

**THE RELATIONSHIP BETWEEN FLUCTUATING INTEREST RATES
AND THE NATURE OF CREDIT CARD SPENDING IN A LEADING
SOUTH AFRICAN FOOD RETAILER WITH SPECIFIC REFERENCE
TO CAPE TOWN CONSUMERS**

by

RASHAAD DOMINGO

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SUPERVISOR: MR D.W. DE GOEDE

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Declaration

I, Rashaad Domingo, declare that the contents of this thesis represent my own unaided work, and that the thesis has not previously been submitted for academic examination towards any qualification. Furthermore, it represents my own opinions and not necessarily those of the Cape Peninsula University of Technology.

Rashaad Domingo

Date

Abstract

This research study assesses the impact of fluctuating interest rates on the credit card spending habits within a leading South African food retailer by determining whether a relationship exists between interest rates and credit card spending and whether this relationship is significant. Although there are many factors that influence consumer use of credit cards such as fuel prices, cost of food and affordability, interest rates play a role in the decision making process whether to purchase on credit or not. To assess the effect of interest rates on credit card spending within the food retailer, turnover data by tender type were obtained from the retailer and were compared to interest rate changes as announced by the Governor of the South African Reserve Bank. By using non-parametric Spearman Rank Order Correlations the nature and significance of the relationship between interest rate data and tender data was determined by using a confidence level of 95 %.

Customer surveys were conducted within the Cape Town area to understand the effect interest rates have on credit card usage, what the preferred methods of payments are, retailer preference, shopping frequency, average grocery spend and the perception of interest rate fairness of respondents. A total of 213 completed questionnaires were analysed and significant correlations between various variables were determined and discussed.

The result of the data analysis revealed that a significant adverse relationship exists between interest rates and credit card spending within the selected food retailer.

Key Words:

Credit Card, Turnover, Interest Rates, Food Retailer, Retail Food Sector, Average Transaction Value, Transaction Volume, Tender Type, Consumers, Customers, ShopriteCheckers, Spar, Pick n Pay, Woolworths, South African Reserve Bank, SARB

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Dedication

This dissertation is dedicated to my late father, Achmat Rashied Domingo, my mother Gafsa Domingo, my wife Haadiyah and my daughters Aalia and Salma.

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Chapter 1: Introduction

1.1 Background to the Research

The research study assessed the impact of fluctuating interest rates on the credit card spending habits of South African consumers within the retail food sector. This was determined by understanding how interest rates affect the pocket of the consumer and to what extent interest rates have fluctuated over the last few years. Cognisance was taken of further possible increases or decreases in interest rates and how this will affect consumer spending. An investigation into credit card usage was conducted within the retail food sector to determine national trends with a focus on how Cape Town consumers responded to interest rate hikes.

The research study had a two-tiered approach to the gathering and analysis of data. The first approach was to consult and analyse secondary data to gather useful information to aid with the research study. Secondly, primary data was collected through independent research to gather information from a consumer perspective.

Secondary data was gathered in order to determine the interest rate changes over the past few years; various resources were consulted such as bank data as well as the South African Reserve Bank (SARB) media releases that documented when interest rate changes have occurred. Statistics South Africa (StatsSA) was an additional source in determining when changes in interest rates have occurred. Bank data was used to determine how banks responded to the announcements by the Governor of the South African Reserve Bank and to what extent the banks had increased or decreased their lending rates and in particular their credit card lending rates.

Secondary data was also collected to determine the credit card usage of consumers in the retail food sector. Data was obtained from a leading South African retail food chain. For the purpose of confidentiality the chosen food retail organisation is referred to as Company X in this research study. The data represents the value and volume of various types of legal tender of which the total credit card spending by consumers, on a national level, is reflected on a month by month basis. From this

data it was established how credit card spending as a form of tender in the retail food sector was influenced by the change in interest rates i.e. did the value of sales drop as increases in interest rates were experienced or did the adverse occur and to what extent did credit card turnover decrease or increase.

To gauge consumer response to interest rate fluctuations and the use of their credit cards, consumer surveys were conducted within the Cape Town area. From these surveys it was determined what form of tender consumers preferred and whether interest rates have had a direct impact on their decision to use borrowed money. The surveys were used for explanatory purposes in order to determine why consumers chose certain tenders and how they reacted to interest rate fluctuations. The average transaction value of a Cape Town consumer was then determined from the sample surveyed and compared to the national average transaction value of Company X. Data drawn from secondary sources were descriptive in nature to determine the nature of the relationship between credit card spending and interest rates. Data was drawn from other retail sectors to determine whether the food sector had been impacted as much as the other retail sectors.

1.2 Problem Statement

Is the decline in credit card turnover growth experienced by food retailers due to the increase in interest rates?

Credit card usage for any retailer is a vital form of tender. Credit cards have transformed consumer preference when selecting a tender type, since its introduction in the 1950's and have changed the way retail payment systems function (Mann, 2005:1). The interest rates attached to credit cards are a key factor in the consumer decision making process on whether to enjoy the use of credit or not (Business Encyclopaedia). Cognisance has to be taken that there are many other factors that contribute to and influence consumer buying power. With the consumer adversely feeling the effects of increased interest rates and other economic, social or political factors, consumers may not be as eager as before to use their credit cards.

Interest rates have increased by a total of 500 basis points between 2006 and 2008 (SARB, 2012) which according to Lings and Rankin (2008:2) has a negative impact

on the disposable income of consumers. Increased interest rates have a significant impact on consumers as the cost of debt becomes expensive making it difficult for consumers to service their debt, which in turn has an impact on aggregate demand (Prinsloo, 2002:63).

The substantial increase in interest rates and the introduction of the National Credit Act 34 of 2005 (NCA), which was implemented on 1 June 2007, tightened the noose around the neck of consumers by restricting the use of credit (National Credit Regulator, not dated). Retailers have felt the side effects of the interest rate hikes and the NCA by experiencing declines in turnover and credit usage (Lings & Rankin, 2008:7). Consumers have also felt the effects of interest rate hikes and find it difficult to recover from debt despite a decline in interest rates. Food retailers however, have not experienced such a major decline in turnover compared to other retailing sectors (Lings & Rankin, 2008:7; Company X, 2008:1). Interest rates are thus one of the many factors contributing to the steady increase in food prices in South Africa as retailers try to compensate for the declining turnover figures.

1.3 Purpose Statement

This research study determines whether the relationship does indeed exist between fluctuating interest rates and credit card spending habits of consumers and whether the correlation between these variables is positive or negative in nature. The desired outcome of the surveys that was conducted was to determine the most popular form of tender consumers preferred using and to what extent interest rates had impacted on their decision to use borrowed money when shopping at Company X.

The purpose statement can be summarised as the investigation of the relationship between fluctuating interest rates and credit card usage within a retail food organisation and to assess the impact of interest rates on consumers and retailers.

1.4 Research Questions

The research study answers the following research questions. The methodology employed had a bearing on how these research questions were answered:

- By what percentage have the interest rates fluctuated over the past few years?
- What has been the value of credit card spending as a form of tender in a food retail organisation?
- From a consumer perspective how have interest rates affected the consumer?
- Have interest rate fluctuations curbed the use of credit cards?
- What is the preferred form of tender for consumers in the Cape Town area when doing their grocery shopping?
- Is there a relationship between increasing interest rates and credit card spending in a retail food organisation?
- What is the nature of the above relationship?

1.5 Objectives of Research

The research project aimed to establish whether there was a relationship between interest rate fluctuations and credit card spending patterns of consumers within a retail food organisation. To establish whether the relationship exists or not, a literature review was conducted on previous and related research to obtain a clear understanding of the variables and key factors affecting these variables. The literature review highlighted the important factors identified by previous researches in determining the nature of the relationship and the conclusions that these researchers have drawn. Previous research was critically analysed to identify shortcomings and to highlight key findings that assisted with the completion of this research study. After a clear understanding had been established, conclusions were drawn to establish consumer credit card spending in difficult financial times. Primary and secondary data were obtained and evaluated to provide a quantitative analysis of interest rate fluctuations and credit card usage within a retail food organisation.

The analysis of secondary data is descriptive in nature with an attempt to identify the impact of interest rates on credit card spending within a retail organisation and to gather information on interest rate changes. Collection of primary data and the

analysis thereof is explanatory in nature in order to better understand why consumers make the choices that they do when selecting a tender type. Collection of primary data through surveys was also done to obtain relevant information. This was done to determine how consumers perceive interest rate changes and the effect on their credit card spending patterns. The information gathered from these surveys and the analysis thereof assisted in determining whether credit card spending was restricted in times where the cost to service debt was high. Furthermore, the survey provided information on the popularity of credit cards as a form of tender, as well as determining what the preferred tender was of Cape Town consumers when purchasing from a retail food store.

Additional objectives included the following:

- Defining key variables and concepts to give the reader a better understanding of the research study;
- The use of a theoretical framework to answer the research questions constructed;
- To design and utilise a suitable research methodology to obtain the best possible results;
- To interpret these results into useful information to support other objectives; and
- To achieve the overall result of establishing the nature of interest rates on credit card spending.

1.6 Research Design and Methodology

This section focused on the research methodology that was employed to assist with the completion of the research study. It details the methodology selected and how this methodology assisted with the collection of valuable information and the analysis thereof.

Welman, Kruger and Mitchell (2005:8) define quantitative research as the evaluation of objective data and qualitative research as the analysis of subjective data. From this it can be deduced that quantitative research is a statistical analysis of facts and figures to deduce whether relationships exist between variables and that qualitative

research is a descriptive approach in order to understand human behaviour (Babbie & Mouton, 2001:48-53).

Given the above definitions and based on the research topic and the research questions to be answered, the chosen form of methodology for the purpose of this paper was a quantitative approach. The reasoning behind choosing this type of methodology was that the topic and research questions required a clear cut analysis of numerical data to determine the relationship between credit card spending and interest rate fluctuations. The analysis of available data and the data that was acquired lends itself to a quantitative analysis rather than a qualitative analysis as the flexibility of the data is limited and allows for a clear cut conclusion to be drawn rather than an interpretation of human behaviour.

In order to measure the credit card spending as a form of tender within a South African food retailer, secondary data in the form of a national tender analysis of the various types of tender used as payment was obtained from Company X. The national tender analysis was obtained from the company's finance division with permission obtained from the finance director. The data gathered from Company X was analysed to determine if credit card spending was affected when a change in interest rates was experienced and whether there was a fluctuation in the use of other tender types bearing in mind that there are other forces influencing consumer spending patterns. Information was drawn from this to determine percentages of total turnover and the correlation between interest rates and the nature of credit card spending. This data was analysed and adapted to support the research and to obtain answers to the applicable research questions. Secondary data was also obtained from the South African Reserve Bank (SARB) regarding interest rate changes i.e. when they occurred and by what percentage they had changed, in order to determine whether there was a change in the spending patterns of consumers within the retail environment when interest rate changes were announced. The data from the SARB was not analysed and was only used to plot when interest rates changed. The analysis of secondary data was descriptive in nature by determining the relationship of the two variables as per the research title i.e. Interest rates and credit card spending. The secondary data obtained was very rigid in that it cannot be altered by the researcher in any way and this data does not lead to explanatory analysis.

Primary data was collected via customer surveys to determine the types of tenders used by consumers in order to gauge the impact of interest rates on the choice of tender and whether credit cards are the preferred choice of tender. These customer surveys were conducted, in the form of questionnaires, within the Cape Town area and related to the national credit card turnover of Company X. Questionnaires were analysed to determine whether credit cards play an important role in the customers' lives during the current economic situation. Analysis of this information provided insight as to whether interest rates are an important factor as to the way consumers in South Africa shop. The primary data collection and analysis was more flexible than the secondary data. The surveys allowed for the exploration as to why consumers preferred using certain tender types and how they reacted to interest rate changes. The primary data was explanatory in nature as it explained the spending habits of consumers regarding credit card spending based on the data that was collected.

It is difficult to overcome the disadvantages that were experienced where secondary sources were involved as there was no control over how this data was collected and analysed by these outside sources (Welman *et al*, 2005:151). The honesty and poor response by respondents when filling out the questionnaires is equally difficult to control however self-administered questionnaires and concise questionnaires to gather relevant information may have alleviated this disadvantage (Babbie & Mouton, 2001:258). A bigger sample size would have to be drawn in order to minimise the disadvantage of the research not being fully representative of the population (Welman *et al*, 2005:71) and an assumption was made that the data would be relative to the national spending patterns in Company X as national data was obtained from Company X.

The questionnaires should be able to give one a fair understanding of whether customers are as eager as they were before to pay using their credit cards as opposed to other tender types. Respondents were randomly approached to ask for their participation in the survey, and questionnaires were then handed to those willing to participate as the questions were sensitive in nature i.e. enquiring about income brackets, spending patterns using credit cards and other forms of tender. This method was selected so as to get the best possible representation of the population and more accurate responses from respondents, as respondents were willing to participate which ensured a more accurate and honest response. A quota system

was used when approaching potential respondents to ensure that the sample satisfies all demographic variables. The survey was conducted at various stores of Company X in the Cape Town area taking into account the demographics of the area.

The addition of the self-selection method ensured a demographic representation of different race groups when collecting primary data. By using the two methods in conjunction, participants were sought from various race groups. Participants were selected from those willing to participate so as to make up the required numbers in the various race groups. Furthermore to support the self-selection sampling method an attempt was made to achieve a 50 % split between males and females across the various race groups. Given the demographics of Cape Town regarding race, the following race groups were targeted: white, black, Asian and coloured. There was no age bias in the collection of primary data.

1.7 Significance of the Research

Consumers and businesses alike have been impacted by the financial state of South Africa and of late the global financial crisis. Interest rate hikes, rises in food and fuel prices and weakened exchange rates are all factors that affect the growth of the South African economy. In order to curtail inflation and to meet inflationary targets set by SARB, strict monetary policy was implemented in the hope of improving the financial state of the country and the consumer in an effort to discourage unnecessary spending and to curb the use of credit. However, credit cards are an important form of tender for the retail industry and an important 'survival' tool for cash strapped consumers. With consumers using credit cards less and less as the cost of debt increases, it is important to understand how consumer spending patterns will be affected and how and why consumers prefer using certain tender types, especially during difficult financial times. Similarly as the cost of using borrowed money decreases, consumer spending patterns may change and consumer preference to certain tender types may change as well.

The research study determines the nature of the relationship between interest rates and credit card spending patterns in the retail food industry. The results of the research will be valuable to retail food organisations when forecasting spending

patterns of consumers as this research study provides insight into the way consumers think and behave to interest rate changes. The analysis of primary and secondary data will assist retail food organisations to understand the popularity of card usage as a form of tender. It will also aid in ensuring that proper systems are put in place so that increases in card usage is catered for through proper structures, information systems and processes. This is important for retailers to cater for as it is most likely that card usage will supersede the use of other forms of tender in the future and the fact that banks are promoting debit cards as opposed to cash and cheque usage. It will also provide retailers with additional information to negotiate and substantiate lower bank costs as higher volumes will yield greater revenue to the banking sector as the costs to retailers for card transactions are higher than that of cash and cheques.

The critical analysis of previous research highlights shortcomings of such previous research to assist in better understanding the factors that influence consumer spending patterns. Coupled with the findings of the research conducted in this study, the relationship between interest rates and credit card spending was established. There is very little research conducted within the South African context as to how interest rates affect retailers and consumers. This research study will add body to the subject by addressing unanswered questions not handled by previous research.

1.8 Delineation of the Research

The research was limited to a single food retailer focusing on the spending patterns of Cape Town consumers. Focus was applied to the effect of interest rates in relation to credit card spending. Cognisance was taken that there were other major factors that influenced credit card spending. When selecting Company X as the preferred retailer on which the research study is based, the following considerations were taken:

- One of the leading food retailers in South Africa;
- Availability and willingness of the Company to provide information;
- Credit card sales a main form of tender in day to day operations; and
- Willingness and participation of consumers to the research.

1.9 Limitations of the Research

The research was only conducted within the retail food sector within South Africa, however, cognisance was taken of global research. Information was gathered on all tender types used in Company X with the research focusing on credit cards. The research that was performed within this research study was the analysis of statistical data purely on a quantitative basis. The sample was drawn from the Cape Town region as time and budgetary constraints did not allow for a national survey to be conducted. The data analysis was related to the national credit card usage of Company X. Although there are many factors that influence consumer spending patterns and the use of credit cards as a form of tender, this research study only looked at the effect of interest rates on credit card spending patterns.

The research did not cover credit card usage in other retail sectors or in other retail food organisations other than Company X. Therefore data, analysis and findings were Company X specific and may not be related to the total spending habits of consumers in South Africa when frequenting food retailers but may provide an insight into how consumers may behave when affected by interest rate hikes. The analysis of secondary data is for the period January 2006 to December 2010 of Company X as 2011 data was not available at the time of commencement of this paper.

1.10 Chapter Division

The chapters to follow outline the approach that was taken to address the problems posed, available literature and provide a theoretical framework for the completion of the dissertation.

The chapters that follow will cover the following:

Chapter 2: Literature Review;

Chapter 3: Research Design and Methodology;

Chapter 4: Data Analysis and Interpretation of Results;

Chapter 5: Discussion; and

Chapter 6: Conclusion and Recommendations.

This study also provides the reader with an understanding of the problem and what is to be achieved on completion of this study.

1.11 Summary

The purpose of this chapter was to provide a background to the research study and the approach taken in reaching the outcome of proving whether a relationship exists between fluctuating interest rates and credit card turnover in a retail food chain. The problem was highlighted as well as the purpose of the research study. The objectives of the research were outlined and research questions were listed that needed to be answered by the study. The research design and methodology that was employed to achieve the purpose of the study was highlighted. This chapter also discussed the significance of the research. Limitations of the research were also defined. The following chapters discuss previous studies, methodology employed to perform data analysis and interpretation, the discussion of the results of the data analysis and the conclusion to the study.

Chapter 2: Literature Review

2.1 Introduction

To obtain a better perspective of the research project and the research topic, it is important to define the scope of the project. The research will be conducted within the retail food sector of South Africa. The retail sector forms part of the services sector of the economy with retail organisations providing goods and services to end users for final consumption (Moss, 2002:3). Van der Westhuizen (2005:59) defines the retail sector as an industry that concerns itself with the resale, without transformation, of new and used goods and products to the public for household consumption. BitPipe (2005) describes the retail sector as the final step in the distribution of merchandise. The retail sector is categorised into non-durables such as food and beverages, services such as insurance and banking, durables such as household appliances and semi-durables such as clothing and footwear (Van der Westhuizen 2005:60).

2.2 Retail Organisations

A retailer is an organisation within the retail sector that derives more than 50 % of its turnover from sales of goods or services to consumers for final household consumption (Van der Westhuizen 2005:60). Goods and services are sold through distribution channels such as stores, online and direct marketing. The retail food sector focuses on the resale of food and general merchandise for final consumption. Retail food organisations that operate in this sector are commonly referred to as grocery outlets. The most popular retail food stores in South Africa are Spar, Shoprite Checkers, Pick 'n Pay and Woolworths. Although similar in nature, each of the above role-players operate successfully in the retail food market as each chain is differentiated by service, product offerings, brand appeal, pricing, business strategy and target market. What makes all these organisations successful is that as human beings we need to eat and no matter what the inflation rates are, the prices of food are and the economic state of the country or globally, we will continue to buy food. It is for this reason that during times of financial crisis, when every industry, including the retail food sector, experiences financial difficulty, it is the retail sector that comes off worse. The financial difficulty experienced by the retail sector, is however, felt less in the retail food sector than other retail sectors as the first thing that consumers curb

their spending on is luxury items in order to meet their basic needs such as the purchasing of food.

This is further supported by Maslow's hierarchy of needs. According to Maslow the most basic and strongest needs to be satisfied is physiological needs. It is stated so because these are needs that need to be satisfied first in the search for other satisfactions. Maslow lists these basic needs as food, water and shelter. Given this theory, it could be understood that no matter what the cost of food is, the physiological needs of humans will always be met.

2.3 Credit Card and Interest Defined

The Business Encyclopaedia (n.d.) defines credit as "a transaction between two parties in which one party supplies another party with money, goods or services in return for the promise of a future payment. The lender of credit then charges interest on the borrowed money, goods or services to the borrower as a cost of lending such money, goods or services." Interest can also be defined as the price consumers pay for the benefit of spending the lending institution's money. Furthermore, credit can be defined as a liability as a result of borrowing money or obtaining goods or services against an obligation to pay for such goods or services at an agreed later date (Prinsloo, 2002:63).

Debt on the whole is the willingness of consumers to sacrifice future earnings and possible future consumption for immediate gratification by satisfying current needs or wants (van der Walt & Prinsloo, n.d.:1). It is the South African Reserve Bank (SARB) that influences the prime lending rate that consumers will pay for borrowed money, goods or services by determining the repo rate or the interest rate charged to banking institutions for acquiring the central bank's funds (De Jager, 1998:23). The repo rate has a direct impact on the prime lending rate i.e. the base interest rate that banks charge customers for borrowing bank funds. Banks lend money to customers through various banking products such as loans, overdraft facilities and credit cards.

Credit Cards are a form of tender used by consumers to purchase goods or services and an instrument of debt. These credit cards are a form of short-term financing provided by banks to which interest is attached. Credit card usage is determined by

the interest that consumers have to pay for enjoying the use of credit (Business Encyclopaedia, n.d.) i.e. the lower the interest rates the more likely consumers are to spend and the adverse is also true. There are other factors that influence credit card spending habits such as economic states, over indebtedness, cash flow, the ability to service debt, increased cost of living and unexpected purchases (Daniels, 2001:4). Elshenawi and Rwegasira (n.d.:1) defines credit cards as a payment card that grants the cardholder access to purchase goods or services at the present time and pay for them at a later date to his or her bank on which interest is calculated and payable each month on the outstanding credit. Prinsloo (2002:65) describes credit cards as a convenient method of tender for purchases by deferring the payment to the facility provider at a later date.

Other forms of card products issued by financial institutions include debit cards and buy-aid cards. A debit card is a payment mechanism that allows bank clients to transact at a merchant's point of sale to pay for purchases or services or withdraw cash from retailers or ATM's by directly accessing available funds in their bank accounts (www.investopedia.com). There is no interest charged on debit card balances as balances on these products are not credit balances due to the bank but rather balances of available funds due to the cardholder on which interest is paid to the cardholder by the bank. A buy-aid card is essentially a credit card with additional benefits such as annual bonuses on annual purchases and longer interest free payment periods unlike most traditional credit cards (Cape Consumers).

2.4 The History of Credit Cards

Credit cards were first introduced in the 1950's to the American public and have since changed the way retail payment systems function, and have transformed consumer preference when selecting a tender type as payment (Mann, 2005:1). By 1959 revolving credit was introduced to credit card holders granting flexibility to pay off balances over a longer period (Elshenawi & Rwegasira, n.d.:2). In the 1960's Visa International was formed by the Bank of America and MasterCard was formed by a conglomerate of banks not associated with the Bank of America (Elshenawi & Rwegasira, n.d.:2). These associations formed licence agreements with other banks to allow cross bank interchange and to give cardholders flexibility by allowing such cardholders to transact at participating merchants who prescribed to Visa

International, MasterCard or both (Mann, 2005:15). Banks became less eager to enter into the credit card market alone but preferred joining Visa or MasterCard. These two institutions set standards for issuing and accepting of cards and provided services such as settlement, clearing and authorisations which assisted the banks greatly (Elshenawi & Rwegasira, n.d.:2).

Visa International and MasterCard transformed the credit card industry through globalisation. With the flexibility that these associations introduced, the credit card industry grew in leaps and bounds over the decades along with its advantages and disadvantages. These advantages included wide spread use of card payment systems, security, efficiency from retail payment systems to bank processing, scalability and integration into retail point of sale systems and reliability (Elshenawi & Rwegasira, n.d.:6). Disadvantages included fraud, card counterfeiting and misuse by credit card holders (Elshenawi & Rwegasira, n.d.:7). Other card providers include American Express and Diners Club International.

2.5 Consumer Indebtedness

Credit cards along with lending institutions' lenient standards undoubtedly contributed heavily to the current indebtedness of households that we have in the current situation in South Africa (Stavins, 2000:15). This is one of the reasons why the SARB took a firm stance on the debt situation of South African Consumers by using monetary policy in an attempt to curb spending. This also led to the advent of the National Credit Act 34 of 2005 (NCA) which was implemented on 1 June 2007 and is controlled by the National Credit Regulator (National Credit Regulator, not dated). The situation in the US is no different as consumer debt to disposable income has increased with credit cards being a noticeable contributor to total debt (Stavins, 2000:15). Stavins (2000:16) further states that households that applied for bankruptcy carried high credit card balances and significantly higher debt to income ratios than those who had not filed for bankruptcy.

The SARB had steadily increased interest rates from June 2006 to June 2008 showing a total increase of 4.5 percentage points over this period (Lings & Rankin, 2008:2). The rationale behind the increasing of interest rates by the Governor of the SARB was to firstly curb consumer spending, which he believed was one of the main

contributors to the country's inflation problem (Nevin, 2008:21). This has a significant impact on the consumer as the cost of debt becomes quite expensive resulting in many consumers unable to meet their debt repayments. Changes in interest rates therefore have an effect on credit extended to households which have an impact on aggregate demand (Prinsloo, 2002:63). With salary increases not keeping up with inflation, consumers are experiencing financial pressure thus redirecting any surplus income to pay off outstanding debts (Lings & Rankin, 2008:3).

As a result retailers have felt the side effects of the interest rate hikes. This is currently not just in South Africa but is a global phenomenon. In the United States retail sales had only risen by 2 % over the 12 months ending January 2008 with retail sales reflecting that consumers were focused on buying necessities (Anon, 2008:12). The global financial crisis saw negative growth rates in US retail sales, however this recovered with positive growth rates of 6.5 % and 7.7 % in 2010 and 2011 respectively with positive results expected for 2012 (<http://www.babypips.com>). Bankruptcy rates are also increasing in the US (Stavins, 2000:15). Lending institutions and federal banks across the globe have increased interest rates under the pressures of the global economic crisis which is hitting every country, business and consumer and the probability of a US recession imminent (Stanlib, 2008:9).

Secondly, the increasing of interest rates also encourages savings and investments to stimulate the economy (Aron & Meullbauer, 2000:2). However, consumer savings levels are deteriorating with 2007 figures being the lowest ever recorder in South Africa (Stanlib, 2008:3). This is mainly due to a decrease in disposable income as consumers have to fork out more due to inflationary pressures leaving less money to save. Consumer indebtedness is dependent on interest rate fluctuations. The desire of consumers to over extend their current debt status becomes less desirable as interest rates increase (Prinsloo, 2002:66) making it a contributor to the declining retail figures. Non-discretionary spending such as food, fuel and electricity continue to sell whereas discretionary items such as cars, furniture and clothing are under huge pressure as consumers have an instinct for survival and cut the purchasing of discretionary items first. Similarly consumers curb their spending on luxury food items and stick to purchasing necessities thus causing a decline in sales in the retail food sector. Due to the high cost of living for South Africans, the rate of consumers not meeting debt demands are increasing drastically with banks recording their highest

levels of repossessions. The increased interest rates have also created that the cost of properties has come down as people cannot afford the costs associated with high bonds any longer (Stanlib, 2008:3). As a result properties are being devalued creating a negative wealth effect. (Stanlib, 2008:3)

There does not seem to be any short term relief for South Africans as fuel and food prices are expected to steadily increase in the months to come (Nevin, 2007:34). With maize being Dollar priced, this puts further pressure on food prices due to the weakened Rand. As a result consumers have to decide on how best to channel their money in order to survive from day to day. Consumers are becoming increasingly aware of the impact of interest rate fluctuations and are tightening the belt when it comes to spending. This is evident with the decline in the purchase of luxury items as the purchase of necessities take preference. There is also a drive from lending institutions, government and the consumer to decrease liabilities in order to improve liquidity.

The majority of credit cardholders in South Africa are generally in the middle to upper income groups which is why cash still remains the tender of choice in South Africa as the majority of South Africans fall into lower income groups and do not have the luxury of the use of a credit card (Moss, 2002:35). The majority of lower income earners are from the black population and the higher income earners are mainly from the white population. According to Daniels (2001:6), the total outstanding debt of total income is 18.03 % for the black population, 34.32 % for the coloured population, 60.10 % for the Indian population and 66.14 % for the white population. From this data it can clearly be established that there is a distinction between the characteristics across various race groups when it comes to debt. This substantiates that majority of credit card holders' fall within the middle to upper income groups (Daniels 2001:14). As far as gender statistics are concerned males outstanding debt to income ratio is 43.90 % whereas females have a ratio of 19.89 %. A large portion of the above percentages are made up of housing debt (Daniels 2001:7). It is the lower income group that spends up to 50 % of their income on food leaving little or no money left over to service debt hence the low number of credit cards in this income group. The highest income group spends only 11 % of their total income on food leaving more money available to service debt, and hence credit card usage is still high in this income group (Moss, 2002:35).

There are many factors that influence the use of credit by consumers such as an increase in disposable income, asset holdings of households, cost of credit, age distribution of the population, control over credit extension, control over deposit rates and control over lending rates (Van der Walt & Prinsloo, n.d.:10). Noticeably over the last few years the cost of credit has increased significantly. This and the control over lending rates exerted by the SARB would be the main factors influencing South African consumers' use of credit. Many credit card providers have attached affinity programs to their credit cards to promote credit card usage (Mann, 2005:52). This has also increased the popularity of credit cards and has an impact on consumer choice when selecting a tender when paying for goods and services as consumers' weigh up the rewards receivable (Mann, 2005:52). However, the negative impact is an increasing credit balance with service fees and interest attached to it. For consumers to obtain credit has become harder as lending institutions have an obligation to comply with National Credit Act regulations by seeing to the best interests of their customers by ensuring that their customers do not over extend themselves as far as debt is concerned. This has resulted in a slowdown of credit usage and has also left a lot of consumers in financial trouble.

