

**THE IMPACT THAT INACCURATE CREDIT INFORMATION
HAS ON THE KEY FUNCTIONS WITHIN THE CREDIT
DEPARTMENT OF A TELECOMMUNICATIONS COMPANY**

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DECLARATION

"I declare that the Field Study hereby submitted for the Magister in Business Administration at the UFS Business School, University of the Free State, is my own independent work and that I have not previously submitted this work, either as a whole or in part, for a qualification at another university or at another faculty at this university.

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1. CHAPTER ONE

INTRODUCTION AND PROBLEM STATEMENT

1.1 Introduction

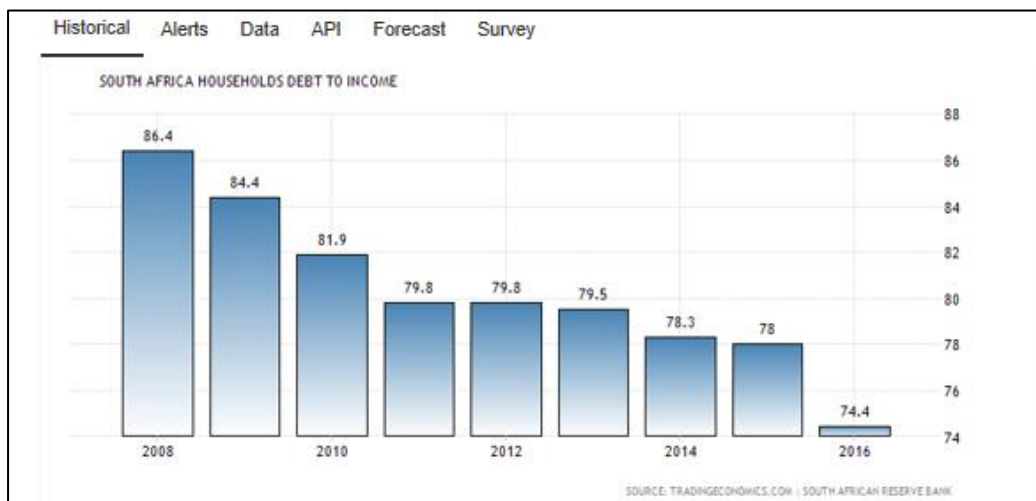
The research study explores the impact that the quality of data that is received from the credit bureaux has on the key functions within the credit departments of the three major telecommunication companies in South Africa; that is, Vodacom, MTN and Cell C. This includes a focus on the effectiveness of credit management information used in the credit assessment process that is procured from the major credit bureaux in South Africa. Moreover, a risk framework and its pertinent components are explored in the research regarding the products, processes and interventions that are utilised by telecommunication credit departments when making a credit decision. The overall aim of this study is to ascertain if these actions are robust enough to sustain the business performance or do they need to be refined to optimise the functioning of the credit risk portfolio of the business.

1.2 Problem statement

The problem is that the data of applicants/customers utilised by the telecommunications companies obtained from the credit bureaux as part of credit decision making, may not be of the standard of quality expected by the credit team in support of sustainable credit performance of the organisation.

If the problem is not addressed, the impact thereof is twofold. Firstly, it could result in potential loss of income for the company that could be detrimental to both its bad debt ratios and its credit reputation. Secondly, the impact on the individual consumer is also of concern, as the consumer could find themselves in a debt cycle that will take years to overcome; and the result is further the degradation of consumer well-being and ultimately the state of the economy.

Figure 1.1 South African Reserve Bank – Households’ debt to income



Source: Reserve Bank (2016) – Households debt to income

1.3 Research objectives

1.3.1 Primary research objective

The primary research objective of this study is to explore the effects of data quality from the credit bureaux on the credit standing of prospects/customers of telecommunications companies in South Africa.

1.3.2 Secondary research objectives

The secondary research objectives of this study are to:

- Explore the views of the credit officials on the impact inaccurate data on the credit component of the telecommunication company.
- Explore the threat that poor governance of the data placed within the public domain may have on the telecommunications companies.
- Explore how asymmetry within the credit process may affect the selection processes applied by the credit departments of the telecommunications companies.
- To examine the use of credit bureau data in credit risk decisions; and explore the consequence of the use of substandard credit data in South African telecommunications companies; and

The following research questions are raised:

- What are the perceptions of the credit officials of the impact of the accuracy of the data on the credit component of the telecommunication company?
- What are the threats for telecommunication companies on the poor governance of data placed in the public domain by credit bureaux?
- What is the effect of asymmetry of information on the selection processes applied by the credit departments of the telecommunications companies; and
- How may the quality of the credit bureau data in credit risk decisions impact the South African telecommunications companies?

1.4 Context of the Study

The credit extenders, being the telecommunications companies in this study, have a significant dependency on the credit bureau data providers for its daily credit operations, where numerous decisions are taken each day to extend a credit facility or in most cases a physical handset or device to their customers based on the information provided.

When a credit decision is made by the credit department of a telecommunications company, the primary concern is that information that may prove crucial in the credit assessment of the customer, may be omitted on that of an individual's credit profile at the credit bureau. The worst case could be that incorrect or derogatory information is placed on the customer's profile. A secondary concern with the data is that it is used to formulate the customer's credit rating and may be extensively used across many organisations and industries to assess the customer for many products and services. This scenario leads not only to the potential customer being biased, but it can lead to a negative impact on organisational risk bearing.

The function of a credit bureau is to collate data on both the credit and the payment behaviour of an individual's financial accounts and more importantly, how these have been managed (McNab & Wynn, 2013). They also provide other insights from information derived from the data that may be of interest to parties within the credit industry. This includes information about the individual's home loan, telecommunications company accounts, debit cards, credit cards, loan accounts, and even insurance or medical accounts; it also extends to telecommunication and other personal utilities' accounts. This set of information is then compiled with other data that is available in the public domain like electoral rolls, high court judgements,

sequestrations, debt rescue and voluntary payment agreements, as well as other private information that could be provided by companies that are part of the closed user group of the credit bureau organisation. This information is compiled into a credit bureau report which is utilised by several parties, numerous times over for credit decisions (McNab & Wynn, 2013).

The essence of the problem is that of errors in the credit bureau report and ultimately, the quality of information used by the credit bureau to rate the risk of a consumer, which poses an untold level of risk to a lending organisation. Such errors can be detrimental to a consumer's credit standing and financial well-being, especially if one is overextended due to poor quality products and services that are provided by the credit bureau. Further to this, an individual could be refused any further credit due to misrepresentation of information.

1.5 Research methodology

1.5.1 Research design

The nature of the research is explorative and is a qualitative study in order to fall within the researcher's view of reality. It was based on "a constructivist philosophy that assumes reality as multilayer, interactive, and a shared social experience interpreted by individuals understanding the social phenomena from the participant's perspective" (McMillan & Schumacher, 2001:393).

Exploratory research is usually conducted in order to determine the nature of the problem, and is not intended to provide conclusive evidence, while also assisting the researcher to attain a better understanding of the problem that is being researched. Given the outcomes from this type of research, the researcher should be willing to change direction as a result of the revelation of new data and new insights.

A risk management process was utilised to frame the most impactful aspects of the study and to reference their bearing on the outcomes on these critical processes within the credit vetting departments under study. This framework identifies the risks, analyses the risks and evaluates risks, risk treatment, communication and consultation, and lastly, monitoring and controlling the events of risk.

