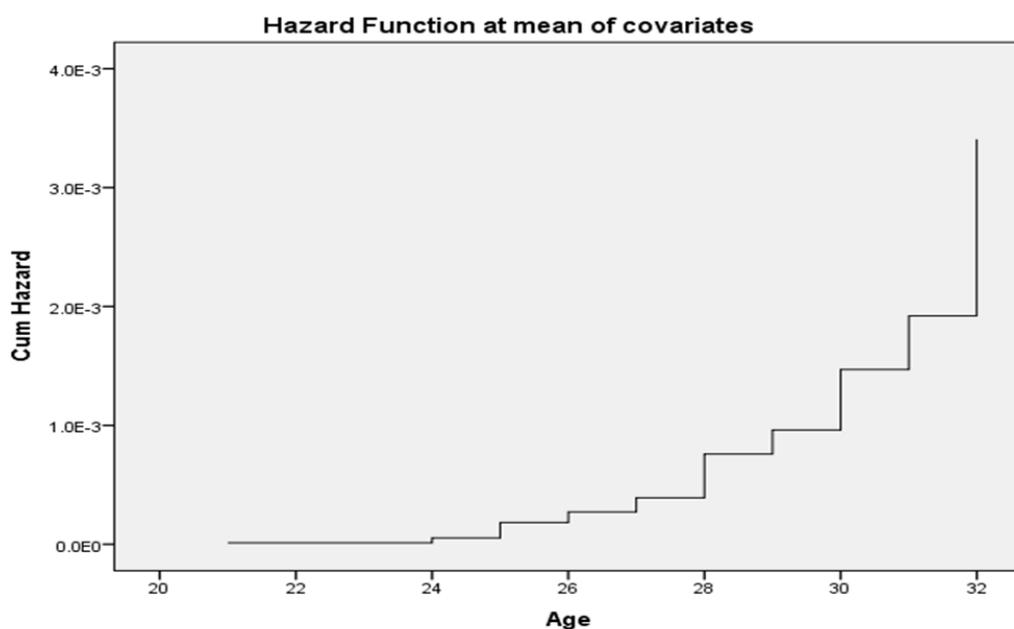


Figure 5.4: Hazard function for home loan use

Source: Author's calculations.

Figure 5.4 indicates that the respondents have an increased probability of taking up home loans from approximately 25 years of age, which steadily increases as individuals age. As expected and referring back to the heuristic model in Table 4.1, the probability of holding this type of debt therefore increases as the head of the household gets older.

5.3.3. Overdraft uptake

Overdraft facilities were included on the questionnaires from 2007 onwards and the information is therefore available for respondents aged from 26–32. Overdraft usage for the age group used in this study is indicated Figure 5.5.

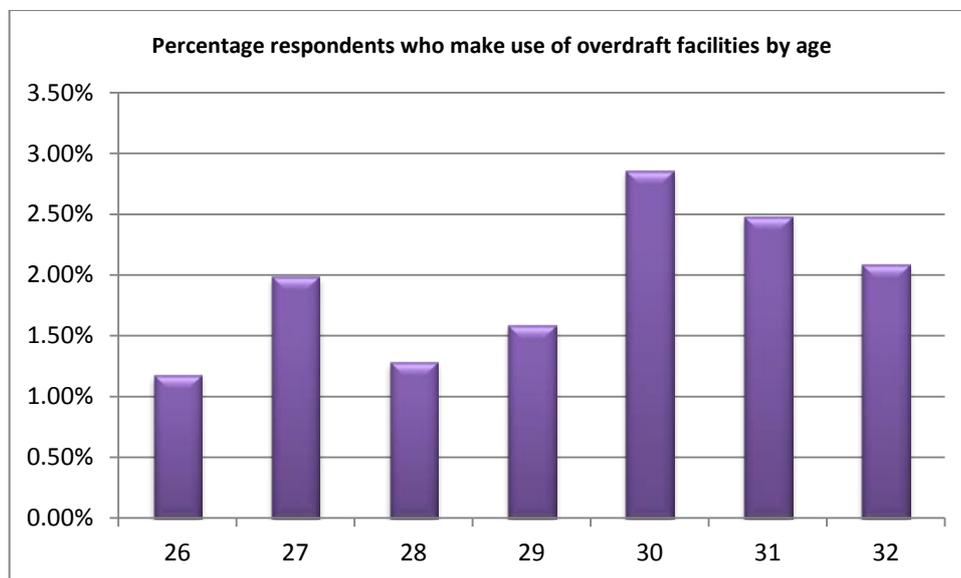


Figure 5.5: Respondents making use of overdraft facilities

Source: Author's calculations.

As with credit cards, overdraft facilities may be used for a variety of purposes and it appears that at age 30 the respondents have the greatest need for this debt product, as this is the time when they are facing a number of transitions and events, including, but not limited to, getting married and having children. Overdraft facilities are useful when incurring debt on smaller purchases and day-to-day consumption expenditure.

Sub-hypothesis 3

H_{03} : There is no statistically significant relationship between age and overdraft uptake.

H_{A3} : There is a statistically significant relationship between age and overdraft uptake.

Table 5.6 indicates the results of sub-hypothesis 3.

Table 5.6: Chi-square test Overdraft and Age

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	6.051 ^a	6	.418
Likelihood Ratio	6.060	6	.416
Linear-by-Linear Association	2.463	1	.117
N of Valid Cases	3 412		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 7.80.

Source: Author's calculations.

The null hypothesis cannot be rejected, as it is evident that there is no statistically significant relationship between age and overdraft uptake based on a 0.418 asymptotic significance level. This could be due to the ease with which individuals may be granted overdraft facilities at financial institutions, despite their age. The size of the overdraft facility may be more dependent on income levels and thus indirectly on age.

Despite the results of the chi-square test, the Cox regression was performed in order to determine which of the variables presented in the heuristic model in Table 4.1 have an impact on the respondents' overdraft usage. The results of the impact of the independent variables on the use of overdraft facilities are presented in Table 5.7.

Table 5.7: Impact of the independent variables on the usage of overdraft by the respondents

	β	SE	Wald	df	Sig.	Exp(β)
Life stage	.072	.114	.398	1	.528	1.075
Number of financial assets	.712	.112	40.758	1	.000 ***	2.038
Housing assets	-.516	.324	2.540	1	.111	.597
Currently living with your parents	.325	.458	.503	1	.478	1.384
Children/dependants up to 12 years	-.461	.410	1.266	1	.261	.630
Children/dependants 13 years and plus	-.177	.461	.148	1	.700	.837
Level of education	.187	.094	3.959	1	.047 **	1.205
Household income	.495	.276	3.225	1	.073 *	1.640
Personal income	-.302	.267	1.275	1	.259	.740
Marital status	-.554	.342	2.623	1	.105	.574
Family size	-.097	.127	.579	1	.447	.908
Work status	-.627	.257	5.946	1	.015 **	.534
Self employed	.284	.375	.575	1	.448	1.329
Occupation	-.147	.062	5.569	1	.018 **	.863
Changed jobs in the past 12 months	-.902	.741	1.481	1	.224	.406
Got married in the past 12 months	1.027	.533	3.714	1	.054 *	2.792
Moved in the past 12 months	-.111	.381	.085	1	.771	.895
Spent money on education in the past 12 months	.399	.499	.639	1	.424	1.490

*p<0.1, **p<0.05, ***p<0.01

Source: Author's calculations.

The movement through the various life stages influences the uptake of overdraft facilities. As a household accumulates more financial assets, there is a positive effect on the holding of overdraft facilities (refer to the discussion on financial assets in section 5.3.1). Households that pay rent to landlords are more likely to make use of overdraft than homeowners. Households headed by respondents who currently live with their parents are more likely to make use of overdraft facilities than those who do not live with their parents. When looking at the overall position relating to households who have dependent children up to and including 12 years of age and households who have dependents older than 13 years of age, it appears as though they have less demand for overdraft facilities than households who do not have any dependents or who have fewer dependents. However, it must be taken into account that dependents are included when determining the particular life stage that a household belongs to. As the head of the household

becomes more educated, there is a positive effect of the use of overdraft facilities. This is in line with the heuristic model in Table 4.1. Household income has a positive effect on the likelihood of taking on overdraft facilities, which is in line with the heuristic model in Table 4.1. Personal income has a negative effect on the particular household making use of a credit card. Single individuals are likely to have a greater demand for overdraft facilities. Once again, and as reported in the two previous sections, larger households have a reduced likelihood of holding overdraft facilities. In terms of the work status of the head of the household, respondents who are working full-time are most likely to make use of overdraft facilities. Self-employed heads of households are more likely to hold overdraft facilities. The reason may be that they are more likely to have to make use of overdrafts during times when they are not actively working as a result of taking leave or facing illness. The occupation of the head of the household appears to have an effect on usage of overdraft facilities, with people who work in administrative and managerial positions being more likely to use overdraft facilities. Households headed by individuals who have experienced the following events during the past 12 months are more likely to make use of overdraft facilities: getting married and spending money on part-time or correspondence education. Households headed by individuals who have changed jobs in the past 12 months and who have moved are less likely to use overdraft facilities. The activities mentioned are useful in determining the events that may drive households to make use of overdraft facilities. The statistical significance relating to the various variables will be discussed in greater detail in section 5.4.