2.6 Card Usage

Credit card spending in Company X makes up an average of 22 % of the total tender received in respect of turnover (Company X, 2010:1). This has however, remained relatively constant over the period under review as the preferred method of payment of consumers within Company X still remains cash which represents approximately 50 % of the total tender accepted (Company X, 2010:1). However, total card usage i.e. credit cards and debit cards, have increased over the last two years. Credit card usage is therefore critical to the long-term sustainability of the company due to the high percentage of total tender that it makes up. Consumer decision to use credit cards as a form of tender is also dependant on the value of the purchases (Plouffe, Vandenbosch & Hulland, 2000:112). Consumers are most likely to use cash for low value items and use the card payment method for substantially high value items.

Card usage is only expected to increase significantly in years to come with the card payment system eventually becoming the dominant form of tender when paying for

purchases. Banks across the globe are desperately trying to eradicate the cheque payment system and substitute it with the promotion of the debit card system. With new developments in card technology like the chip card technology that overseas banks have already implemented and that South African banks are in the process of rolling out the technology, retailers have to align their processes and payment systems to keep up with the expected volumes. Retailers therefore have to brace themselves for the dominance of card technology.

Company X is constantly seeking ways of improving its ability to cope with the ever-changing card payment system. Currently Company X and many other retailers are upgrading their point of sale systems to comply with EuroPay, MasterCard and Visa (EMV) international payment technology system standards to be globally competitive and to be noticed as serious role-players in the international retail industry (Company X 2007:5). Although credit cards are an important form of tender for Company X and many other retailers, one great disadvantage of accepting this form of tender is accepting the fraud risk attached to credit cards. Skimming of credit cards, the stealing of information off the magnetic strip to reproduce fraudulent credit cards, have increased over the years with fraudulent transactions costing businesses and banks millions of Rands. Hence, the drive toward the issuing of chip cards as they are less easy to skim and have many more security features than conventional magnetic stripe cards therefore creating a more secure way for consumers and retailers to transact. However, payment systems need to be constantly upgraded to remain one step ahead of credit card criminals. This is costly to both banks and merchants.

With interest rates steadily increasing between 2006 and 2008, retailers on a whole had experienced a decline in turnover as consumers were thinking twice before spending unnecessarily (Lings & Rankin, 2008:7). To ease the effects of the global financial crisis central banks around the world started decreasing interest rates between 2009 and 2010 with rates remaining relatively constant between 2011 and 2012 (Harrison, 2008). There was therefore a call to seek other ways to curb consumer spending other than to raise interest rates and in response the National Credit Act (NCA) was instituted (Nevin, 2008:22). This however did not ease the pressures felt by retailers as interest rates continued to rise and the NCA made it more difficult for consumers to obtain credit hence other forms of tenders are given

preference over credit cards as it becomes harder for consumers to service their debt (Lings & Rankin, 2008:3; Company X, 2008:2).

For food retailers however, there has not been such a major decline as experienced by other retailing sectors (Lings & Rankin, 2008: 7; Company X, 2008: 1) as consumers still need to eat and tend to cut out luxury spending before reducing the expenditure on necessities i.e. food. Despite this, food retailers have still experienced a decline in turnover. The growth percentage has been very low compared to previous years. Interest rates are thus one of the many factors contributing to the steady increase in food prices in South Africa.

Total card usage; debit and credit cards; in Company X makes up a total of approximately 46 % of the total tender received as a form of payment on turnover (Company X, 2010:1). On a global scale South Africa's total card usage is not as high as countries such as the US, Canada and the UK, however, the use of credit cards in South Africa as a percentage is significantly higher than that of the above mentioned countries with a significantly low percentage of debit card usage in South Africa (Mann, 2005: 6). However, debit card usage is increasing steadily. Based on the data provided by Company X the use of debit cards on turnover have increased by more than 130 % from the period February 2006 to November 2010 (Company X, 2010:1). This is mainly due to the promotion of debit cards instead of cheques by banking institutions. With a steady increase in debit cards, the likelihood of debit cards being the chosen form of tender and superseding credit cards and cash in years to come is high (Mann, 2005:26). Similarly Company X's credit card turnover has increased by 58 % over the same period which could be attributable to an increase in interest rates (Company X, 2010:1). South Africa's credit card usage per capita per year only amounts to 4 transactions per year compared to the US and Canada's approximately 100 transactions per capita per year (Mann, 2005:28).

The Consumer Price Index (CPI) is an indication of fluctuations in households cost of living based on the cost of a basket of goods (Martins, 2003:199). Inflationary pressures have worsened in South Africa owing to global food and fuel prices and a weakened Rand and interest rates are expected to remain high in order to attain the SARB inflationary targets (Stanlib 2008:4). Subsequently we have seen a decrease in interest rates from June 2008 to date. CPI figures for May 2008 showed inflation to

be at 11.7 % which was significantly higher than the SARB's target range of 3 % to 6% with food inflation up at 16.9 % (Stanlib, 2008:5). CPI Figures for January 2010 showed inflation to be 6.2 % which was significantly lower than 2008 (StatsSA, 2010:4). Statistics released by Stats SA showed food inflation to be 2.4 % at the end of January 2010.

Consumer confidence is at an all-time low owing to uncertainties regarding the global and South African financial status and the South African political situation with the African National Congress's (ANC) alliance partners calling for a shift to the left in financial policy, i.e. a more socialistic financial approach promoting social welfare. This also affects business confidence and investment. This causes uncertainty and changes spending habits of businesses and consumers and a low investor confidence. According to news reports on 7 November 2008 the International Monetary Fund (IMF) has appealed to countries around the world to reduce lending rates to improve economic conditions and to avoid a global economic meltdown. At the time it was expected that SARB would have heeded this call and that South Africans would have some reprieve. The international community heeded the call of the IMF and steadily decreased interest rates to ease the pressures of the global financial crisis on consumers. By February 2009 the interest rate in South Africa started to decrease.

In summary, credit card spending is an important tender type to Company X with both credit and debit card tender making up a total of 46 % of total tender accepted as payment. Although interest rates are a determining factor when using credit, cognisance needs to be taken of other factors such as food and fuel prices, a weakened Rand and the uncertainty of the economic climate all of which contribute to consumer uncertainty, spending habits and card usage. Owing to the global financial crisis and appeals by the IMF, SARB has steadily decreased the interest rate which has brought about relief for consumers allowing for a freer use of cards.

2.7 Future Payment Trends

Card usage patterns will undoubtedly change in the future due to globalisation and changes in technology (Mann, 2005:38). Since South Africa's first democratic elections in 1994, the spending power of previously disadvantaged individuals

increased dramatically and this gave rise to a new, important economic factor, the black middle class. The emergence of the black middle class has significantly changed consumer spending patterns in South Africa (Wilson, 2003). This increased consumer spending and added tremendous value to the economy. The black middle class is most likely to continue to grow giving more people access to credit cards, thus increasing spending power and greatly influencing retail sales.

With more South Africans having access to banking facilities and with bank plans to eradicate cheque usage, payment by card will show a dramatic increase over the next few decades. There are many advantages associated with card usage. One such advantage is the added security for retailers in that it reduces the handling of cash. It may also reduce the significant dominance of cash as portrayed by Company X's data as card payments are more secure, thus reducing the risk associated with cash for retailers and banks alike. With the advent of new payment technologies and enhancements to the card payment system, the risk to retailers is reducing. Retailers are enhancing their systems to accommodate changes in the banking industry which would undoubtedly see a dramatic growth in card payments as well as new forms of tender such as mobile telephone payments. Increasing interest rates are however a stumbling block as far as the growth of credit cards is concerned. Although interest rates have reduced significantly over the past few years, the possibility of future hikes in interest rates does exist.

The global economic crisis as well as a possible change in economic policy by the ANC leadership will affect consumer spending patterns and the cost of food, all of which contribute to retail food growth and credit card usage. It is the researcher's opinion that debit card usage will increase significantly and supersede credit card and cash usage as the majority of South Africans are not in the financial position to own credit cards. The advent of mobile payments will grow significantly over time and will also contribute to the decline of cash as a major form of tender. Also, with the strict criteria that the NCA prescribes to lending institutions, credit cards will be harder to come by hence the faster growth rate of debit cards. Banks are also aiming to eradicate cheque usage by 2017 with the aim of replacing cheque books with debit cards or hybrid cards. This will significantly contribute to an increase in card usage by consumers.

Daniels (2001:18) established that consumer indebtedness increases as a result of a decrease in cash flow. He also established that the greater portion of consumers' income is spent on housing and food. The researcher agrees with Daniels's findings in that consumers tend to look at debt as the way out when cash is scarce and that the basic necessities of man are seen to first i.e. food and housing. Daniels (2001:19) also states that the ability for consumers to service debt is declining, in particular in the lower income groups and the main factors contributing to this decline are decreasing cash flow, housing costs, interest rates, food and oil prices, increasing cost of electricity and the weakened Rand. Mann (2005:60) states that consumers fail to appreciate credit cards and do not take cognisance of the risks attached to its usage and as a result this leads to financial distress. Consumers are not aware of the implications of using credit cards until it is too late i.e. when they experience financial difficulty. To ensure that consumers are aware of the impact of credit card usage, lending institutions need to have more consumer awareness programs especially in times of financial distress as currently experienced by consumers.

2.8 Conclusion

The focus of this research project is to assess whether interest rate changes indeed affect the use of credit cards within a food retail organisation or if there is absolutely no correlation, as interest rates will not affect the attainment of necessities. From the above it is quite clear that credit cards and the card payment systems are an important part of consumers' and merchants' lives. The card payment systems are here to stay and the popularity of this form of tender will only grow in future years. How consumers use this form of payment, responsibly or not, is key to the financial state of such consumers and in the bigger scheme of things the success of retailers and other merchants. Government also has a key role to play through monetary policy on the financial state of the citizens of this country.

Not much research has been done on the correlation between interest rates and credit card usage with regard to a retail organisation within the South African context, whereas research has been done on related topics and will be consulted in completion of the research study. Previous works will be critically analysed to provide an overall view of the importance of credit cards, interest rates and retail sales taking cognisance of the financial position of both consumers and the financial state of the

South African and global economies. Cognisance will also be taken of other factors other than interest rates that affect the use of credit cards. Whether any lessons can be learnt, or recommendations can be applied within the South African context is what the research study will address. This paper will take an explanatory approach into how consumers react to interest rate fluctuations in terms of credit card usage and why consumers behave or react in a certain manner.

Chapter 3: Research Design and Methodology

3.1 Introduction

This section will focus on the research methodology that was employed to assist with the completion of the research study. It details the methodology selected and how this methodology assisted with the collection of valuable information and the analysis thereof. It will also look at the sample selection for primary data and the various available sources for secondary data.

3.2 Research Design

Welman, Kruger and Mitchell (2005:8) define quantitative research as the evaluation of objective data and qualitative research as the analysis of subjective data. From this it can be deduced that quantitative research is a statistical analysis of facts and figures to deduce whether relationships exist between variables and that qualitative research is a descriptive approach in order to understand human behaviour (Babbie & Mouton, 2001:48-53).

Given the above definitions and based on the research topic and the research questions to be answered, the chosen form of methodology for the purpose of this study would be a quantitative approach. The reasoning behind choosing this type of methodology is that the topic and research questions require a clear cut analysis of numerical data to determine the relationship between credit card spending and interest rate fluctuations. The analysis of available data and the data acquired lends itself to a quantitative analysis rather than a qualitative analysis as the flexibility of the data is limited and allows for a clear cut conclusion to be drawn rather than an interpretation of human behaviour.

3.3 Research Methodology

3.3.1 Limitations

The research data is limited to a single national food retailer focusing on operations within the borders of South Africa. Primary data collection specifically focuses on Cape Town consumers due to time and budgetary constraints. Thus the research does not fully represent the entire South African population. Data collected and

analysis thereof is purely quantitative in nature. Due to the sensitive nature of the questionnaire, the willingness of participants will be a challenge. Poor responses or honesty of respondents will skew the data analysis. Data analysis and findings is Company X specific with specific reference to the effect of interest rate fluctuations on credit card sales. This is therefore not representative of the retail food sector but only representative of the effect on Company X. Secondary data is rigid and therefore limits explanatory analysis and the researcher has no control over how Company X has collected its data. Data provided by Company X was for the period January 2006 to 2010 December 2010. 2011 and 2012 data was not available at the time of requesting the information from Company X.

3.3.2 Sampling

The sampling frame for this research study is Cape Town consumers with the aim of obtaining at least 200 respondents to the questionnaire. Although 200 respondents were used, it is desirable to have a larger sample size to provide better statistical analysis. However, due to the time constraints and small scope of the study, it was decided that 200 would suffice. This should be able to provide a fair understanding of whether customers are as eager as they were before to pay using their credit cards as opposed to other tender types. The sample was drawn using a mix of probability and non-probability sampling by using simple random sampling and self-selection sampling (Welman *et al*, 2005:69). Respondents were randomly approached to ask for their participation in the survey. A simple selection process was adopted by selecting every fifth person after the completion of a questionnaire. This gave everyone a fair opportunity of being selected as a participant with the main aim of ensuring a demographic representation of different racial groups. Questionnaires were then handed to those willing to participate as the questions are sensitive in nature i.e. enquiring about income brackets, spending patterns using credit cards and other forms of tender. This method was selected so as to get a better and more accurate response from respondents. It also ensured that the goal of achieving at least 200 completed questionnaires was obtained. A quota system was used when approaching potential respondents to ensure that the sample satisfied all demographic variables. The survey was conducted at various stores of Company X in the Cape Town area taking into account the demographics of the area.

The self-selection method was used as well by sending out questionnaires to known associates requesting their participation in the study. By using the two methods in conjunction, participants were sought from various race groups. Furthermore to support the sampling method an attempt was made to achieve a 50 % split between males and females across the various race groups. Given the demographics of Cape Town regarding race, the following race groups were targeted: white, black, Asian and coloured. There was no age bias in the collection of primary data.

3.3.3 Data Collection

In order to measure the credit card spending as a form of tender within a South African food retailer, secondary data in the form of a national tender analysis of the various types of tender used as a payment instrument was obtained from Company X. The national tender analysis was obtained from the company's finance division with permission obtained from the finance director. The data gathered from Company X was analysed to determine if credit card spending was affected when a change in interest rates was experienced and whether there was a fluctuation in the use of other tender types bearing in mind that there are other forces influencing consumer spending patterns such as food prices, inflation, affordability, cost of fuel, needs and wants. Information was drawn from this to determine percentages of total turnover and the correlation between interest rates and the nature of credit card spending. This data was analysed and interpreted to support the research and to obtain answers to the applicable research questions.

Secondary data was also obtained from the South African Reserve Bank (SARB) regarding interest rate changes i.e. when they occurred and by what percentage they had changed, in order to determine whether there was a change in the spending of consumers within the retail environment when interest rate changes were announced. The data from the SARB was used to plot when interest rates changed from January 2006 to December 2010. The analysis of secondary data was descriptive in nature by determining the relationship of the two variables as per the proposed title i.e. Interest rates and credit card spending. The secondary data that was obtained is very rigid in that it could not be altered by the researcher in any way and this data does not lead to explanatory analysis.

Primary data was collected via customer surveys to determine the types of tenders used by consumers in order to gauge the impact of interest rates on the choice of tender and whether credit cards are the preferred choice of tender. These customer surveys were conducted, in the form of questionnaires, within the Cape Town area and related to the national credit card turnover of Company X. The customers were assured that their responses would be kept strictly confidential. Questionnaires were analysed to determine whether credit cards play an important role in the consumers' lives during the current economic difficulties. Analysis of this information should provide insight as to whether interest rates are an important factor as to the way consumers in South Africa shop.

Additional data such as biographical and behavioural data was analysed to determine how certain groups' spending patterns differed from each other. Groupings were based on different variables such as race, gender, age, employment status and gross income. Behavioural patterns were then analysed by grouping type in order to understand where consumers shop, where they prefer to shop, how often they shop, how much they spend at food retailers and which of the value added services they utilise at food retailers.

The primary data collection and analysis was more flexible than the secondary data. The surveys allowed for the exploration as to why consumers prefer using certain tender types, behavioural patterns and how they reacted to interest rate changes. The primary data is explanatory in nature as it explains the spending habits of consumers regarding credit card spending based on the data that was collected and what consumer perceptions are of interest rates.

Within the context of this paper the following advantages and disadvantages of data collection have been identified:

Advantages

- The data received from Company X is reliable, as this is received as a full analysis which is completed by Company X on a monthly basis with source data directly from their point of sale;
- The reliability of data regarding interest rate fluctuations was obtained directly from the source, the SARB, ensuring data reliability;

- Obtaining secondary data is easy and has a low or no costs attached to it and it is easier to determine trends (Welman *et al*, 2005:151);
- Costs of customer surveys in the form of questionnaires are low and are easy to administer (Welman *et al*, 2005:152);
- Surveys are able to reach a wide target audience and are flexible (Babbie & Mouton, 2001:263); and
- Allows for measurement and statistical analysis (Babbie & Mouton, 2001:263).

Disadvantages

- Incomplete data from secondary sources as there is no control as to how this data is collected (Welman *et al*, 2005:151);
- Honesty and completeness of respondents to questionnaires (Welman *et al*, 2005:153);
- Poor response (Babbie & Mouton, 2001:261);
- Sample may not be representative of the population (Welman *et al*, 2005:152);
- Data obtained from Company X will not be able to be applied to total credit card spending in South Africa as this will be Company X specific;
- Customer surveys conducted in Cape Town may not be representative of the national spending of consumers in Company X as consumers differ from region to region; and
- Customer surveys were conducted at various stores of Company X. Data collected from these surveys may be biased toward Company X.

It is difficult to overcome the disadvantages that were experienced where secondary sources were involved as there is no control over how this data is collected and analysed by these outside sources (Welman *et al*, 2005:151). The honesty and poor response by respondents when filling out the questionnaires is equally difficult to control however self-administered questionnaires and the use of a concise questionnaire to gather relevant information may alleviate this disadvantage (Babbie & Mouton, 2001:258). A bigger sample size will have to be drawn in order to minimise the disadvantage of the research not being fully representative of the population (Welman *et al*, 2005:71) and an assumption will be made that the data will be relative to the national spending patterns in Company X as national data was obtained from Company X.

3.4 Data Analysis

STATISTICA v.9 (StatsSoft) was used for statistical analysis and data management. Non-parametric Spearman Rank Order Correlations were used to determine relationships between two or more variables. The correlation co-efficient is called the r value and can be between 1 and -1 and can be positive, negative or zero (Welman *et al.*, 2008:234). Non-parametric correlations were used because the data was not normally distributed; a confidence limit of 95 % or $p = 0.05$ was used. Graphs were created using Microsoft Excel.

Correlations were performed on secondary data obtained from both Company X and the South African Reserve Bank (SARB). Data was plotted on graphs and in tables in order to establish trends. Correlations between the interest rate data from the SARB was analysed from January 2006 to December 2010 and the tender details of Company X over the same period. Interest rate data was compared to total turnover details from Company X and the Average Transaction Value (ATV) per tender type. The ATV (total turnover divided by transaction volume) will provide insight into consumer spending patterns with particular reference to basket size at Company X. The ATV will determine whether consumers are spending more, less often or spending less and not spending as much. Each tender type was analysed in order to determine the behaviour of consumers when interest rates fluctuate

Primary data analysis was performed using the data collected from the administered questionnaire. There were three sections to the questionnaire viz. biographical data, consumer behavioural data and tender and interest rate data. The data from the questionnaire was coded to make the data more manageable and captured to a spreadsheet for easier analysis. Each section of the questionnaire was analysed individually to provide quantitative value to each section. The sections were then analysed in a combined manner to profile groups of individuals and the way they reacted to interest rates and to establish behavioural patterns of various groups. Data analysis was completed in an attempt to answer the research questions as detailed in Chapter 1.

3.5 Research Questions

The questionnaire was developed in such a way that it would provide the necessary data to address the research questions. The research questions are listed below with the relevant questions that should address the question.

- By what percentage have the interest rates fluctuated over the past few years? This will be answered through the analysis of the SARB data on interest rate fluctuations between January 2006 and December 2010;
- What has been the value of credit card spending as a form of tender in a food retail organisation? This will be provided through the analysis of Company X's tender analysis; and
- From a consumer perspective how have interest rates affected the consumer? This should be answered by the following question posed to the respondents to the questionnaire.

Which of the following statements describe the effect of interest rates on you as a consumer? Please tick the appropriate box(es).

Curbed my credit spending	
Cut out the purchase of luxury items	
Used my credit card more as there was less disposable income due to increases in other debt costs	
Purchase lower priced items at various retailers rather than one stop shopping (hunting for bargains)	
No effect at all	

- Have interest rate fluctuations curbed the use of credit cards? This will be addressed in the customer survey with the following question;

Do high interest rates curb your use of credit cards?

Yes	No
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- What is the preferred form of tender for consumers in the Cape Town area when doing their grocery shopping? This will be addressed by the following question in the administered survey. A further analysis on the national tender

details of Company X will provide the retailers view on preferred tender utilised by their customers;

Which of the following forms of legal tender do you utilise as payment when shopping at a food retailer?

Cash	Cheque	Debit Card	Credit Card	Buy Aid
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- Is there a relationship between increasing interest rates and the nature of credit card spending in a retail food organisation? This will be answered by comparing interest rate data to Company X's credit card data to determine whether correlation exists; and
- What is the nature of the above relationship? Based on the above analysis of the two sets of secondary data and a comparison between the trends over the period under review, the nature of the relationship will be established.

3.6 Conclusion

This chapter discussed the research methodology and design that was employed in order to be able to answer the research questions as stated in the introductory chapter. The following chapter discusses the analysis and the interpretation of the results collected during the data collection process. This chapter will be used as an aid to the following data analysis chapter.

Chapter 4: Data Analysis and Interpretation of Results

4.1 Introduction

This chapter aims to analyse both primary and secondary data to support the study on consumer behaviour in response to interest rate fluctuations. By using graphs and tables this chapter will explain and interpret primary and secondary data so as to answer the research questions as stated in Chapter 1 of this paper.

The collation of consumer responses to the survey will be analysed and interpreted to provide supporting evidence to establish the relationship between interest rates and credit card spending. Analysis of this primary data will attempt to establish behavioural patterns of respondents based on race, age, employed vs. unemployed and income groups' patterns.

By the end of this chapter there should be enough evidence to support whether a relationship does indeed exist between interest rates and credit card turnover within a major food retailer.

4.2 Secondary Data Analysis

There are two sets of data that will be analysed as part of the secondary data analysis of the paper viz. interest rate fluctuation data and tender analysis from Company X. Secondary data for Company X will be analysed for the period January 2006 to December 2010. The interest rate information obtained from the SARB will be over the same period.

4.2.1 Interest Rate Data Analysis

Interest rates have fluctuated from 2006 to 2010; although the majority of interest rate hikes were between 50 and 100 basis points, there was an overall increase of 450 basis points between June 2006 and June 2008 where interest rates peaked at 12 % (Fig. 1). From December 2008 to November 2010, however, the SARB started decreasing interest rates. An overall decrease of 650 basis points meant that the interest rate decreased from 12 % to 5.5 % over this period.

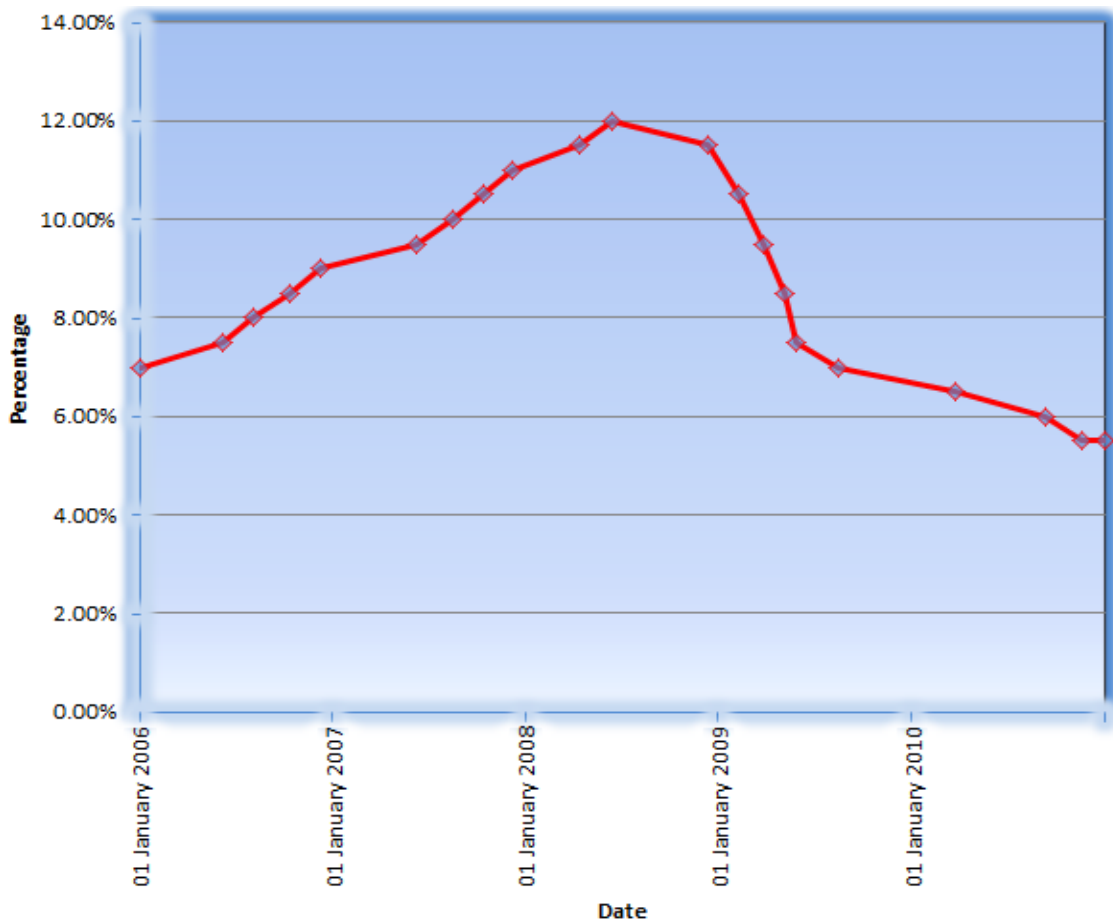


Figure 1: Representation of interest rate fluctuations from January 2006 to December 2010 (Data from the SARB, April 2012)

4.2.2 Company X Data Analysis

Company X provided information on total turnover by tender type, total volume by tender type and average transaction value by tender type for the period 1 February 2006 to 31 December 2010. This data was analysed in the sections below.

4.2.2.1 Volume Analysis

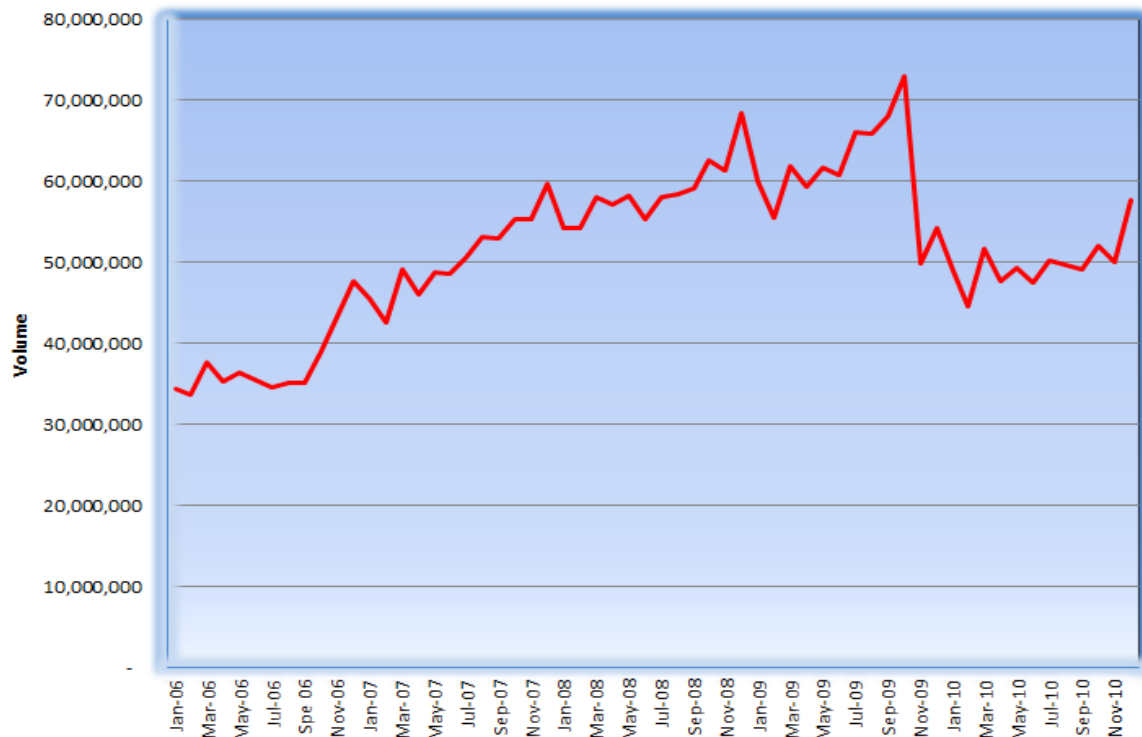


Figure 2: Representation of turnover volumes from January 2006 to December 2010 (data from Company X, 2011)

The total volume of transactions grew steadily in Company X between the periods January 2006 and October 2009 (Fig. 2). The volume increased from 34,471,564 transactions per month to 72,997,485 transactions per month. The company experienced a dramatic decrease in the total number of transactions from November 2009 to December 2010.