In this risk management process, attention was given not only to the process of making credit decisions, but included aspects (as outlined in the literature review) pertaining to the roles and responsibilities of credit bureaux and credit extenders; the quality of data used in the decision making; as well as external factors that can impact the process.

1.5.2 Sampling design

The sampling technique used for this study was non-probability, judgement sampling, which is also known as purposive sampling. It allowed the researcher to actively select the most productive sample of the population to answer the research questions (Cooper & Schindler, 2011).

The population of the study comprised senior credit managers and executives within the telecommunications industry and its affiliates. Credit officials were selected from the top three telecommunications companies, arriving at a population size of 21. The sample for the field study compromised sixteen officials by designation for each of the institutions. The Table 1.1 below illustrates the sample and designation per company.

Table 1.1 – Key credit staff for each telecommunications company

Designation within the company	Company A	Company B	Company C
General manager credit			X
Credit executive	X	X	X
Head of credit scoring and risk	X	X	X
Senior credit manager	X	X	X
Credit manager	X	X	X
Senior credit supervisor	X	X	X
Total	5	5	6

Note: The top three companies are illustrated above, namely A, B and C in no particular order.

The credit portfolio of each of the telecommunications companies in South Africa has a standard reporting structure which entail; a credit chief or general manager, his/her direct report, who is an executive for credit, a senior credit manager and a credit manager. The credit officials are members of the Credit Bureau Association.

1.5.3 Data collection

The data collection techniques used in this study comprised semi-structured interviews using questionnaires whereby all participants were asked the same set of questions which took the form of a conversation. This approach was chosen over structured interviews as they present an opportunity for the questions to be phrased appropriately, with flexibility of the order of the questions posed, and also provides further opportunities to interject for clarity (Crouch & McKenzie, 2006). The intention of this technique of interview was to explore the participants' views, ideas, beliefs and attitudes about certain events (Creswell & Lategan, 2003).

During the interview process, the respondents shared their views and opinions based on their experiences and understandings. The researcher ensured that all aspects of the interviews were soundly monitored. The meetings were recorded on the researcher's laptop, and the information which the researcher believed was crucial to the study outcomes were transcribed into text, and key themes were extracted. To ensure the credibility and trustworthiness of the information. The interviews were recorded with the permission of each respondent. This process of acquiring consent was initiated through a signed consent request, on a pre-designed form of approval. The form was part of the final interview pack.

Lincoln and Guba (2011) cite credibility, transferability, dependability, and confirmability as being critical in the qualitative research paradigm. The meetings were arranged timeously with the selected credit officials within the various telecommunication companies to provide ample time to explore perspectives and expand on critical statements made by the officials during the interviews that bring deeper understanding to the study.

During the interview process the researcher probed respondents and acted on opportunities to explore interrelationships between the concepts that emerged from the interviews and expanded on the research objectives that are of pertinent relevance to the study. The researcher was also acutely aware of unexplored items that were extracted from the interviews and asked for further clarity and information.

The participants' personal information was kept confidential, and they were selected based on their designated credit roles that they fulfil within their respective telecommunication companies.

The researcher continued the interview process until no new themes emerged, which is referred to as the data saturation point (Creswell & Lategan, 2003). The interview process of the study was conducted in the first quarter of 2018, in Buccleuch, Midrand, Johannesburg or the designated offices of the senior officials of the telecommunications companies. The geographical area of the study was the greater Gauteng area, where most of the offices are located.

1.5.4 Data analysis

The research methodology above details the research method and as such the data analysis is an ongoing, insightful and iterative or non-linear process. According to Diamantopoulos & Schlegelmilch (2006:34) data analysis in qualitative research also refers to "reasoning and argumentation that is not based simply on statistical relations between 'variables', by which certain objects or observation units are described".

Prior to proceeding with such an analysis, the information or voice recordings were transcribed, whereby the content of the interviews, the researcher's side notes and memos were typed into word documents. The next process entailed the analysis of these documents using Microsoft Office Excel and the computer programme, Atlas.Ti, which the researcher selected as the data analysis tool for the study. The data elements allowed the researcher to draw commonalities and also to glean information from the data connections that became possible during the iterative process of analysing the data.

1.5.5 Ethical considerations

Ethics is defined as what is deemed to be acceptable or unacceptable in human conduct (Tustin, D.H., Ligthelm, A.A., Martins, J.H. & Van Wyk, J,2005). It goes beyond the ambit of the law and into what is accepted by others as being good and right for all involved. For example, in the case of this study, the researcher ensured that confidentiality of the responses from all the participants was maintained at all times unless respondents provided explicit consent to disclose the information that was provided.

For this research study the following standards were applied to ensure that all activities during the research were ethically sound:

- Permission was sought from the senior officials of the organisation in which the interviews were conducted.
- All participants were duly notified that their involvement in the interviews would not be compulsory but voluntary and at their own discretion.
- All participants were informed that their responses will be treated in the highest confidence, and they were informed as such.

The two primary ethical considerations in any project are consent and confidentiality (Easterby-Smith, M., Thorpe, R. & Jackson, P. (2012).

- Consent: All participants were asked to voluntarily consent to their participation in the interview process and it was made clear that they would not be coerced or put under any pressure during the interview. They were informed in reasonable detail about the purpose of the study and what was required of them.
- Confidentiality: The identities of all participants were protected at all stages of the process, as this was communicated to all the participants.

1.6 Limitations of the Study

This research study only concentrates on the South African telecommunications institutions. Shortcomings for this research study exist due to the fact that the banking sector, unsecured retailers and employment agencies were excluded. It could be assumed that if all the telecommunications companies in South Africa were included in this study, the results could yield a higher sense of diversity and accuracy, because the sample size (16) used in this research study encompasses the economic productive population, substantiated and justified by the South African telecommunications industry's market share.

Given the credit laws legislated by the South African government to protect consumer privacy and confidentiality, telecommunications companies are restricted and mandated not to share any consumer data; hence the data analysed is of primary nature.

1.7 Demarcation of the Study

The research study is conducted in the South African context and includes the perspectives of customers of the credit bureaux as well as the impact on the consumers, to whom the customers of the credit bureaux extend credit facilities. The study involved the executive and senior leadership of the credit departments of the three major telecommunication companies in South Africa.

The credit executives and senior managers are key decision makers on where and how credit bureau data is applied to a decision, and how the results are compiled into a final risk-based facility that will be extended to a customer. The credit risk team members understand the impact of using the credit bureau data in a decision and they are also continually assessing the quality of the data as well as the performance of the decisions already taken. This team of individuals across the credit lending departments of the telecommunications institutions are therefore best placed to contribute to the study. The subject area is Credit Risk Management.

1.8 Layout of the Study

The study followed the prescribed layout as detailed below:

Chapter one: Introduction and problem statement

Chapter two: Literature review

Chapter three: Research methodology

Chapter four: Data analysis and presentation of results and discussion

Chapter five: Recommendations and conclusion

1.9 Conclusion

In this Chapter, a brief introduction to the study was presented. The researcher defined problems of data laxity, external factors, governance of data, and roles of the parties

and the impact thereof in the telecommunications sector. The aims and objectives of the study were outlined, as well as the research methodology that was employed. The Chapter is concluded with an outline for the rest of the study.

2. CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Preliminary research indicates that the use of the credit bureau information relied upon to extend credit to consumers is an integrated and widely used process in all telecommunication and financial services companies in South Africa (South African Reserve Bank, 2016). They are cognisant that data quality is a huge problem in most organisations across several industries. As such, poor quality data results in loss of money and increases bad debt write-offs, which eventually affects the company's revenue streams.

Lang and Jagtiani (2010) express the sentiment that there is a requirement for further research into the practice of credit management as there are limited studies that have been conducted in this regard. In light of this, the researcher wants to contribute to the body of knowledge in this area by conducting research into the credit management process in the telecommunications industry with a particular focus on the quality of data used in the credit assessment process.

Global financial and telecommunications institutions like other economic entities exist not only to provide a service, but to generate wealth to function and to maximise profit share for the various partners and stakeholders. One of the main factors that exist within the functionality of telecommunications companies is to provide credit to a large percentage of the working population. Good quality credit data serves as an important factor in evaluating the credit value of borrowers and to adequately measure and ensure that the borrowers are not over exposed. The institutions that provide this service normally conducts a detailed enquiry on the borrowers by gathering reliable information and consumer credit records from the various credit bureaux (National Credit Regulator, 2007).

Financial infrastructure is the fundamental notion for a financial system. There are various standards, rules, technologies, information and institutions for enabling the intermediation of finance. Inferior quality of financial infrastructure in a number of developing nations poses major challenges for financial institutions when expanding

their offering of financial services within the relevant markets. Due to the saturation of the current telecommunications markets in South Africa, these targeted initiatives are directed at underserved segments across the economic spectrum, which is called the 'emerging market' of the economy. These market segments hold risks that the standard credit processes may not be geared towards which may result in the creation of risks that they have not dealt with previously. Venturing into these markets could threaten the stability of financial systems of the telecommunications company.

With reference to this study, telecommunications companies are credit extenders with a major dependence upon the data providers of the credit bureaux for effective daily operations of the credit departments. On a daily basis, major decisions are made for extending numerous credit facilities or in the majority of the cases, a physical device or handset is provided to customers based on data provided by the credit bureau, and ultimately used in credit decisions. The officials of the credit department are involved in making a credit decision, and the primary awareness by the telecommunications company is that data is crucial for assessing the credit standing of the customer. There can be an omission of this data on the credit profiles of individuals across the credit bureau datasets provided.

As the worst-case scenario, there can be the placement of derogatory or incorrect information on the profile of the customer, issued to the telecommunications company by the credit bureau data provider. The data is used as a secondary source for formulating the credit rating of the customer, with its extensive utilisation across many industries and organisations for assessing the customers in the target markets that are selected, or when a customer seeks out a credit extension from the telecommunications company of his/her own accord. This particular scenario will not only result in bias towards a potential customer, but it also negatively affects the risks borne by the organisation.

2.2 Definitions

2.2.1 Credit report

When a borrower applies for a credit-based product, the credit agency requests a detailed credit report from the credit bureau in order for permission to be granted for a

specific credit product. The credit report will also reflect the borrower's credit history, marital status, residence and active employment (Federal Reserve Bulletin, 2004).

2.2.2 Profile of the telecommunications customers

- In order to create a similar comparison across the three telecommunications companies, a similar timeframe and a similar customer credit performance profile was utilised. The classification was split into good and bad customers based on a generic credit profile used across financial and telecommunication companies in South Africa (TransUnion Credit Bureau, 2017):
 - Good standing account: The account is current, and the customer had not defaulted on more than one or two instalments, and on which there is no record of a judgment or adverse listing.
 - Bad standing account: The account has three or more payments in arrears, or/and has an administration order, "adverse information", or a judgment listing.

2.2.3 Credit bureau

These dedicated credit institutions gather data from credit card companies, creditors, telecommunications and banking sectors, economic institutions and retail lenders. On a borrower's credit information and historical timelines, a comprehensive credit analysis is constructed and populated; this detailed report is then sold to financial institutions and secondary lenders (International Finance Corporation, 2006).

2.2.4 Disputed credit information

Consumers lodge disputes when it is deemed that their credit information is not accurate or outdated; incorrect information provided by creditors can have a detrimental effect on the overall risk factors (National Credit Regulator, 2007).

2.2.4.1 Credit risk

Credit risk, which is also defined as counterparty risk refers to when a borrower defaults due to non-payment or failure to honour an agreement of debt in relation to the terms and conditions that were contractually agreed upon. The loss that the credit or financial institution suffers can be perceived as complete or partial depending on the

collection method that is employed for debt recovery (Rose & Hudgins, 2005).

2.2.4.2 *Credit management*

Credit management involves some components that are external to the business and some elements could at times be embedded in the data that is utilised in the credit decision. These factors that are external to the organisation could influence the quality of the credit decision based on the premise that, "Many external factors do influence the results, actions and decisions of businesses, although diverse businesses are impacted by varied external factors in dissimilar ways" (Ciby, 2013:329).

2.2.4.3 *Quality of the customer*

The credit facility extended to a customer is based on the quality of the customer and his/her financial standing. Padilla and Pagano (2012) developed a model in which they premise that the performance of a loan depends on the quality of the borrower, called the Lenders' Moral Hazard. At the initiation of the credit extension, each institution extending a credit facility possesses private information on the quality and credit standing of a borrower. According to Ciby (2013), a borrower can be denied or extended credit based on this private information and the borrower will be none the wiser as to the information utilised for the credit extension.

2.2.4.4 *Credit management system*

Lang and Jagtiani (2010) indicate that credit management is a system that is devised to prevent unwarranted damage to a firm or institution from unforeseen but probable events. In light of this premise the aim of the research is to identify key areas of the credit management process impacted by the quality of information sourced from the credit bureaux, which might need revision.

2.3 Function of the Credit Bureaux

The hypothesis that information sharing enhances sound credit risk management is supported by a growing body of empirical evidence. Analyses of credit bureau data confirm that credit reporting reduces the selection costs of lenders by allowing them to more accurately predict individual loan defaults (Luoto *et al.*, 2007).

One of the features that telecommunications companies deliberate when deciding on a loan credit application is the estimated chances of recovery (Getenga, 2012). In order to arrive at this decision, credit information is required on how well the applicant has conducted past loan agreements and the information is relevant as it indicates correlation between past and future performance on repayment behaviour. It is challenging for the telecommunications company to access a potential customer's payment behaviour and credit records as it may be distributed by various institutions. Therefore, the credit bureau is crucial to the telecommunications company as it can provide them with a summarised view of all customer records.

2.3.1 Importance of data to the telecommunications companies

Without data, the modern commercial opportunities would be limited. Data and information are fundamental to the success of any business and they increasingly provide a commercial competitive edge (McNab & Wynn, 2013).

2.3.1.1 *Weakness in the data*

The quality of decisions made within the telecommunications companies is only as good as the information upon which they are based; it is unfortunate that a laxity exists about the data that is collected for customer decisions, which in many cases may be of poor quality, insufficient, deficient in correctness, or at best difficult to decipher. Poor quality intelligence has been the undoing of senior credit officials, companies, countries and CEOs, and others in high profile situations (Bitterer & Newman, 2011). Information is critical for sound credit functioning.