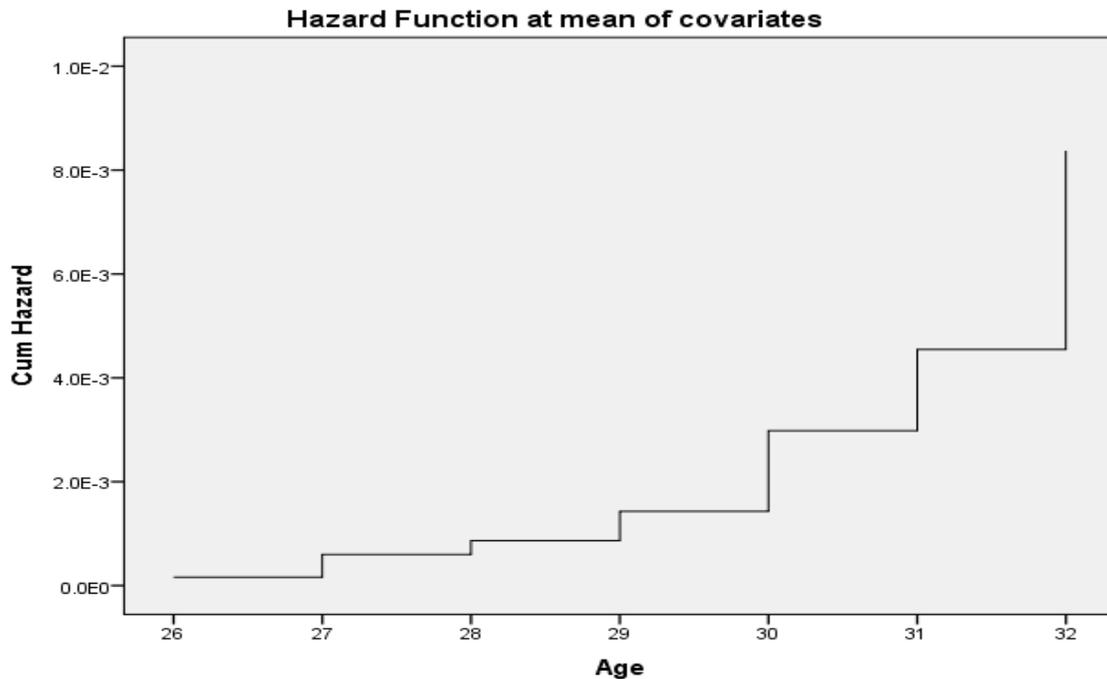


Figure 5.6: Hazard function for overdraft use

Source: Author's calculations.

Figure 5.6 indicates that the respondents have an increased probability of taking up overdraft facilities from 26 years of age, which steadily increases as individuals age. This variable was only included from the 2007 survey and thus the information was only available from the age of 26. As expected and referring back to the heuristic model in Table 4.1, the probability of holding this type of debt therefore increases as the head of the household gets older. The results are consistent with the life cycle hypothesis, which suggests that the debt holding of households has a pronounced life cycle pattern.

5.3.4. Student loan uptake

Student loans were included on the questionnaires from 2007 onwards and the information is therefore available for respondents aged from 26 to 32. Student loan usage for the age group used in this study is indicated Figure 5.7.

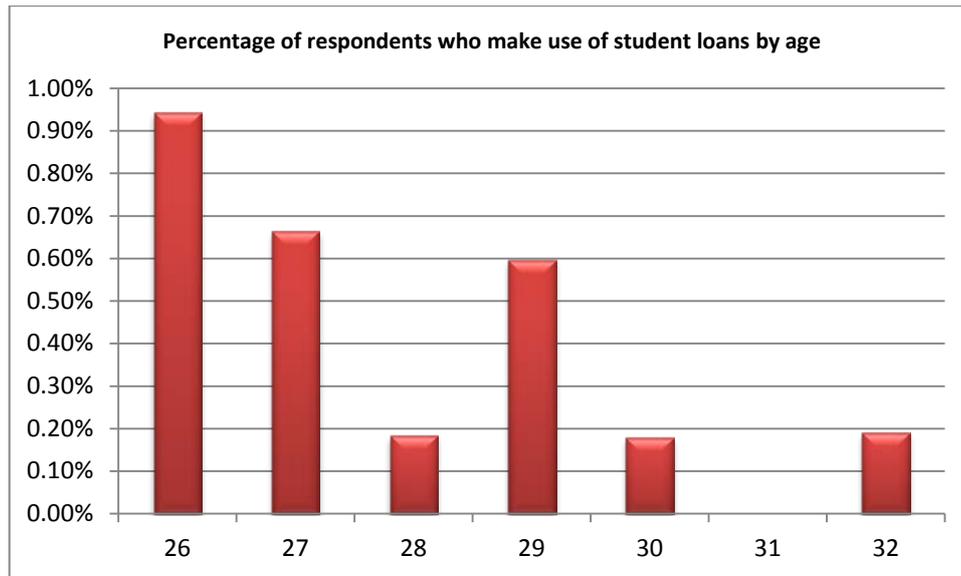


Figure 5.7: Respondents making use of student loans

Source: Author's calculations.

It appears that as the students reach their thirties, their need to make use of student loans decreases. As the data was only available from 2007 onwards, the position relating to 18–25 year-olds was subsequently unavailable. However, the results are valuable in determining up to which age the youth have the greatest need for student loans.

Sub-hypothesis 4

H_{04} : There is no statistically significant relationship between age and student loans uptake.

H_{A4} : There is a statistically significant relationship between age and student loans uptake.

Table 5.8 indicates the results of sub-hypothesis 4.

Table 5.8: Chi-square test Student loan and Age

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	8.308 ^a	6	.216	.203		
Likelihood Ratio	8.940	6	.177	.276		
Fisher's Exact Test	7.026			.229		
Linear-by-Linear Association	5.064	1	.024	.026	.014	.005
N of Valid Cases	3 412					

a. 7 cells (50.0%) have expected count less than 5. The minimum expected count is 1.54.

Source: Author's calculations.

Table 5.8 indicates that the basic assumption of the test was not met as 50% of the cells have expected frequencies of less than 5. However, as described in section 4.4.4.2 the Fisher's Exact test should thus be reported as a result of this violation. The null hypothesis cannot be rejected, as it is evident that there is no statistically significant relationship between age and student loan uptake, based on a 0.229 exact significance level.

Following on from the results of the chi-square test, it was necessary to determine which of the variables presented in the heuristic model in Table 4.1 have an impact on the respondents' usage of student loans. The results of the impact of the independent variables on the use of student loans are presented in Table 5.9.

Table 5.9: Impact of the independent variables on the usage of student loans by the respondents

	β	SE	Wald	df	Sig.	Exp(β)
Life stage	.097	.270	.129	1	.720	1.102
Number of financial assets	.631	.227	7.759	1	.005 ***	1.880
Housing assets	-.356	.707	.253	1	.615	.701
Currently living with your parents	.099	.785	.016	1	.899	1.104
Children/dependants up to 12 years	-1.891	1.054	3.220	1	.073 *	.151
Children/dependants 13 years and plus	-13.684	674.819	.000	1	.984	.000
Level of education	.514	.169	9.244	1	.002 ***	1.672
Household income	-.642	.537	1.428	1	.232	.526
Personal income	.195	.538	.132	1	.716	1.216
Marital status	.250	.516	.235	1	.628	1.284
Family size	.167	.171	.953	1	.329	1.182
Work status	.206	.190	1.179	1	.278	1.229
Self employed	.431	.772	.312	1	.576	1.540
Occupation	.264	.178	2.212	1	.137	1.303
Changed jobs in the past 12 months	1.372	.717	3.658	1	.056 *	3.943
Got married in the past 12 months	-14.044	1906.088	.000	1	.994	.000
Moved in the past 12 months	-.199	.740	.072	1	.788	.820
Spent money on education in the past 12 months	1.690	.670	6.354	1	.012 **	5.418
*p<0.1, **p<0.05, ***p<0.01						

Source: Author's calculations.

In accordance with the life cycle model, as a household progress through the various life stages, this has an impact on its participation in the student loan market. As a household accumulates more financial assets, there is a positive effect on the holding of student loan facilities. For more information, refer to a similar discussion in section 5.3.1 regarding credit card debt. Households who rent the property they reside in have the highest probability of holding student loans as opposed to households who are homeowners. Households headed by respondents who currently live with their parents are more likely to make use of student loan facilities than those who do not live with their parents. When looking at the overall position relating to households who have dependent children up to and including 12 years of age and households who have dependents older than 13 years of age, it appears as though they have less demand for student loan facilities than households who do not have any dependents or who have fewer

dependents. As the head of the household becomes more educated, there is a positive effect on the use of student loan facilities. This is in line with the heuristic model in Table 4.1. Households who have lower levels of income are more likely to make use of student loans. Personal income is not statistically significant in explaining take-up of student loans. Households headed by people who are married, divorced or separated are expected to have an increased need for student loan facilities as compared to households who are headed by singles. Households that consist of more people tend to have a greater demand for student loans facilities, which is in line with the heuristic model in Table 4.1; however, this predictive effect is low. In terms of the work status of a household head, people working full-time are least likely to make use of student loans, while people who are not working are most likely to use student loans, followed by part-time employees. The reason may be that students may take time off their studies to gain an education and thus require the assistance of a student loan. A self-employed person is more likely to hold a student loan. The reason behind this may be that self-employed individuals are not in the position to receive study assistance from their employers as is the case with individuals who do not work for themselves – in line with the heuristic model in Table 4.1. As a person moves into an occupation requiring higher levels of skill, they have an increase in the demand for student loans. On the one hand, households headed by individuals who have changed jobs in the past 12 months and spent money on education are predicting factors for households making use of student loan facilities. Then again, households who have individuals who got married and moved in the past 12 months are not likely to make use of student loans. The statistical significance relating to the various variables will be discussed in greater detail in section 5.4.

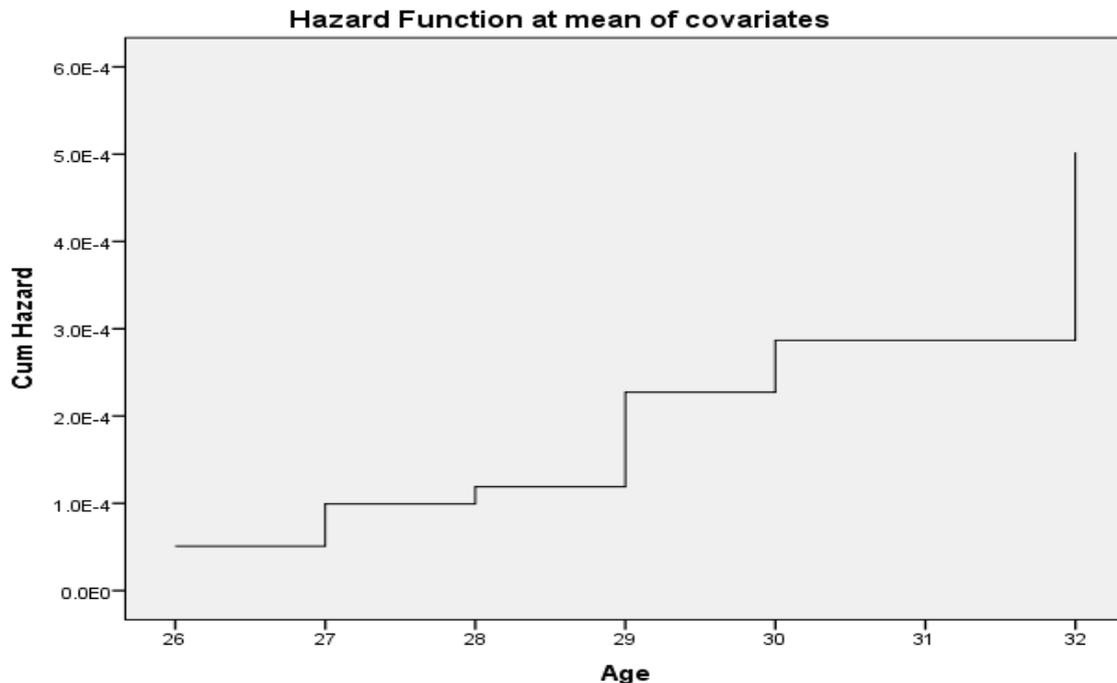


Figure 5.8: Hazard function for student loans use

Source: Author's calculations.