Table 1: Total volume of transaction by year from 2006 to 2010 for Company X as well as the year-on-year percentage increase (Company X, 2011)

Total Volume By Year		
	Annual Volume	% Increase
2006	447,809,058	0
2007	607,039,841	36%
2008	705,016,322	16%
2009	736,224,491	4%
2010	598,363,390	-19%

Company X showed a steady growth in volume from 2006 to 2007 (Table 1). From 2007 to 2010 volumes decreased from a growth of 36 % in 2007 to a negative growth of -19 % between 2009 and 2010. The transaction volume information will be more meaningful when compared to Rand value turnover figures of Company X in the next section of this chapter.

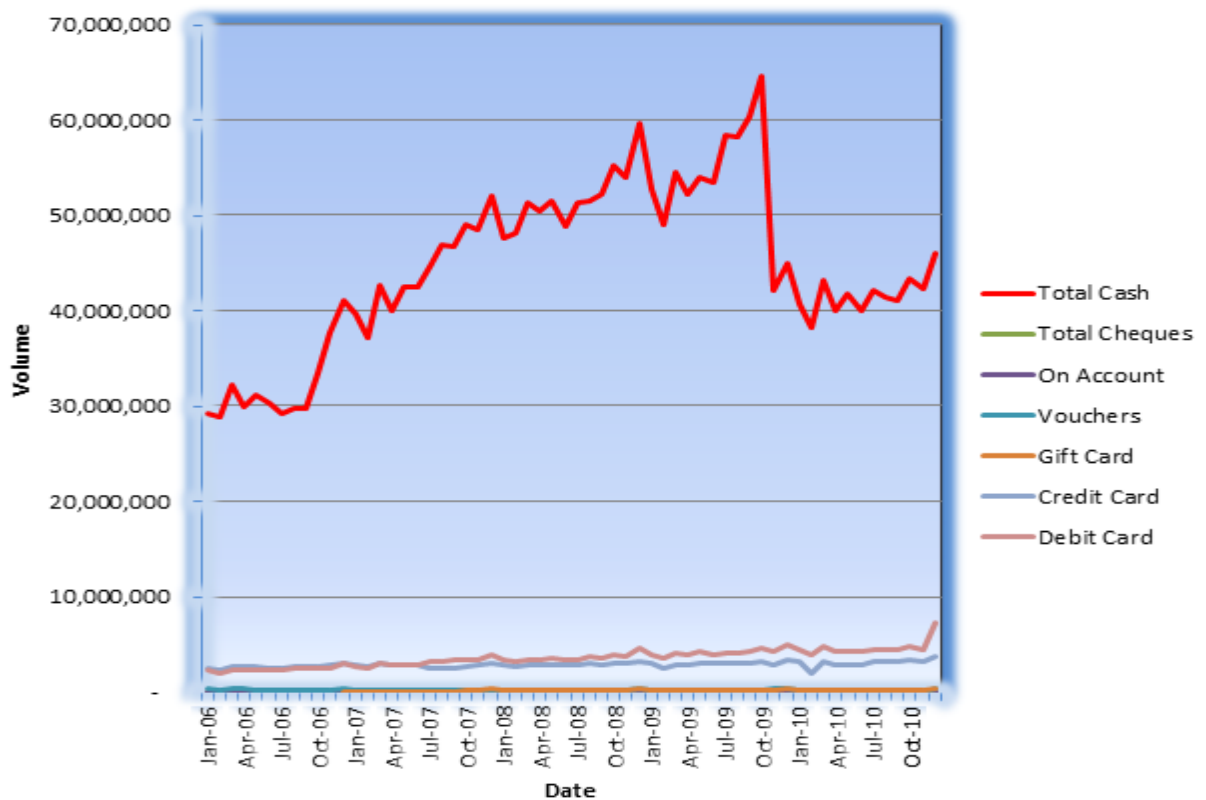


Figure 3: The total tender volume split by the tender types accepted by Company X viz. Cash, Cheques, On Account, Vouchers, Gift Cards, Credit Cards and Debit Cards (Company X, 2011)

The dominant form of tender in Company X is cash and represents a total of 86.6 % of the total volume of transactions over the period January 2006 to December 2010 (Fig. 3). Total credit card volume equates to 5.57 % and total debit card tender equates to 6.97 % of total volume of tenders received during the above period. All the other tender types equate to less than 1 % of the total tender received during this period. Cash remains the dominant form of tender in Company X and probably will in years to come. However, debit card growth is on the rise and in future will probably replace cash as the dominant form of tender as we move into a technology driven world. Company X has already seen a decrease in cheques as a form of tender due to banks promoting debit cards as a replacement for cheque books.

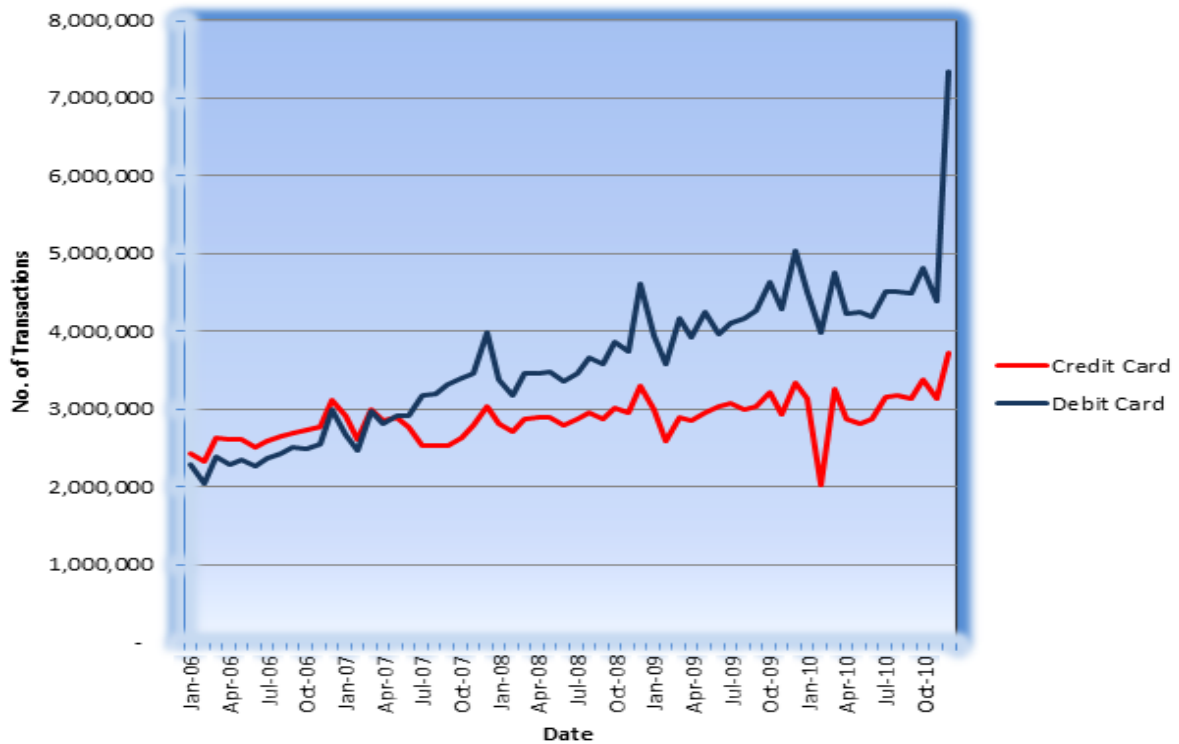


Figure 4: The Credit and Debit card transaction count as a form of tender in Company X (Company X, 2011)

Credit card volumes have remained fairly constant throughout the period January 2006 to December 2010 (Fig. 4). As stated above, debit card volumes have steadily increased as a form of tender in Company X overtaking credit cards as the major form of card tender in Company X in April 2007.

4.2.2.2 Value/Turnover Analysis

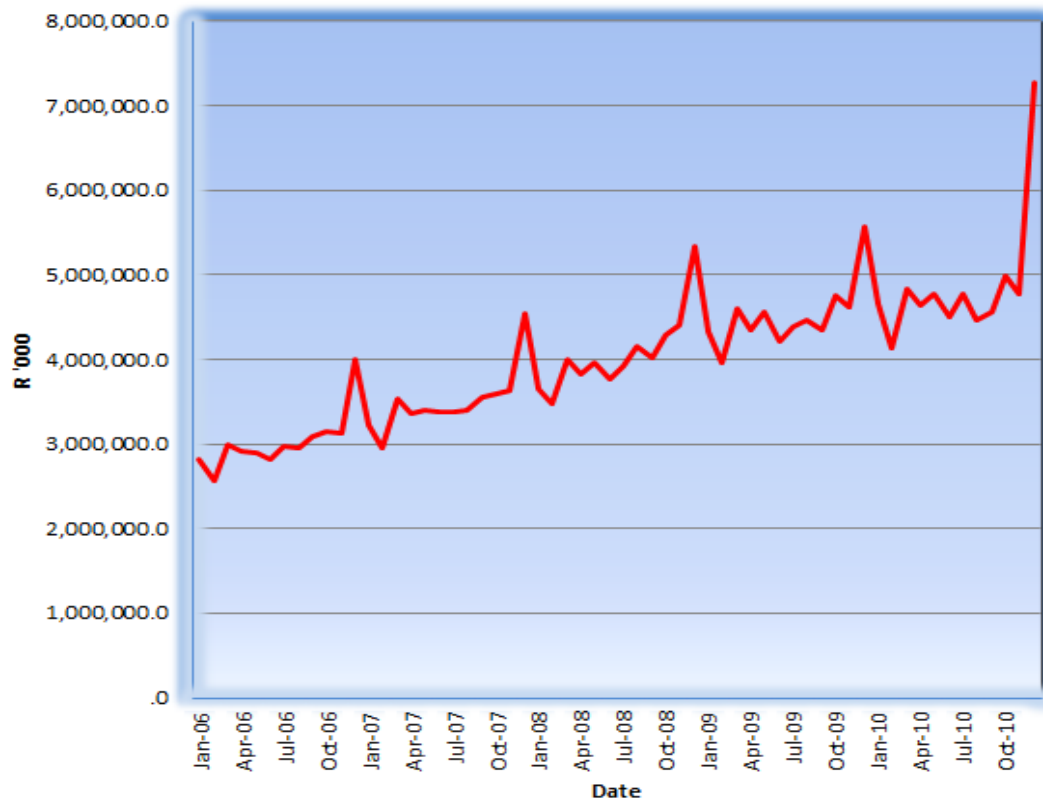


Figure 5: The total turnover value in R'000 of Company X from January 2006 to December 2010 (Company X, 2011)

Company X has enjoyed a steady growth during the period under review with significant spikes over the December holiday periods and an expected decrease in the January and February trading periods (Fig 5.).

Table 2: Total value of transaction in R'000 by year from 2006 to 2010 for Company X as well as the year-on-year percentage increase (Company X, 2011)

Total Value By Year		
	Annual Value R'000	% Increase
2006	36,288,659.6	0
2007	41,936,968.3	16%
2008	48,774,684.9	16%
2009	54,131,497.9	11%
2010	58,360,295.6	8%

Growth in Company X's turnover grew by 16 % per annum from 2006 to 2008 (Table 2). Company X's turnover displayed a decrease in growth rates year on year from 2008 to 2010 with just an 8 % increase in turnover for 2010.

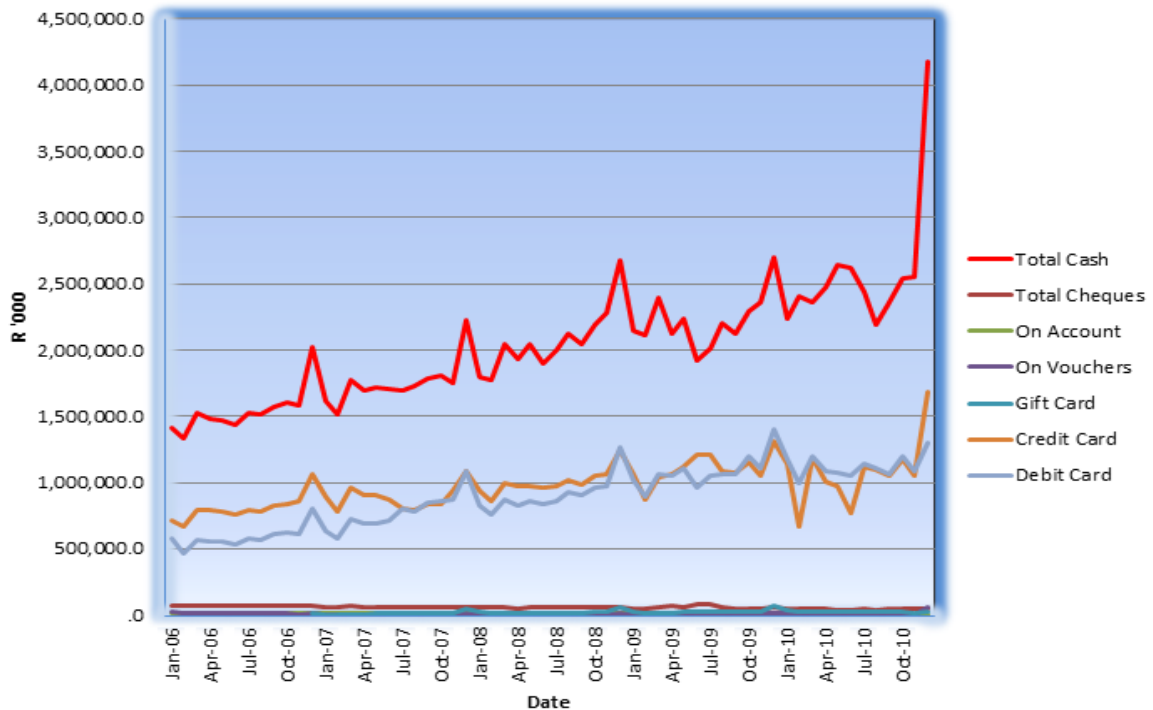


Figure 6: The turnover in R '000 of Company X by tender type (Company X, 2011)

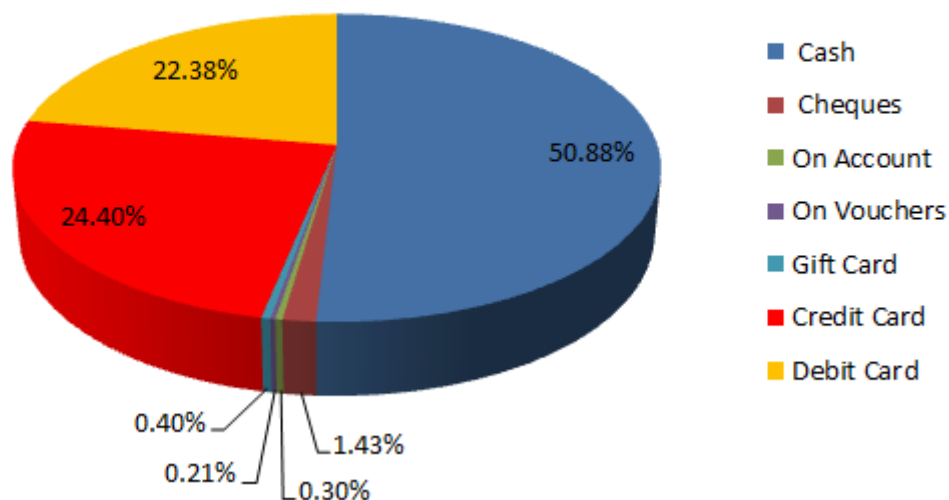


Figure 7: The turnover of Company X by tender type by percentage of total turnover (Company X, 2011)

As illustrated by the tender values (Fig. 6), the dominant form of tender in Company X from a value perspective remains cash, totalling 50.88 % (Fig. 7) of the total value of turnover over the period under review. Card transactions make up 46.78 % of total turnover of which credit cards represent 24.40 % and debit cards represent 22.38 % of total turnover. The other tender types make up 2.34 % of total turnover for the period January 2006 to December 2010.

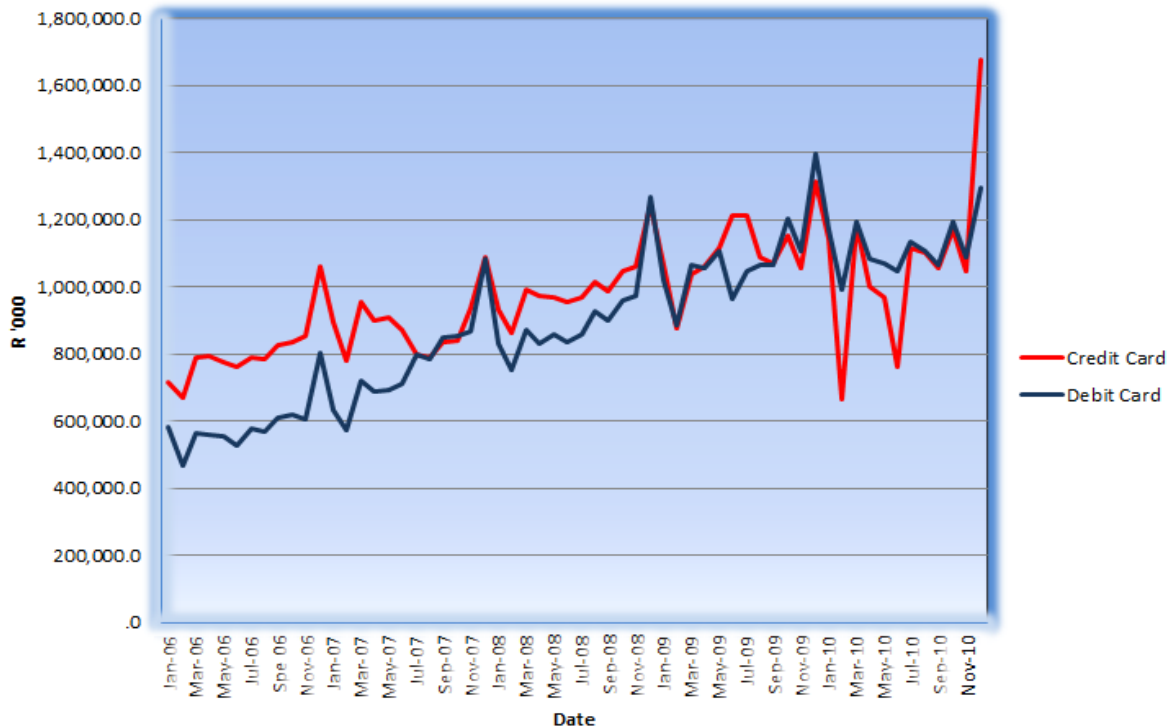


Figure 8: The total Credit and Debit card turnover in R '000 for Company X (Company X, 2011)

The debit card value in Company X has shown significant growth during the period under review, while credit card growth has been increasing at a steady rate (Fig. 8). Company X remains a cash driven business. We could however see a change in the dominance of other tenders in the future as the retail payment system evolves.

4.2.2.3 Average Transaction Value

The average transaction value (ATV) provides information on consumers' purchasing behaviour. The ATV will highlight whether consumers basket values have been increasing or decreasing. The transaction volumes have decreased (Fig. 3) but the turnover has increased (Fig. 5). Reasons for increased ATV are discussed in Chapter 5.

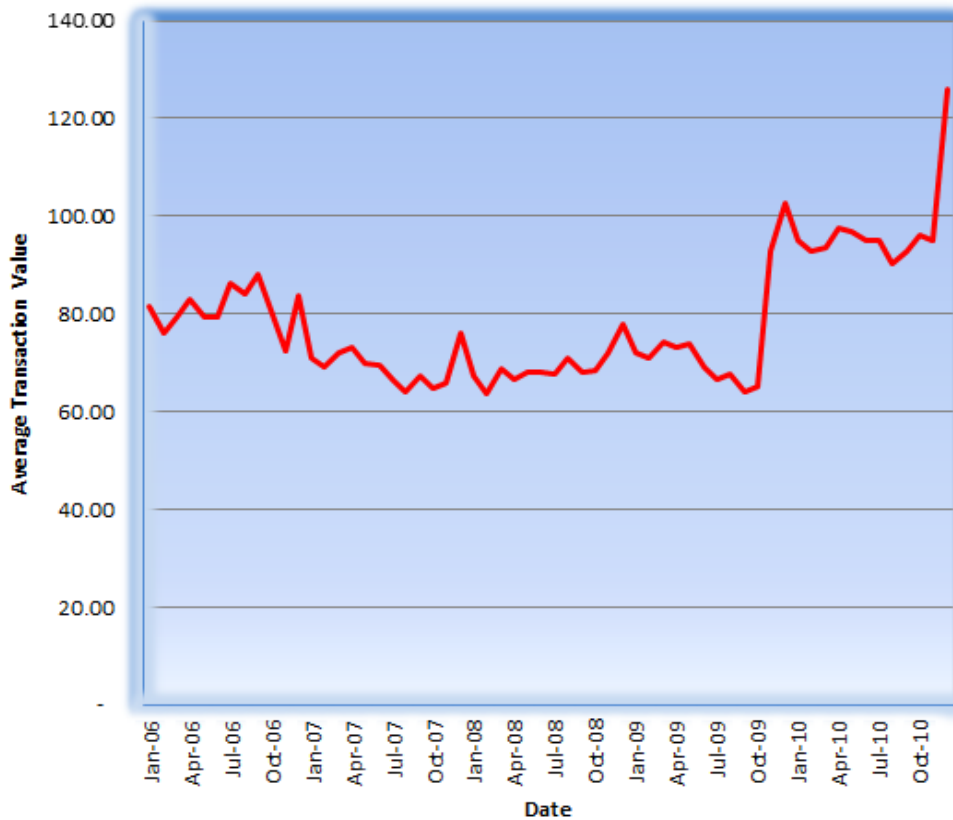


Figure 9: The average basket size of a customer shopping at Company X of the total turnover. (Company X, 2011)

Table 3: The average basket size of a customer shopping at Company X by year from 2006 to 2010 as well as the percentage increase or decrease over the same period (Company X, 2011)

Total ATV By Year		
	Annual ATV	% Increase
2006	81.04	0
2007	69.08	-15%
2008	69.18	0%
2009	73.53	6%
2010	97.53	33%

The average transaction value (ATV) decreased between January 2006 and September 2009 before showing a significant growth from October 2009 to December 2010 (Fig. 9). The average transaction value increased by 33 % from 2009 to 2010 (Table 3). This meant that although turnover increased the number of transactions were less (Fig. 2 and Fig. 5).

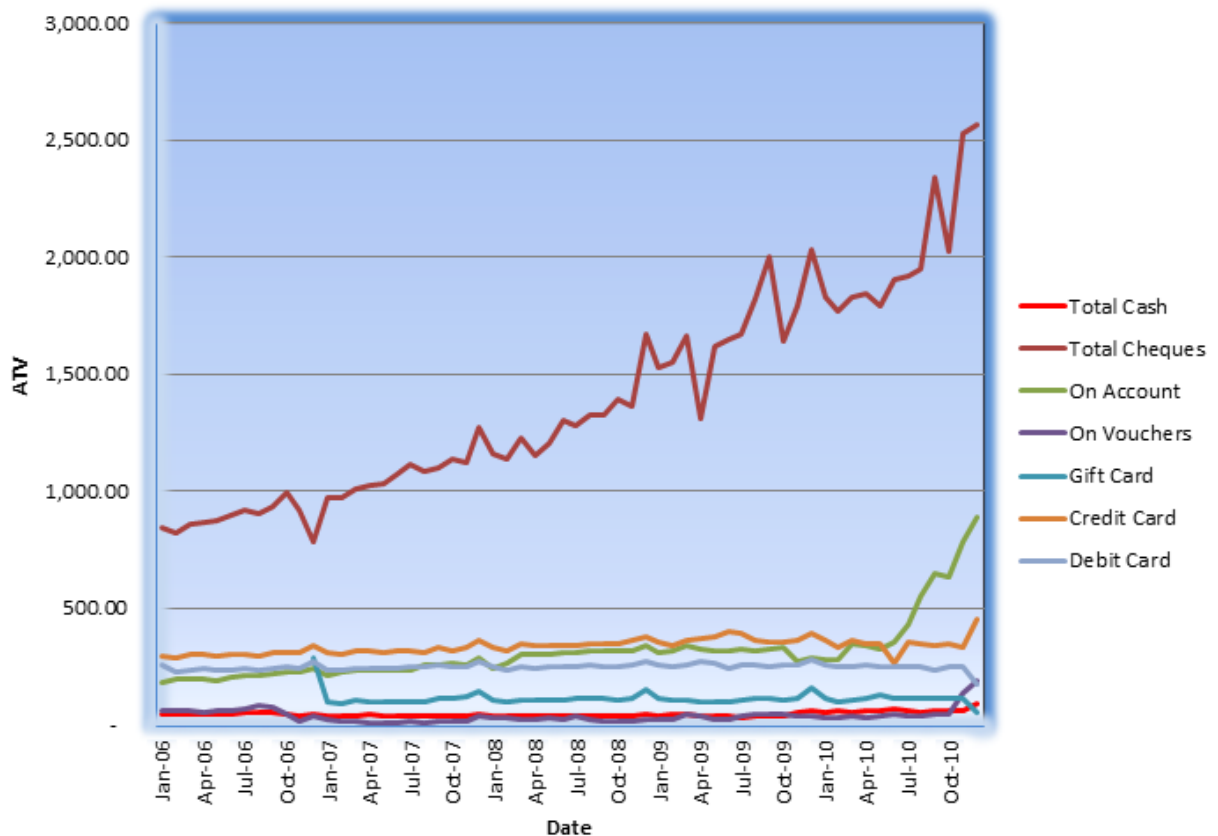


Figure 10: The average transaction value by tender type for Company X (Company X, 2011)

Although cheque volumes are on the decrease, the ATV of cheques in Company X has been increasing significantly and at a faster rate in relation to other tender types (Fig. 10). The ATV of the 'on account' tender type showed an increase from July 2010 to December 2010. All other tender types have remained fairly constant over the period under review.

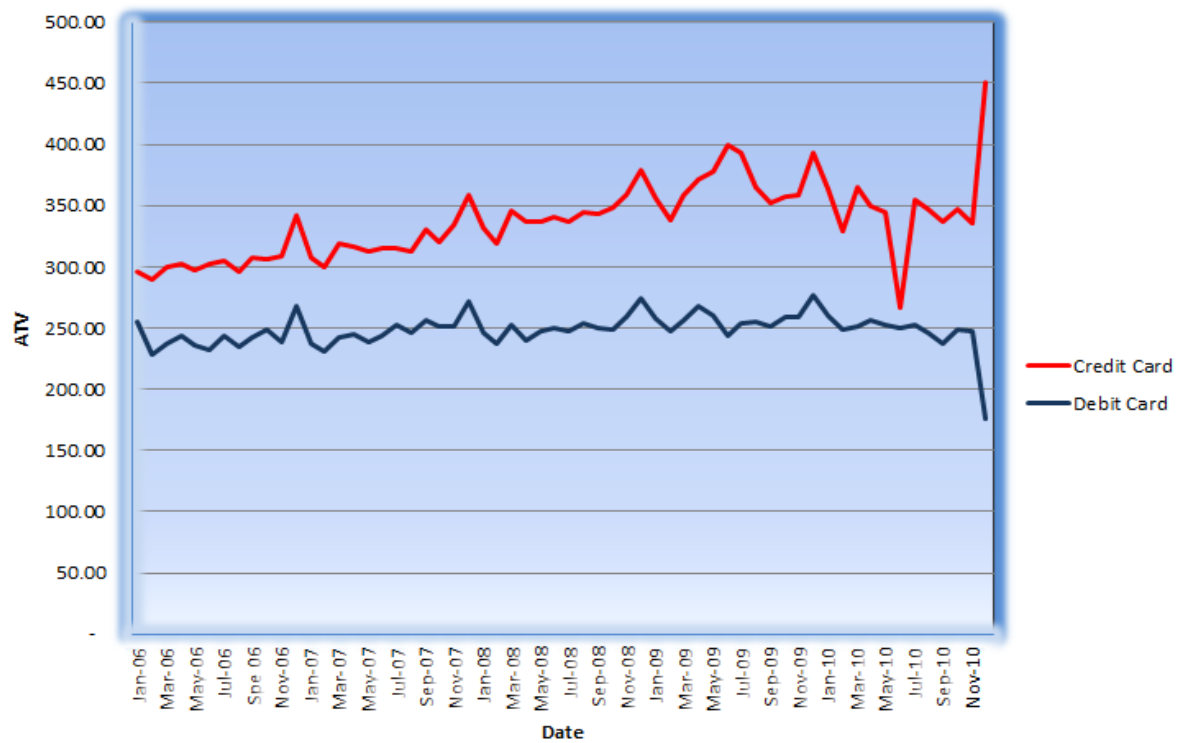


Figure 11: The average transaction value for Credit and Debit card turnover in Company X from January 2006 to December 2010

The ATV for debit cards has remained constant, however, showed a decrease from November 2010 to December 2010 (Fig. 11). Credit card ATV has shown a slight growth with a spike over the December trading periods of which the most significant increase was in December 2010.