2.3.1.2 *Credit essential data*

The telecommunications companies need to continuously focus on the quality of credit information, more specifically in terms of the following (Lehohla, 2011):

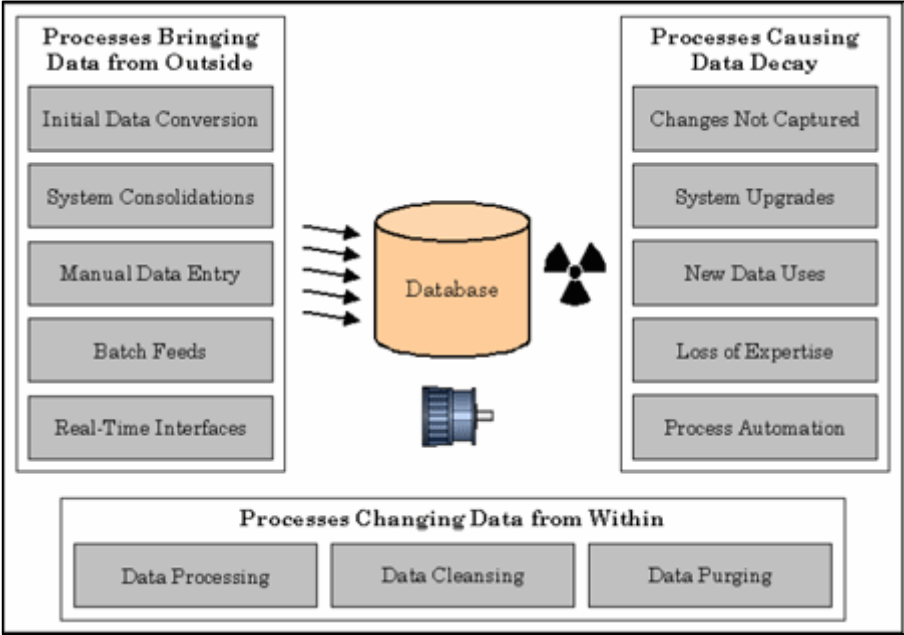
- The traceability of the information;
- Number of data sources;
- The ease with which it can be summarised and analysed;
- The amount of relevant information provided; and
- Value added to decision making.

2.3.1.3 *Data governance*

Data quality is defined by Lehohla (2011) in terms of what is required as prerequisites for data quality as well as its seven crucial dimensions, namely relevance, accuracy, timeliness, accessibility, interpretability, coherence and integrity.

Lincoln and Guba (2011) discuss the credit bureau as an institution with no direct dealings or relationships with consumers, proclaiming that it is largely unknown and misunderstood, maintaining large databases of information which may or may not be accurate. They concur that it has the power to determine whether or not an individual is given credit, can buy a home, obtain insurance cover or even start a business and at its most, influence getting a job. It is the epitome of the remote database, in terms of the size and potential for harm equaled only by the comprehensive records of taxation authorities in South Africa, namely SARS.

Figure 2.1 - Data management cycle in a credit bureau



Source: Tech Target (2013)

2.3.1.4 *Data quality*

Data instability can arise from rapid growth or contraction in the credit bureau’s subscriber base determined by how many parties are contributing to the database of subscriber information. A change in the number of subscribers will affect the quality of the data; and a change in the nature of contributors will affect shared-performance data. In essence, how much and who contributes can affect overall reliability and stability of the data (Anderson, 2007).

2.3.1.5 *Internal data impacts at the credit bureaux*

Anderson (2007) states that companies that use the data from the credit bureaux are quite oblivious to the various internal changes in the contributors as well as the many drivers that directly impact the data quality. Due to the constant shift in both the numbers and the types of contributors and subscribers to the credit bureaux, their data for telecommunications companies are ever changing. These contributors and subscribers are ultimately the data owners

from several organisations who create the information used by the telecommunications companies.

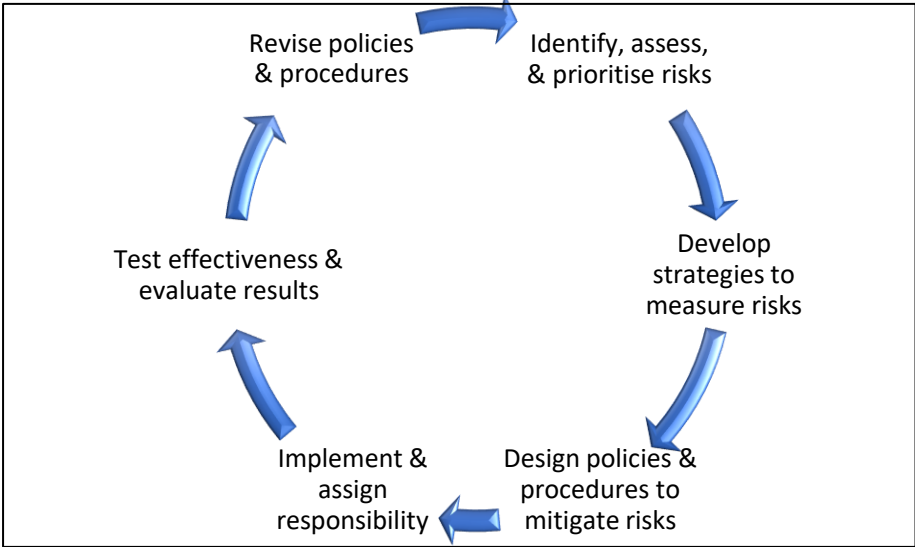
2.3.1.6 *Information asymmetry*

A credit bureau is considered an effective risk monitoring institution, which reduces the information gap between the telecommunications company and its existing as well as potential customers. The credit bureau's primary purpose is to manage information asymmetry during a transaction, and it is perceived to help by eliminating this phenomenon during a transaction. It is most valuable where one party has more or better information than the other and the consolidated contributions of all parties positively impact information asymmetry (Lang & Jagtiani, 2010).

2.3.1.7 *Role of the credit extender*

The data review cycle is crucial for credit management and is used as a means to identify credit failure and over indebtedness, it is also used extensively to mitigate the risks inherent in the credit processes where several external data elements are utilised. The credit data monitoring cycle can provide stability in the credit book against risks that may not be apparent when debt is extended to a customer (Van Aardt & Van Tonder, 2015).

Figure 2.2 – Steps in the credit monitoring cycle



Source: Tech Target (2013)

The steps below are followed in a typical credit management cycle (Hillman, 2003):

- Revise policies and procedures;
- Identify, assess and prioritise risks;
- Develop strategies to measure risks;
- Design policies and procedures to mitigate risks;
- Implement and assign responsibility; and
- Test effectiveness and evaluate results.

2.4 Role of a credit bureau

The means by which a credit bureau may assist an organisation in the extension of credit to potential customers are listed below. This study will utilise this list as a basis to glean truths and perceptions around this set of values (Anderson, 2007):

- It is meant to promote responsible lending and borrowing by being the main catalyst in developing and adopting a sound credit culture;
- It is said to provide credit insight to all lending institutions by enhancing their risk management practices;
- It assists lending institutions by mitigating their exposure to potential bad debts and non-performing loans (NPLs);
- It helps credit seeking borrowers to gain easier access to credit facilities;

- It is perceived to positively impact the company's liquidity;
- It can assist financial credit institutions to discover hidden market opportunities through significant data provision; and
- It can stimulate and increase economic growth by accurately unlocking profitable opportunities for individuals.