Figure 5.8 indicates that the respondents have an increased probability of taking up student loans from approximately 26 years of age, which steadily increases as an individual ages. This variable was only included from the 2007 survey and thus the information was only available from the age of 26. As expected and referring back to the heuristic model in Table 4.1, the probability of holding this type of debt therefore increases as the head of the household gets older. The results are consistent with the life cycle hypothesis, which suggests that the debt holding of households has a pronounced life cycle pattern.

5.3.5. Vehicle finance uptake

The data available for vehicle finance was only included on the questionnaires from 2007 onwards and the information is therefore available for respondents aged from 26 to 32. Vehicle finance usage for the age group used in this study is indicated in Figure 5.9.

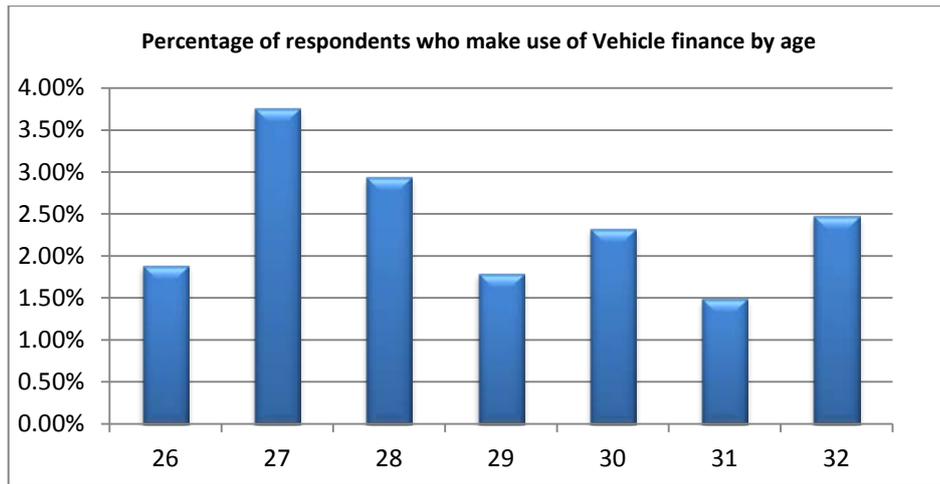


Figure 5.9: Respondents making use of vehicle finance

Source: Author's calculations.

As the youth complete their studies and find employment, they find themselves in a position to be able to apply for vehicle finance. This trend is indicated in Figure 5.9, which reflects the percentage of the respondents who indicated that they make use of vehicle finance.

Sub-hypothesis 5

H_{05} : There is no statistically significant relationship between age and vehicle finance uptake.

H_{A5} : There is a statistically significant relationship between age and vehicle finance uptake.

Table 5.10 indicates the results of sub-hypothesis 5.

Table 5.10: Chi-square test Vehicle finance and Age

	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-Square	6.964 ^a	6	.324
Likelihood Ratio	6.745	6	.345
Linear-by-Linear Association	.768	1	.381
N of Valid Cases	3412		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 9.69.

Source: Author's calculations.

The null hypothesis cannot be rejected, as it is evident that there is no statistically significant relationship between age and vehicle finance uptake, based on a 0.324 asymptotic significance level.

Following on from the results of the chi-square test, it was necessary to determine which of the variables presented in the heuristic model in Table 4.1 have an impact on the respondents' usage of vehicle finance. The results of the impact of the independent variables on the use of vehicle finance are presented in Table 5.11.

Table 5.11: Impact of the independent variables on the usage of vehicle finance by the respondents

	β	SE	Wald	Df	Sig.	Exp(β)
Life stage	-.007	.090	.007	1	.936	.993
Number of financial assets	.691	.090	58.841	1	.000 ***	1.997
Housing assets	-.820	.283	8.383	1	.004 ***	.440
Currently living with your parents	.887	.367	5.834	1	.016 **	2.429
Children/dependants up to 12 years	.168	.342	.243	1	.622	1.183
Children/dependants 13 years and plus	-.159	.394	.163	1	.686	.853
Level of education	.148	.083	3.192	1	.074 *	1.160
Household income	.676	.224	9.099	1	.003 ***	1.966
Personal income	-.013	.211	.004	1	.950	.987
Marital status	.013	.216	.004	1	.951	1.013
Family size	-.139	.111	1.569	1	.210	.871
Work status	-.279	.142	3.877	1	.049 **	.756
Self employed	-.876	.418	4.400	1	.036 **	.416
Occupation	.033	.058	.329	1	.566	1.034
Changed jobs in the past 12 months	.365	.353	1.071	1	.301	1.441
Got married in the past 12 months	.614	.565	1.184	1	.277	1.848
Moved in the past 12 months	.106	.309	.117	1	.732	1.111
Spent money on education in the past 12 months	.452	.368	1.507	1	.220	1.571
*p<0.1, **p<0.05, ***p<0.01						

Source: Author's calculations.

It appears that a household in the earlier stages has an increased demand for vehicle finance. As a household accumulates more financial assets there is a positive effect on the holding of vehicle finance facilities. The discussion in section

5.3.1 likewise applies to vehicle finance. Households who pay rent for the property they reside in have the highest probability of holding vehicle finance, as opposed to home-owners, who are less likely to make use of vehicle finance. Households headed by respondents who currently live with their parents are more likely to make use of vehicle finance facilities than those who do not live with their parents. Households who have dependent children up to and including 12 years of age have a greater demand for vehicle finance as opposed to households who have dependents older than 13 years of age, who have less demand for vehicle finance facilities. Level of education is positively associated with vehicle finance usage and is in line with the heuristic model in Table 4.1. Personal income has a low predictive effect. Household income has a positive predictive effect on the particular household making use of vehicle finance facilities, which is in line with the heuristic model in Table 4.1. In particular, household income has a statistically significant effect. Thus, as a household earns more income it is more likely to utilise vehicle finance facilities. Households headed by people who are married, divorced or separated are expected to have an increased need for vehicle finance as compared to households who are headed by singles. Larger households are less likely to hold vehicle finance debt, the reason being similar to the explanation given in section 5.3.1. Respondents who are employed full time are the most likely to take on vehicle financing – in line with the heuristic model in Table 4.1. Self-employed individuals as opposed to individuals who work are less likely to make use of vehicle finance debt. Occupation is not statistically significant in explaining the usage of vehicle finance. Households headed by individuals who have experienced the following events during the past 12 months are more likely to make use of vehicle finance: changing jobs, getting married, moving house and spending money on part-time or correspondence education. These activities are valuable in determining the events that may drive households to participate in the vehicle finance market. The statistical significance relating to the various variables will be discussed in greater detail in section 5.4.

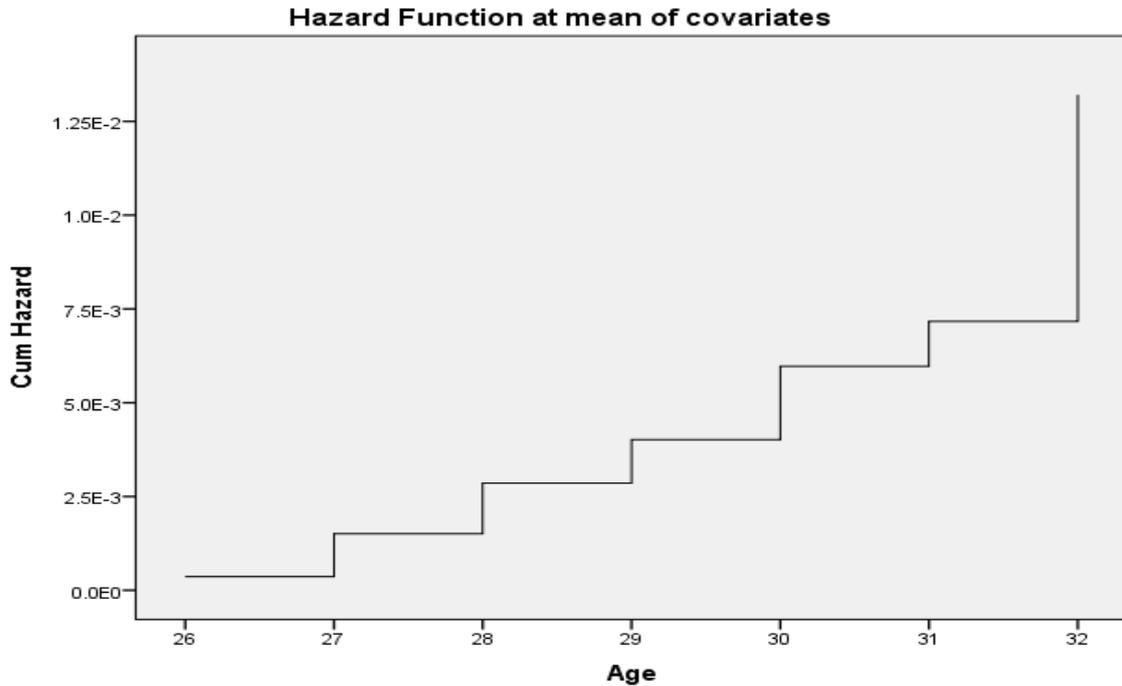


Figure 5.10: Hazard function for vehicle finance use

Source: Author's calculations.