4.2.3 Credit Card Turnover in Relation to Interest Rate Fluctuations

This section aims to establish whether there is a direct relationship between interest rate fluctuations on consumer credit card spending by comparing the credit card turnover of Company X to the interest rate changes as announced by the South African Reserve Bank over the period under review. Company X has had steady growth in credit card turnover between 2006 and 2009, with a negative growth in 2010 (Table 4).

Table 4: The total Credit card turnover in R'000 from 2006 to 2010 as well as the year-on-year % increase for Company X (Company X, 2011)

Total Credit Card Value By Year		
	Annual Value R'000	% Increase
2006	9,654,351.2	0
2007	10,605,923.8	10%
2008	12,017,510.8	13%
2009	13,256,263.5	10%
2010	12,899,948.2	-3%

Any significant trend cannot be picked up when viewing Fig.12. A statistical analysis, below, will determine the correlation co-efficient between interest rates and credit card turnover.

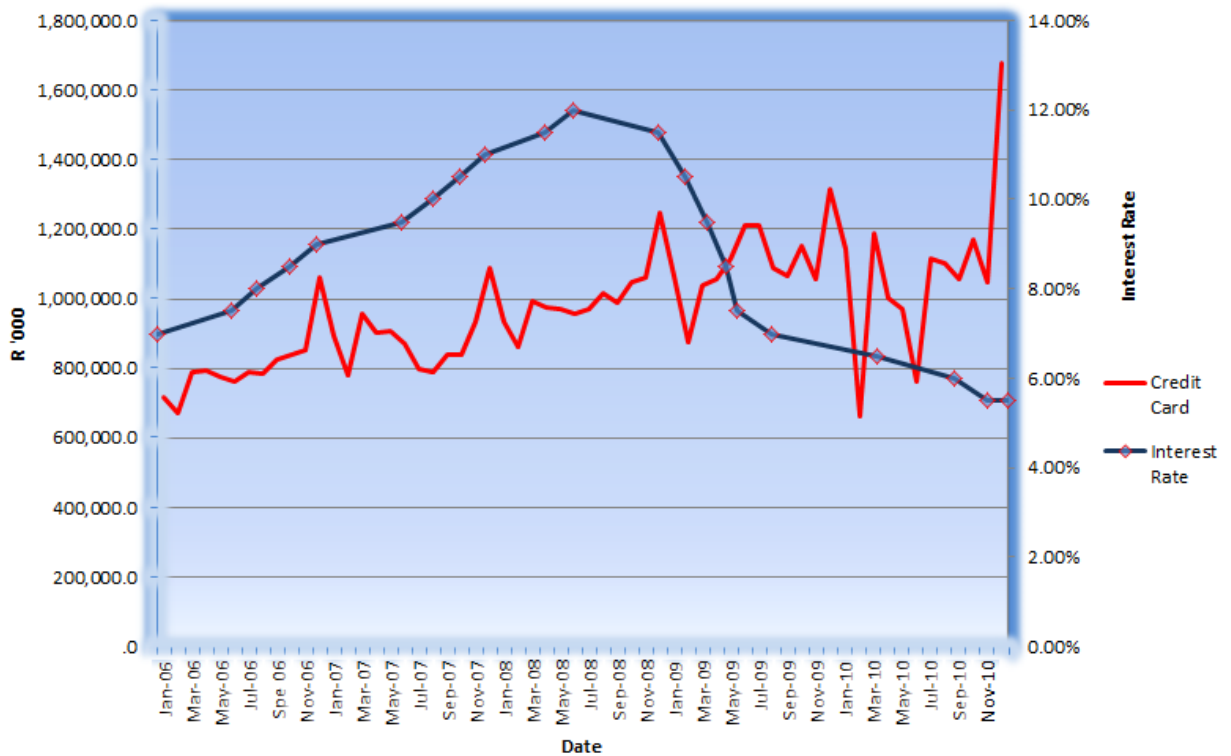


Figure 12: Comparison of interest rate fluctuations against the credit card turnover of Company X from January 2006 to June 2010 (Company X, 2011)

Table 5: The correlations between the interest rate and turnover by tender type and average transaction value, significant values ($p < 0.05$) are in bold type. r is the correlation co-efficient between interest rates (x) and various tender types (y). p represents the confidence limit

	$r(X,Y)$	p
Tender types (total value)		
Total vat incl	-0.196	0.134
Cash	-0.228	0.080
Cheques	0.391	0.005
On account	0.424	0.002
Vouchers	-0.444	0.001
Gift card	-0.146	0.316
Credit card	-0.335	0.019
Debit card	-0.514	0.000
Tender types (average transaction value)		
Total vat incl	-0.705	0.000
Cash	-0.662	0.000
Cheques	-0.721	0.000
On account	-0.519	0.000
Vouchers	-0.503	0.000
Gift card	0.061	0.678
Credit card	-0.229	0.114
Debit card	0.182	0.210

As the interest rate increased the total turnover value decreased, however, this was not a significant decrease (Table 5). As interest rate increased the cash values decreased but the decrease was not significant ($p = 0.08$). Cheques ($p = 0.005$) and on accounts ($p = 0.002$) increased as the interest rate increased with the increase being significant. Although there was a negative correlation for vouchers and gift cards, the negative correlation of vouchers ($p = 0.001$) was the only significant correlation of the two tender types. On the whole, as the interest rate increased, credit card ($p = 0.019$) and debit card ($p < 0.0001$) transactions decreased significantly.

As the interest rates increased, the average transaction values of cash, cheques, on account and vouchers decreased. This decrease was significant as the p value for all these tenders were less than 0.0001. As interest rates increased so did the average transaction value of gift cards ($p = 0.678$). The average transaction value for both

credit ($p = 0.114$) and debit cards ($p = 0.210$) was not significant in relation to interest rates.

Although there was a significant decrease in total credit card turnover ($p = 0.019$) the decrease in the average transaction value for credit cards ($p = 0.114$) was not significant. debit cards ($p < 0.0001$) showed a significant decrease total turnover value, however, the average transaction value for debit cards increased but the increase in ATV was not significant ($p = 0.210$). Cash showed a decrease on both total turnover and average transaction value, however, only the average transaction value decrease was significant ($p < 0.0001$).

In summary a significant negative correlation does exist between interest rates and credit card turnover in Company X ($p = 0.019$).

4.3 Primary Data Analysis

Primary data was obtained through the administration of a customer questionnaire that contained three sections. The first section of the questionnaire dealt with biographical data of the respondents. This section was aimed at understanding who the respondents were. The second section dealt with consumer behavioural data. This section was aimed at understanding where consumers performed their grocery shopping, how often they shopped and how much they spent at food retailers. The last section of the questionnaire provided data on payment methods used by consumers and their opinion on interest rates in South Africa. The primary data is analysed in the points below.

4.3.1 Biographical Data

61.5 % of the 213 respondents were females with males representing 38.5 % of the total respondents (Table 6). 85.1 % of the respondents were between the ages of 25 and 55 (Fig. 13). 98.1 % of all respondents were South African Citizens of which only 4 respondents were foreign nationals. 195 (91.5 %) of the respondents were employed and 18 (8.5 %) were unemployed. Almost half of all the respondents, 49.8% were coloured. White respondents made up 31 % of the total and black respondents made up 14.6 % of the total (Fig. 14). Respondents were almost evenly spread amongst the Income brackets (Fig. 15).

Table 6: Represents the biographical data of respondents

Profile of Respondents			
		n	%
Gender	Male	82	38.5%
	Female	131	61.5%
	Total	213	100.0%
Age	<25	11	5.2%
	25-35	76	35.7%
	36-45	60	28.2%
	46-55	45	21.1%
	>55	21	9.9%
	Total	213	100.0%
SA Citizen	Yes	209	98.1%
	No	4	1.9%
	Total	213	100.0%
Employment Status	Employed	195	91.5%
	Unemployed	18	8.5%
	Total	213	100.0%
Population Group	Black	31	14.6%
	Coloured	106	49.8%
	White	66	31.0%
	Asian	10	4.7%
	Other	0	0.0%
	Total	213	100.0%
Household Income	<R8000	43	20.2%
	R8000 - R15000	45	21.1%
	R16000 - R20000	36	16.9%
	R21000 - R30000	34	16.0%
	>R30000	55	25.8%
	Total	213	100.0%

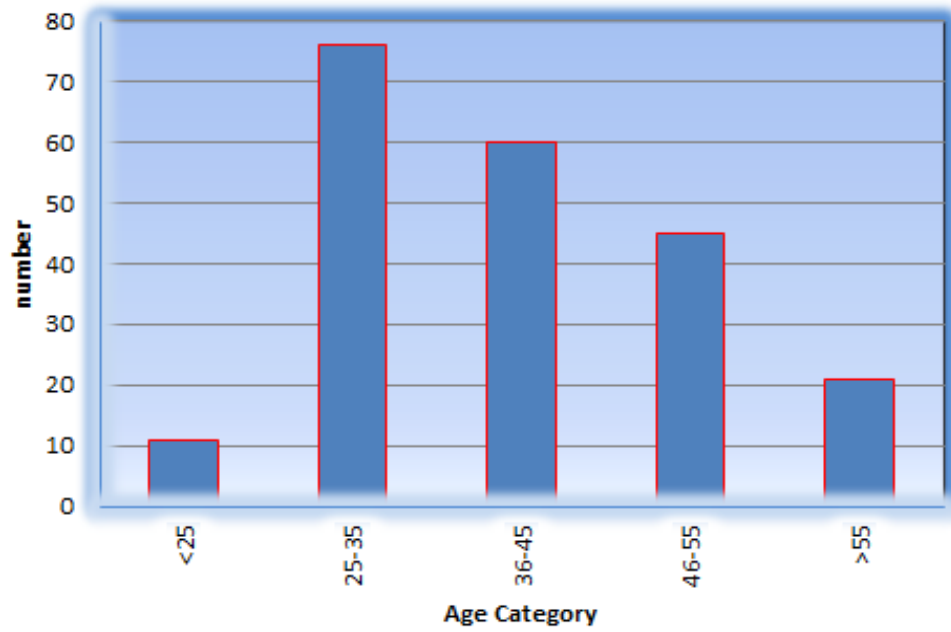


Figure 13: The number of respondents who fall into the various age categories as stipulated in the customer survey

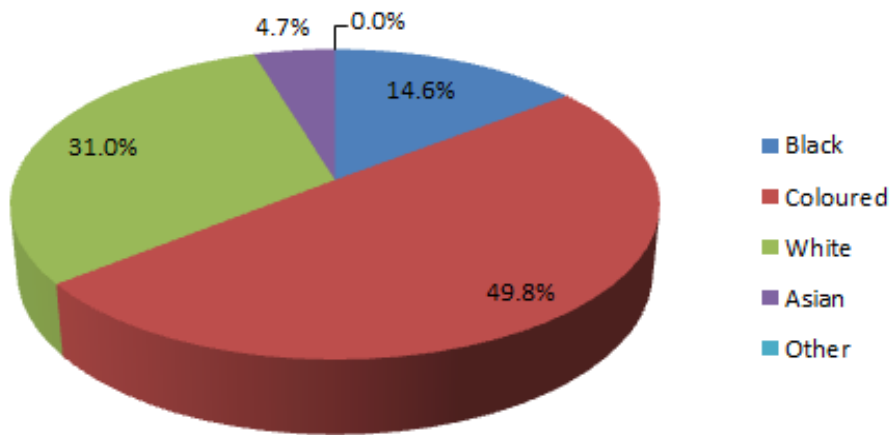


Figure 14: The respondents categorised by population group

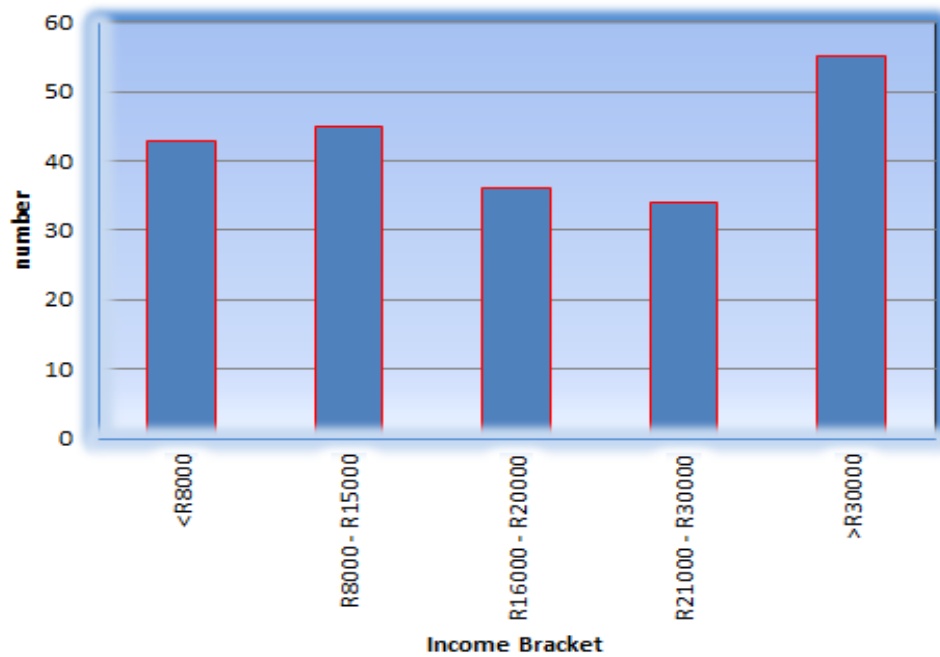


Figure 15: The household income per month of respondents

4.3.1.1 Gender, Race and Income Analysis

The average age of the respondents was between 25 to 35 years of age. However, 85 % of the respondents fell within the ages of 25 to 55. Of the 38.5 % of male respondents 86.5 % or 71 of the respondents were between the ages of 25 and 55 of which 8.5 % of them were unemployed. The 82 male respondents were made up of 14 Blacks, 41 Coloureds, 21 Whites and 6 Asians. 61.9 % of white male respondents had a household income in excess of R21,000 per month. 39.3 % of non-white respondents, i.e. black, coloured and Indian respondents, had household incomes in excess of R21,000 per month.

83.9 % of all female respondents were between the ages of 25 and 55 of which 11 or 8.4 % were unemployed. The 131 female respondents were made up of 17 Blacks, 65 Coloureds, 45 Whites and 4 Asians. 71.1 % of white females earned in excess of R21,000 compared to 23.3 % of non-white female respondents.

Table 7: The household incomes of R21,000 per month and above by racial group

Household Income > R21000		
Race	n	%
Black	8	9.0%
Coloured	30	33.7%
White	45	50.6%
Asian	6	6.7%
Total	89	100.0%

A total of 50.6 % of all white respondents earned R21,000 or more of which the remaining 49.4 % of the respondents were non-white with coloured respondents representing 33.7 % of the total non-white respondents. Black respondents only represented 9 % of the total respondents who earned R21,000 or more of which Asians represented 6.7 %. All respondents that had a household income of R21,000 or more were all aged 25 or older.

4.3.2 Consumer Behavioural Data

The consumer behavioural data provides insight as to the shopping habits of respondents.

Table 8: How frequently the respondents shop at the major grocery retailers, namely ShopriteCheckers, Spar, Pick n Pay and Woolworths

Number of Shoppers Frequenting Retailers						
Retailer	Very Rarely	Rarely	Occasionally	Frequently	Most Frequently	Total
ShopriteCheckers	53	31	55	54	20	213
Spar	56	28	84	40	5	213
Pick n Pay	5	3	35	57	113	213
Woolworths	37	36	57	54	29	213
Total	151	98	231	205	167	852

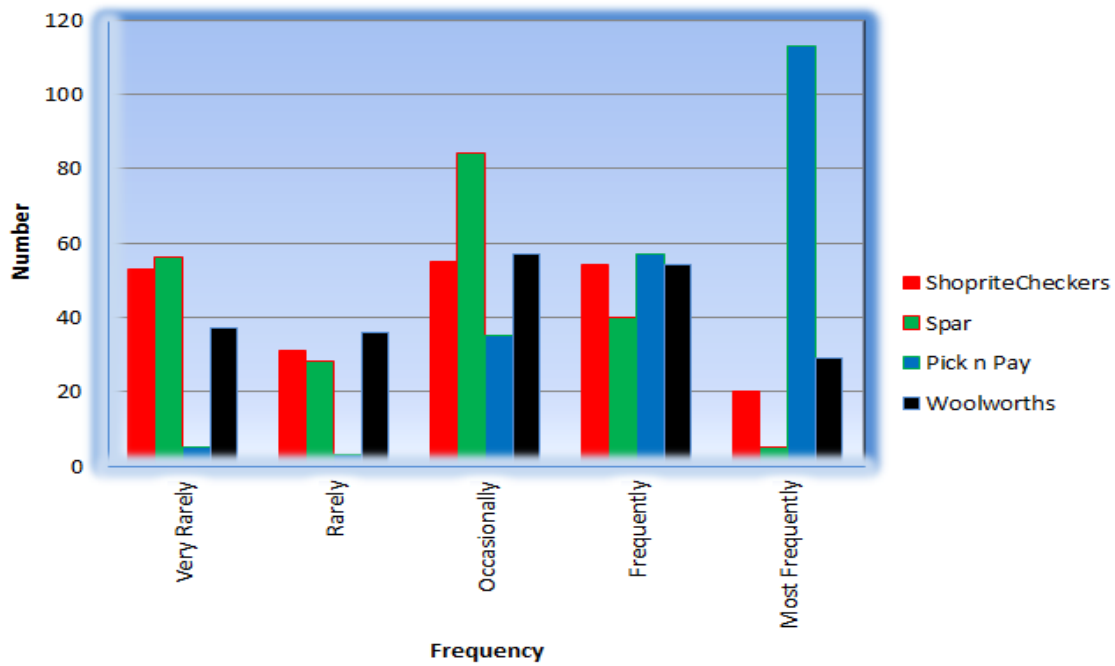


Figure 16: Graphical representation of how frequently the respondents shop at ShopriteCheckers, Spar, Pick n Pay and Woolworths

The retailers that most of the respondents 'very rarely' shop at are, ShopriteCheckers and Spar (Fig. 16). It is quite evident that the bulk of the respondents most frequently shop at Pick n Pay. Following Pick n Pay as 'most frequently' frequented is Woolworths, ShopriteCheckers and Spar respectively. There is relatively an even distribution of customers under the 'Frequently' shopped at column. 51.2 % of all respondents 'occasionally' to 'frequently' visit each of the four retailers. Spar is visited 'occasionally' by 39.4 % of all the respondents.

Pick n Pay depicts a perfect positive trend on the graph compared to the other retailers in that a low number of respondents 'very rarely' shop at the retailer and a high number of respondents shop at the retailer 'most frequently'. Pick n Pay also provides the best shopping experience of the retailers (Fig. 17). 38.5 % of the respondents believe that Woolworths provides the best overall shopping experience.

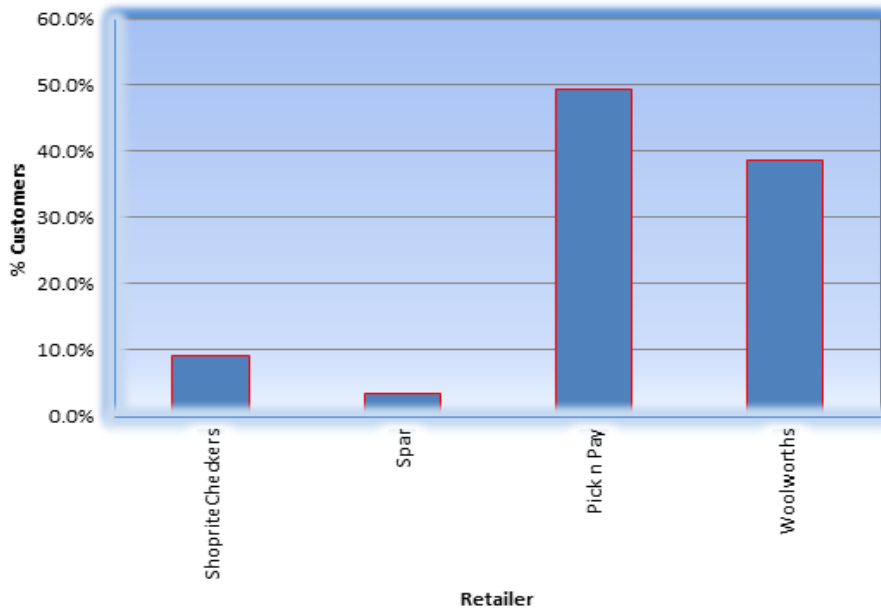


Figure 17: The result of the respondents that selected one of the four retailers that provides the best overall shopping experience

48.4 % of the respondents frequented retailers to do their grocery shopping on a weekly basis (Fig. 18). The rest of the respondents either performed their grocery shopping daily, bi-weekly or monthly.

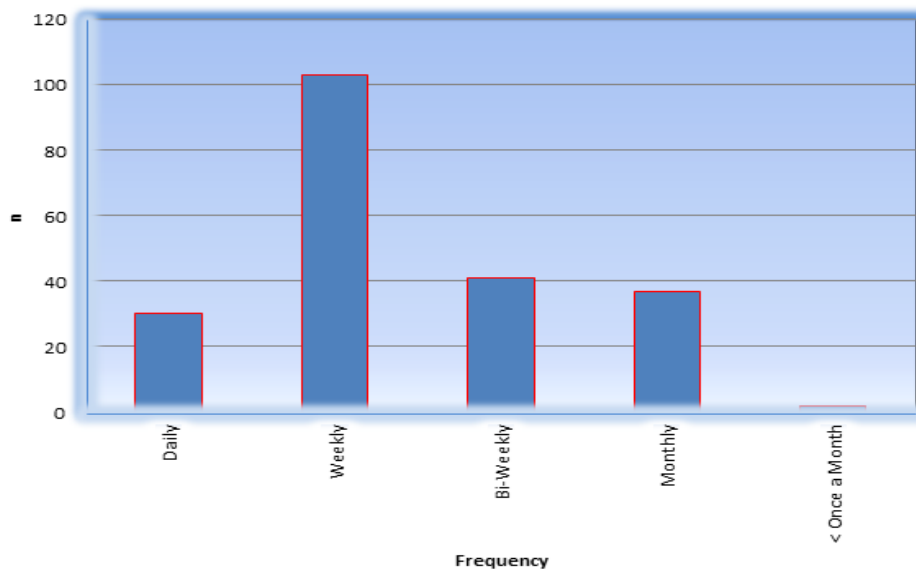


Figure 18: How often respondents frequented the four retailers to perform grocery shopping

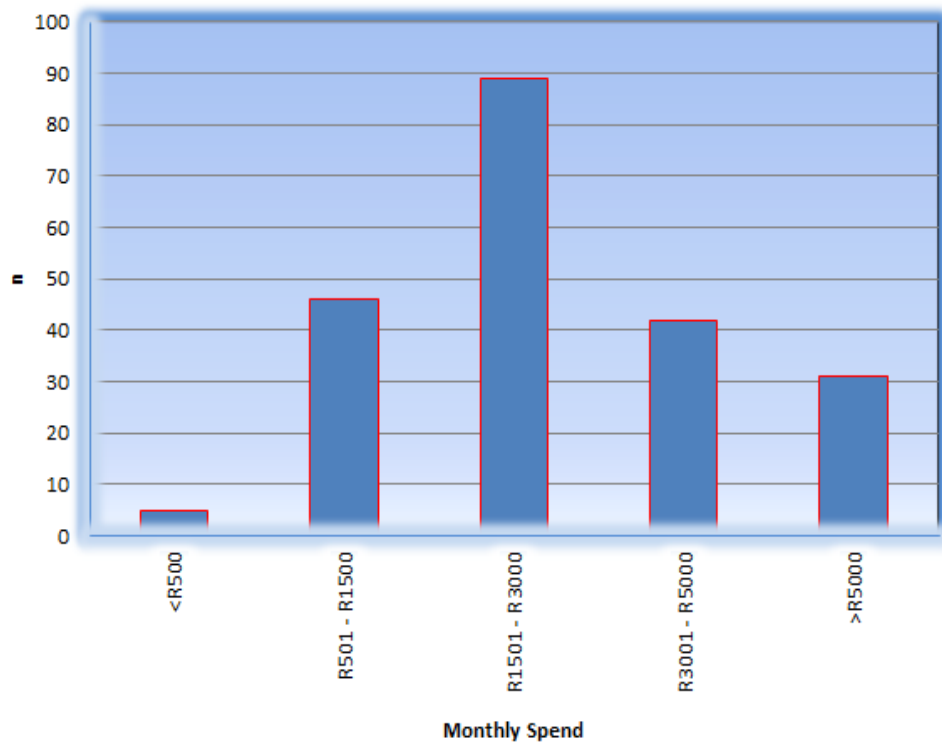


Figure 19: The monthly value spent on grocery shopping by the total respondents

A total of 41.8 % of respondents spent on average between R1,501 to R3,000 on grocery shopping at food retailers per month (Fig 19). 76.1 % of all respondents spent more than R1,501 on groceries per month.

Table 9: The value added services that retailers offer and how many of the services respondents utilise as well as a percentage split

VAS Utilised		
Service	n	%
Bill Payments	130	32.4%
Airtime	94	23.4%
Prepaid Electricity	102	25.4%
Bus/Airline Tickets	20	5.0%
Event Tickets	55	13.7%
Total	401	100%

Out of the value added services offered by retailers, bill payments are the most popular service utilised by retail customers (Table 9).

4.3.3 Tender and Interest Rate Data

Table 10: The preferred methods of payment used by the respondents when shopping at a food retailer

Legal Tender Details		
Service	n	%
Cash	125	33.1%
Cheque	3	0.8%
Debit Card	156	41.3%
Credit Card	93	24.6%
Buy Aid	1	0.3%
Total	378	100%

Most of the respondents preferred using their debit cards as a payment method with a large number of respondents using cash as well (Table 10). Of the 156 customers that used a debit card, 84 or 53.8 % of those customers also used cash as a method of payment. Of the 213 respondents, 93 customers used their credit cards as a method of payment of which 49 said they used cash and 64 used debit cards as well and 35 used both cash and debit card as an alternate means of payment.

The majority of respondents own either a MasterCard or a Visa card; 58.8 % in total (Fig. 20). A low percentage of respondents owned Amex (5.5 %) and Diners (3.6 %) cards. The two debit card products, Maestro (17.3 %) and Electron (14.2 %) made up 31.5 % of the total card products owned by respondents. Less than 1 % was made up of 'other' card products not listed.

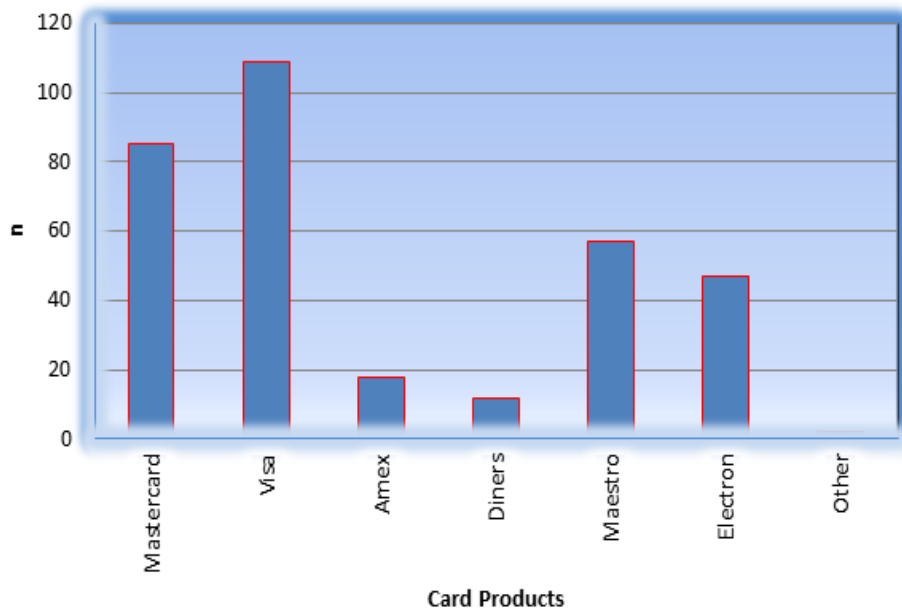


Figure 20: The various card products available to customers and how many of the respondents own these card products

Respondents were asked what they thought of interest rates in South Africa (Fig. 21). The results were close with 52.6 % of respondents perceiving interest rates to be unfair while the remaining 47.4 % thought that interest rates were fair.

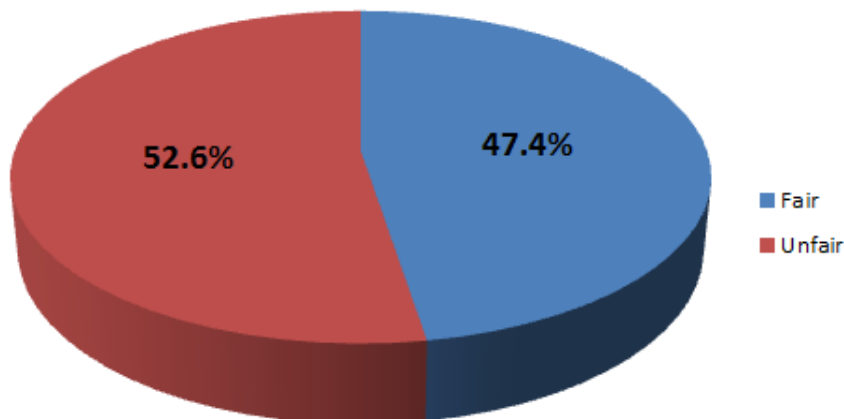


Figure 21: The perception of respondents toward interest rate fairness in South Africa

Interest rates play an important role in the decision making process of the respondents when it comes to purchasing on credit (Table 11). 77.5 % of the

respondents who stated that interest rates did not curb their spending and 75.9 % of the respondents that stated that interest rates do not influence their purchasing decision, all earned above R16,000 per month.