2.5 External data governance: The Credit Bureau Association

The Credit Bureau Association (CBA) is the governing body for the credit bureaux and can control and legislate its information content. The CBA in turn is governed by the rules of the National Credit Act No. 34 of 2005 and is an important feature of the credit lending landscape. There are ten or more credit bureaux operating in South Africa, with ITC and Experian dominating the market for consumer credit information. The major player for company data is KreditInform, while Compuscan is active in the micro-lending market. All of the credit bureaux are represented by the CBA, which has a Code of Conduct endorsed by the Business Practices Committee (White Paper, 2015).

The code covers compliance procedures, disclosure of information to customers, procedures in the event of disputed accuracy, data retention periods, and disclosure to other parties. Even so, there is a public perception that the credit bureaux are perpetuating historical inequalities. This has been worsened, because the information provided has on occasion been inaccurate, and credit bureau data is sometimes used in employment screening. It is hoped that many of these perceptions will improve once the bureaux comply with the new NCA requirements (Hillman, 2003).

2.6 External credit environment and credit management

The traditional purpose of credit management is to have the ability to identify probable delinquent accounts while taking corrective action towards the prevention of unmanageable debt. However, herein lies an opportunity for telecommunication companies to convert the practice of credit risk management into a robust competitive strength by closely reviewing the use of systems and processes for credit risk management while fine-tuning the offers it makes to its potential customers. The existing customer processes often involve campaigns for rewarding the customers of the telecommunications company who have a good credit record, both internal to them and in the public domain. Similarly, campaigns for collecting dues from delinquent customers

are approached in an analogous manner. Dynamic and continuous monitoring helps to adjust the availability of credit and the offering of newer subscribed services. This may be set on the basis of changes in personal information, payments and usage. Management of credit risk is a major component in the management of customer relationships in the telecommunications company, as it forms the basis for further exposing the company in terms of the debt extended. In the current economic era, average revenue per unit (ARPU) has been diminished and in a bid to increase revenue, customer acceptance rates are being forced upwards, because of sheer competition within the industry (ICASA, 2017). As a result, it is imperative that the tools and processes of the risk management of the telecommunications companies are reliable and modified to support this phenomenon. The current management of risk processes considers the overall exposure per customer, while considering each factor that indicates potential delinquency. This is set in accordance with the profile of the customer, and includes external information related to the customer, demographic information, payment behaviour and credit facility usage. This approach for managing risk not only allows the proactive mitigation of risk, but also allows for the identification of the most deserving customers requiring an increase of their credit limits. Hence, this will result in an increase in the profitability obtained from these consumers being served by the telecommunications business.

2.6.1 Defining credit

The term credit is derived from a Latin word “credere”, which means trust. In its most simplistic form, credit can be defined as “nothing but the expectation of the repayment of a sum of money within a limited time” and credit risk is “the probability that this expectation will not be met” (Caouette, 2008:126).

In the wealth transfer process between the telecommunications company and the buyer, who has agreed to pay at a later date, there exists a clear implication of trust that the payment will be made on the agreed date. The root of the major credit problems in the telecommunications companies is directly related to the lax credit standards related to wealth extension to borrowers.

Telecommunications companies as financial institutions extend credit to their customers in the form of a short-term loan and service, the loan part of the agreement is related to

the device or handset issued to the customer coupled with a rental and service fee related to the usage of the services related to data, short message services (SMS), and voice services, being amongst the most important.

Credit is granted by the telecommunications company to perform its most primary strategic function of maintaining its competitive edge, using the credit process as a tool for leveraging its bargaining power in the industry, enhance its revenue streams, and to maintain and enhance their customer relationships.

In the dynamics of credit granting, there is a high possibility of the company failing due to the decisions made, so the credit managers are required to do a sound evaluation of the trade-off between the opportunity for higher returns, and the probability of not realising those returns. In order to obtain higher returns, the company must either lower operating costs in a cost reduction initiative or take on higher risk (Koch & MacDonald, 2003).

2.6.2 The role of credit information

A credit report is defined by the Federal Reserve Bulletin (2004) as an organised presentation of credit data belonging to companies and/or individuals that a credit bureau will communicate to those who may request information on credit history of such entities. The information covers, amongst others, the individual and/or company's management of collection agency actions, credit, leases, monetary-related public records, and inquiries, and non-credit-related bills about the entity/individual's credit history.

The credit information presented by the credit bureau is further enhanced by integrating other data sources, such as electoral rolls, court judgments and information provided by other private organisations who may be contributing information to the credit bureau and add further value to the data presented by them (Ferreti, 2007).

Information sharing fulfils the purpose of connecting relationship information from prevailing lending relationships to lenders outside of the consumer's current credit portfolio (Gehrig & Stenbacka, 2007). Creditworthiness highlights political, economic and legal risks within a credit transaction as per Hendrikse and Hendrikse (2004).

There are several benefits to the credit providers when they share information (Jentzsch, 2008), and the most pertinent of these are that it curbs the amount of losses through decreasing the number of write offs and provides a benefit to a customer with good credit risk in the form of a lower interest rate. Information sharing can serve a dual purpose where it is valuable at the origination stage as well as after the credit has been extended, the use of the information at origination stage will mitigate adverse selection that would otherwise be rife, in the absence of such information (Kallberg & Udell, 2009). They place further emphasis on borrower discipline created by banking credit information, as it automatically cuts bad payers off from any further credit and reduces or prevents the borrower initiatives to become over indebted, by procuring credit from several providers concurrently, unbeknown to any of them.

According to Swiss National Telecommunications (2013), the exchange of information disciplines the consumers and borrowers to repay loans, because the borrowers do not want to harm the good reports they have, as it will make it difficult for them to obtain credit in the future.

The exchange of information will help to minimise the lending corruption in telecommunications companies by reducing the asymmetry of information between consumers and creditors by improved control methods of corruption and intensify information security, and thus the negotiating power of lenders (Barth *et al.*, 2008).

The Information Regulator has under section 112(2) of the Protection of Personal Information Act, No. 4 of 2013, made the regulations that credit information of any consumer is deemed to be confidential and may only be shared or published in the public domain to the degree that is allowed by the National Credit Act, No. 34 of 2005 or by written consent by the consumer (Singh, 2006).

Checking a potential employee's credit reference and doing further background checks are becoming extremely important, given the potential legal claims and work place fraud that is occurring on a regular basis (Tighe, 2000). The employer is best placed to be cognoscente and observe the legal requirements regarding the use of such information.

Telecommunications companies also use credit information to evaluate a potential job candidate to determine whether such a candidate is appropriate for the job for which they are employed, particularly if the work involves elements of cash management. The way a prospective employee conducts his/her credit portfolio is an indication of the stability and maturity they will demonstrate in the work place (Lee *et al.*, 2005).

It is postulated by Gehrig and Stenbacka (2007) that financial stability is supported when credit information is utilised for customer selection as it diminishes the levels of adverse selection. It can also reduce misinformation held with their established customer frameworks.

2.6.3 Credit analysis

Credit risk management forms a critical part of the procedures that the telecommunications company will use to avoid losing money and managing its bad debt rate. According to Caouette (2008), there is a similarity between a telecommunications company dealing with credit risk and a tailor designing a suit for a customer – “carefully measuring a customer’s needs and capacities to make sure the financing is a good fit”. More specifically, it is a process of analysis where the objective is to “look at both borrower and the credit extension being proposed and to assign a risk rating” (Caouette, 2008).

The detailed act of credit analysis is in response to the question of whether to approve a loan for a specific customer or not. The company makes profit by extending the correct cell phone facility to the customer, and its goal is to do this at the lowest risk possible.