Figure 5.10 indicates that the respondents have an increased probability of taking up vehicle finance from approximately 26 years of age, which steadily increases as individuals age. This variable was only included from the 2007 survey and thus the information was only available from the age of 26. As expected and referring back to the heuristic model in Table 4.1, the probability of holding this type of debt therefore increases as the head of the household gets older. The results are consistent with the life cycle hypothesis, which suggests that the debt holding of households has a pronounced life cycle pattern.

5.3.6. Other loans uptake

Usage of other loan facilities for the age groups used in this study is indicated Figure 5.11.

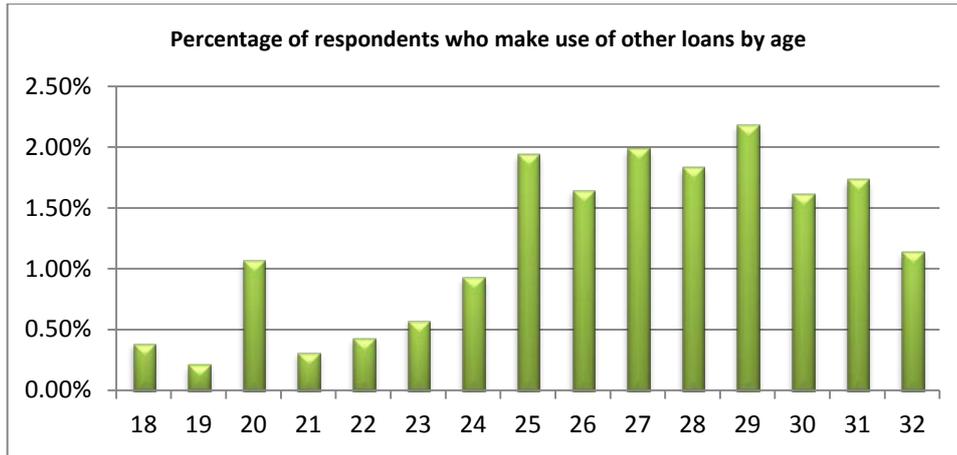


Figure 5.11: Respondents making use of other loans

Source: Author's calculations.

The results are consistent with the literature, which finds that younger households tend to have the highest levels of borrowing when the demands of the family are at their highest as a result of establishing a home, getting married and having children (Finney *et al.*, 2007:9).

Sub-hypothesis 6

H_{06} : There is no statistically significant relationship between age and other loans uptake.

H_{A6} : There is a statistically significant relationship between age and other loans uptake.

Table 5.12 indicates the results of sub-hypothesis 6.

Table 5.12: Chi-square test Other loans and Age

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	34.933 ^a	14	.002
Likelihood Ratio	37.791	14	.001
Linear-by-Linear Association	18.982	1	.000
N of Valid Cases	8841		

a. 2 cells (6.7%) have expected count less than 5. The minimum expected count is 4.51.

Source: Author's calculations.

The null hypothesis can be rejected, as it is evident that there is a statistically significant relationship between age and other loans uptake based on a 0.002 asymptotic significance level. Thus, as individuals become older, they will start using other loans.

The chi-square confirmed the association between age and other loan usage, but it is not evident which characteristics or events will actually result in the individual starting to use other loans. The results of the impact of the independent variables on the use of other loans are presented in Table 5.13.

Table 5.13: Impact of the independent variables on the usage of other loans by the respondents

	β	SE	Wald	df	Sig.	Exp(β)
Life stage	.051	.090	.327	1	.567	1.053
Number of financial assets	.795	.087	83.588	1	.000 ***	2.214
Housing assets	-.488	.239	4.177	1	.041 **	.614
Currently living with your parents	.014	.327	.002	1	.966	1.014
Children/dependants up to 12 years	-1.077	.327	10.845	1	.001 ***	.340
Children/dependants 13 years and plus	-.774	.437	3.136	1	.077 *	.461
Level of education	.063	.073	.748	1	.387	1.065
Household income	-.130	.181	.521	1	.470	.878
Personal income	-.529	.205	6.639	1	.010 **	.589
Marital status	.150	.206	.530	1	.467	1.161
Family size	.015	.076	.038	1	.846	1.015
Work status	-.243	.088	7.695	1	.006 ***	.784
Self employed	-.082	.328	.063	1	.802	.921
Occupation	.087	.052	2.866	1	.090	1.091
Changed jobs in the past 12 months	.399	.316	1.589	1	.207	1.490
Got married in the past 12 months	.762	.426	3.200	1	.074 *	2.143
Moved in the past 12 months	.066	.270	.060	1	.807	1.068
Spent money on education in the past 12 months	.093	.357	.067	1	.796	1.097
*p<0.1, **p<0.05, ***p<0.01						

Source: Author's calculations.

In accordance with the life cycle model, a household's life stage has an impact on its participation in the market for other loans. As a household progress through the various life stages, they are more likely to demand other loans. As a household

accumulates more financial assets there is a positive effect on the holding of other loans. The heuristic model predicts that as the value of a household's financial assets increases there is a negative effect on the uptake of credit. It appears as though this result is not as predicted by the heuristic model in Table 4.1, but it is important that the financial assets of a household are indeed a valuable predictor of the use of other loans. Households who pay rent to landlords are more likely to make use of other loans as opposed to homeowners. Households headed by respondents who currently live with their parents are less likely to make use of other loans than those who do not live with their parents, but the predictive effect is low. When looking at the overall position relating to households who have dependent children up to and including 12 years of age and households who have dependents older than 13 years of age, it appears as though they have less demand for other loan facilities than households who do not have any dependents or who have fewer dependents. As the head of the household becomes more educated there is a positive effect of the use of other loan facilities. This is in line with the heuristic model in Table 4.1. Household income has a negative effect on the likelihood of taking on other loans facilities. Households who have lower levels of income are more likely to make use of other loans. Thus, as a household earns more income it is less likely to utilise other loan facilities. The same reasoning applies to personal income. Households headed by people who are married, divorced or separated are expected to have an increased need for other loans as compared to households who are headed by singles. Households that consist of more people tend to have a greater desire for other loan facilities, though the predictive effect is not statistically significant. In terms of the work status of a household head, people working full-time are most likely to make use of other loans, whereas people who are not working are least likely to use other loans – also in line with the heuristic model in Table 4.1. A self-employed person is less likely to hold other loans, as they tend to have an inconsistent stream of income and therefore may not qualify for these facilities. The occupation of an individual positively affects the uptake of other loans: as a person moves into an occupation requiring higher levels of skill, they have an increase in the demand for other loans. This is also indicated in the heuristic model in Table 4.1. Households headed by individuals who have experienced the following events during the past 12 months are more likely to make use of other loan facilities: changing jobs,

getting married, moving house and spending money on part-time or correspondence education. The statistical significance relating to the various variables will be discussed in greater detail in section 5.4.

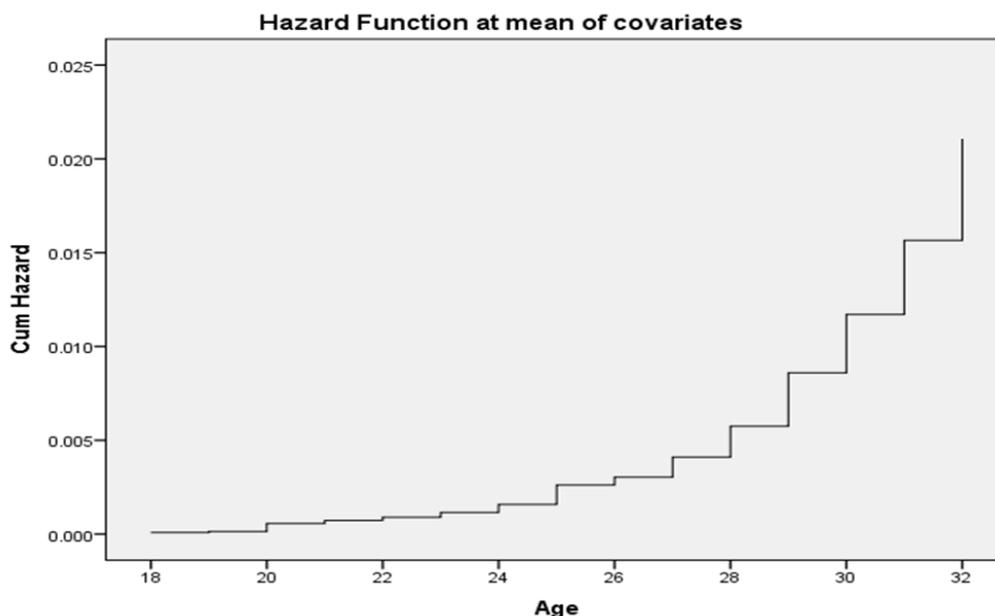


Figure 5.12: Hazard function for other loan use

Source: Author's calculations.

Figure 5.12 indicates that the respondents have an increased probability of taking up other loans from approximately 27 years of age, which steadily increases as individuals age. As expected, referring back to the heuristic model in Table 4.1 and the results in section 5.3.1, the probability of holding this type of debt therefore increases as the head of the household gets older. The results are consistent with the life cycle hypothesis, which suggests that the debt holding of households has a pronounced life cycle pattern.

Having determined the effect of the group of variables indicated in section 5.2 (Table 5.1) on the take-up of the respective debt products, the next section will present the variables that are statistically significant in the use of debt by the respondents.

5.4. SUMMARY OF VARIABLES THAT WERE STATISTICALLY SIGNIFICANT PREDICTORS OF DEBT UPTAKE

Variables that were shown to have an effect on the uptake of debt were discussed in section 5.3. The results of the Cox proportional-hazards model for variables that were shown to be statistically significant are presented in Table 5.14.