Table 11: Whether interest rates are a factor that influences the respondents' decision to purchase on credit and whether interest rates curb the use of Credit cards

Interest Rate Factor			
Factor	yes	no	total
Influence Decision	134	79	213
Curb Spending	133	80	213
Total	267	159	426

Many of the respondents respond to high interest rates by curbing their spending on credit. 47 of the 213 respondents stated that interest rate hikes had no effect on them at all (Fig. 22). 7.9 % of the respondents used their credit cards more.

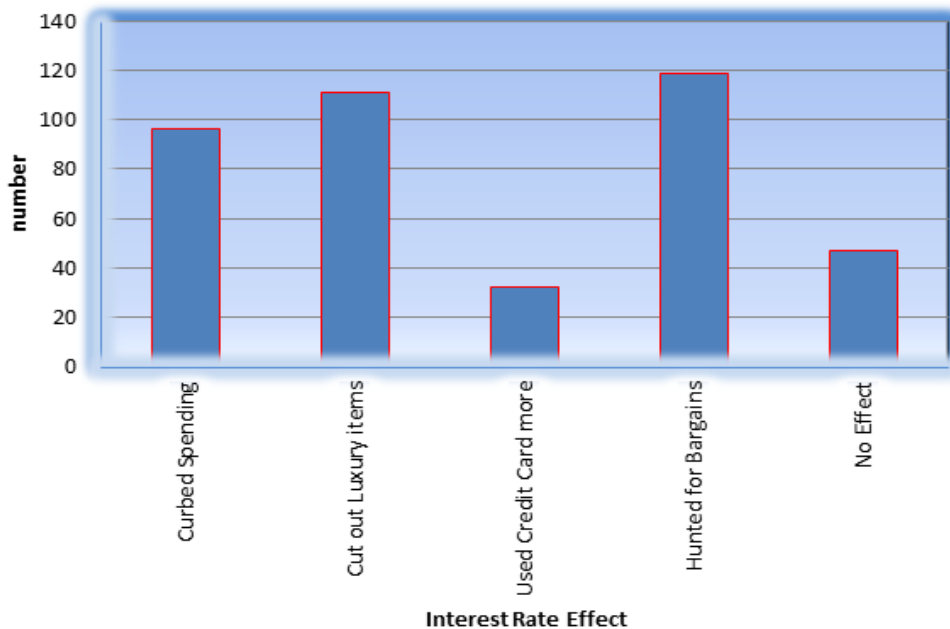


Figure 22: The effect interest rates have on the respondents

4.3.4 Combined Analysis

This section analyses data across the various sections of the questionnaire by performing statistical analysis by using r and p values to determine the significance of correlations.

Table 12: The correlation between monthly household income and the effects of interest rate, shopping preference, shopping frequency and average grocery spend (consumer behaviour); significant values ($p < 0.05$) are in bold type

	r(X,Y)	p
Interest Rate Fairness	-0.441	0.000
Interest Rate Factor	0.315	0.000
Interest Curb on Credit Cards	0.346	0.000
Curbed my spending	0.047	0.498
Cut out the purchase of luxury items	0.218	0.001
Used my credit card more	0.019	0.786
Purchase lower priced items	0.299	0.000
No effect at all	-0.434	0.000
Shop preference	0.143	0.038
Shopping Frequency	-0.074	0.283
Average Grocery Spend	0.620	0.000

There is a significant correlation between monthly income of respondents and their view on interest rates (Table 12). As the monthly income of respondents increased more respondents felt that interest rates were unfair ($p < 0.0001$). Respondents that fell in a higher income bracket considered interest rates to be a determining factor more so than respondents that earned less. This correlation was significant as p was less than 0.0001. The higher the monthly income of respondents the less interest rates curbed their spending on Credit cards. This correlation is significant ($p < 0.0001$). The correlation between monthly income and the action of cutting out the purchase of luxury items in response to increases in interest rates is positively significant ($p = 0.001$). There was a significant positive correlation ($p < 0.0001$) between monthly income and the purchase of lower priced items. There was a significant negative correlation between monthly income and the effect of interest rates ($p < 0.0001$) i.e. the higher the monthly income of respondents, the less interest rates affected them. The higher the income bracket of respondents the more they

preferred to shop at Pick n Pay or Woolworths. The correlation is significant ($p = 0.0038$). Respondents with higher incomes spent more on groceries per month which displays a significant correlation ($p < 0.0001$).

Table 13: The correlation between respondents who mostly frequented certain retailers and between those retailers that provided respondents with the best overall experience

	r(X,Y)	p
Shop preference		
Overall Shopping Experience	-0.103	0.135

There is no significant correlation between the retailers mostly frequented by respondents and the retailers that respondents felt provided them with the best overall experience ($p = 0.135$) (Table 13).

Table 14: Correlations by population group by Black, Coloured, White and Asian respectively to consumer behaviour. The significant correlations are in bold type

	r(X,Y)	p
Monthly household income	0.353	0.000
shop preference	0.068	0.324
Average Grocery Spend	0.291	0.000
Interest Rate Fairness	-0.143	0.037
Interest Rate Factor	0.131	0.058
Interest Curb on Credit Cards	0.127	0.065
Curbed my spending	-0.057	0.411
Cut out the purchase of luxury items	0.003	0.961
Used my credit card more	0.020	0.773
Purchase lower priced items	0.176	0.010
No effect at all	-0.090	0.191

There is a significant correlation ($p < 0.0001$) between monthly income and population group (Table 14). The average grocery spend correlation is also significant ($p < 0.0001$) when compared to black, coloured, white and Asian. The negative correlation between interest rate fairness and race is significant ($p = 0.037$). Black respondents were less concerned with interest rate fairness than coloured and

white respondents. When population groups were compared to the respondents that purchased lower priced items because of higher interest rates, there was a significant positive correlation ($p = 0.010$). White respondents were less concerned about purchasing lower priced items than coloured or black respondents.

Table 15: The correlation between gender (male and female respectively) and consumer behaviour. Significant correlations are in bold type

	r(X,Y)	p
Monthly household income	-0.088	0.200
Shop preference	-0.096	0.164
Average Grocery Spend	-0.108	0.115
Interest Rate Fairness	0.181	0.008
Interest Rate Factor	-0.177	0.010
Interest Curb on Credit Cards	-0.229	0.001
Curbed my spending	-0.119	0.083
Cut out the purchase of luxury items	-0.057	0.410
Used my credit card more	-0.010	0.883
Purchase lower priced items	-0.090	0.189
No effect at all	0.206	0.003

A positive significant correlation exist between gender and interest rate fairness ($p = 0.008$) with a higher percentage of female respondents believing that interest rates were unfair compared to male respondents (Table 15). Interest rates were however less of a factor for female respondents when purchasing on credit ($p = 0.10$) whereas males stated that it was a factor. There is a significant correlation between gender and interest rates curbing credit card spending ($p = 0.001$) with female respondents stating that interest rates did not have an effect on their decision to purchase on credit. Similarly, female respondents felt that interest rates had no effect on them at all. This was a significant correlation ($p = 0.003$).

Table 16: The correlation between age and consumer behaviour. Significant correlations are in bold type

	r(X,Y)	p
Monthly household income	0.075	0.275
Shop preference	0.093	0.176
Average Grocery Spend	0.236	0.001
Interest Rate Fairness	0.029	0.678
Interest Rate Factor	0.060	0.381
Interest Curb on Credit Cards	-0.030	0.669
Curbed my spending	-0.092	0.180
Cut out the purchase of luxury items	-0.011	0.876
Used my credit card more	-0.006	0.928
Purchase lower priced items	0.004	0.956
No effect at all	-0.065	0.344

There is a significant positive correlation ($p = 0.001$) between age of respondents and average grocery spend. The older the respondent the more they spend on groceries.

4.4 Conclusion

The purpose of this chapter was to analyse both primary and secondary data to support the topic of this research study and to be able to answer the research questions as stated in Chapter 1. Secondary data was scrutinised to establish what interest rates fluctuated by from January 2006 to December 2010 as well as an analysis on Company X's turnover was completed with specific reference to credit card turnover. This information was plotted and analysed to establish a relationship between interest rates and credit card turnover of Company X.

Primary data was obtained through the administration of a customer questionnaire. This data was coded and captured into a spreadsheet for analysis. The primary data provided information such as biographical data, consumer behavioural data and tender and interest rate data of respondents. Each of the sets of data were analysed separately to provide a profile of the respondents. The data sets were then analysed collectively to provide insight into respondents with similar profiles. This analysis provided information on how certain groups reacted to interest rates, which tender

types were preferred, how much was spent on groceries per month, preferred retailers and household income per month of various groups. All the data was plotted in tables and graphs to provide a visual representation of the analysis.

Data was interpreted in an effort to provide support to the research study in particular the research questions. It was established that the retailer most of the respondents frequented on a regular basis and provided them with the best overall shopping experience was Pick n Pay. Although interest rates are at its lowest it has ever been, general perception of respondents were that it was still unfair. It was also established that there was a significant correlation between interest rates and credit card turnover in Company X. As interest rates increased, credit card turnover decreased on a whole for the period under review.

The following chapter will discuss the findings of the data analysis in more detail.

Chapter 5 : Discussion

5.1 Introduction

The aim of this chapter is to discuss the results of the data analysis in Chapter 4. The nature of the relationship between interest rates and credit card spending in Company X will be discussed.

5.2 Secondary Data

The two sets of analysis that will be discussed in this section will be interest rate data and Company X's tender analysis. Findings on the relationship between interest rates and credit card spending will be discussed.

5.2.1 Interest Rate Analysis

Interest rates are determined by the South African Reserve Bank's (SARB) Monetary Policy Committee (MPC) (SARB, 2011:3). The MPC meetings are held every second month to assess the interest rates in South Africa by considering various factors such as changes in administered prices, changes in wages, productivity and labour costs, components of domestic and external demand, exchange rate developments, money supply and credit extension and oil prices (SARB: n.d.). Econometric models are used and the consideration of the above factors, assist the members of the MPC to make their decision on whether to change the interest rate.

Interest rates fluctuated for the period under review from a low of 7 % in January 2006 to a high of 12 % in June 2008 to an all-time low of 5.5 % in November 2010. The interest rate fluctuations can be attributed to the Government's policies on inflationary targets and in response to the global financial crisis (Van Den Heever, 2001:168). The SARB's monetary policy around inflation targeting was established to achieve price stability (Van Der Merwe, 2004:1). In 1990 New Zealand was the first country to adopt inflation targeting policies. Other countries followed suit such as Australia, Brazil, Canada, Chile, Mexico, Sweden and the United Kingdom with South Africa introducing inflation targeting in February 2000 (Van Der Merwe, 2004:1).

To ease inflationary pressures the SARB uses interest rates, a monetary policy tool used to combat inflation and protect consumers. An increase in interest rates keeps

inflationary pressures in check (Mboweni, 2007). Mboweni (2007) stated that household indebtedness and credit extensions by bank have resulted in consumption expenditure increasing. To curb the high consumption of consumers, interest rates are increased, however, this comes at a price. Due to consumer over-indebtedness, the cost to service debt increases as interest rates increase resulting in consumers feeling the pressure (Mishkin, 1976:642). As a result the National Credit Act (2005) was instituted to reduce undesirable credit practices and to encourage responsible borrowing (Goodwin-Groen, 2006:8). The interest rate hikes between 2006 and 2008 was an effort to meet Government inflation targets of between 3 % and 6 %.

The Global Financial Crisis began on the 9th of August 2007 with a major US Bank terminating activity in the US mortgage market culminating in a full scale financial crisis on the 15th of September 2008 which led to major banks in the US to go bankrupt (Elliott, 2007). This resulted in a global stock market downturn which eventually led to a global recession (Bordo, 2008:6). In response to the recession, central banks around the world started cutting interest rates to stimulate their ailing economies (Harrison, 2008). The SARB was no different to central banks around the world and responded by making its first interest rate cut in December 2008. The SARB continued to cut interest rates to ease the effects of the financial recession on South Africans until its lowest interest rate of 5.5 % was reached in November 2010.

5.2.2 Company X Analysis

This section will discuss the results of the data analysis performed on Company X's data.

5.2.2.1 Volume Analysis

The low increase in percentage of transaction volume increase from 2007 to 2008 is mainly due to the uncertainty brought about by the global financial crisis with consumers limiting their willingness to spend (Sapa, 2009). Consumers had very little confidence and had heavy debt burdens which added to the decline in retail sales (Sapa, 2009). Factors that contributed to a decline in retail sales included general market uncertainty, consumer indebtedness, increase in food and fuel prices and the global recession (Pomoni, 2009). It is evident that consumers transacted less with Company X with the volumes decreasing by 19 % from 2009 to 2010 (Company X,

2011). However, debit card growth is on the rise and in future will probably replace cash as the dominant form of tender as we move into a technology driven world (Hayashi, Sullivan & Weiner, 2003:1). Because of various electronic payment media available to consumers, there has been a decline in cheque tender at Company X. Cheques volumes have decreased by 78 % from January 2006 to December 2010. In December 2009 the UK announced that it would be phasing out cheques as a form of tender (Comins, 2009). The SARB along with the Payments Authority of South Africa (PASA) and the banking sector are exploring the idea of phasing out cheques as legal tender in South Africa as well (Whitfield, 2011). Cash volume remains the dominant form of tender accepted by Company X making up a total of 86.6 % of the total volume of transactions for the period under review. Although cash is the dominant form of tender in South Africa, Company X has shown significant growth in card transactions. Cash is still a preferred method of payment by lower income consumers due to lack of understanding and trust of electronic payments systems (Passport, 2012).

5.2.2.2 Value/Turnover Analysis

Although Company X's turnover has increased year-on-year from 2008 to 2010 the growth has been at a slow rate from 16 % growth per year from 2006 to 2008 to just an 8% increase in turnover for 2010. This is mainly due to the global financial crisis and increased cost of living (Pomoni, 2009). The high level of food prices has left consumers with less disposable income resulting in consumers spending less at retailers (Afrinem, 2011). The most dominant form of tender in Company X as reflected in the volume analysis is cash making up a total of 50.88 % of the total value of tender accepted in respect of sales.

Debit card contribution to total turnover of Company X has increased from 19.4 % in 2006 to 23.04 % in 2010 which represents a R6.4 billion increase. As we move to an electronic payment system, debit card usage is expected to increase as consumers are becoming more comfortable using debit cards (Visa, 2012). Credit card turnover in Company X more than doubled in value from January 2006 to December 2010. Company X's credit card sales steadily increased year-on-year despite interest rates increasing to a high of 12 % in 2008. By December 2008 the interest rate had dropped by 50 basis points to 11.5 % and Company X reported its highest credit card

turnover value of R1.2 billion at the time. As interest rates decreased, the credit card turnover for Company X plateaued with two months showing huge drops of between R600 million and R700 million in turnover per month. The plateau can be attributed to customers having more disposable income due to the cost of debt decreasing due to lower interest rates (Taylor, 2009:19). As a result consumers purchased less on credit. This can be seen in Company X's steady increase in cash and debit card turnover over this period. Although the credit card turnover plateaued between 2009 and 2010, by the end of 2010, when interest rates were still at its lowest, the company still experienced its highest December sales in 2010 over the period under review. The high credit card sales can be attributable to reporting changes at Company X that regrouped certain card products from debit to credit. Credit card contribution to total turnover has however decreased in Company X with Credit cards contributing 26.6 % in 2006 of total turnover to 22.10 % of total turnover in 2010. This is because of the availability of disposable income to service debt resulting in Credit cards not being used as often (Maki,2002). Standard Bank had stated that the reductions in interest rates have had a positive impact on disposable income of consumers which resulted in transaction volumes on credit cards beginning to climb (Standard Bank, 2011). Consumers struggled to recover from the global recession but consumer confidence is expected to boost spending (Seria, 2010).

A decline in cheque value is largely due to the advancements in electronic banking in South Africa (Comins, 2009). The contribution of cheques total turnover of Company X has decreased from 2.22 % of total turnover to 0.87 % in 2010. The 2010 contribution does however represent a total value of R508 million for the year. Although cheque values are declining there is still a substantial use of cheques, mainly by businesses. The use of cheques is mainly used as a 'float management' tool as it provides additional cash flow until the cheque is processed (Comins, 2009).

5.2.2.3 Average Transaction Value

Although volumes have decreased in Company X, the total turnover has increased over the period under review. This means that the average transaction value (ATV) or basket size should show an increase as customers are shopping less but at higher values. This is evident in the analysis on Company X's data as the ATV showed an increase year-on-year meaning that customers are paying more for the basket of

groceries and as a result are shopping less which is evident in the declining volumes of transactions. This could be a direct result of high food and oil prices as this would cause customers to shop less often but pay more for their food (Von Braun, 2008:31).

Although cheque numbers have been declining the average transaction value of cheque payments has increased by 127 % from January 2006 to December 2010. What this means is that although customers are using cheques less often, they are writing out cheques for much higher values. This could be because of the higher price of food but could also be that customers are using their cheques as a float management tool to improve cash flow (Comins, 2009). Because cheques are often banked a few days later, customers' cash remains in their bank accounts for a few days longer. The on account ATV has also increased meaning that customers are purchasing at higher values on credit in Company X. The increase in ATV for cheques and on account payments reflects the desperation of consumers to make their money stretch much further by paying with borrowed funds (Schreft, 2006:9). The ATV for debit and credit cards has remained fairly constant for the period under review. The correlation between interest rates and the ATV of both Debit and Credit cards was not significant, however, credit card ATV declined in Company X as interest rates increased. This meant that on average customers were spending less on their baskets per shop at Company X. The decline in Debit card ATV and increase in Credit card ATV in December 2010 was due to reporting changes in Company X (Company X, 2011).

5.2.3 Credit Card Turnover in Relation to Interest Rate Fluctuations

Although the interest rate increases increased the cost of debt, consumers used their credit cards more year-on-year between 2006 and 2009. This could be due to the lack of availability of disposable income hence the use of borrowed money became easier to use. Similarly when interest rates started to decline, the credit card turnover in Company X did not grow as much as previous years leading to a negative growth in 2010 when compared to 2009. This could be attributable to the lack of disposable income whereby consumers were unable to service debt and as a result did not spend as much using borrowed money (Taylor, 2009:19). It could also be attributable to over spending in previous years and exhausting the availability of borrowed funds

by consumers which also means that the cost to service debt was high (Maki, 2002). Consumers therefore became weary of spending on credit cards as they tried to recover from the global recession (Baily & Elliott, 2009: 21).

The negative correlation between interest rates and total turnover was not significant enough to say that Company X's total turnover was affected by interest rates. This is because consumers will purchase food no matter how difficult the financial climate is. There was a negative correlation between interest rates and cash as well, however, not significant. This is as a result of consumers being cash strapped and trying to make their money stretch further by spending less. The significant increase in cheques and on account is attributable to consumers trying to improve cash flow. There was a significant negative correlation between interest rates and debit card spending i.e. as interest rate went up Company X experienced lower debit card turnover. Because debit cards are an electronic payment method linked to physical cash, the resulting decrease in cash payment and debit card payments were as a result of the lack of availability of customers' funds, increased food prices and people shopping around for lower prices (Payne, 2011). There was a significant negative correlation between interest rates and Credit card spending in Company X. As interest rates increased Credit card spending decreased significantly. Because of the high cost of debt consumers found it difficult to meet their debt obligations (Sapa, 2009). As a result spending on Credit cards became expensive to maintain resulting in consumers transacting on credit cards less and at lower values.

5.3 Primary Data Analysis

This section discusses the findings of the primary data obtained through the administering of customer questionnaires.

5.3.1 Biographical Data

The biographical data section of the questionnaire provided personal data of the respondents in order to create a profile for respondents to provide meaningful analysis.

5.3.1.1 Gender, Race and Income Analysis

The majority of respondents fell within the age group of 25 to 55 years. This generally represents the greater workforce age of the population (Carapinha, 2010:15). The majority of male respondents were between the ages of 25 and 55. The majority of white male respondents had a household income in excess of R21,000 per month while the majority of non-white respondents had incomes less than R21,000 per month. This is mainly due to the disparities of the legacy of apartheid which the government has been trying to correct by introducing various policies and laws (Carapinha, 2009:1 & Seekings & Nattrass, 2002:11). Similarly the majority of female respondents were between the ages of 25 and 55 of age. As with the male respondents, the majority of white female respondents earned in excess of R21,000 per month, while very few non-white female respondents earned in excess of R21,000 per month. There is, however, still disparity between males and females monthly earnings with females earning 77.1 % of males' average monthly incomes (StatsSA, 2010). In summary white respondents earned more than non-white respondents with the white male respondents earning more than both females and other race groups.

5.3.2 Consumer Behavioural Data

Pick n Pay targets all Living Standards Measure (LSM) groups. Pick n Pay generally provides a better service offering than its direct competitor ShopriteCheckers. ShopriteCheckers has however gained market share in recent years by repositioning its Checkers brand to attract a wealthier clientele (Fin24, 2010). ShopriteCheckers targets the demographic profile by racial group of the country with the Shoprite and OK brands targeting the middle to lower LSM's (Fastmoving, n.d.). Spar operates on a franchise model with almost 800 stores in South Africa that caters for convenience and general grocery shopping (Spar, n.d.). Woolworths target market is the high LSM groups offering a superior product offering and service to its customers. (Woolworths, 2011:11). Woolworths competes in both the convenience and general grocery shopping market.

The majority of respondents frequent Pick n Pay stores more often than any of the other major retail food outlets. This is mainly due to the retailer targeting all LSM's. Spar had a high percentage of respondents 'occasionally' frequenting their stores.

This is mainly due to Spar having a greater presence in the convenience market than the other major role players. Most people run into a Spar because they need to replenish a grocery item that they urgently require. There were a relatively equal number of respondents that 'frequently' visited all the four retailers. Out of the four retailers most of the respondents felt that Pick n Pay provided them with the best overall shopping experience with a large number believing that Woolworths provided the best overall shopping experience. The respondents' response to Pick n Pay is noteworthy as Pick n Pay has lost market share over the last few years. As this study has only been conducted in the Cape Town area, this is just a regional view of perceptions, feelings and preference. The national view should be somewhat different. Woolworths provides a better service and a superior product to the other food retailers however, this comes at a premium as their products are usually priced a bit higher than the other retailers. Their appeal to a higher LSM is evident in the data collected which reflects that 79.3 % of the respondents that felt that Woolworths provided the best overall shopping experience, earned in excess of R16,000 per month of which 90.8 % of those respondents spent more than R1500 per month on groceries.

Out of the respondents that selected ShopriteCheckers as their most frequented retail food outlet, only 50 % of those respondents felt that ShopriteCheckers provided the best overall shopping experience. The probability exists that customers are shopping at ShopriteCheckers because of convenience i.e. located closer to the respondents than a Pick n Pay or Woolworths, price perception or product variation. What is also noteworthy was that 35.5 % of respondents that frequented ShopriteCheckers, most stated that Pick n Pay provided the best overall shopping experience. Similarly 38.9 % of respondents that 'most frequently' visit Pick n Pay selected Woolworths as their best overall shopping experience. The question needs to be asked, why a consumer who frequents one retailer would prefer shopping at its competitor. The answer would be product and service. There is no doubt that among consumers and retailers alike that Woolworths provides a superior product and excellent service (Vermeulen & Bienabe, 2007:9). With the global retail giant, Wal-Mart, entering the South African retail space, it would be interesting to see how retailers respond to the threat of a global cutthroat retailer that delivers on product, service and price.

A total of 97.8 % of respondents that shopped at Spar on a 'frequently' and 'most frequently' basis all earned more than R8,000 per month. Because of the convenience aspect that Spar offers and their smaller store formats, respondents stated that they only used Spar if they needed something urgently. The basket size of Spar customers is generally small. Because of the convenience factor, Spar's prices are generally higher than that of ShopriteCheckers and Pick n Pay. Woolworths and Spar should not be completely discounted as they too can play the pricing game and do from time to time have pricing strategies that draw customers to their stores and if they lucky might get that one more item into the basket.

Many of the respondents that selected their shopping frequency as 'daily' stated that their basket contained the bare essentials such as milk and bread and one or two specials that the retailers would be running for the day. They would do additional grocery shopping on a weekly or monthly basis for their non-essential items, less frequently used items, fresh produce and meat or cleaning items. Weekly shoppers were those customers that prepared for the week ahead or that did not have the time to go to food retailers during the working week and could only do their shopping over weekends. Weekly shoppers' baskets were generally made up of essential and non-essential items, food and non-food products, fresh produce and meat and additional items that were on special for the weekend. Monthly shoppers were those that budgeted more for grocery shopping and preferred not to frequent food retailers on more than one occasion. They were more structured shoppers that stuck to a list but would however buy in bulk if there were any good specials at food retailers. Although they performed the bulk of their grocery shopping on a monthly basis, they purchased their fresh and perishable products, including bread, throughout the month (Goldman, 1974:9). There were only two respondents that preferred doing their grocery shopping less than once a month. They would generally buy in bulk and enough items to last them a month or two or even more depending on the shelf life of the items purchased.

The amount of money spent on groceries is dependent on needs, lifestyle and affordability. There are many factors that contribute to the high percentage of customers purchasing groceries to the value in excess of R1,500, however one of the main contributors is the high cost of food (Von Braun, 2008:31). Consumers

spending less than R1,500 per month are struggling to keep up with the increasing cost of food.

Food retailers offer various value added services to improve the value proposition to customers and to attract feet in store. Of the value added services offered at retailers the bulk of respondents selected bill payments, airtime purchases and prepaid electricity purchases as the value added services they utilised the most. Customers utilise the value added services that retailers offer because of the convenience that it offers of being able to shop and pay your bills, purchase airtime and prepaid electricity and much more all in one place.

5.3.3 Tender and Interest Rate Data

Credit cards are generally branded either MasterCard or Visa, however debit cards or Hybrid cards may be branded with either MasterCard or Visa as well. Maestro and Electron branding, brands of MasterCard and Visa respectively, are generally found on most debit cards. Amex (American Express) and Diners cards are considered to be prestigious card brandings hence the low number of respondents owning these card products. The majority of respondents preferred paying with a debit card with a large number of respondents preferring cash as their payment mechanism due to the nature of South African consumers (Passport, 2012). The high volume of debit card usage by respondents is also due to the high cost of debt where consumers are not as willing to purchase using their credit cards (Sapa, 2009).

Although interest rates are at its lowest in South Africa that it has ever been, 52.6 % of respondents still felt that interest rates in South Africa were unfair and a large number of respondents stated that interest rates played a role in their decision making when purchasing on credit and that interest rates curbed their spending. This is a large number considering that the repo rate is currently 5.5 % and has been since November 2010. The response to the question could be because of respondents not knowing what the interest rate is, high debt costs because of high debt makes it appear that the interest rate is high and perception that when you hear the word interest it is a bad thing so it is instinctively unfair. A large number of the respondents that stated that interest rates did not have an effect on their decision to purchase on credit earned above R16,000 per month. Although people with higher

incomes have more expenses such as bond repayments, car repayments, retail accounts and credit cards, it is the lower income earners that are affected the most with interest rate fluctuations. It can therefore be deduced that the higher your income the less you concern yourself about interest rates. Higher income earners have more disposable income to service high debt costs. However, higher income earners do curb their spending on credit which is evident from declining credit card transactions (Visa, 2012). In the researcher's opinion it is the interest not the interest rate that influences consumers to purchase on credit. The final value i.e. principle value of the article plus the interest, is what influences your decision to purchase on credit.

A large number of respondents stated that the effect interest rates had on them meant cutting out luxury items when shopping and that they would rather hunt for bargains by shopping at various retailers than to perform one stop shopping and end up paying a higher value for an article. Because of the increasing cost of food and oil, the global recession and the human survival instinct, it became a necessity to look for bargains and to cut out luxury items which is evident in the slow growth in the retail sector (Popplewell, 2011). A small percentage of respondents used their credit cards more as there was less disposable income due to the cost of outstanding debt increasing as rates increased and other contributing factors such as increased cost of living. Despite interest rates remaining constant since November 2010, this approach puts consumers in a worse position in that they increasing their debt and reducing their disposable income month on month. As debt increases, regardless of a low interest rate, the cost to service debt remains high as the principle value of debt continues to increase.

The impact of interest rates on the decision making of consumers is very small. Interest rates cannot be looked at in isolation. There are many other factors that play a bigger part in the consumer decision making process such as the cost of food, cost of fuel, wants versus needs, affordability and debt on a whole. The global financial crisis also negatively impacted consumer behaviour and the factors that contributed to the decision making process.

5.3.4 Combined Analysis

High income earners were affected more by interest rate fairness and considered interest rates to be a determining factor when it came to spending on credit because high income earners generally have more debt than lower income earners in the form of bonds, car repayments, credit cards and higher bill payments. As a result higher interest rates meant that the cost to service debt became higher leaving less disposable income (Prinsloo, 2000:22). This meant that high income earners would cut out the purchasing of luxury items and tended to purchase lower priced goods (Prinsloo, 2000:23). This is evident from the data analysis performed which supports the comment above. However, many of the respondents with higher monthly incomes stated that they were less affected by interest rates than lower income earners. This is true in that they had more disposable income than lower income earners to be able to cope with interest rate hikes.

Statistical analysis showed that the retailers that respondents shopped at most frequently were not necessarily those that provided them with the best service. This reflects that there is no brand loyalty as price, in these difficult economic times, is probably the most important factor when consumers are doing grocery shopping.