The relevant members of the credit team will assess the details of the customer’s behaviour as well as any supporting documentation rendered. The staff member will utilise several methods to verify and qualify the information presented during the loan assessment and lending procedure. Finally, the credit team will take the necessary actions that decide whether to approve or reject the application for a cell phone contract.

Amongst the list of important tasks and questions that the telecommunications companies use for credit analysis, is the credit bureau information pertaining to the customer being assessed. The credit bureau system is a powerful tool that the

organisation may use to analyse the data of a particular customer and make a prediction of the value of the credit extension he/she will be given. In the case of telecommunications companies, the credit extended would normally include a handset or device and a voice and/or data package that will accompany the device, normally repayable over a period of two years (section 14(2)(c) of the Consumer Protection Act, No. 68 of 2008 (CPA)).

The telecommunications company has an internal credit rating system which is a complex system used for facility approval, portfolio monitoring and management reporting. These systems analyse the adequacy of the loan-loss reserves or capital, the profitability and the loan-pricing analysis (Crouhy *et al.*, 2001). With these systems, the credit risk is identified and measured with the most accuracy as it applies the company's policies and strategies to minimise the credit risk that may be present.

When applying for the cell phone facility, debtors need to provide information such as their identity information, basic financial data, and demographic information etc. The system will add to this information of a credit bureau record that it will electronically source from the credit bureau of its choice. By obtaining information from the credit bureau that is relevant to the customer will assist with automatic calculations based on the compounded information and the result will be called the credit rate.

2.6.4 Credit policies and strategies

The credit risk and the bad debt rate is controlled by a strict set of credit policies and strategies, which include risk measurement, risk identification risk control techniques, risk grading techniques and other legal documents (Hassan & Renteria-Guerrero, 2007). This report pointed out that the credit policies and strategies are important to the telecommunications company's operation and revenue targets. Good credit policies need to have the following criteria:

- Provide detail credit evaluation;
- Provide risk identification, measurement, monitoring and control; and
- Define the target market, risk acceptance criteria, credit approval authority and guideline to portfolio management.

Greuning and Bratanovic (2009) divided credit risk into three main categories based on their aims. The policies in the first group aim to limit or reduce the credit risk, the second one aims to classify the assets, while the third set deals with loss provision. Large telecommunications companies may have many types of written policies; however, the most important policy is the lending guidelines. Beside the credit policies, credit risk strategies are also important for any telecommunications company, its main purpose being to determine the risk appetite of the company. "Credit risk strategies are designed to optimise return while credit risk is kept within the predetermined limit" (Hassan & Renteria-Guerrero, 2007:28).

Like credit policies, credit strategies are key measurements for assessment and in the guidelines of Hassan & Renteria-Guerrero (2007), there are the following fundamental points:

- Credit strategies should include a statement of the telecommunications company's willingness to grant facilities based on the type of economic activity, currency, geographical location, market etc.;
- Target market, business sectors, level of diversification and concentration, cost of bad debt and cost of granting credit are also key points that receive focus;
- Credit strategies should delineate the company's overall risk that relates to credit risk and the granting of credit plans is based on this in-depth; and
- Credit strategies should inform the pricing strategies.

2.6.5 Lending guidelines

According to the Principles for the Management of Credit Risk in the Basel Accord (Basel Committee on Banking Supervision, 2003) more specifically principle three, which is compiled in extensive detail, the company, "should identify and manage credit risk inherent in all products and activities. The company should ensure that the risks of products and activities new to them are subject to adequate risk management procedures and controls before being introduced or undertaken and approved in advance by the board of directors or its appropriate committee."

The list of items below should be considered by companies who have credit management as part of its core business, as a mechanism to ensure that the necessary

structures and mandates are in place before such activities are undertaken (Basel Committee on Banking Supervision, 2003):

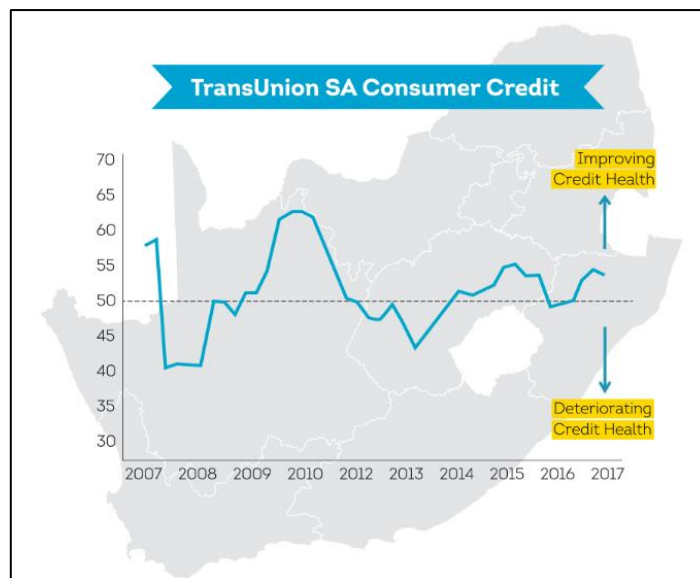
- The basis for an effective credit risk management process is the identification and analysis of existing and potential risks inherent in any product or activity. Consequently, it is important that the company identifies all credit risk inherent in the products they offer and the activities in which they engage. Such identification stems from a careful review of the existing and potential credit risk characteristics of the product or activity (Basel Committee on Banking Supervision, 2003).
- The company must develop a clear understanding of the credit risks involved in more complex credit-granting activities. This is particularly important because the credit risk involved, while not new to the company, may be less obvious and require more analysis than the risk of more traditional credit-granting activities. Although more complex credit-granting activities may require tailored procedures and controls, the basic principles of credit risk management will still apply.
- New ventures require significant planning and careful oversight to ensure the risks are appropriately identified and managed. The company should ensure that the risks of new products and activities are subject to adequate procedures and controls before being introduced or undertaken. Any major new activity should be approved in advance by the board of directors or its appropriate delegated committee.
- It is critical that senior management determine that the staff involved in any activity where there is borrower or counterparty credit risk, whether established or new, basic or more complex, be fully capable of conducting the activity to the highest standards and in compliance with the telecommunications company's policies and procedures (Basel Committee on Banking Supervision, 2003).

As part of the credit portfolio of the company a set of lending guidelines are established, which is the set of official instructions to be used in the company's main activity, namely extending credit for a cell phone facility. The credit extension guidelines, in general, are an important set of tools that will help the telecommunications company's staff members when dealing with applications. A mortgage lending policy, for example, will be a list that would specify how the mortgage loans are organised, assessed, approved, supervised and collected. The lending policies also include the following fundamental points (Greuning & Bratanovic, 2009):

- Lending authority;
- Type of loans and distribution by category;
- Appraisal process;
- Credit pricing and maturities;
- Collection monitoring; and
- Limit on total outstanding credit extension.

At the telecommunications company level, credit analysis, credit policies, credit strategies and lending guidelines are the four core methods used in the credit risk management process. Based on these four core methods, the telecommunications company may have many practical ways to control the bad debt and credit risk.

Figure 2.3 – TransUnion SA Consumer Credit Indicator



Source: TransUnion CCI (Consumer Credit Indicator 2017)

2.7 Risk management

This section is divided into two parts: (1) Critical success factors for risk management; and (2) Emphasis on a critical review of the procedures for effective risk management.