Table 5.14: Summary of the results of the Cox-proportional hazards model for variables shown to be statistically significant

	Credit cards	Home loans	Overdraft	Student loans	Vehicle finance	Other loans
	β	β	β	β	β	β
Number of financial assets	.583 ***	.729 ***	.712 ***	.631 ***	.691 ***	.795 ***
Housing assets	-.248 **	1.512 ***			-.820 ***	-.488 **
Currently living with your parents	.490 ***	-1.158 *			.887 **	
Children/dependants up to 12 years	-.592 ***			-1.891 *		-1.077 ***
Children/dependants 13 years and plus		.583 *				-.774 *
Level of education	.124 ***		.187 **	.514 ***	.148 *	
Household income	.360 ***		.495 *		.676 ***	
Personal income	-.211 **					-.529 **
Family size	-.137 ***	-.362 **				
Work status	-.244 ***	-.455 **	-.627 **		-.279 **	-.243 ***
Self employed					-.876 **	
Occupation			-.147 **			
Changed jobs in the past 12 months				1.372 *		
Got married in the past 12 months	.522 **		1.027 *			.762 *
Spent money on education in the past 12 months	.359 **	.804 **		1.690 **		
*p<0.1, **p<0.05, ***p<0.01						

Source: Author's calculations.

Each of the debt products with variables that have been shown to be statistical predictors of debt usage will be dealt with in the order indicated in Table 5.14.

The results for credit cards suggest that respondents who rent the dwelling they reside in, have lower levels of personal income and as well as those who got married in past 12 months and spent money on education in the past 12 months are more likely to hold credit card debt. These variables were significant at the 0.05 significance level. As the number of financial assets increases, so too does the take-up of credit card debt. Respondents who live currently with their parents, have higher levels of education, have fewer people living in the household and are employed full-time are more likely to make use of credit card debt. The results show that the respondents who have dependent children up to and including 12 years of age are less likely to utilise credit card facilities; the demand for credit card facilities increases as household income increases. These variables were significant at the 0.01 significance level. The results for credit card debt are convergent with the heuristic model with regard to a number of variables. The number of financial assets, higher levels of income, employment status and level of education are as expected, and in line with the heuristic model. Large family size, having dependent children up to the age of 12 years, and not owning the household dwelling exert opposite effects on the uptake of credit card debt to those indicated in the heuristic model.

The results for home loans suggest that respondents who are not currently living with their parents and who have dependent children who are 13 years and older are more likely to make use of home loan facilities. These two variables are significant at the 0.01 significance level. Respondents who have fewer people living in the household, who are employed fulltime, and those who have spent money on education in the past 12 months are more likely to make use of home loan facilities. These variables were significant at the 0.05 significance level. As individuals take on greater numbers of financial assets and own the dwelling they reside in, they in turn have a greater demand for home loan facilities. These variables were significant at the 0.01 significance level. The results for home loan debt are convergent with the heuristic model with regard to a number of variables. Possessing greater numbers of financial assets, being a homeowner, having dependent children who are 13 years and older, as well as employment status are as expected, in line with the heuristic model. Large family size exerts an opposite effect on the uptake of home loans to that indicated in the heuristic model.

The results for overdraft facilities suggest having higher levels of household income and people who have got married in the past 12 months have a greater demand for overdraft facilities. These variables were significant at the 0.1 significance level. Occupation, work status and level of education were significant at the 0.05 significance level. People who work in administrative and managerial positions are more likely to use overdraft facilities and people who are employed full-time have a greater demand for overdraft facilities. As the youth become more educated, they are more likely to make use of overdraft facilities. Respondents' who hold a greater number of financial assets are more likely to make use of an overdraft facility. This variable was significant at the 0.01 significance level. The results are convergent with the heuristic model with regard to a number of variables. The number of financial assets, higher levels of household income, employment status and level of education are as expected and in line with the heuristic model.

The results for student loans suggest that respondents who have children 12 years of age are less likely to utilise student loan facilities. Those who changed jobs in the past 12 months are more likely to have student loans. These variables were significant at the 0.1 significance level. Those who spent money on part-time or correspondence education in the past 12 months (significant at the 0.05 significance level) were more likely to make use of student loans. Respondents who had a greater number of financial assets and those who were more educated were more likely to make use of student loan facilities. These variables were significant at the 0.01 significance level. The results are convergent with the heuristic model with regard to the following variables; the number of financial assets and level of education are as expected, in line with the heuristic model. Having dependent children up to the age of 12 years old exerts an opposite effect on the uptake of student loans to that indicated in the heuristic model.

The vehicle finance results suggest that households having higher levels of education have a greater demand for vehicle finance facilities (significant at the 0.1 significance level). Households headed by respondents who currently live with their parents, who are not self-employed and who are permanently employed are more likely to make use of vehicle finance. These variables were significant at the

0.05 significance level. The uptake of vehicle finance debt by respondents who pay rent to landlords and have higher levels of household income are more likely to make use of vehicle financing. As the number of financial assets increases so too does the take-up of vehicle financing. These variables are significant at the 0.01 significance level. The results for vehicle finance facilities are convergent with the heuristic model with regard to a number of variables. The number of financial assets, higher levels of education, higher levels of household income and employment status are as expected, in line with the heuristic model. Not owning the household dwelling exerts an opposite effect on the uptake of vehicle finance to that indicated in the heuristic model.

The results for other loans suggest that respondents who got married in the past 12 months are more likely to make use of other loans. Respondents who have children who are 13 years and older are less likely to utilise other loan facilities. These variables were significant at the 0.1 significance level. Respondents who earn more personal income are less likely to utilise other loan facilities. Respondents who pay rent are more likely to make use of other loans. These variables are significant at the 0.05 significance level. It appears as though respondents have a greater demand for other loan facilities when they are employed full time. The results show that the respondents who have dependent children up to and including 12 years of age are less likely to utilise other loan facilities. As the number of financial assets increase, so does the take-up of other loans. These variables were significant at the 0.01 significance level. The results for other loan debt are convergent with the heuristic model with regard to the following variables: the number of financial assets and employment status are as expected in line with the heuristic model. Higher levels of personal income, having children who are 13 years and older, having dependent children up to the age of 12 years and not owning the household dwelling exert opposite effects on the uptake of other loans to that indicated in the heuristic model.

The results of the Cox proportional-hazards regression model have shown certain similarities in behaviour of the drivers of debt uptake among the sample. There were also other drivers of debt uptake that were not indicated in the heuristic model but that were found to be statistically significant in a South African context,

namely: currently living with your parents and certain activities that were undertaken by the respondents in the preceding 12 months.

In summary, the results reveal that the number of financial assets is positively related to the holding of all the types of debt analysed in this study.

5.5. CONCLUDING REMARKS

The results presented in this chapter address the fourth research objective. The sections dealing with the debt product uptake according to the age of the respondent and chi-square tests for independence reveal that there was a statistically significant relationship between the age and the following debt products, namely: credit cards, home loans and other loans. The results of the Cox proportional-hazards regression models and the variables that were found to be statistically significant drivers of debt uptake were discussed.

It is evident that a number of variables have a predictive effect for the uptake of the six debt products included in this study. A number of relationships proved to be statistically significant and a number of these relationships were as expected, based on the heuristic model as presented in the conclusion to Chapter 3 (Table 3.11) and which was presented again in Table 4.1 in section 4.1. The findings presented in this chapter provide valuable information about the drivers of debt uptake by South African households.

Chapter 6 concludes the research by incorporating all the contributing factors that may affect young South African households' decision to participate in the debt industry. It will provide recommendations, where applicable, to policy-makers, as well as stakeholders in the debt industry that may result in improved policies relating to the granting of credit and which could ultimately positively affect the economy as a whole by providing information on risk factors that act as predictors of debt uptake.

CHAPTER 6

CONCLUSION

6.1. INTRODUCTION

In section 1.1, the researcher referred to the debt situation of people living in South Africa and mentioned that individuals progress through various life stages as they experience certain events and transitions. The different life stages are characterised by various financial demands and hence debt requirements may also vary. The study specifically looked at 18–32 year-olds as concern has been expressed by stakeholders regarding this financially vulnerable group.

The main objective of this study was to identify and describe how liabilities are accumulated by young adult South Africans and how household characteristics and events may be related to the uptake of household liabilities.

In order to address the main research objective, a number of sub-objectives were formulated in section 1.4.

According to the research objectives, a literature review was conducted in the first phase of the study, as reported in Chapters 2 and 3. Chapter 2 investigated household debt in South Africa and Chapter 3 investigated how the demand for liabilities may fluctuate over the life course of a household. The literature review was employed to achieve research objectives 1–3. The literature review provided the heuristic model as indicated in Table 3.11 (section 3.4).

In keeping with the research objectives, the empirical research was carried out during phase 2 of the study, as reported in Chapters 4 and 5. Chapter 4 discussed the research methodology applicable to this study, while Chapter 5 reported the results of the inferential statistical analyses. Chapters 4 and 5 were employed to achieve research objective 4.

The purpose of this chapter is to establish whether all of the research objectives have been achieved by this study. The chapter discusses the research objectives that were formulated and presents the significant research findings in section 6.2.

Section 6.3 provides an outline of any limitations of the research and suggestions for future research are considered in section 6.4.

6.2. RESEARCH OBJECTIVES AND A SUMMARY OF RESEARCH FINDINGS

This section will discuss how the research objectives were addressed and will present a summary of the findings related to each of the research objectives that were formulated in section 1.4. A discussion of each of the research objectives will follow in sections 6.2.1–6.2.4.