Analysis of data showed a significant correlation between monthly income and population group. This is mainly due to inequalities of the past as, on a whole, white respondents earned more than black and coloured respondents (Carapinha, 2009:1). When the average grocery spend was compared to the population groups, it resulted in blacks spending less money per month on food than coloured or white respondents. This is generally because black respondents earned less than white respondent leaving less disposable income to be spent on food.

Black respondents were less concerned with interest rate fairness than coloured and white respondents, however white and coloured respondents were less concerned about purchasing lower priced items mainly due to white and coloured respondent earning more than black respondents. This is in line with South African statistics (StatsSA: 2010)

Female respondents believed that interest rates were unfair more than male respondents. Although more females thought that interest rates were unfair, interest

rates were however less of a factor when purchasing on credit. This was further supported by a significant correlation between gender and interest rates with female respondents stating that interest rates did not have an effect on their decision to purchase on credit and had no effect on them at all. Females have generally assumed the role of shopper hence the decision to purchase outweighs the consideration of factors that prevent purchasing (Evans, Christiansen & Gill, 1996).

5.4 Conclusion

The objective of this chapter was to discuss the analysis of primary and secondary data as performed in Chapter 4. An effort was made to understand why respondents behaved in certain ways and how they perceived interest rates in South Africa by referring to previous statistical analyses completed and previous works completed on similar topics. The data analysis performed on Company X's data and the effect of interest rates on the company's credit card turnover was also discussed.

In summary, Company X's turnover continued to grow despite interest fluctuation, however, this increase in growth rate was slower year-on-year between 2008 and 2010. One of the main reasons for the continued growth is that people need to eat and no matter what the cost of food people will buy food. They may not purchase as much but they will purchase groceries. This is evident from the increase in average transaction value of Company X with the volume declining but total turnover increasing meaning that people shopped less but spent more per basket. Further to this credit card basket size has also increased in value meaning that those customers who had tendered for their baskets with a credit card had paid more for their groceries.

It was also established that a significant negative correlation exists between interest rates and credit card spending in Company X. What this means is that as interest rates increased, credit card turnover growth in Company X decreased. In conclusion it can be stated that interest rates have an effect on credit card turnover in Company X.

The following chapter discusses the conclusions of the research and recommendations are made.

Chapter 6 : Conclusion and Recommendations

6.1 Conclusion

The purpose of this chapter is to provide conclusions encompassing the objectives as stated in Chapter 1 and to offer recommendations. The aim is to ensure that the objectives were met, research questions were answered, that the interpretation of results were meaningful and to establish the nature of the relationship between interest rates and credit card turnover in Company X.

The introductory chapter provided a background to the research study and set out approach taken in reaching the outcome of proving whether a relationship exists between fluctuating interest rates and credit card turnover in a retail food chain. The problem, purpose, objectives, research questions and research design and methodology that was employed to achieve the purpose of the study was highlighted. This chapter also discussed the significance of the research. Limitations of the research were also defined. This introductory chapter served as the framework for the research study.

A literature review was completed in an effort to contextualise the study by understanding previous or similar research to establish how such previous research could assist with this research study. Key variables such as the retail sector, the retail food sector or non-durable retail category, retail organisations, credit cards and interest rates were defined to provide the reader with a broader understanding of the topic and what the researcher was trying to establish. The literature review assisted in understanding what consumer indebtedness was and how this affected credit card spending and as a result led to a decrease in disposable income resulting in consumers unable to meet their debt obligations. The South African Reserve Bank instituted monetary policy to curb spending and to stem the over indebtedness of consumers. The advent of the National Credit Act 34 of 2005 which was instituted to promote responsible lending by financial institutions introduced an additional measure to control credit spending of consumers.

The global financial crisis of 2008 (Elliott, 2007) added to the woes of over-indebted South African consumers and businesses alike. The crisis brought about high fuel costs, high food prices, market uncertainty and job losses (Pomoni, 2009). As a

result retail sales figures declined year-on-year from 2008 to 2010 with retail sales figures showing slight improvements from 2011 to 2012. The SARB, like most global central banks, heeded to an appeal by the International Monetary Fund to reduce lending rates to improve the economic conditions. Consumers have therefore seen a steady decrease of interest rates from December 2008 to November 2010 with a low of 5.5 % in an effort to stimulate the economy and to improve the state of consumer indebtedness amongst rising cost of fuel, food and electricity.

Previous research provided an understanding of who are the credit card holders in South Africa by classifying cardholders by racial, income and gender groups and helped to understand the spending patterns of such groups when it came to the purchasing of food. Factors that influences the use of credit were highlighted to assess the credit card usage in Company X. Card usage in Company X was highlighted as well as efforts to improve the card payment system within Company X.

A quantitative approach was used to analyse data to provide sufficient evidence to establish outcome of the study. The study was biased in that it was limited to a single retailer. Although it is desirable to have a large sample size for a study of this nature, due to time and budgetary constraints a sample size of 213 respondents was used.

Secondary data was obtained from the SARB, regarding interest rate fluctuations, and Company X, in the form of turnover data by tender type, and primary data was collected in the form of customer surveys. Questions to the customer survey were constructed in such a way as to provide meaningful data in order to best answer the research questions. A quantitative approach to data analysis was used to analyse both secondary and primary data. Limitations were highlighted and a sampling frame was defined. STATISTICA v.9 was used for statistical analysis and data management in order to establish correlations between variables. Non-parametric Spearman Rank Order correlations were used to determine relationships with a 95 % confidence limit.

Correlations between credit card turnover and interest rates were established as well as correlations between different sets of primary data. Graphs and tables were used to explain and interpret primary and secondary data. Significant correlations between interest rates and other tender types on both Rand value and average transaction

value were also explained and interpreted. An analysis and interpretation of results of responses to the survey was completed in order to profile respondents in an effort to understand consumer behaviour and impact of interest rates in the decision making process of consumers when purchasing food. Correlations performed across different sets of data revealed that various significant correlations existed which were interpreted and discussed.

Data analysis revealed that interest rates fluctuated in response to monetary policy and the SARB's response to the global financial crisis. It was also revealed that customers shopped less at Company X due to various factors that were highlighted which included interest rate fluctuations, high food and fuel prices, increased electricity costs and the financial position of consumers. It was evident from the analysis that Company X had a slow growth rate in total turnover over the period under review. Analysis on various tender types used within Company X was completed and revealed that cash remained the dominant form of tender. There was a clear increase in debit card usage over the period under review as a result of a drive by banks to promote card technology over traditional payment methods such as cash and cheques. The average transaction values in Company X increased. Credit card usage had positive growth between 2006 and 2009 with a negative growth rate experienced from 2009 to 2010.

The average transaction value (ATV) or basket size increased year-on-year from 2008 to 2010. Essentially what this meant was that volumes decreased and transaction value increased in this period meaning that customers shopped less but paid more for their purchases. The relationship between interest rates and total turnover was negative in nature and not significant. Although interest rates and cash tender reflected a negative correlation, this correlation was also not significant. There was however a significant negative correlation between interest rates and debit card tender in Company X. This was as a result of consumers having less disposable income due to increased debt obligations as a result of increased interest rates. This left consumers with less disposable income to spend (Prinsloo, 2000:22). A significantly negative correlation existed between interest rates and credit card turnover in Company X.

Analysis on customer surveys revealed that higher income earners were more concerned about interest rate fairness however they were less concerned about the actual interest rates as their disposable income was higher and could cope with increased debt costs much better than lower income earners. The customer survey also revealed that no brand loyalty existed as analysis revealed that although customers frequented one retailer, they believed that other retailers provided a better service. A significant correlation existed between income and population group which displayed that white respondents earned more than other race groups. Interest rates were also less of a factor for female respondents when making a decision to purchase on credit although more females believed interest rates to be unfair than male respondents.

The research study produced results that could assist in answering the research questions as stated in the introductory chapter by analysing both primary and secondary data. The first question was to identify the interest rate fluctuations for the period under review. This details was plotted on a graph and fluctuations discussed in order to establish the changes and why the changes occurred. The second question was to establish the value of credit card spending in Company X which was obtained from the tender analysis provided by Company X. The third question was to understand how interest rates affected the consumer. This was achieved through the customer survey by asking respondents how they perceived interest rates in South Africa.

The fourth question, through the customer survey, established whether interest rates played a role in respondents to purchase on credit and whether increased interest rates curbed their use of credit. The fifth question was aimed at establishing the preferred method of tender of the respondents when paying for groceries. It was established that respondents preferred debit cards and cash respectively as the most popular tenders.

The sixth research question was to establish whether a relationship exists between interest rates and credit card turnover in Company X. It was established that a significant relationship does exist. The seventh question was to establish the nature of the relationship to which the result revealed that there was a significant negative correlation between interest rates and credit card spending in Company X i.e. as

interest rates increased credit card turnover percentage growth decreased and vice versa. Bearing in mind that interest rates are only a factor when there are full or budget balances due on credit cards.

6.2 Recommendations

The following recommendations are based on the results of the study:

- Although there was a significant correlation between interest rates and credit card turnover in Company X, it is recommended that other factors are explored that may have an influence on credit card spending.
- Furthermore, interest rates are only a factor when using credit cards that have balances on them. There were respondents that stated that interest rates had no bearing on their ability and willingness to spend on credit. It is recommended that respondents where interest rates are a factor only be taken into consideration.
- Respondents utilised the VAS service offering of retailers with bill payments being the most popular service. It is recommended that the VAS offerings are broadened and strategies are drawn up to enhance the service offering.
- Analysis showed that retailers most frequently frequented were not necessarily the retailers that provided the best level of service. However, the overall shopping experience was important to the respondents. It is recommended that overall shopping experience and service be improved which may increase frequency at retailers.

The following are recommendations to the retailer:

- Company X's total turnover has grown at a slow rate over the past few years due to factors out of and within the company's control. Although it is difficult to control external factors which play a major role on reduced sales, focus needs to be placed on internal factors such as improving service delivery by providing better quality products and retraining of staff to improve overall customer service. This will create brand appeal which will lead to brand loyalty resulting in increased sales;
- Another way of boosting sales is by Company X improving and adding to its value added services offering. Retail outlets are no longer seen as just retail outlets but as value added service providers and it is these value added

services that attract feet in store. If customers know they can perform a certain service at a retailer, the likelihood of them doing more than just the value added service like purchasing traditional retail lines as well is high. Customers would generally not go all the way to a retailer just to perform a value added service. By providing value added services that other retailers do not offer, Company X may attract a new customer base;

- By improving the speed at checkouts, Company X will improve customer service and speed up the number of customers through the front line. By making the checkout process faster and hassle free, customers will leave Company X's stores feeling that they had an excellent experience and will undoubtedly return to their stores. This will almost certainly guarantee future business and increased turnover;
- Consumers are experiencing difficult and trying times and although Company X may not have a direct influence on credit card spending as this is dependent on customer preference and their customers' financial position, Company X along with card issuers should look at offering additional functionality on credit cards such as accepting deposits or withdrawals on credit cards at point of sale. This may have an impact on credit card spending; and
- Company X should also be looking at accepting other forms of tender they do not accept today such as mobile tender. Although this is relatively new to the South African market, if Company X can beat its competitors to be the first retailer to accept mobile payments as a form of tender, it will establish Company X as a market leader in seeking technological ways of improving the retail payments system and attract customers from retailers leading to increased sales.

The following recommendations are made for future research:

- To provide an all-inclusive study on the effect of interest rates on credit card spending, credit card sales of multiple retail companies would have to be looked at and compared to each other. This will provide an overall view of how consumers react to interest rates;
- Future research should take into account all the other factors that may influence sales such as increased food costs, fuel costs, cost of electricity, consumer affordability or indebtedness and the global and local economy as

interest rates are not the only factor that will influence sales and the use of credit cards;

- Future research could also include analysis on credit card sales of global retailers and the factors that influence their sales;
- A qualitative study could also be conducted to provide a deeper insight into consumer behaviour. This could be achieved through qualitative surveys, structured interviews or focus groups; and
- A larger sample size could be used to better understand consumer behavioural patterns and provide more conclusive results. The research study was focused on Cape Town consumers only and a larger sample size to include other South African cities will provide a national view on consumer behavioural patterns.

6.3 Chapter Summary

This chapter focused on concluding the study by summarising key points of discussion such as the review of previous literature, collection, analyses and interpretation of data and the answering of the research questions. This research study set out to establish if a relationship exists between interest rates and credit card turnover in a retail organisation and what the nature of this relationship was. Customer surveys were conducted to determine customer behavioural trends by establishing correlations between various sets of data collected. For the purposes of this study, a grocery retailer, Company X, was chosen and a complete data analysis was performed on the tender analysis provided by Company X and compared to fluctuations in interest rate data obtained from the South African Reserve Bank. After data was analysed it was established that a relationship indeed existed and that the relationship was significantly negative in nature. This meant that when interest rates increased, Company X experienced a negative growth rate in credit card turnover and the adverse was also true. Cognisance has to however, be taken that interest rates only have an effect on the decision to buy on credit if there is a balance due on the credit card. Recommendations based on the research results were provided as well as recommendations to the company and future research was provided.

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Appendices

Appendix A: SARB Interest Rate Data

SARB Interest Rate Fluctuations			
Date	Interest Rate	% Points Difference	Basis Points Difference
01 January 2006	7.00%	0	0
08 June 2006	7.50%	0.50%	50
03 August 2006	8.00%	0.50%	50
13 October 2006	8.50%	0.50%	50
08 December 2006	9.00%	0.50%	50
08 June 2007	9.50%	0.50%	50
17 August 2007	10.00%	0.50%	50
12 October 2007	10.50%	0.50%	50
07 December 2007	11.00%	0.50%	50
11 April 2008	11.50%	0.50%	50
13 June 2008	12.00%	0.50%	50
12 December 2008	11.50%	-0.50%	-50
06 February 2009	10.50%	-1.00%	-100
25 March 2009	9.50%	-1.00%	-100
04 May 2009	8.50%	-1.00%	-100
28 May 2009	7.50%	-1.00%	-100
13 August 2009	7.00%	-0.50%	-50
25 March 2010	6.50%	-0.50%	-50
09 September 2010	6.00%	-0.50%	-50
18 November 2010	5.50%	-0.50%	-50
31 December 2010	5.50%	0.00%	0

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Appendix B: Company X Transaction Values

	Value of Transactions (Rands 000's)							
	Total Vat incl.	Cash	Cheques	On Account	Vouchers	Gift Card	Credit Card	Debit Card
Jan-06	2,807,001.5	1,407,904.5	68,793.1	9,275.7	21,822.3		716,747.3	582,458.6
Feb-06	2,560,404.3	1,332,714.2	63,924.9	9,703.3	17,112.4		669,691.7	467,257.8
Mar-06	2,986,289.4	1,529,447.4	72,572.7	10,945.2	17,011.9		789,917.3	566,394.9
Apr-06	2,922,779.5	1,478,867.3	66,266.6	9,758.2	16,371.8		791,903.1	559,612.5
May-06	2,899,521.3	1,472,696.3	68,571.2	10,644.6	16,899.5		774,937.4	555,772.3
Jun-06	2,813,292.2	1,432,894.7	66,529.7	10,566.9	16,999.4		760,053.9	526,247.6
Jul-06	2,979,248.3	1,521,543.5	65,958.7	11,385.1	16,612.2		787,414.7	576,334.1
Aug-06	2,956,635.9	1,511,145.6	63,982.3	11,771.7	14,583.9		784,304.2	570,848.2
Sep-06	3,094,202.5	1,570,381.1	63,807.7	11,464.1	14,987.3		825,134.2	608,428.2
Oct-06	3,143,352.8	1,599,869.7	67,974.3	12,625.3	7,678.4		837,715.3	617,489.9
Nov-06	3,131,041.6	1,586,717.3	66,283.4	12,972.9	4,720.8		854,328.6	606,018.7
Dec-06	3,994,890.2	2,024,906.5	69,970.8	13,200.9	13,505.9	7,723.4	1,062,203.6	803,379.1
Jan-07	3,228,771.9	1,616,376.2	61,712.8	12,230.7	5,047.5	3,751.8	894,655.2	634,997.7
Feb-07	2,943,406.9	1,514,053.0	56,866.5	12,515.8	2,764.9	4,674.9	781,092.6	571,439.2
Mar-07	3,541,769.8	1,775,583.2	66,744.6	14,358.7	2,818.0	6,248.4	955,990.6	720,026.3
Apr-07	3,364,611.2	1,694,311.4	57,946.6	12,837.0	1,891.9	6,705.9	901,604.7	689,313.8
May-07	3,405,279.1	1,718,358.9	63,131.3	12,699.7	2,164.1	8,771.3	907,390.5	692,763.2
Jun-07	3,370,438.8	1,703,315.4	60,332.7	11,418.7	1,560.9	9,117.0	872,857.5	711,836.5
Jul-07	3,375,854.2	1,694,176.1	58,615.3	11,910.4	1,905.7	10,277.3	798,532.9	800,436.4
Aug-07	3,392,536.8	1,728,904.2	62,558.7	13,319.0	1,834.8	10,343.8	791,236.9	784,339.4
Sep-07	3,554,959.2	1,783,002.1	60,643.1	12,337.0	2,032.0	11,871.2	837,611.8	847,462.0

Oct-07	3,587,850.2	1,803,411.4	61,972.7	13,532.5	2,381.1	12,785.8	840,083.7	853,682.9
Nov-07	3,639,361.4	1,744,755.8	61,627.5	13,072.2	3,581.3	14,897.7	935,470.3	865,956.7
Dec-07	4,532,128.8	2,229,824.5	63,155.8	14,017.6	8,145.1	45,468.1	1,089,397.0	1,082,120.7
Jan-08	3,650,828.6	1,795,541.8	56,025.2	12,529.3	3,009.0	19,804.1	933,452.4	830,466.9
Feb-08	3,466,247.4	1,768,167.1	54,415.7	12,866.5	3,824.3	12,374.4	862,180.5	752,418.8
Mar-08	3,996,016.1	2,043,161.8	57,539.9	12,252.5	4,762.4	12,878.6	991,288.8	874,132.0
Apr-08	3,816,019.8	1,931,819.3	51,710.5	11,448.0	3,690.3	12,796.2	975,199.0	829,356.4
May-08	3,955,254.4	2,040,236.7	55,383.2	12,347.0	4,356.4	12,562.9	970,904.0	859,464.2
Jun-08	3,771,229.4	1,897,327.4	52,920.1	12,454.6	4,166.2	12,868.4	955,074.3	836,418.5
Jul-08	3,915,989.8	2,000,997.2	53,346.5	13,104.6	5,153.6	15,524.7	970,657.7	857,205.5
Aug-08	4,151,874.4	2,118,536.9	55,678.7	13,698.5	4,480.8	16,742.3	1,015,119.5	927,617.7
Sep-08	4,014,363.1	2,040,398.3	52,916.4	13,933.3	3,849.1	17,200.9	987,458.8	898,606.2
Oct-08	4,293,175.9	2,190,235.2	57,931.6	14,983.8	3,780.6	19,021.3	1,046,808.5	960,414.9
Nov-08	4,410,297.3	2,278,126.0	56,934.8	14,586.3	4,097.1	21,432.0	1,062,818.3	972,302.8
Dec-08	5,333,388.7	2,673,938.9	63,519.5	15,687.4	7,653.0	59,312.4	1,246,549.0	1,266,728.4
Jan-09	4,325,465.7	2,141,386.0	51,625.2	14,054.4	5,418.5	27,487.2	1,067,538.6	1,017,956.0
Feb-09	3,952,421.3	2,109,391.9	44,681.8	13,756.9	3,397.0	17,760.7	875,538.8	887,894.2
Mar-09	4,595,850.8	2,393,445.3	54,629.3	15,674.6	8,934.6	17,974.4	1,037,839.6	1,067,353.0
Apr-09	4,338,854.2	2,118,099.9	71,447.4	14,252.6	6,441.3	15,482.1	1,058,724.7	1,054,406.1
May-09	4,561,188.2	2,234,861.7	61,421.5	15,388.4	4,333.9	21,073.3	1,115,723.2	1,108,386.3
Jun-09	4,215,493.8	1,916,404.5	82,600.9	15,255.7	4,503.7	20,988.6	1,210,898.7	964,841.7
Jul-09	4,391,275.4	2,015,451.7	74,906.7	16,334.6	6,235.3	21,532.0	1,210,730.6	1,046,084.6
Aug-09	4,460,453.7	2,206,395.6	55,142.3	16,102.5	6,513.8	21,444.8	1,089,003.2	1,065,851.6
Sep-09	4,354,195.6	2,122,922.6	51,718.6	15,948.5	6,484.2	22,036.3	1,067,847.8	1,067,237.6
Oct-09	4,744,913.2	2,295,857.4	47,649.7	16,911.0	9,313.5	20,963.3	1,152,571.1	1,201,647.1
Nov-09	4,625,448.2	2,357,807.0	51,753.3	14,311.9	13,226.0	26,548.7	1,055,167.4	1,106,634.0
Dec-09	5,565,937.7	2,694,608.3	62,134.8	13,481.9	15,200.3	69,614.0	1,314,679.8	1,396,218.6
Jan-10	4,650,287.3	2,238,925.3	42,988.3	13,264.6	9,163.6	31,200.5	1,143,125.3	1,171,619.8
Feb-10	4,138,652.6	2,405,828.1	41,046.0	13,264.6	5,634.8	18,751.1	663,152.8	990,975.2

Mar-10	4,830,737.3	2,360,289.8	43,636.7	16,669.7	9,558.1	20,954.2	1,185,899.4	1,193,729.5
Apr-10	4,638,003.3	2,470,063.7	41,014.6	13,015.5	8,807.7	19,306.5	1,002,402.0	1,083,393.3
May-10	4,771,671.0	2,644,792.2	39,384.2	11,738.9	10,574.5	25,207.4	969,684.2	1,070,289.7
Jun-10	4,509,265.3	2,618,512.0	40,944.8	9,297.1	9,815.5	20,364.3	763,101.4	1,047,230.4
Jul-10	4,765,751.2	2,433,275.6	42,765.1	6,103.2	9,508.4	21,905.4	1,116,204.7	1,135,988.8
Aug-10	4,470,828.9	2,187,715.4	37,743.7	3,416.0	9,263.7	22,581.5	1,101,199.4	1,108,909.2
Sep-10	4,558,630.8	2,361,216.2	42,917.5	3,102.9	9,413.5	20,999.3	1,055,744.8	1,065,236.6
Oct-10	4,986,795.8	2,543,064.9	41,332.2	2,355.0	10,877.7	23,633.6	1,170,832.8	1,194,699.6
Nov-10	4,763,078.6	2,552,276.0	47,997.2	3,488.8	3,834.8	18,038.5	1,049,138.8	1,088,304.4
Dec-10	7,276,593.3	4,178,222.8	46,362.2	3,290.4	56,722.6	18,983.9	1,679,462.7	1,293,548.7
Total	239,492,106.3	121,854,461.0	3,426,109.0	728,934.5	510,433.2	949,986.3	58,433,997.4	53,588,184.9

Company X

Appendix C: Company X Transaction Volumes

	Volumes of Value Transactions							
	Total Volume	Cash	Cheques	On Account	Vouchers	Gift Card	Credit Card	Debit Card
Jan-06	34,471,564	29,272,430	81,919	51,500	360,403		2,425,164	2,280,148
Feb-06	33,644,191	28,867,779	77,673	50,295	279,813		2,317,229	2,051,402
Mar-06	37,618,359	32,160,506	84,541	55,250	292,655		2,639,793	2,385,614
Apr-06	35,227,168	29,894,663	76,758	49,300	291,304		2,618,731	2,296,412
May-06	36,471,894	31,094,208	78,821	55,998	279,640		2,612,149	2,351,078
Jun-06	35,521,652	30,322,867	74,059	52,339	287,837		2,518,772	2,265,778
Jul-06	34,584,806	29,265,052	72,009	53,949	236,328		2,587,339	2,370,129
Aug-06	35,116,707	29,721,758	70,647	56,148	180,571		2,649,694	2,437,889
Sep-06	35,160,402	29,647,924	68,332	51,906	191,056		2,684,934	2,516,250
Oct-06	38,973,256	33,442,699	68,586	56,248	179,768		2,737,528	2,488,427
Nov-06	43,315,350	37,626,980	72,219	56,890	249,627		2,767,023	2,542,611
Dec-06	47,703,709	41,091,074	89,178	53,963	339,281	26,976	3,106,931	2,996,306
Jan-07	45,557,289	39,596,060	63,770	56,847	223,787	37,778	2,904,365	2,674,682
Feb-07	42,592,229	37,155,451	58,485	55,604	203,101	49,496	2,600,753	2,469,339
Mar-07	49,074,697	42,689,060	66,188	60,431	225,162	60,884	2,999,003	2,973,969
Apr-07	45,964,897	39,947,170	56,525	54,994	178,310	69,940	2,848,402	2,809,556
May-07	48,679,280	42,435,916	61,331	54,187	228,919	89,155	2,900,172	2,909,600
Jun-07	48,500,718	42,442,660	56,258	48,700	173,952	93,914	2,766,705	2,918,529
Jul-07	50,557,990	44,515,960	52,548	50,298	137,169	103,039	2,530,984	3,167,992
Aug-07	53,040,390	46,950,018	57,507	52,347	158,729	104,056	2,531,697	3,186,036
Sep-07	52,869,581	46,673,146	55,154	48,374	137,486	107,370	2,536,346	3,311,705
Oct-07	55,341,106	48,929,776	54,454	50,938	165,355	113,450	2,626,202	3,400,931
Nov-07	55,244,789	48,561,186	54,783	51,383	204,040	125,024	2,795,032	3,453,341

Dec-07	59,616,875	51,993,041	49,588	49,453	195,654	312,915	3,036,492	3,979,732
Jan-08	54,139,738	47,567,033	48,342	51,103	107,831	180,454	2,811,128	3,373,847
Feb-08	54,287,439	48,065,448	47,722	48,105	120,779	129,530	2,704,442	3,171,413
Mar-08	58,057,108	51,317,961	47,016	40,969	198,612	120,944	2,870,079	3,461,527
Apr-08	57,159,829	50,442,987	44,979	38,324	148,362	121,452	2,897,307	3,466,418
May-08	58,271,137	51,568,656	45,846	40,484	136,918	118,839	2,885,034	3,475,360
Jun-08	55,286,918	48,778,169	40,581	40,625	159,622	117,285	2,800,132	3,350,504
Jul-08	57,992,964	51,278,693	41,764	42,291	146,517	136,020	2,880,472	3,467,207
Aug-08	58,473,869	51,447,104	41,910	43,524	182,509	145,822	2,950,975	3,662,025
Sep-08	59,092,749	52,129,685	39,950	44,078	263,669	155,376	2,873,317	3,586,674
Oct-08	62,581,099	55,251,945	41,682	47,437	194,190	180,874	3,010,214	3,854,757
Nov-08	61,278,942	54,042,733	41,813	46,379	249,308	189,911	2,962,115	3,746,683
Dec-08	68,394,530	59,706,711	38,045	46,010	307,997	389,599	3,289,894	4,616,274
Jan-09	60,129,756	52,651,884	33,780	45,185	213,136	237,637	3,000,751	3,947,383
Feb-09	55,552,719	49,005,105	28,861	43,520	139,821	166,195	2,586,687	3,582,530
Mar-09	61,906,137	54,414,492	32,820	46,094	182,079	174,689	2,890,267	4,165,696
Apr-09	59,352,816	52,164,145	54,452	43,481	152,713	152,663	2,854,581	3,930,781
May-09	61,594,816	53,908,238	38,004	48,457	185,536	206,561	2,957,445	4,250,575
Jun-09	60,837,097	53,364,858	50,218	48,483	176,806	212,320	3,029,523	3,954,889
Jul-09	65,988,945	58,332,536	44,804	50,352	175,114	196,445	3,075,465	4,114,229
Aug-09	65,842,679	58,270,274	30,229	50,246	140,472	192,642	2,988,819	4,169,997
Sep-09	67,994,547	60,297,956	25,882	49,517	136,910	200,042	3,026,582	4,257,658
Oct-09	72,997,485	64,655,015	29,019	51,247	212,907	193,401	3,224,098	4,631,798
Nov-09	49,877,552	42,024,050	28,923	52,038	328,447	226,779	2,939,666	4,277,649
Dec-09	54,149,942	44,853,597	30,618	46,956	388,990	445,027	3,345,571	5,039,183
Jan-10	48,919,921	40,670,894	23,545	47,150	263,314	268,234	3,142,470	4,504,314
Feb-10	44,578,965	38,136,430	23,237	47,150	184,624	186,776	2,017,221	3,983,527
Mar-10	51,720,412	43,209,900	23,889	47,874	245,546	191,618	3,251,855	4,749,730
Apr-10	47,576,560	39,971,870	22,261	38,541	274,738	171,318	2,865,033	4,232,799

May-10	49,324,861	41,719,557	22,008	36,486	287,762	201,490	2,809,741	4,247,817
Jun-10	47,500,488	40,003,584	21,535	26,059	221,002	182,151	2,866,292	4,179,865
Jul-10	50,247,137	42,138,121	22,310	14,100	233,528	193,245	3,145,743	4,500,090
Aug-10	49,587,452	41,471,934	19,345	6,217	218,913	194,568	3,169,137	4,507,338
Sep-10	49,161,248	41,114,710	18,347	4,810	220,642	189,930	3,132,472	4,480,337
Oct-10	51,960,514	43,296,252	20,430	3,706	249,302	210,099	3,368,329	4,812,396
Nov-10	50,039,326	42,298,413	18,981	4,446	28,153	162,419	3,130,158	4,396,756
Dec-10	57,746,506	45,987,423	18,043	3,717	299,674	370,232	3,727,502	7,339,915
Total	3,094,453,102	2,679,855,747	2,802,524	2,662,503	12,776,390	8,406,584	172,221,957	215,727,397