2.7.1 Risk management overview

A noted area of development over the last few decades in the telecommunications industry has been risk management, as this business sector has been exposed to

increasing financial uncertainty (Leedy & Ormrod, 2010). Institutions in the financial sector are regarded as the main point of risk-taking in an uncertain environment:

2.7.1.1 *Definition of risk*

Risk can be defined as a function of the likelihood of something happening and the degree of losing which arises from such a situation or activity. The losses incurred can be direct or indirect, for example, a natural disaster will cause the direct loss of buildings and other resources, indirect losses on the other hand will include lost customer confidence, lost reputation and increased operational costs during recovery (Leedy & Ormrod, 2010).

“Risks are usually defined by the adverse impact on profitability of several distinct sources of uncertainty. While the types and degree of risks an organisation may be exposed to depend upon a number of factors such as its size, complexity business activities, volume etc.” (Smith, 2007:54).

2.7.1.2 *Definition of risk management*

Anderson (2007) maintains that risk management can be defined as a process that should seek to eliminate, reduce and control risks, enhance benefits, and avoid detriments from speculative exposures. The primary objective of risk management is to ensure that the potential of success is maximised, and the probability of future losses is minimised. When risk becomes problematic it can negatively affect cost, time, quality and system performance.

Risk management is further defined by the Committee of Sponsoring Organisations of the Treadway Commission (2016:14) as follows: “Enterprise risk management is a process, effected by an entity’s board of directors, management and other personnel, applied in strategy setting and across the enterprise, designed to identify potential events that may affect the entity, and manage risk to be within

its risk appetite, to provide reasonable assurance regarding the achievement of entity objectives.”

Risk management involves measuring, identifying, monitoring and controlling risks. The process is to ensure that the individual clearly understands risk management and fulfils the business strategy and objectives (Smith, 1995).

Taking the above definition into account, risk management involves:

- The likelihood and consequence of an event occurring; and
- The chance of an event or events occurring that will impact the achievement of the company objectives.

The core of risk management is about:

- The process to reduce, eliminate and control risks;
- It further involves monitoring, analysing, measuring, identifying and controlling risks;
- It is a process of continuously reducing the emerging and negative opportunities; and
- It supports the achievement of business objectives and strategy.

2.7.1.3 *The risk management procedures*

The Online Oxford Dictionary (2010) gives the definition of the word “procedure” as a “fixed, step-by-step sequence of certain courses of action or activities (with pre-defined start and end points) that should be followed in a particular order to correctly perform a given task.” Repetitive procedures are called methods or routines.

According to Smith (2007) an effective risk management framework comprises the scope, process/system/procedures to manage risks, and importantly the roles and responsibilities of the individuals who form part of the risk management function. It is further premised by Smith (2007) that an effective risk management framework includes risk management policies and procedures that must cover the following

parameters, namely; risk identification, measurement, acceptance monitoring, reporting and finally control.

The risk assessment procedure is reviewed by the National Institute of Standards and Technology (NIST, 2014) in three distinct parts, namely; risk assessment, risk mitigation and then evaluation and assessment. These are further broken down as follows:

a. Risk assessment

The assessment process includes identification, recommendation of risk-reducing measures and evaluation of risk impact.

b. Risk mitigation

The mitigation part involves maintaining, prioritising and implementing the necessary and appropriate risk-reducing controls as recommended by the risk assessment mentioned before.

c. Risk evaluation and assessment

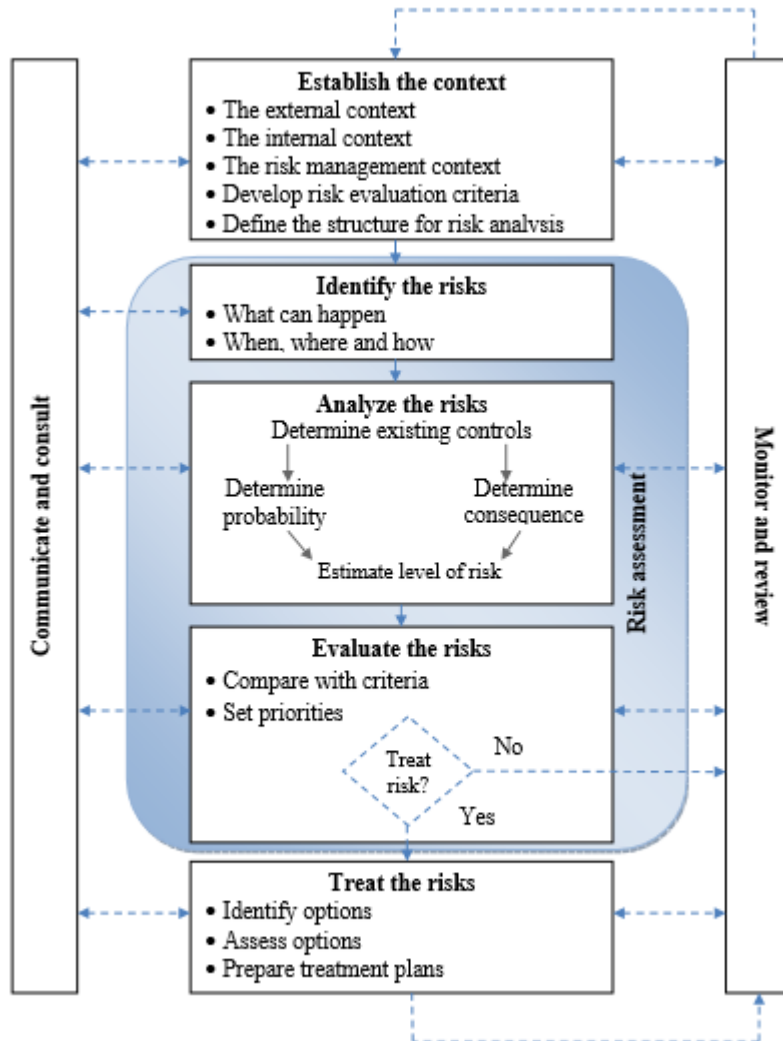
The evaluation emphasises the continual evaluation process and highlights the key factors necessary for a sound risk management programme.

The Enterprise-wide Risk Management Guideline (Basu & Rolfes, 1995) describes the risk process model according to the following eight sequence steps: (1) Establishing the context; (2) Identifying the prevalent risks; (3) Analysing the risk in context of prevailing controls; (4) Evaluating the risks; (5) Developing the risk mitigation strategy; (6) Monitoring and reviewing the risk mitigation strategy; (7) Quantifying the risks; and (8) Consulting and communicating the risk.

A model of risk management procedures as designed by Standards Australia and Standards New Zealand (2014), as well as the International Organisation for Standardisation (ISO/DIS 31000, 2014) is detailed below, and comprises five activities to establish the context of main components of risk, which are risk assessment identifying the risks, analysing and evaluating risks, risk treatment, communication and consultation, and lastly, monitoring and controlling the events of risk.

The framework by Standards Australia and New Zealand (2014) as summarised above will be utilised for this study. The risk management process consists of seven iterative sub-processes shown in the Figure below.

Figure 2.4 - The risk management process



Source: Standards Australia and Standards New Zealand (2014)

2.8 Credit risk management

Credit risk is defined by Greuning and Bratanovic (2009) as the chance that a debtor or a financial instrument issuer will not be able to repay the principal debt or pay interest, according to the terms as specified in a credit agreement.