6.2.1. Research objective 1

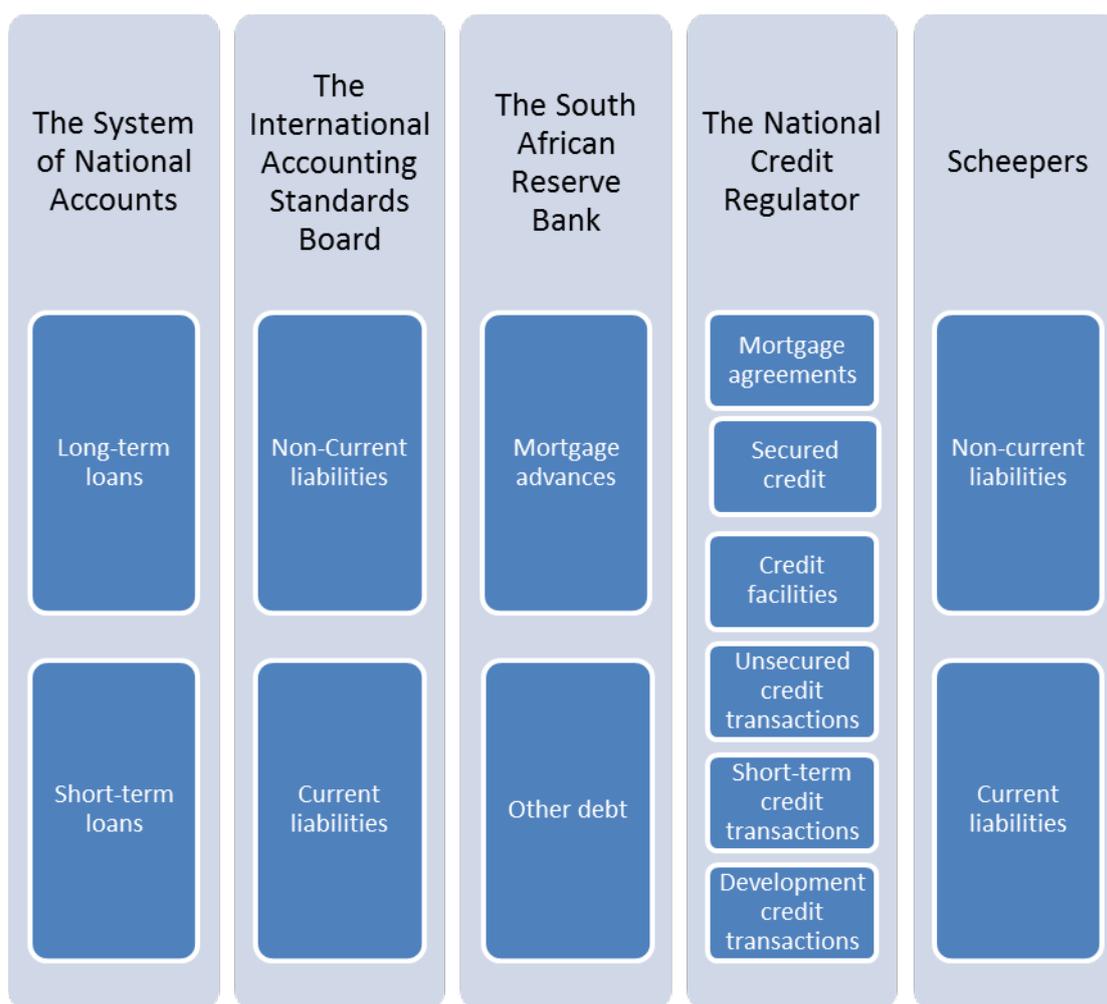
To investigate household debt in South Africa based on the available sources.

This objective was achieved by:

- Defining the different definitions relevant to households and household liabilities and discussing the components of household debt in section 2.2.
- Describing the various indicators used to measure household debt trends in section 2.3.
- Describing the changing credit situation in South Africa in section 2.4.
- Describing the situation of the youth in South Africa in section 2.5.

The literature review provided the definitions of a household, household debt, and liabilities (section 2.2.1) and the various classifications of liabilities were provided (section 2.2.2). Table 6.1 indicates a summary of the classifications by the various institutions examined in this section.

Table 6.1: Classification of liabilities



Source: Author's own.

The empirical research found that a number of institutions monitor the debt situation of the South African population. The indicators from the following institutions were of value for this research: South African Reserve Bank (section 2.3.2), National Credit Regulator (section 2.3.3), Statistics South Africa (section 2.3.4), Financial Services Board (section 2.3.5), and financial institutions (section 2.3.6). The indicators revealed that South Africans are indeed experiencing debt-related financial vulnerability.

Figures 6.1 and 6.2 indicate the credit standing of consumers for the second quarter in 2008 and the credit standing of consumers for the second quarter in 2014.

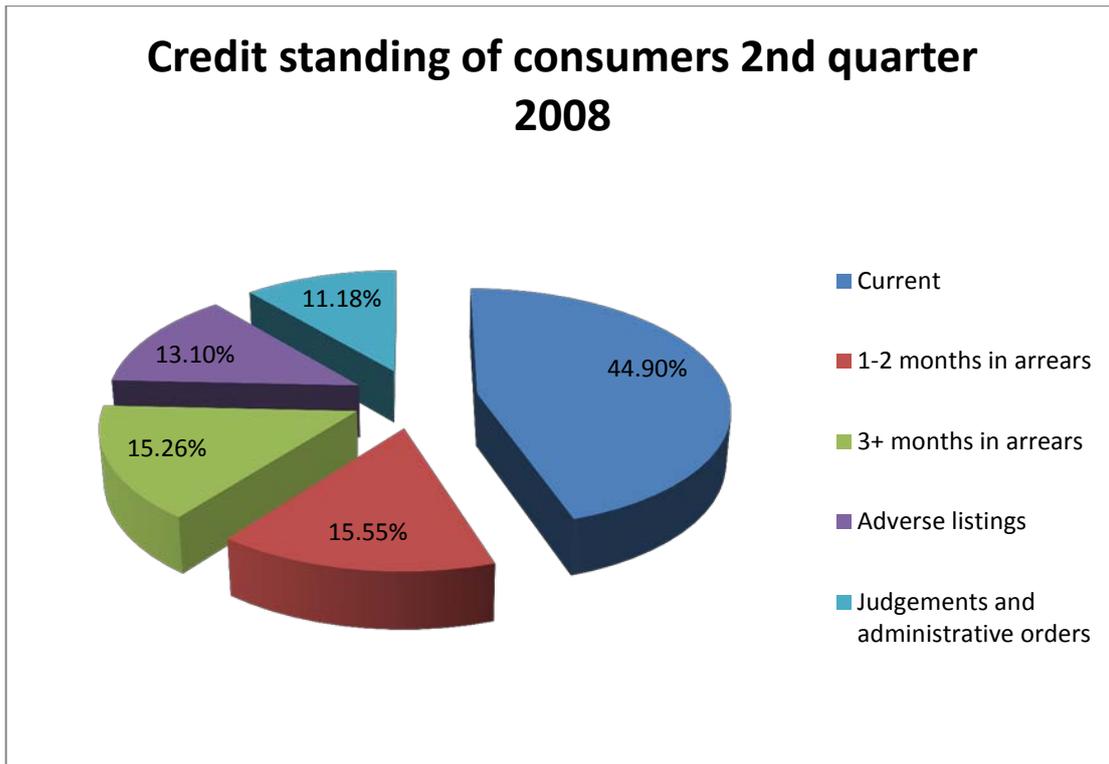


Figure 6.1: NCR: Credit standing of consumers for the quarter ended June 2008

Source: NCR, 2008c.

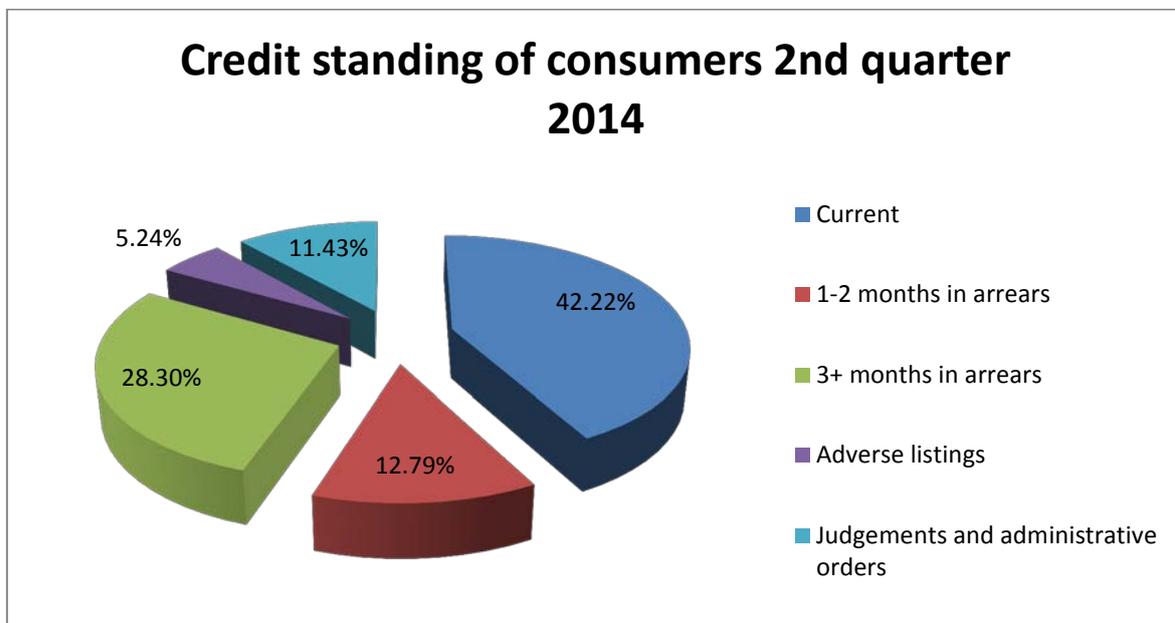


Figure 6.2: NCR: Credit standing of consumers for the quarter ended June 2014

Source: NCR, 2014e.

The figures indicate that in June 2014 only 55 percent of consumers were classified as being in good standing (current and 1–2 months in arrears) compared to the 60.45 percent who were classified in June 2008 as being in good standing. This is indicative of the financial pressure faced by South African households.

Of particular interest to these stakeholders was the surge in unsecured lending to households and the associated risks associated with being unable to pay off the debt in the event of an increase in interest rates or an unexpected event. It appears as though many households are using credit to cover monthly living expenses, which is not sustainable in the long run. A number of initiatives have been implemented and the stakeholders agree that it is necessary for consumers to be financially educated in order to avoid being caught in a debt spiral.

The literature review revealed that because of the stakeholders' concern for the financial well-being of the people of South Africa and due to the deterioration of household debt, it was necessary to describe the changing credit situation in South Africa over the past few years. This was dealt with in section 2.4 of the literature review.

It was found that financial liberalisation coupled with the deregulation of the financial sector contributed to the increased debt burden experienced by households. The financial crisis of 2008/2009 had a huge impact on global markets; however, South Africa was sheltered from some of the effects for various reasons. The financial sector has transformed dramatically over recent years. Included in this transformation is the change in the types of debt products used by households. Once again, of particular interest is the increase in the use of unsecured debt.

As described in section 2.5, the literature revealed that the youth (15 – 24 years of age) of South Africa represent one in every two people in the working-age population, but their level of unemployment stood at an average of 52.9 percent for 2013. The unemployment rate for the entire working population is 25.2 percent, and this reiterates the hardship faced by the youth. The youth are also more likely not to draw up a monthly budget, have lower levels of financial literacy, and are prepared to borrow for discretionary spending.