Company X

Appendix D: Company X Average Transaction Value

	Average Transaction Value							
	Total Vat incl.	Cash	Cheques	On Account	Vouchers	Gift Card	Credit Card	Debit Card
Jan-06	81.43	48.10	839.77	180.11	60.55		295.55	255.45
Feb-06	76.10	46.17	823.00	192.93	61.16		289.01	227.77
Mar-06	79.38	47.56	858.43	198.10	58.13		299.23	237.42
Apr-06	82.97	49.47	863.32	197.94	56.20		302.40	243.69
May-06	79.50	47.36	869.96	190.09	60.43		296.67	236.39
Jun-06	79.20	47.25	898.33	201.89	59.06		301.76	232.26
Jul-06	86.14	51.99	915.98	211.03	70.29		304.33	243.17
Aug-06	84.19	50.84	905.66	209.65	80.77		296.00	234.16
Sep-06	88.00	52.97	933.79	220.86	78.44		307.32	241.80
Oct-06	80.65	47.84	991.08	224.46	42.71		306.01	248.14
Nov-06	72.28	42.17	917.81	228.03	18.91		308.75	238.35
Dec-06	83.74	49.28	784.62	244.63	39.81	286.30	341.88	268.12
Jan-07	70.87	40.82	967.74	215.15	22.55	99.31	308.04	237.41
Feb-07	69.11	40.75	972.33	225.09	13.61	94.45	300.33	231.41
Mar-07	72.17	41.59	1,008.41	237.61	12.52	102.63	318.77	242.11
Apr-07	73.20	42.41	1,025.15	233.43	10.61	95.88	316.53	245.35
May-07	69.95	40.49	1,029.35	234.37	9.45	98.38	312.87	238.10
Jun-07	69.49	40.13	1,072.43	234.47	8.97	97.08	315.49	243.90
Jul-07	66.77	38.06	1,115.46	236.80	13.89	99.74	315.50	252.66
Aug-07	63.96	36.82	1,087.85	254.44	11.56	99.41	312.53	246.18
Sep-07	67.24	38.20	1,099.52	255.03	14.78	110.56	330.24	255.90

Oct-07	64.83	36.86	1,138.08	265.67	14.40	112.70	319.89	251.01
Nov-07	65.88	35.93	1,124.94	254.41	17.55	119.16	334.69	250.76
Dec-07	76.02	42.89	1,273.61	283.45	41.63	145.30	358.77	271.91
Jan-08	67.43	37.75	1,158.93	245.18	27.90	109.75	332.06	246.15
Feb-08	63.85	36.79	1,140.26	267.47	31.66	95.53	318.80	237.25
Mar-08	68.83	39.81	1,223.84	299.07	23.98	106.48	345.39	252.53
Apr-08	66.76	38.30	1,149.66	298.72	24.87	105.36	336.59	239.25
May-08	67.88	39.56	1,208.03	304.98	31.82	105.71	336.53	247.30
Jun-08	68.21	38.90	1,304.06	306.58	26.10	109.72	341.08	249.64
Jul-08	67.53	39.02	1,277.33	309.87	35.17	114.14	336.98	247.23
Aug-08	71.00	41.18	1,328.53	314.74	24.55	114.81	343.99	253.31
Sep-08	67.93	39.14	1,324.57	316.11	14.60	110.70	343.67	250.54
Oct-08	68.60	39.64	1,389.85	315.87	19.47	105.16	347.75	249.15
Nov-08	71.97	42.15	1,361.65	314.50	16.43	112.85	358.80	259.51
Dec-08	77.98	44.78	1,669.59	340.96	24.85	152.24	378.90	274.40
Jan-09	71.94	40.67	1,528.28	311.04	25.42	115.67	355.76	257.88
Feb-09	71.15	43.04	1,548.17	316.10	24.30	106.87	338.48	247.84
Mar-09	74.24	43.99	1,664.51	340.06	49.07	102.89	359.08	256.22
Apr-09	73.10	40.60	1,312.12	327.79	42.18	101.41	370.89	268.24
May-09	74.05	41.46	1,616.18	317.57	23.36	102.02	377.26	260.76
Jun-09	69.29	35.91	1,644.85	314.66	25.47	98.85	399.70	243.96
Jul-09	66.55	34.55	1,671.87	324.41	35.61	109.61	393.67	254.26
Aug-09	67.74	37.86	1,824.15	320.47	46.37	111.32	364.36	255.60
Sep-09	64.04	35.21	1,998.25	322.08	47.36	110.16	352.82	250.66
Oct-09	65.00	35.51	1,642.02	329.99	43.74	108.39	357.49	259.43
Nov-09	92.74	56.11	1,789.35	275.03	40.27	117.07	358.94	258.70
Dec-09	102.79	60.08	2,029.35	287.12	39.08	156.43	392.96	277.07
Jan-10	95.06	55.05	1,825.79	281.33	34.80	116.32	363.77	260.11
Feb-10	92.84	63.08	1,766.41	281.33	30.52	100.39	328.75	248.77

Mar-10	93.40	54.62	1,826.64	348.20	38.93	109.35	364.68	251.33
Apr-10	97.49	61.80	1,842.44	337.70	32.06	112.69	349.87	255.95
May-10	96.74	63.39	1,789.54	321.74	36.75	125.10	345.12	251.96
Jun-10	94.93	65.46	1,901.31	356.77	44.41	111.80	266.23	250.54
Jul-10	94.85	57.75	1,916.86	432.85	40.72	113.36	354.83	252.44
Aug-10	90.16	52.75	1,951.08	549.47	42.32	116.06	347.48	246.02
Sep-10	92.73	57.43	2,339.21	645.09	42.66	110.56	337.03	237.76
Oct-10	95.97	58.74	2,023.11	635.44	43.63	112.49	347.60	248.25
Nov-10	95.19	60.34	2,528.70	784.71	136.21	111.06	335.17	247.52
Dec-10	126.01	90.86	2,569.54	885.22	189.28	51.28	450.56	176.23

Company X

Appendix E: Customer Questionnaire

Questionnaire on Consumer Tender Preference

Introduction

The purpose of this questionnaire is to obtain data for my research study which focuses on the relationship on fluctuating interest rates and the effect this has on credit card spending within a retail organisation. All responses will be treated with the strictest of confidence and the anonymity of all the respondents will be protected. The questionnaire should take approximately 10 minutes to complete. Please answer all the questions as honestly as possible.

Biographical Data

Please mark the appropriate box with a tick.

1. Gender

Male	Female
------	--------

2. Age Category

<25	25 – 35	36 – 45	46 – 55	>55
-----	---------	---------	---------	-----

3. SA Citizen

Yes	No
-----	----

4. Employment Status

Employed	Unemployed
----------	------------

5. Population Group

Black	Coloured	White	Asian	Other
-------	----------	-------	-------	-------

Please specify if you have chosen other: _____

6. Gross average monthly household income

<R8 000	R8k – R15k	R16k – R20k	R21k – R30k	>R30 000
---------	------------	-------------	-------------	----------

Consumer Behavioural Data

Please rate each of the following options in the grid provided by marking the appropriate box with an X.

7. How often do you shop at the following food retailers, 1 being very rarely and 5 being most frequently?

	1	2	3	4	5
	Very Rarely	Rarely	Occasionally	Frequently	Most Frequently
ShopriteCheckers					
Spar					
Pick n Pay					
Woolworths					

Please answer the following questions by marking the appropriate box(es) with a tick:

8. Which food retailer provides you with the best overall shopping experience?

ShopriteCheckers	Spar	Pick n Pay	Woolworths
------------------	------	------------	------------

9. How often do you do grocery shopping?

Daily	Weekly	Bi-Weekly	Monthly	Less than once a month
-------	--------	-----------	---------	------------------------

10. What is your average monthly spend on groceries or general merchandise at a food retailer?

<R500	R501 – R1 500	R1 501 – R3 000	R3 001 – R5 000	>R5 000
-------	---------------	-----------------	-----------------	---------

11. From the list below, please select the value added service(s) that you utilise at a food retailer (you may choose more than one service)

Bill Payments	
Airtime Purchases	
Prepaid Electricity Purchases	
Bus/Airline Ticket Purchases	
Theatre/Sport/Entertainment Ticket Purchases	

Tender and Interest Rate Data

Please answer the following questions by marking the appropriate box(es) with a tick:

12. Which of the following forms of legal tender do you utilise as payment when shopping at a food retailer?

Cash	Cheque	Debit Card	Credit Card	Buy Aid
------	--------	------------	-------------	---------

13. Which of the following card products do you use (select as many as desired)?

MasterCard	Visa	Amex	Diners	Maestro	Electron	Other
------------	------	------	--------	---------	----------	-------

If other please specify: _____

14. How would you rate interest rates in South Africa?

Fair	Unfair
------	--------

15. Are interest rates a determining factor that influences your decision to purchase on credit?

Yes	No
-----	----

16. Do high interest rates curb your use of credit cards?

Yes	No
-----	----

17. Which of the following statements describe the effect of interest rates on you as a consumer? Please tick the appropriate box(es).

Curbed my credit spending	
Cut out the purchase of luxury items	
Used my credit card more as there was less disposable income due to increases in other debt costs	
Purchase lower priced items at various retailers rather than one stop shopping (hunting for bargains)	
No effect at all	

Appendix F: Customer Survey Data

Biographical Data

Key:

Gender

Male	1
Female	2

Age Category

<25	1
25-35	2
36-45	3
46-55	4
>55	5

SA Citizen

Yes	1
No	2

Employment Status

Employed	1
Unemployed	2

Population Group

Black	1
Coloured	2
White	3
Asian	4
Other	5

Household

Income

<R8000	1
R8000-R15000	2
R16000-R20000	3
R21000-R30000	4
>R30000	5

#	Gender	Age	SA Citizen	Employment Status	Population Group	Monthly household income
1	1	2	1	1	2	2
2	2	2	1	1	2	2
3	1	1	1	1	2	2
4	1	1	1	1	1	3
5	1	2	1	1	2	4
6	2	5	1	1	3	5
7	2	3	1	1	3	5
8	2	2	1	1	3	4
9	2	5	1	1	3	5
10	2	3	1	1	2	1
11	2	2	1	1	2	1
12	2	2	1	1	1	1
13	2	4	1	1	2	3
14	2	2	1	1	4	5
15	1	2	1	1	2	2
16	2	2	1	1	2	2
17	2	3	1	1	3	5
18	1	2	1	1	3	2
19	2	4	1	1	3	5
20	1	4	1	1	3	5
21	2	2	1	1	3	4
22	2	4	1	1	2	3
23	2	3	1	1	2	4
24	2	2	1	1	2	3
25	1	2	1	1	3	2
26	2	3	1	1	3	3
27	2	3	1	1	2	2
28	2	3	1	1	3	3
29	1	1	1	1	2	3
30	2	3	1	1	2	3
31	2	5	1	1	2	3
32	2	2	1	1	2	4
33	2	3	1	1	3	2
34	2	2	1	1	3	2
35	2	2	1	1	3	4
36	1	2	1	1	3	2
37	2	4	1	1	4	5
38	2	5	1	2	2	1
39	1	4	1	1	2	5
40	2	4	1	1	2	3
41	1	2	1	1	4	1
42	2	3	1	1	2	2

#	Gender	Age	SA Citizen	Employment Status	Population Group	Monthly household income
43	2	3	1	1	2	4
44	2	3	1	1	2	1
45	2	4	1	2	2	2
46	2	2	1	1	2	1
47	2	4	1	1	3	3
48	2	2	1	1	1	2
49	1	4	1	1	2	5
50	1	2	1	1	3	5
51	2	3	1	1	3	5
52	1	2	1	1	4	5
53	2	5	1	2	2	1
54	2	4	1	1	3	1
55	2	3	1	1	2	3
56	2	1	1	1	2	1
57	2	1	1	1	2	1
58	2	1	1	1	2	1
59	2	2	1	1	3	1
60	2	2	1	1	2	1
61	2	3	2	1	1	2
62	2	2	1	1	2	1
63	2	2	1	1	1	1
64	2	2	1	2	2	2
65	2	3	1	1	2	2
66	2	2	1	1	2	3
67	2	2	1	1	1	1
68	1	3	1	2	2	1
69	1	4	1	1	2	1
70	1	4	1	1	2	1
71	1	2	1	2	2	1
72	2	3	1	2	2	1
73	2	3	1	2	2	1
74	2	4	1	1	2	5
75	2	4	1	1	3	2
76	2	2	1	1	2	2
77	2	1	1	1	2	1
78	1	2	1	1	2	2
79	2	3	1	1	2	2
80	1	2	1	1	3	5
81	2	2	1	1	3	5
82	2	3	1	1	3	5
83	1	2	1	1	1	1
84	1	2	1	1	1	5

#	Gender	Age	SA Citizen	Employment Status	Population Group	Monthly household income
85	2	5	1	1	1	1
86	2	2	1	1	2	2
87	1	2	1	1	2	5
88	2	2	1	1	2	1
89	2	4	1	2	2	1
90	2	5	1	2	2	1
91	1	5	1	1	2	3
92	1	2	1	1	2	2
93	1	2	1	1	1	5
94	2	5	1	2	2	1
95	1	4	1	1	4	5
96	2	2	1	1	2	4
97	1	2	1	1	2	5
98	2	2	1	1	1	3
99	1	5	2	1	3	5
100	1	3	1	1	1	5
101	1	4	1	1	2	5
102	2	4	1	2	2	3
103	2	4	1	1	3	5
104	1	5	1	1	2	2
105	2	3	1	1	2	4
106	1	1	1	2	2	1
107	2	2	1	1	3	2
108	2	4	1	1	2	4
109	2	4	1	1	2	5
110	2	5	1	1	2	2
111	2	4	1	1	2	3
112	2	4	1	1	2	3
113	2	4	1	1	2	2
114	1	2	1	1	2	4
115	1	2	1	1	2	5
116	2	4	1	1	4	5
117	1	3	1	1	2	5
118	2	2	1	1	3	5
119	2	5	1	1	3	5
120	2	3	1	1	2	4
121	1	4	1	1	2	5
122	2	3	1	1	3	5
123	2	2	1	1	2	3
124	1	3	1	1	2	5
125	2	2	1	1	3	4
126	2	3	1	1	1	5
127	2	1	1	1	2	3

#	Gender	Age	SA Citizen	Employment Status	Population Group	Monthly household income
128	2	2	1	1	2	3
129	1	4	1	1	2	4
130	1	5	1	1	3	3
131	2	3	1	1	3	4
132	2	3	1	1	2	4
133	2	3	1	1	2	4
134	2	2	1	1	1	4
135	2	2	1	1	3	5
136	1	3	1	1	3	5
137	2	3	1	1	3	5
138	1	2	1	1	1	3
139	2	2	1	1	2	2
140	1	2	1	1	2	2
141	2	4	1	1	3	4
142	2	2	2	1	3	4
143	2	3	1	1	3	5
144	1	4	1	1	3	5
145	2	3	1	1	3	4
146	2	3	1	1	2	4
147	2	3	1	1	2	2
148	1	4	1	1	3	4
149	1	3	1	1	2	3
150	2	3	1	1	3	3
151	2	3	1	1	3	4
152	2	2	1	1	1	2
153	2	4	1	1	2	5
154	2	5	1	1	3	4
155	1	3	1	1	1	5
156	2	2	1	1	3	2
157	2	3	1	1	1	3
158	2	3	1	1	2	3
159	1	3	1	1	1	4
160	1	2	1	1	2	3
161	1	3	1	1	3	4
162	2	2	1	1	3	2
163	2	4	1	1	3	2
164	1	2	1	1	2	5
165	2	2	1	1	3	4
166	2	2	1	1	3	5
167	1	2	1	1	3	5
168	1	3	1	1	3	5
169	2	4	1	1	1	4
170	2	4	1	1	2	2

#	Gender	Age	SA Citizen	Employment Status	Population Group	Monthly household income
171	2	5	1	1	3	4
172	2	5	1	1	3	5
173	2	4	1	1	3	5
174	1	3	1	1	3	5
175	2	2	1	1	3	4
176	1	2	1	1	2	5
177	1	3	1	1	3	5
178	2	2	1	1	2	5
179	2	5	1	2	1	1
180	1	2	1	1	2	5
181	2	3	1	1	2	1
182	2	2	1	1	1	1
183	2	1	1	1	1	2
184	2	2	1	1	1	3
185	1	2	1	1	1	3
186	1	2	1	1	4	2
187	2	2	1	1	4	3
188	2	3	1	1	3	5
189	1	3	1	1	2	2
190	1	3	1	1	2	4
191	1	2	1	1	2	1
192	1	3	1	1	1	2
193	1	3	1	1	4	4
194	1	4	1	1	1	1
195	1	3	1	2	1	1
196	1	5	1	2	2	1
197	1	4	2	2	1	1
198	2	4	1	1	1	1
199	1	5	1	1	2	2
200	1	4	1	1	3	2
201	1	3	1	1	2	3
202	2	3	1	1	2	2
203	1	4	1	1	3	3
204	1	2	1	1	4	3
205	1	4	1	2	3	1
206	2	1	1	1	2	1
207	1	4	1	1	2	2
208	1	4	1	1	2	2
209	1	4	1	1	3	3
210	1	3	1	1	2	2
211	1	3	1	1	3	4
212	1	3	1	1	1	3
213	1	5	1	1	2	1

Consumer Behavioural Data

Key:

Shopping Frequency

Very Rarely	1
Rarely	2
Occasionally	3
Frequently	4
Most Frequently	5

Overall Shopping Experience

ShopriteCheckers	1
Spar	2
Pick n Pay	3
Woolworths	4

Shopping Period Frequency

Daily	1
Weekly	2
Bi-Weekly	3
Monthly	4
Less than once a month	5

Average Grocery Spend

<R500	1
R501-R1500	2
R1501-R3000	3
R3001-R5000	4
>R5000	5

VAS

Yes	1
No	2

#	ShoprитеCheckers	Spar	Pick n Pay	Woolworths	Overall Shopping Experience	Shopping Frequency	Average Grocery Spend	Bill Payments	Airtime	Electricity	Bus/Airline Tickets	Event tickets
1	4	3	5	2	3	2	3	1	1	2	2	2
2	4	3	5	2	3	2	3	1	1	1	2	2
3	2	3	3	2	3	3	2	2	1	2	2	2
4	4	4	4	3	3	2	3	1	1	2	1	2
5	3	4	5	3	4	2	4	1	2	2	2	1
6	1	1	5	5	3	2	4	2	2	2	2	2
7	1	1	5	3	3	2	4	2	2	2	2	2
8	1	3	5	3	4	2	3	2	2	2	2	2
9	1	3	5	3	3	2	4	2	2	1	2	2
10	1	1	5	1	3	4	3	1	1	2	2	2
11	4	1	3	3	3	2	2	2	1	1	2	2
12	1	3	5	3	3	4	2	2	1	1	2	1
13	3	3	5	1	3	2	3	1	1	1	2	2
14	1	1	5	4	4	2	3	1	1	1	2	2
15	1	2	5	3	3	2	3	2	2	2	2	2
16	2	1	4	3	3	2	2	1	2	1	2	2
17	3	2	5	4	3	2	3	1	2	1	2	2
18	3	3	3	1	3	4	3	2	2	1	2	2
19	4	1	3	4	4	2	4	2	2	2	2	1
20	1	1	5	3	4	3	5	1	2	2	2	1
21	2	4	5	1	3	2	3	1	2	2	2	2
22	5	3	4	3	1	1	4	1	2	2	1	1
23	3	2	5	4	3	1	3	1	2	2	2	1
24	4	5	3	2	1	4	3	2	2	1	2	2
25	4	4	4	3	3	2	3	1	2	1	2	1

#	ShopriteCheckers	Spar	Pick n Pay	Woolworths	Overall Shopping Experience	Shopping Frequency	Average Grocery Spend	Bill Payments	Airtime	Electricity	Bus/Airline Tickets	Event tickets
26	5	5	1	3	2	2	2	1	1	2	2	2
27	1	4	5	4	4	2	3	1	1	2	2	2
28	4	1	5	4	1	1	4	1	1	2	2	2
29	1	3	3	4	4	4	1	2	1	2	2	2
30	3	2	5	4	4	4	3	2	1	2	2	2
31	3	2	4	4	4	1	3	2	1	2	2	2
32	1	4	5	1	3	2	2	2	1	2	2	2
33	5	2	3	1	1	2	3	2	2	2	2	1
34	2	3	4	2	3	4	2	1	2	1	2	2
35	5	3	2	3	1	4	3	2	2	1	2	2
36	1	3	5	1	3	4	2	1	1	1	2	2
37	1	1	5	5	3	4	3	1	1	2	2	2
38	3	3	5	3	4	2	2	1	2	2	2	2
39	2	1	3	1	3	5	5	1	2	1	1	1
40	5	3	3	3	1	2	2	2	1	1	2	2
41	4	1	3	1	4	2	2	1	1	2	1	2
42	5	1	4	3	1	2	3	1	1	1	1	2
43	4	4	4	3	3	2	4	1	2	1	1	1
44	3	1	4	3	3	4	5	1	2	1	2	2
45	4	3	4	5	4	4	3	1	1	1	2	2
46	4	1	5	3	3	4	2	1	2	1	2	2
47	1	1	5	3	4	2	5	1	1	1	2	2
48	4	3	5	3	3	2	2	1	1	1	2	2
49	1	1	5	4	3	2	5	1	1	2	2	2
50	2	2	4	4	3	3	4	2	2	2	2	2
51	1	1	5	5	4	1	5	2	2	2	2	2
52	1	1	3	5	4	1	3	2	2	2	2	2
53	2	1	5	5	3	2	3	2	1	1	2	2

#	ShopriteCheckers	Spar	Pick n Pay	Woolworths	Overall Shopping Experience	Shopping Frequency	Average Grocery Spend	Bill Payments	Airtime	Electricity	Bus/Airline Tickets	Event tickets
54	1	4	5	4	4	2	4	2	2	2	2	2
55	3	1	5	3	3	2	3	1	2	1	2	2
56	3	1	5	1	3	4	3	2	1	2	2	2
57	1	1	5	1	3	2	2	1	1	2	2	2
58	1	1	5	3	3	3	2	1	1	1	2	2
59	1	1	5	3	4	1	4	1	1	1	2	1
60	2	1	5	3	4	4	2	1	1	1	2	1
61	4	1	4	4	3	4	2	2	1	1	2	2
62	1	1	4	1	4	2	3	2	2	2	1	1
63	1	1	3	1	3	2	1	2	1	2	2	2
64	1	1	5	3	3	4	4	1	1	2	2	2
65	1	3	1	3	3	2	3	2	2	2	1	1
66	2	3	5	5	4	2	2	1	1	2	1	1
67	1	1	1	1	1	4	1	2	2	1	2	2
68	1	1	3	1	3	2	3	1	1	1	2	2
69	1	1	5	1	3	4	4	1	1	1	2	2
70	1	1	5	1	3	2	4	1	1	1	2	2
71	1	1	1	1	3	5	1	1	1	1	2	2
72	1	1	4	1	3	4	3	1	1	1	2	2
73	1	1	4	1	3	4	2	1	1	1	2	2
74	3	1	5	3	4	2	5	1	2	1	2	2
75	1	4	5	2	2	2	3	1	1	1	2	2
76	1	1	5	3	3	3	2	1	1	1	2	2
77	4	2	4	2	3	4	3	2	1	1	2	1
78	2	3	5	4	4	4	3	1	1	1	2	2
79	1	1	5	4	4	2	5	1	1	2	2	2
80	1	1	5	4	3	2	4	1	2	1	2	2
81	1	1	5	3	3	2	3	2	2	2	2	1

#	ShopriteCheckers	Spar	Pick n Pay	Woolworths	Overall Shopping Experience	Shopping Frequency	Average Grocery Spend	Bill Payments	Airtime	Electricity	Bus/Airline Tickets	Event tickets
82	1	1	3	5	4	1	5	2	2	2	2	1
83	5	3	4	1	1	2	2	2	1	2	1	2
84	3	4	5	4	4	3	4	1	2	2	2	1
85	4	1	3	1	3	1	2	2	1	2	1	2
86	4	4	5	3	4	3	3	1	2	2	2	2
87	4	3	5	4	4	2	5	1	2	1	2	2
88	4	3	5	2	3	2	2	2	1	2	2	2
89	5	3	4	2	3	4	2	2	1	2	2	2
90	4	3	5	2	3	3	2	1	2	2	2	2
91	5	3	4	2	3	4	4	1	2	2	2	2
92	4	3	5	2	3	3	3	1	1	1	2	2
93	3	3	5	4	4	3	4	1	2	2	1	1
94	4	3	5	2	3	2	3	1	2	2	2	2
95	2	3	4	5	4	4	5	1	2	2	2	1
96	3	4	5	4	3	3	4	1	2	1	2	2
97	3	4	5	4	4	4	5	1	2	1	2	1
98	3	3	5	4	3	2	3	2	1	2	2	2
99	2	2	4	5	4	4	5	2	2	2	2	1
100	3	4	5	4	4	3	5	1	2	1	2	1
101	2	3	4	5	4	2	4	1	2	2	2	1
102	2	3	5	4	4	2	4	1	2	2	2	1
103	2	3	3	5	4	2	5	1	2	2	2	2
104	4	4	5	3	4	2	3	1	2	1	2	2
105	3	3	5	4	4	2	4	1	1	2	2	1
106	4	3	3	1	3	2	2	2	1	1	2	2
107	3	3	4	3	4	3	3	1	2	2	2	1
108	2	3	5	3	3	2	2	1	2	1	2	1
109	5	4	3	5	4	2	4	2	2	2	2	1

#	ShopriteCheckers	Spar	Pick n Pay	Woolworths	Overall Shopping Experience	Shopping Frequency	Average Grocery Spend	Bill Payments	Airtime	Electricity	Bus/Airline Tickets	Event tickets
110	3	2	5	4	4	2	4	1	2	2	2	1
111	4	3	5	3	4	2	4	1	1	1	2	2
112	3	5	5	4	3	1	3	2	1	1	1	2
113	1	5	5	1	3	3	3	1	1	1	2	2
114	4	3	4	3	4	4	4	1	2	2	2	2
115	3	4	5	3	4	2	5	1	2	2	2	1
116	2	1	5	5	4	2	4	1	2	2	2	2
117	3	3	5	4	3	3	5	1	2	2	2	1
118	4	3	4	4	4	3	3	1	2	1	2	2
119	3	2	3	5	4	3	5	1	2	1	2	2
120	4	3	4	3	4	2	5	1	1	1	2	2
121	4	3	4	5	4	3	5	1	2	1	2	1
122	3	3	3	5	4	3	5	1	2	1	2	1
123	5	3	5	3	3	2	4	1	1	1	2	2
124	3	3	3	5	4	3	4	1	2	1	2	1
125	3	2	4	5	4	1	3	1	2	2	2	1
126	1	3	5	4	4	4	2	1	1	2	2	2
127	4	3	5	2	3	1	4	1	1	1	2	2
128	2	4	3	4	2	2	5	1	2	2	2	1
129	5	4	5	4	4	2	3	1	2	2	2	2
130	2	3	5	2	3	2	3	1	1	1	2	2
131	3	3	4	5	4	3	3	1	2	1	2	1
132	3	2	5	2	4	2	4	1	2	2	2	2
133	4	4	4	4	4	2	3	2	1	2	2	1
134	2	2	5	3	3	2	3	2	2	2	2	2
135	2	4	4	4	4	2	3	2	2	2	2	1
136	1	3	3	4	4	3	3	1	2	2	2	2
137	4	4	5	4	3	2	5	2	2	2	2	2

#	ShopriteCheckers	Spar	Pick n Pay	Woolworths	Overall Shopping Experience	Shopping Frequency	Average Grocery Spend	Bill Payments	Airtime	Electricity	Bus/Airline Tickets	Event tickets
138	2	3	4	2	3	2	3	2	2	2	1	2
139	5	4	5	3	1	3	3	2	2	2	2	2
140	3	4	4	2	3	3	3	2	2	1	2	2
141	2	4	3	5	4	1	4	2	1	1	2	2
142	1	3	3	5	4	1	3	2	2	2	2	2
143	4	4	4	4	4	1	4	1	2	2	2	2
144	2	4	3	5	4	1	5	2	2	1	2	2
145	1	1	5	3	4	2	3	2	1	1	2	2
146	4	4	5	4	2	3	4	2	2	1	2	1
147	5	2	4	3	3	2	3	1	1	2	2	1
148	3	2	5	2	3	2	3	1	2	1	2	2
149	3	4	3	2	3	3	4	1	1	1	2	2
150	5	3	2	2	1	2	3	2	2	2	2	2
151	2	4	5	3	4	2	3	1	2	1	1	1
152	3	4	5	2	4	4	2	2	1	1	1	2
153	3	3	5	4	3	2	3	1	1	1	2	2
154	1	5	1	4	2	2	3	1	1	1	1	2
155	4	3	4	5	3	3	4	2	1	2	1	2
156	3	4	5	2	3	3	2	2	1	2	2	1
157	3	3	5	4	3	4	2	2	2	1	1	2
158	3	4	5	4	3	1	3	1	1	2	2	2
159	2	3	4	5	4	3	3	1	2	1	2	2
160	4	3	4	4	4	3	2	1	2	1	2	1
161	4	4	4	2	4	1	2	2	1	2	2	2
162	1	2	5	5	4	2	3	2	2	1	2	1
163	2	1	5	1	3	2	2	2	1	1	2	2
164	3	2	5	3	1	3	3	2	1	1	2	1
165	1	2	4	4	4	1	2	2	2	2	2	2

#	ShopriteCheckers	Spar	Pick n Pay	Woolworths	Overall Shopping Experience	Shopping Frequency	Average Grocery Spend	Bill Payments	Airtime	Electricity	Bus/Airline Tickets	Event tickets
166	2	3	5	3	3	2	4	2	2	1	2	1
167	1	3	5	4	4	3	5	2	2	2	2	2
168	1	4	5	2	2	2	5	2	2	2	2	2
169	3	3	5	4	3	2	4	1	2	1	2	2
170	3	3	3	3	3	3	3	1	2	1	2	2
171	3	3	4	2	1	1	3	2	1	2	2	2
172	3	2	5	3	3	2	5	2	2	1	2	2
173	1	2	5	4	4	3	5	2	2	1	2	2
174	1	3	5	4	3	2	5	2	2	2	2	2
175	3	2	5	3	3	4	3	1	1	2	2	2
176	1	1	4	5	4	2	4	1	2	1	2	1
177	1	4	4	5	4	2	5	2	2	2	2	1
178	2	1	5	3	4	2	3	1	2	1	2	1
179	5	3	4	2	3	1	2	2	1	1	2	2
180	3	3	5	4	4	2	3	1	2	2	2	2
181	2	1	5	3	3	4	3	2	2	1	2	2
182	5	3	4	1	3	4	2	1	2	2	2	2
183	5	3	3	1	3	3	2	2	1	1	2	2
184	3	2	4	4	3	4	3	1	2	2	2	2
185	4	3	5	3	3	2	2	2	1	1	2	2
186	4	3	4	2	3	3	3	1	2	2	2	2
187	3	4	5	4	4	3	3	1	2	2	2	2
188	2	3	4	5	4	4	5	1	2	2	2	1
189	3	2	4	2	4	2	3	3	1	2	1	2
190	4	3	4	3	3	3	4	1	2	1	2	2
191	4	2	3	1	1	1	2	2	1	2	2	2
192	4	3	4	2	3	2	3	1	1	1	2	2
193	3	3	5	4	4	2	4	1	2	2	2	2

#	ShopriteCheckers	Spar	Pick n Pay	Woolworths	Overall Shopping Experience	Shopping Frequency	Average Grocery Spend	Bill Payments	Airtime	Electricity	Bus/Airline Tickets	Event tickets
194	4	1	3	1	1	1	2	2	1	2	2	2
195	4	1	2	1	1	1	1	2	2	2	2	2
196	3	1	4	1	3	2	2	2	2	2	2	2
197	3	1	3	1	3	1	2	2	1	2	2	2
198	4	1	3	1	1	1	2	2	1	2	2	2
199	4	1	5	1	3	2	3	1	1	1	2	2
200	4	3	4	2	3	2	3	1	1	2	2	2
201	4	3	4	2	3	2	3	1	1	1	2	2
202	3	4	5	4	3	2	3	1	1	2	2	2
203	5	3	4	2	1	2	3	1	2	1	2	1
204	3	3	5	4	4	2	3	1	2	1	2	2
205	3	2	4	1	3	1	2	2	2	2	2	2
206	4	2	3	3	3	1	2	1	1	1	2	2
207	4	3	5	2	3	3	3	1	1	1	2	2
208	4	3	5	1	3	3	3	1	2	2	2	2
209	4	4	5	3	2	1	3	1	1	1	2	2
210	4	4	5	2	3	2	3	1	2	2	2	2
211	3	3	5	2	4	3	4	1	2	1	2	2
212	4	2	4	3	3	2	3	1	2	2	2	1
213	5	3	3	1	1	1	3	1	2	1	2	2

Tender Data

Key:

Tender Type

Yes 1
 No 2

#	Cash	Cheque	Debit Card	Credit Card	Buy Aid	MasterCard	Visa	Amex	Diners	Maestro	Electron	Other
1	1	2	1	2	2	2	2	2	2	1	2	2
2	1	2	1	1	2	1	2	2	2	2	1	2
3	1	2	1	2	2	2	2	2	2	2	1	2
4	1	2	1	1	2	2	1	2	2	1	2	2
5	1	2	1	1	2	1	1	1	2	2	2	2
6	2	2	2	1	2	1	1	2	2	2	2	2
7	2	2	1	2	2	1	2	2	2	2	2	2
8	2	2	1	1	2	1	2	2	2	2	2	2
9	2	2	2	1	2	1	1	2	2	2	2	2
10	1	2	2	2	2	1	1	2	2	2	2	2
11	1	2	1	2	2	2	2	2	2	1	2	2
12	1	2	1	2	2	2	2	2	2	1	2	2
13	2	2	1	2	2	2	1	2	2	2	2	2
14	1	2	1	2	2	1	2	2	2	2	2	2
15	2	2	1	1	2	1	1	2	2	2	2	2
16	1	2	1	1	2	1	2	2	2	2	2	2
17	1	2	1	2	1	1	2	2	2	1	1	1
18	2	2	1	2	2	2	2	2	2	1	2	2
19	2	1	2	2	2	1	2	2	2	2	2	2
20	2	2	2	1	2	2	1	2	2	2	2	2
21	2	2	1	2	2	1	1	2	2	2	2	2

#	Cash	Cheque	Debit Card	Credit Card	Buy Aid	MasterCard	Visa	Amex	Diners	Maestro	Electron	Other
22	1	2	1	1	2	2	1	1	2	2	2	2
23	2	2	1	2	2	2	1	2	2	1	2	2
24	2	2	1	2	2	2	1	2	2	2	2	2
25	2	2	1	1	2	2	1	2	2	1	2	2
26	1	2	1	2	2	1	2	2	2	2	2	2
27	1	2	1	2	2	2	1	2	2	2	2	2
28	1	2	2	2	2	1	2	2	2	2	1	2
29	1	2	2	2	2	2	2	2	2	2	1	2
30	1	2	2	1	2	2	1	2	2	2	2	2
31	1	2	2	1	2	2	1	2	2	2	2	2
32	1	2	2	2	2	1	1	2	2	1	2	2
33	1	2	2	2	2	1	1	2	2	2	2	2
34	1	2	1	2	2	2	1	2	2	2	2	2
35	2	2	1	2	2	2	2	2	2	1	2	2
36	2	2	1	2	2	2	1	2	2	1	2	2
37	2	2	1	2	2	2	2	2	2	2	1	2
38	1	2	1	2	2	2	2	2	2	1	2	2
39	2	2	1	1	2	1	1	1	1	2	2	2
40	2	2	1	2	2	2	2	2	2	2	1	2
41	1	2	1	2	2	1	1	2	2	1	2	2
42	1	2	1	2	2	2	1	2	2	2	2	2
43	2	2	1	1	2	2	1	1	2	2	2	2
44	2	2	1	2	2	2	1	2	2	2	2	2
45	1	2	2	2	2	2	2	2	2	2	2	2
46	1	2	2	2	2	2	2	2	2	2	2	1
47	2	2	1	1	2	1	1	2	2	2	2	2
48	1	2	1	1	2	1	2	2	2	1	2	2
49	2	2	2	1	2	1	1	1	1	2	2	2
50	2	2	1	1	2	2	1	2	2	2	2	2

#	Cash	Cheque	Debit Card	Credit Card	Buy Aid	MasterCard	Visa	Amex	Diners	Maestro	Electron	Other
51	1	2	2	1	2	2	1	2	2	2	2	2
52	1	2	2	1	2	2	1	2	2	2	2	2
53	1	2	2	2	2	2	1	2	2	2	2	2
54	1	2	1	2	2	2	2	2	2	1	2	2
55	1	2	2	2	2	2	2	2	2	2	1	2
56	2	2	1	2	2	2	1	2	2	2	2	2
57	1	2	1	2	2	2	2	2	2	1	2	2
58	2	2	1	2	2	1	2	2	2	2	2	2
59	1	2	1	2	2	1	2	2	2	2	2	2
60	1	2	1	2	2	2	2	2	2	1	2	2
61	1	2	2	2	2	1	2	2	2	2	2	2
62	1	2	1	2	2	2	2	2	2	2	2	2
63	1	2	2	2	2	2	1	2	2	2	2	2
64	1	2	2	2	2	2	2	2	2	2	2	2
65	1	2	2	2	2	2	2	2	2	2	2	2
66	2	2	1	1	2	1	1	2	2	2	2	2
67	1	2	2	2	2	2	2	2	2	2	1	2
68	2	2	1	2	2	2	2	2	2	1	2	2
69	1	2	2	2	2	2	2	2	2	1	2	2
70	1	2	2	2	2	2	1	2	2	2	2	2
71	1	2	2	2	2	2	2	2	2	2	2	2
72	1	2	2	2	2	2	2	2	2	2	2	2
73	1	2	2	2	2	2	2	2	2	2	2	2
74	2	2	1	2	2	2	2	2	2	1	2	2
75	2	2	1	2	2	1	2	2	2	2	2	2
76	1	2	1	2	2	2	2	2	2	1	1	2
77	2	2	1	2	2	1	1	2	2	2	2	2
78	2	2	1	1	2	1	2	2	2	2	1	2
79	1	2	1	1	2	1	1	2	2	1	2	2

#	Cash	Cheque	Debit Card	Credit Card	Buy Aid	MasterCard	Visa	Amex	Diners	Maestro	Electron	Other
80	1	2	1	1	2	2	1	1	2	2	2	2
81	1	2	2	1	2	1	1	2	2	1	2	2
82	2	2	2	1	2	2	1	2	2	2	2	2
83	1	2	1	2	2	2	2	2	2	1	2	2
84	2	2	1	1	2	1	2	2	2	1	2	2
85	1	2	2	2	2	2	2	2	2	2	2	2
86	1	2	1	1	2	2	1	2	2	2	1	2
87	1	2	1	1	2	2	1	2	2	2	1	2
88	1	2	1	2	2	2	2	2	2	2	1	2
89	1	2	1	2	2	2	2	2	2	1	2	2
90	1	2	1	2	2	2	2	2	2	1	2	2
91	1	2	1	1	2	2	1	2	2	2	1	2
92	1	2	1	1	2	1	2	2	2	2	1	2
93	1	2	1	1	2	2	1	2	2	2	1	2
94	1	2	1	2	2	2	2	2	2	2	1	2
95	2	2	2	1	2	2	1	2	1	2	2	2
96	1	2	1	1	2	1	2	2	2	2	1	2
97	1	2	1	1	2	2	1	1	2	2	1	2
98	1	2	1	1	2	1	2	2	2	2	1	2
99	2	2	2	1	2	1	2	2	1	2	2	2
100	1	2	1	1	2	2	2	2	1	1	2	2
101	1	2	1	1	2	2	1	1	2	2	1	2
102	1	2	1	1	2	1	2	2	2	2	1	2
103	2	2	1	1	2	1	2	1	2	1	2	2
104	1	2	1	1	2	1	2	2	2	1	2	2
105	2	2	1	2	2	2	1	2	2	2	1	2
106	1	2	2	2	2	2	2	2	2	2	2	2
107	2	2	1	1	2	2	1	2	2	2	1	2
108	1	2	1	1	2	1	1	2	2	2	2	2

#	Cash	Cheque	Debit Card	Credit Card	Buy Aid	MasterCard	Visa	Amex	Diners	Maestro	Electron	Other
109	2	2	2	1	2	1	2	2	2	2	2	2
110	1	2	2	2	2	2	1	2	2	2	2	2
111	1	2	1	2	2	1	2	2	2	2	1	2
112	2	2	1	2	2	2	2	2	2	1	2	2
113	1	2	1	2	2	2	1	2	2	2	1	2
114	1	2	1	2	2	2	1	2	2	1	2	2
115	1	2	1	1	2	1	1	1	2	2	2	2
116	2	2	1	2	2	1	2	2	2	2	2	2
117	2	2	1	1	2	1	2	2	1	2	2	2
118	2	2	1	1	2	1	1	2	2	2	2	2
119	2	2	1	1	2	1	1	2	1	2	2	2
120	2	2	1	1	2	2	1	2	2	2	1	2
121	1	2	1	1	2	1	1	2	1	2	2	2
122	1	2	1	1	2	2	1	2	1	2	2	2
123	1	2	1	2	2	1	2	2	2	1	2	2
124	1	2	1	1	2	1	1	2	2	1	2	2
125	1	2	1	2	2	1	1	2	2	2	2	2
126	2	2	1	2	2	1	1	2	2	2	2	2
127	1	2	1	2	2	1	2	2	2	1	2	2
128	2	2	1	1	2	2	1	2	2	2	1	2
129	2	2	2	1	2	1	1	2	2	2	2	2
130	1	2	1	2	2	1	2	2	2	1	2	2
131	1	2	1	1	2	2	1	2	2	2	2	2
132	2	2	1	1	2	1	1	2	2	1	2	2
133	2	2	1	2	2	1	2	2	2	2	2	2
134	2	2	1	2	2	2	1	2	2	2	1	2
135	2	2	1	1	2	2	1	2	1	1	2	2
136	2	2	1	1	2	1	2	2	1	1	2	2
137	1	1	2	1	2	2	1	2	2	2	2	2

#	Cash	Cheque	Debit Card	Credit Card	Buy Aid	MasterCard	Visa	Amex	Diners	Maestro	Electron	Other
138	1	2	1	2	2	1	2	2	2	2	1	2
139	1	2	1	2	2	1	2	2	2	1	2	2
140	2	2	1	2	2	2	1	2	2	2	1	2
141	1	2	1	2	2	1	2	2	2	2	2	2
142	2	2	1	2	2	2	1	2	2	1	2	2
143	2	2	1	2	2	1	2	2	2	2	2	2
144	2	2	1	2	2	2	1	2	2	2	2	2
145	1	2	1	2	2	2	1	2	2	2	2	2
146	1	2	1	1	2	1	1	2	2	2	2	2
147	2	2	1	2	2	2	1	2	2	1	2	2
148	1	2	2	1	2	2	1	2	2	2	2	2
149	2	2	1	2	2	2	1	2	2	2	2	2
150	1	2	2	1	2	2	1	2	2	2	2	2
151	2	2	1	1	2	1	1	2	2	2	2	2
152	2	2	1	2	2	2	2	2	2	1	2	2
153	2	2	2	1	2	2	1	1	2	2	2	2
154	1	2	2	1	2	1	2	2	2	2	2	2
155	2	2	1	2	2	2	1	2	2	1	2	2
156	2	2	1	1	2	2	1	2	2	1	2	2
157	2	2	1	2	2	1	1	2	2	2	2	2
158	1	2	1	1	2	1	2	2	2	2	2	2
159	1	2	1	1	2	2	1	2	2	2	1	2
160	2	2	1	2	2	1	2	2	2	2	2	2
161	1	2	2	1	2	1	2	2	2	2	2	2
162	1	2	2	1	2	1	2	2	2	2	2	2
163	2	2	1	2	2	1	2	2	2	2	2	2
164	1	2	1	2	2	1	1	2	2	2	2	2
165	2	1	2	1	2	2	1	2	2	2	2	2
166	2	2	2	1	2	2	1	2	2	2	2	2

#	Cash	Cheque	Debit Card	Credit Card	Buy Aid	MasterCard	Visa	Amex	Diners	Maestro	Electron	Other
167	2	2	2	1	2	2	1	2	2	2	2	2
168	2	2	2	1	2	2	2	1	2	2	2	2
169	2	2	1	2	2	2	1	2	2	2	1	2
170	1	2	2	2	2	2	2	2	2	2	2	2
171	1	2	1	2	2	2	1	2	2	2	2	2
172	2	2	1	2	2	2	1	2	2	2	2	2
173	1	2	2	1	2	1	1	2	2	2	2	2
174	1	2	1	1	2	2	1	2	2	2	2	2
175	1	2	1	2	2	2	1	2	2	2	2	2
176	2	2	1	1	2	2	1	1	2	2	2	2
177	1	2	2	1	2	1	2	2	2	2	2	2
178	2	2	2	1	2	2	1	1	2	2	2	2
179	1	2	1	2	2	2	2	2	2	2	1	2
180	1	2	1	2	2	1	1	1	2	2	2	2
181	2	2	1	2	2	2	2	2	2	2	2	2
182	2	2	1	2	2	2	1	2	2	2	2	2
183	2	2	1	1	2	1	1	2	2	2	2	2
184	2	2	1	2	2	2	1	2	2	2	2	2
185	1	2	1	1	2	1	2	2	2	2	1	2
186	2	2	1	2	2	2	1	2	2	1	2	2
187	2	2	1	1	2	1	2	2	2	1	2	2
188	2	2	1	1	2	2	1	2	1	2	1	2
189	1	2	1	1	2	2	1	2	2	2	1	2
190	1	2	1	1	2	2	1	2	2	2	1	2
191	1	2	1	2	2	2	2	2	2	1	2	2
192	1	2	1	2	2	1	2	2	2	2	1	2
193	2	2	1	1	2	2	2	1	2	1	2	2
194	1	2	2	2	2	2	2	2	2	2	2	2
195	1	2	2	2	2	2	2	2	2	2	2	2

#	Cash	Cheque	Debit Card	Credit Card	Buy Aid	MasterCard	Visa	Amex	Diners	Maestro	Electron	Other
196	1	2	1	2	2	2	2	2	2	2	1	2
197	1	2	2	2	2	2	2	2	2	2	2	2
198	1	2	1	2	2	2	2	2	2	1	2	2
199	1	2	1	2	2	2	2	2	2	1	2	2
200	1	2	1	2	2	2	1	2	2	2	1	2
201	1	2	1	1	2	1	2	2	2	2	1	2
202	2	2	1	2	2	1	2	2	2	2	2	2
203	1	2	1	1	2	1	2	2	2	1	2	2
204	2	2	1	2	2	2	1	1	2	1	2	2
205	1	2	1	2	2	2	2	2	2	1	2	2
206	1	2	2	1	2	2	1	2	2	2	1	2
207	1	2	1	2	2	1	2	2	2	1	2	2
208	1	2	1	2	2	2	2	2	2	2	1	2
209	1	2	1	2	2	2	1	2	2	1	2	2
210	2	2	1	2	2	1	2	2	2	1	2	2
211	2	2	1	1	2	1	2	2	2	2	1	2
212	2	2	1	1	2	2	1	1	2	2	2	2
213	1	2	2	2	2	2	2	2	2	2	1	2

Interest Rate Data

Key:

Interest Rate Fairness

- Fair 1
- Unfair 2

Interest Rate Factor

- Yes 1
- No 2

Interest Curb on Credit Cards

- Yes 1
- No 2

Interest Rate Effect

- Yes 1
- No 2

#	Interest Rate Fairness	Interest Rate Factor	Interest Curb on Credit Cards	Curbed my spending	Cut out the purchase of luxury items	Used my credit card more	Purchase lower priced items	No effect at all
1	2	1	2	2	1	2	1	2
2	2	1	1	1	1	2	1	2
3	2	1	1	2	1	2	1	2
4	1	2	2	2	1	2	1	2
5	1	2	2	2	1	1	1	2
6	1	2	2	2	2	2	2	1
7	1	1	1	2	1	2	1	2
8	1	2	2	2	2	2	2	1
9	1	1	1	1	2	2	2	2
10	2	1	1	1	1	2	1	2

#	Interest Rate Fairness	Interest Rate Factor	Interest Curb on Credit Cards	Curbed my spending	Cut out the purchase of luxury items	Used my credit card more	Purchase lower priced items	No effect at all
11	1	1	1	2	2	2	1	2
12	2	1	1	2	1	2	2	2
13	2	1	1	1	1	2	1	2
14	2	1	1	1	2	2	2	2
15	2	2	2	2	2	1	2	2
16	1	1	1	2	1	1	1	2
17	2	1	1	1	1	2	1	2
18	1	1	1	2	1	2	2	2
19	2	1	1	2	2	2	1	2
20	1	2	2	1	1	2	1	2
21	1	1	1	1	1	2	1	2
22	2	1	1	1	1	1	1	2
23	1	1	1	1	2	2	1	2
24	1	1	1	1	1	2	1	2
25	1	1	1	1	1	2	1	2
26	2	1	1	1	1	1	2	2
27	1	1	1	1	2	2	1	2
28	2	1	2	2	1	1	1	2
29	2	1	2	2	1	2	2	1
30	1	1	1	1	1	2	1	2
31	1	1	1	2	1	2	1	2
32	2	1	1	2	1	2	2	2
33	2	1	1	2	1	2	2	2
34	2	1	1	2	1	2	2	2
35	2	2	1	1	2	2	2	2
36	1	1	1	2	1	2	2	2
37	2	1	1	1	1	2	2	2

#	Interest Rate Fairness	Interest Rate Factor	Interest Curb on Credit Cards	Curbed my spending	Cut out the purchase of luxury items	Used my credit card more	Purchase lower priced items	No effect at all
38	1	2	2	2	1	2	1	2
39	2	1	1	1	1	1	1	2
40	2	1	1	1	1	2	1	2
41	2	1	1	1	1	2	1	2
42	2	1	1	1	2	2	1	2
43	1	1	1	2	1	1	2	2
44	2	1	1	1	2	2	2	2
45	2	1	1	1	1	2	1	2
46	2	1	1	1	2	2	1	2
47	2	1	1	1	1	1	2	2
48	2	1	1	1	1	2	1	2
49	1	2	2	2	2	2	2	1
50	2	2	2	2	2	2	2	1
51	2	1	1	1	1	2	2	2
52	1	2	2	2	2	2	2	1
53	2	1	1	1	2	2	2	2
54	2	2	1	1	2	2	2	2
55	1	1	1	1	1	2	1	2
56	2	1	1	2	1	2	1	2
57	2	1	1	1	1	2	1	2
58	2	1	1	2	1	2	1	2
59	2	1	1	1	1	2	2	2
60	2	1	1	1	2	2	2	2
61	1	2	2	2	1	2	2	2
62	2	1	1	1	1	2	1	2
63	2	2	2	2	2	2	1	2
64	2	1	1	1	2	1	1	2

#	Interest Rate Fairness	Interest Rate Factor	Interest Curb on Credit Cards	Curbed my spending	Cut out the purchase of luxury items	Used my credit card more	Purchase lower priced items	No effect at all
65	2	2	2	1	2	2	1	2
66	2	2	1	2	2	2	1	2
67	2	1	1	2	2	2	1	2
68	2	1	1	1	2	2	2	2
69	2	1	1	1	1	2	2	2
70	2	1	1	1	2	1	2	2
71	2	1	1	1	1	1	1	2
72	2	1	1	2	2	2	1	2
73	2	1	1	2	2	2	1	2
74	2	1	1	1	1	2	1	2
75	1	1	1	1	1	2	1	2
76	1	1	1	1	1	2	2	2
77	2	1	1	1	1	2	1	2
78	2	2	2	2	2	1	2	2
79	2	1	1	1	1	1	2	2
80	1	2	2	2	2	1	1	2
81	2	1	2	2	2	1	1	2
82	1	2	2	2	2	2	2	1
83	1	1	1	2	2	2	1	2
84	1	1	2	2	2	2	2	1
85	2	1	1	2	2	2	1	2
86	1	2	2	2	2	2	1	2
87	1	2	2	2	2	2	2	1
88	2	1	1	2	1	2	1	2
89	2	1	1	2	1	2	1	2
90	2	1	1	2	2	2	1	2
91	1	1	1	1	1	2	1	2

#	Interest Rate Fairness	Interest Rate Factor	Interest Curb on Credit Cards	Curbed my spending	Cut out the purchase of luxury items	Used my credit card more	Purchase lower priced items	No effect at all
92	2	1	1	1	1	2	1	2
93	1	2	2	2	2	2	2	1
94	2	1	1	2	1	2	1	2
95	1	2	2	2	2	2	2	1
96	1	1	2	2	2	2	1	2
97	1	2	2	2	2	2	2	1
98	1	1	1	1	1	2	1	2
99	1	2	2	2	2	2	2	1
100	1	1	1	2	2	2	2	1
101	1	2	2	2	2	2	2	1
102	1	2	2	1	2	1	2	1
103	1	2	2	2	2	2	2	1
104	2	1	1	1	1	1	1	2
105	1	1	1	1	1	1	1	2
106	2	1	1	2	2	2	1	2
107	1	2	1	1	1	2	1	2
108	2	1	1	1	1	1	1	2
109	2	2	2	2	2	2	1	1
110	2	2	1	2	1	1	2	2
111	2	2	2	2	1	1	1	2
112	2	1	1	1	1	2	1	2
113	2	1	1	1	1	2	1	2
114	1	2	2	2	2	2	1	2
115	1	2	2	1	1	1	1	2
116	1	1	1	1	1	2	1	2
117	1	2	2	2	2	2	2	1
118	1	1	1	1	1	2	2	2

#	Interest Rate Fairness	Interest Rate Factor	Interest Curb on Credit Cards	Curbed my spending	Cut out the purchase of luxury items	Used my credit card more	Purchase lower priced items	No effect at all
119	1	2	2	2	2	2	2	1
120	1	2	2	2	2	2	2	1
121	1	2	1	1	1	2	2	2
122	1	2	2	1	2	2	2	2
123	1	1	1	1	1	2	1	2
124	1	2	2	2	2	2	2	1
125	1	1	1	1	1	2	2	2
126	1	1	1	2	2	1	2	2
127	2	1	1	1	1	2	1	2
128	1	2	2	2	2	2	2	1
129	2	2	2	2	2	2	2	1
130	1	1	1	1	1	2	1	2
131	2	1	1	2	2	1	1	2
132	1	1	1	1	1	2	1	2
133	1	1	1	1	1	1	1	2
134	1	2	2	2	2	2	2	1
135	1	2	2	2	2	2	2	1
136	1	2	2	2	2	2	2	1
137	2	2	2	2	1	2	1	2
138	1	1	1	1	1	2	2	2
139	2	1	1	2	2	2	1	2
140	2	1	1	1	2	2	2	2
141	1	2	2	1	2	2	2	1
142	1	2	2	2	2	2	2	1
143	1	2	1	1	1	2	2	2
144	2	1	1	1	2	2	2	2
145	2	1	1	1	1	2	1	2

#	Interest Rate Fairness	Interest Rate Factor	Interest Curb on Credit Cards	Curbed my spending	Cut out the purchase of luxury items	Used my credit card more	Purchase lower priced items	No effect at all
146	2	1	1	1	2	2	1	2
147	1	1	1	1	2	2	1	2
148	1	1	2	1	1	2	2	2
149	1	1	1	1	1	2	1	2
150	1	2	2	2	2	2	2	1
151	1	2	2	2	1	2	1	2
152	2	2	2	2	2	2	2	1
153	2	1	1	1	2	2	1	2
154	2	1	1	1	1	2	2	2
155	2	1	1	1	2	2	1	2
156	2	1	1	2	1	1	1	2
157	2	1	1	1	1	1	2	2
158	1	2	1	1	1	2	1	2
159	1	2	2	2	2	2	2	1
160	2	1	1	1	2	2	1	2
161	1	2	2	2	2	2	2	1
162	1	2	2	2		2	1	2
163	2	1	1	2	2	2	1	2
164	1	1	1	1	2	2	1	2
165	2	1	2	2	1	2	2	2
166	1	1	1	2	1	2	2	2
167	2	1	2	2	2	2	2	1
168	2	2	2	2	2	2	2	1
169	1	2	2	2	2	2	2	1
170	2	1	1	1	1	2	1	2
171	2	1	1	1	2	2	1	2
172	1	2	2	2	2	2	2	1

#	Interest Rate Fairness	Interest Rate Factor	Interest Curb on Credit Cards	Curbed my spending	Cut out the purchase of luxury items	Used my credit card more	Purchase lower priced items	No effect at all
173	2	2	2	2	2	2	2	1
174	1	1	1	2	2	2	2	1
175	1	2	1	2	1	2	2	2
176	1	1	1	2	2	2	2	1
177	1	2	2	2	2	2	2	1
178	2	2	2	2	2	2	1	2
179	2	1	1	2	1	2	1	2
180	1	1	1	1	1	2	1	2
181	2	2	2	2	1	2	2	2
182	2	1	1	2	2	2	1	2
183	2	1	2	2	2	2	2	1
184	2	1	1	2	2	2	1	2
185	1	1	1	1	1	2	2	2
186	1	2	2	2	2	2	1	2
187	1	2	2	1	2	2	2	2
188	1	2	2	2	2	2	2	1
189	1	1	1	2	1	2	1	2
190	1	2	2	1	1	2	1	2
191	2	1	1	2	1	2	1	2
192	2	2	2	2	1	2	1	2
193	1	2	2	2	2	2	2	1
194	2	2	1	2	1	2	1	2
195	2	2	1	2	1	2	2	2
196	2	2	2	2	2	2	2	1
197	1	2	2	2	2	2	2	1
198	2	1	1	2	1	2	1	2
199	2	1	1	2	1	2	1	2

#	Interest Rate Fairness	Interest Rate Factor	Interest Curb on Credit Cards	Curbed my spending	Cut out the purchase of luxury items	Used my credit card more	Purchase lower priced items	No effect at all
200	2	1	1	1	1	2	1	2
201	2	1	1	1	1	2	1	2
202	2	1	1	1	1	2	1	2
203	1	2	2	2	1	2	1	2
204	1	2	2	2	1	1	1	2
205	2	1	1	1	1	2	1	2
206	2	1	2	2	2	1	2	2
207	1	1	1	1	1	1	1	2
208	2	1	1	2	1	2	1	2
209	1	2	2	2	2	2	2	1
210	2	1	1	1	1	1	1	2
211	1	2	2	2	1	2	1	2
212	1	2	2	1	2	2	1	2
213	2	1	2	2	2	2	1	2