6.2.2. Research objective 2

To review the life course theory based on available sources.

This objective was achieved by:

- Performing a bibliographic search and a discussion of the most important contributions to the literature in section 3.2.2.
- Discussing the various conceptual frameworks for understanding consumption behaviour in section 3.2.3.

The literature review found that the life course perspective has proven to be useful in gaining an understanding of household debt (section 3.2.2). Characteristics that are typically used when creating life stages are age, marital status and dependent children. A number of theories are used extensively by researchers in their research on household consumption behaviour. Trends in household debt were noted based on studies conducted internationally. The consensus reached among the researchers was that there is a life cycle pattern and that household debt follows a familiar life cycle pattern. During the literature review, it was noted the life course approach is useful when considering how an individual's life unfolds over a period of time and how various events and transitions affect the different trajectories that are experienced. It was revealed that life course studies require a longitudinal perspective.

The literature established that various life cycle theories have been developed and the usefulness and shortcomings were discussed. The main inference made from the literature in section 3.2.3 was that a household's debt increases with age until it reaches a maximum at a certain age and then the level of household debt experiences a downward trend during the later years. This is a result of households being subject to rising income levels and hence debt is high relative to income in early working life when income is low and then slowly decreases as income increases relative to consumption; in the years approaching retirement, consumption drops to below income earned. Figure 6.3 indicates income and consumption over the life cycle.

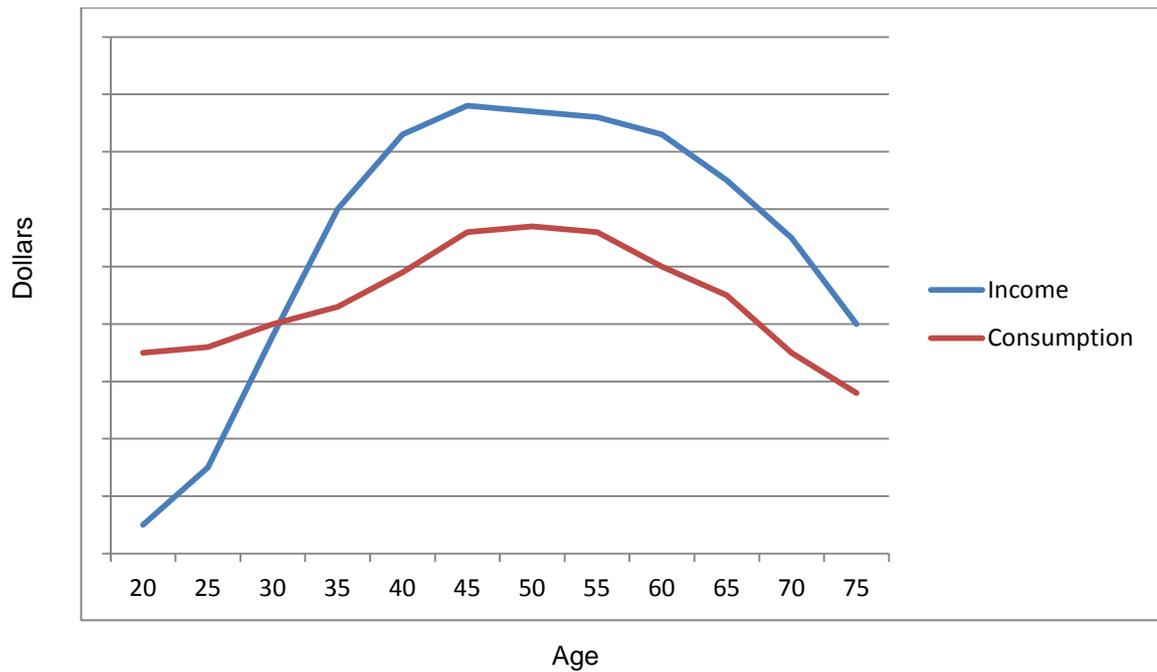


Figure 6.3: Household income and consumption over the life cycle

Sources: Gourinchas & Parker, 2002; Author's own.

Individuals smooth consumption so that in times when consumption is above income they will take on more debt and then, when income lies above consumption, less debt will be taken up and they may increase their level of saving. Debt increases during the working years, reaches a maximum, and then declines as the person moves into retirement. The age at which the debt peaks is understandably different from country to country; however, the various studies are in agreement that debt follows a life cycle pattern.

6.2.3. Research objective 3

To obtain a perspective of household debt over the life course based on available sources.

This objective was achieved by:

- Identifying characteristics that may determine a households' participation in the debt market (section 3.3.2).

- Identifying the reasons for the increase in household debt on an international level (section 3.3.3).
- Discussing the impact of rising household debt (section 3.3.4).

During the literature review (section 3.3.2) it was established that there are socio-demographic (for example, age, gender, level of education, marital status), attitudinal (for example, risk aversion, credit attitude), and economic characteristics (for example, income, financial wealth, total assets) that have been shown to influence a household's participation in the debt market. From the literature, the variables that were shown to most often affect debt uptake have been ranked according to Table 6.2.

Table 6.2: Ranking of variables shown to have an influence on debt holding

VARIABLES	RANKING	NUMBER OF STUDIES
Age of the household head	1	12
Household income	2	11
Employment status	3	9
Marital status/Education level/Large family size/Number of children	4	7
Financial assets	5	5
Housing assets/Gender	6	4
Risk aversion/Credit attitude/Non-financial assets	7	3
Net wealth	8	2
Race/Religion	9	1

Source: Author's own.

The reasons for the increase in household debt were explored in section 3.3.3. The literature cited favourable housing markets, good financial markets, financial deregulation, financial liberalisation, and technological innovation as explanations for the surge in debt leading up to the financial crisis of 2007/2008.

During the literature review (section 3.3.4) it was revealed that the impact of rising household debt on households could have far-reaching consequences. Over-indebtedness is particularly worrisome for households as, on the one hand, certain households may be so over-indebted that they are no longer able to service their debt; on the other hand, they may be in a borderline position of being able to pay their debts but will face financial pressure as a result of unexpected risks. These risks are interest rate risk, investment risk and unemployment risk.

The conclusion to the literature review included the development of a heuristic model of variables that may affect debt uptake, as indicated in Table 6.3.

Table 6.3: Heuristic model of variables affecting debt uptake



Debt uptake		
Age over 45 years	Age of the household head	Age between 25 and 44 years
Early and late life stages	Life stages	Middle life stages
Lower levels of income	Household income	Higher levels of income
Not employed and retired	Employment status	Employed and self-employed
Single	Marital status	Married
Lower level of education	Education	Higher level of education
Smaller family size	Family size	Larger family size
Fewer children	Number of children	More children
Higher value of financial assets	Financial assets	Lower value of financial assets
Non-home owner	Housing assets	Home owner
Unfavourable attitude to risk	Risk aversion	Favourable attitude to risk
Lower level of non-financial assets	Non-financial assets	Higher level of non-financial assets
Higher levels of net wealth	Net wealth	Lower levels of net wealth

Source: Author's own.

Risk aversion, non-financial assets and net wealth from the heuristic model were not addressed in this study, as the information was not readily available in the AMPS surveys.

6.2.4. Research objective 4

To identify the characteristics that may determine the holding or use of the different types of household debt by young South African adults.

This objective was achieved by:

- Identifying how age affects debt product uptake (section 5.3).
- Identifying the determinants of holding each type of debt classified as follows per the AMPS survey: credit card facilities, home loans/mortgage bonds, overdraft facilities, student loans, vehicle finance with a financial institution and other loans (section 5.3).

- Identifying, analysing and grouping the factors that are seen to have a statistically significant influence on the pattern of debt holding (section 5.4).

The objectives were achieved by performing empirical data analysis on data obtained in the SAARF AMPS surveys for the years 1999–2013. Individuals’ debt product behaviour was analysed from age 18 in 1999 to age 32 in 2013. The significant findings relating to the sub-objectives are summarised below in the sections that follow: the effect of age on debt product uptake (section 6.2.4.1), the determinants of holding the various debt products (section 6.2.4.2) and variables that are significant indicators of debt uptake (section 6.2.4.3).

6.2.4.1. The effect of age on debt product uptake

The data indicating that age affects debt product uptake (section 5.3) can be summarised as follows (see Table 6.4):

Table 6.4: Statistically significant relationship between age and debt product

Debt product update	Statistically significant relationship between age and debt product as per chi-square results	
	Yes	No
Credit cards	X	
Home loans	X	
Overdraft		X
Student loans		X
Vehicle finance		X
Other loans	X	

Source: Author’s own.

In line with the literature, individuals have an increased demand for credit cards from the age of 25. The youth up to age 24 face high unemployment; thereafter, once they find employment, they will be in a position to apply for credit cards. In addition, a large number are still studying and thus may not be seeking employment. The literature revealed that the youth make use of debt to finance monthly living expenses and are also comfortable borrowing money to spend at their discretion (section 5.3.1).

From the age of 25, individuals take on home loan debt in order to finance the purchase of a home dwelling (section 5.3.2). This follows from the event/s of getting married and/or having children and then requiring their own dwelling in

which to live. Concern has also been expressed that existing mortgage holders may be using mortgage debt to finance consumption needs (section 5.3.2).

Overdraft facilities may be used for a variety of purposes and hence it appears that at the age of 30, the respondents have the greatest need for overdraft facilities. This coincides with the time when they are facing a number of transitions and events, including but not limited to getting married and having children (section 5.3.3).

It appears that as the students reach their thirties, the need for student loans decreases; presumably a large number of individuals have concluded their studies at tertiary institutions at approximately that age (section 5.3.4) and begin to actively seek employment.

As the youth complete their studies and find employment, they find themselves in a position to be able to apply for vehicle finance. It appears as though at age 27 individuals have the greatest demand for vehicle finance (section 5.3.5).

When looking at other loans, the results are consistent with the literature, which finds that younger households tend to have the highest levels of borrowing when the demands of the family are at their highest because of establishing a home, getting married and having children. Respondents aged 29 are reported to have the highest use of other loan facilities (section 5.3.6).

6.2.4.2. *The determinants of holding the various debt products*

The results of the Cox proportional-hazard regression models are reported on in section 5.3. The sections include the relevant hazard function for each of the six debt products.

Analysis of the data using input variables from the heuristic model (Table 6.3 in section 6.2.3) indicated that certain independent variables have an impact on the type of debt taken up. The researcher also decided to include certain variables in the data analysis that were not included in the heuristic model. The reasoning behind this motive was that the researcher felt that South Africa was a country that had a number of distinct features compared to the international studies undertaken and valuable information could be obtained by including these variables.

The debt situation with regard to a typical household was described, including a description of the predicting effect of all the independent variables that were entered into the models. The hazard function for each of the six types of debt taken up by households revealed that as the head of the household ages, there is an increased probability that he/she will take up the debt product. The results are consistent with the life cycle hypothesis that suggests that the debt holding of a household follows a pronounced life cycle pattern.

6.2.4.3. Variables that are significant indicators of debt uptake

The results indicate that a number of the independent variables are statistically significant predictors of households' debt usage (section 5.4). Table 6.5 indicates the statistically significant predictors and the level of significance for all the types of debt examined in this research.

Table 6.5: Summary of the results of the proportional hazards model for variables shown to be statistically significant

	Credit cards	Home loans	Overdraft	Student loans	Vehicle finance	Other loans
	β	β	β	β	β	β
Number of financial assets	.583 ***	.729 ***	.712 ***	.631 ***	.691 ***	.795 ***
Housing assets	-.248 **	1.512 ***			-.820 ***	-.488 **
Currently living with your parents	.490 ***	-1.158 *			.887 **	
Children/dependants up to 12 years	-.592 ***			-1.891 *		-1.077 ***
Children/dependants 13 years and plus		.583 *				-.774 *
Level of education	.124 ***		.187 **	.514 ***	.148 *	
Household income	.360 ***		.495 *		.676 ***	
Personal income	-.211 **					-.529 **
Family size	-.137 ***	-.362 **				
Work status	-.244 ***	-.455 **	-.627 **		-.279 **	-.243 ***
Self employed					-.876 **	
Occupation			-.147 **			
Changed jobs in the past 12 months				1.372 *		
Got married in the past 12 months	.522 **		1.027 *			.762 *
Spent money on education in the past 12 months	.359 **	.804 **		1.690 **		
*p<0.1, **p<0.05, ***p<0.01						

Source: Author's calculations.

The variables that were found were further summarised into a heat map (Table 6.6). The heat map categories were created as follows: green indicated the variables that had the highest level of significance ($p < 0.01$), blue variables had a high significance level of $p < 0.05$ and yellow being the variables that had significance levels of $p < 0.1$.

Table 6.6: Highlighting the statistically significant variables

	Credit cards	Home loans	Overdraft	Student loans	Vehicle finance	Other loans
Number of financial assets	Green	Green	Green	Green	Green	Green
Housing assets	Blue	Green	Grey	Grey	Green	Blue
Currently living with your parents	Green	Yellow	Grey	Grey	Blue	Grey
Children/dependants up to 12 years	Green	Grey	Grey	Yellow	Grey	Green
Children/dependants 13 years and plus	Grey	Yellow	Grey	Grey	Grey	Yellow
Level of education	Green	Grey	Blue	Green	Yellow	Grey
Household income	Green	Grey	Yellow	Grey	Green	Grey
Personal income	Blue	Grey	Grey	Grey	Grey	Blue
Family size	Green	Blue	Grey	Grey	Grey	Grey
Work status	Green	Blue	Blue	Grey	Blue	Green
Self employed	Grey	Grey	Grey	Grey	Blue	Grey
Occupation	Grey	Grey	Blue	Grey	Grey	Grey
Changed jobs in the past 12 months	Grey	Grey	Grey	Yellow	Grey	Grey
Got married in the past 12 months	Blue	Grey	Yellow	Grey	Grey	Yellow
Spent money on education in the past 12 months	Blue	Blue	Grey	Blue	Grey	Grey
*** 1% level	** 5% level		* 10% level		Not significant	

Source: Author's own.

Credit card debt

The variables that were shown to be statistically significant are listed as follows: number of financial assets, rent payers, currently living with their parents, children/dependants up to the age of 12 years, level of education, household income and personal income, size of family, work status, getting married in the past 12 months and spending money on education in the past 12 months.

Large family size, having dependent children up to the age of 12 years and not owning the household dwelling in which the respondent resides exert opposite

effects on the uptake of credit cards to those indicated in the heuristic model. The results are in line with the heuristic model with regard to a number of variables. Greater number of financial assets, higher levels of income, being permanently employed and having higher levels of education are in line with the heuristic model and predict that these households will have an increased demand for credit card facilities.

Home loan debt

The variables that were shown to be statistically significant are listed as follows: number of financial assets, homeowners, currently not living with their parents, children/dependants 13 years and older, size of family, work status and spending money on education in the past 12 months.

Large family size exerts an opposite effect on the uptake of home loan debt to that indicated in the heuristic model. This may be unique to South Africa and possibly to other developing countries. The results are convergent with the heuristic model with regard to a number of variables. Having a higher number of financial assets, being a homeowner, having children/dependents who are 13 years and older and being permanently employed are as expected, in line with the heuristic model, and predict that these households will have a greater demand for home loans.

Overdraft facilities

The variables that were shown to be statistically significant are listed as follows: number of financial assets, level of education, household income, work status, occupation and getting married in the past 12 months.

The results are as expected and convergent with the heuristic model with regard to the following variables: making use of an increased number of financial assets, being more educated, having a higher level of income and being permanently employed. The occurrence of these events increases overdraft facility usage.

Student loans

The variables that were shown to be statistically significant are listed as follows: number of financial assets, children/dependents up to the age of 12 years, level of

education, changing jobs in the past 12 months and spending money on education in the past 12 months.

Having dependent children up to and including the age of 12 exerts an opposite effect on the uptake of student loans to that indicated in the heuristic model. The results are as expected and convergent with the heuristic model with regard to the following variables: the number of financial assets and level of education that leads to an increased demand for student loan take-up.

Vehicle finance

The variables that were shown to be statistically significant are listed as follows: number of financial assets, rent payers, currently living with their parents, level of education, household income, work status and being self-employed.

The results are convergent with the heuristic model with regard to the following variables: the number of financial assets, being permanently employed and higher levels of income, as well as higher levels of education. They are as expected and in line with the heuristic model. Rent payers are more likely to take up vehicle financing options and self-employed people are less likely to make use of vehicle financing, this is not in line with the heuristic model.

Other loans

The variables that were shown to be statistically significant are listed as follows: number of financial assets, rent payers, having children or dependants, personal income, work status and getting married in the past 12 months.

The results are convergent with the heuristic model with regard to the following variables: The number of financial assets and employment status are as expected and in line with the heuristic model. Higher levels of personal income and having dependent children up to and including the age of 12 exert and not owning the dwelling in which the household reside exerts opposite effects on the uptake of other loans to that indicated in the heuristic model.

6.2.5. Summary

Four research objectives were formulated in section 1.4 to address the main research objective of the study. The main research objective was:

To identify and describe how liabilities are accumulated by young adult South Africans and how household characteristics and events may be related to the uptake of household liabilities.

This section has provided a discussion of the four research objectives and included a description of how each of the research objectives was addressed. A number of highlights were presented in this section based on the findings of the research.

6.3. LIMITATIONS OF THE RESEARCH

As the study spanned a period of fifteen years, certain information relating to the following dependent variables was only included in the later years: overdraft, vehicle finance, student loans and home loans. However, there was sufficient data on these variables to make the analysis valuable and it was deemed unproblematic. It is recommended that the study be repeated in future years using complete information for all the dependent variables.

6.4. SUGGESTIONS FOR FUTURE RESEARCH

The study used the SAARF AMPS surveys for the years 1999–2013, looking at young adults in the youth category from 18 to 32 years of age. This longitudinal study revealed that certain characteristics acted as predictors for households taking up particular debt products during certain life stages.

A follow-up study should be done on this group of respondents as they age past the age of 32 subsequent to 2013. Additional studies could be conducted on the debt holdings pattern of the other age groups including the drivers for using a particular debt product. A similar study should be conducted by making use of another survey instrument to test the effect of risk aversion, non-financial assets and net wealth, which were included in the heuristic model in Table 6.3, but which the researcher was unable to address because the information was not available in the current survey instrument.

Research could be done on the holding of informal debt products that are used by a large number of South African citizens, including the purposes for which they are acquired.

Further research into the spending of individuals for discretionary purposes would be valuable as it has become apparent from this study that the youth are prepared to borrow money to purchase items and hence become indebted during the process.

6.5. CONCLUDING REMARKS

This study investigated the changing needs of a household's demand for liabilities over the life course: focused on young adults. In order to gain an understanding of the changing patterns of household debt over the life course of the youth, the main research objective of the study was formulated as follows:

To identify and describe how liabilities are accumulated by young adult South Africans and how household characteristics and events may be related to the uptake of household liabilities.

In order to address the main research objective, four sub-objectives were formulated. Sub-objectives 1–3 were addressed in the literature review, which culminated in a heuristic model being developed as illustrated in Table 6.3. Sub-objective 4 was addressed in Chapters 4 and 5.

Individuals' usage of debt is influenced by the aging process. People have less demand for debt when they are young; however, as they age and experience certain events and transitions they take up more debt. The amount of debt a person holds reaches a maximum and then starts to decline as the person reaches retirement age.

The data revealed that debt take-up was related to the age of an individual. Life stages were not shown to have a significant predictive effect on the take-up of debt. Nevertheless, life stage according to SAARF is constructed by including the following variables: currently living with your parents, age, marital status and dependent children. The results indicate that currently living with your parents,

dependent children up to 12 years of age, children/dependents 13 years and older and age were significant predictors in the uptake of certain of the debt types. A number of other independent variables were shown to be significantly related to debt uptake. These independent variables are in many instances related to the various trajectories of the life course; for example, an educational trajectory and a family life trajectory. The various events, such as getting an education or getting married and having children, trigger transitions and the transitions are embedded in the trajectories.

The results of this research and the future proposed research studies (section 6.4) will contribute to the policies established by the stakeholders in regulating and understanding the debt industry. The results may also play a part in assisting households to better understand the predictors of taking on debt and ultimately be in a more knowledgeable position. Financially educated households are more likely to secure viable financial futures by taking responsibility for their own debt decisions during each of the life cycle stages. If the debt situation of households improves, then the South African economy will also be in a more favourable position.

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