Due to the turbulent global economic conditions, telecommunications companies in the developing world face more risks than before and must therefore monitor the ever changing micro and macroeconomic environments, so as to timeously identify the risks therein and find effective and innovative ways of managing these risks (Basu & Rolfes, 1995).

In its basic form risk management means reducing the possibility of failure, increasing the likelihood of success, and limiting the uncertainty of the overall financial performance. The purpose of risk management is to prevent an institution from suffering unacceptable loss (Focardi, 2010). He further goes on to explain that “unacceptable loss” is one which either causes an institution to fail or materially damage its corporate position.

The largest source of credit risk is from the cell phone contracts extended to consumers who utilise the voice and data services of the telecommunications company (ICASA, 2017). Credit risk does exist in the other activities of the telecommunications company both on and off the company balance sheet, which translates that a sound and effective credit risk management system becomes critical to the stability of the institution extending the credit. These credit institutions implement various detailed techniques for mitigating credit risk. Amongst these the most common are guarantees, collateral and loan deposits as mitigation (Joseph, 2014). These techniques help towards reducing or transferring the credit risk, as other risks may arise due to the state of the economy and these may include operational, legal, market and liquidity risks. Therefore, the need arises for the telecommunications companies to have stringent processes and procedures to control these risks and have them well documented in its credit risk policies.

2.8.1 Definitions

Credit report: A credit report is an organised summation of information about the consumer’s credit record that a credit bureau communicates to those parties requesting information about the credit history of the consumer in question (Federal Reserve Bulletin, 2004).

Telecommunications customers: The study included individual customers who were

active as at 30 April 2017 for purposes of including cyclical changes and economic impacts on the sample so as to create similarity across the reference sample of the interviewees. The customer base includes customers in “good standing”, which would have been classified as such, according to the National Credit Act, No. 34 of 2005, and means that the client had not missed more than one or two consecutive instalments, and which contained no judgments or adverse listings. An account in “bad standing” is where the account has three or more payments in arrears, or held an “adverse listing”, or that reflected an administration order or a judgment, and is also defined by the Act.

Credit bureaux (CB): These are institutions that collect and collate information from a closed group of creditors, such as retailers, telecommunications and other utility companies or non-telecommunications financial institutions. A comprehensive report is created on a borrower’s credit history, which is sold to lenders for use in their credit assessment processes (International Finance Corporation, 2006).

Disputed credit information: Credit information listed by the credit bureaux that is challenged by the consumers could be due to, amongst others, incorrect information, duplication, completeness, outdated information, or timeliness as provided by creditors (National Credit Regulator, 2007).

2.8.2 Credit report accuracy and access to credit

The information maintained by credit bureaux on South African consumers’ credit-related experiences play a significant role in the credit markets and such data is considered a primary factor when creditors monitor the credit circumstances of their current customers and when they evaluate the credit worthiness of prospective customers. It is widely agreed by analysts that the data quality can enhance the efficiency of the companies in question (National Credit Regulator, 2007).

2.9 Overview of the development of Credit Bureaux

The data collected during a World Telecommunications survey (2013) reveals that almost sixty countries have public credit registries (PCRs). These PCRs hold information on the performances of the borrowers in the financial system and may at times be administered by the telecommunications company or in its own capacity but is most commonly administered by the credit bureaux. Latin America is the region with the

highest coverage of public credit registries, having 17 countries with established PCRs, which include the largest economies like Argentina, Brazil, Chile, Colombia, and Mexico, and by the mid-1960s, three other European countries – Italy, Spain and Belgium – had also established PCRs (World Bank, 2004).

The early adopters were from the former French colonies which formed the West African Monetary Union in 1962 in West Africa, and soon after the public credit reporting platforms were formed. This was closely followed by several North African and Middle Eastern nations who adopted PCRs during the 1950s and 1960s (Morocco, 1966; Egypt, 1957; Jordan, 1966; Turkey, 1951 and Tunisia, 1958) (World Bank, 2004). In response to the financial crisis (2008), Argentina and Brazil established their PCRs during the 1990s.

As time passed these registries were further transformed to assist private financial institutions and enhance their information. The information maintained by the credit bureaux on consumers' credit-related experiences forms a central role in the South African credit market (Shreekant, 2012).

2.9.1 Functions of a credit bureau

The main purpose of a credit bureau is the collation of data in terms of payment and credit behaviour across the financial accounts of an individual. Most significant of all these factors, the overall management of the individual's personal portfolio is crucial for credit extenders. There are also key insights that are provided by deriving this information, as per the interest of specific stakeholders in the respective sectors. This includes information related to medical or insurance accounts, loan accounts, credit cards, debit cards, company accounts and home loan records of an individual. The overall extension of credit is also evident across telecom and other personalised utility accounts (Avery *et al.*, 2009). The credit bureau compiles this information with additional data available across public domains such as voluntary payment agreements, debt rescue, sequestrations, high court judgments, and electoral rolls. In addition, there can be other confidential information from companies that can also be included in a record retrieved from the bureau. This compilation of information within a report of the credit bureau is used by a number of parties who are involved in making credit decisions. However, errors in reporting by the credit bureau and the use of information for rating

the customer risk may impact the consumer negatively if it is incorrect, and in turn could impact the risk assessment processes of the telecommunications department.

This may lead to the detriment of the credit standing of consumers across all parties who access this information, and therefore directly influence the individual's financial stability and well-being (Shreekant, 2012).

2.9.2 Ownership of a credit bureau

Credit bureaux are normally privately owned, profit-making institutions, whose regular business entails collecting and compiling data regarding the character, solvency, reputation and responsibility of a particular business or individual with the intention of furnishing such information to its subscriber, in report form. The report allows subscribers to evaluate the financial stability of the subject of the report (Joseph, 2014).

Ordinarily the primary function of the credit bureaux is to prepare and issue reports to lending institutions and credit stores that investigate the financial reliability of applicants for credit prior to them executing the credit agreement.

The record of the firms or individual payment history lies at the heart of a credit report, and it enables lenders to manage credit risk more accurately and results in lower processing times and costs for loans issued (Joseph, 2014).

The credit report also contributes to borrower discipline, as non-payment with a particular institution will result in the individual being sanctioned with other institutions. It has been showed that credit reporting is a significant contributor to predicting default risk of potential borrowers, which promotes an increase in lending activity (Shreekant, 2012).

The records that are maintained by the credit bureaux in their databases contain positive as well as negative information. The date of a default and the amount still due on that particular record is regarded as a negative record. Positive information is a record of the credit history of closed and current accounts (International Finance Corporation, 2006).

The ever-increasing rate of change in developing and developed countries has

acknowledged the critical importance of credit bureaux due to changes in the legislation and the advances in technology in the operational side of telecommunications companies' credit departments (Galindo & Miller, 2001).

Credit information repositories create greater transparency in the financial and telecommunications markets in South Africa as they act as information agents. This type of credit infrastructure is still in its infancy stage in many smaller and developing countries in the rest of Africa and the world, making the intent to share information both weak and difficult (Luoto et al., 2007).

Credit bureaux can be widely split into two major categories, namely private and public registers, according to Djankov et al., (2005). Public credit databases are managed by the government, and they collect information from credible institutions making them available via a shared platform to potential and actual creditors.

The formal channels implemented by institutions are described by Kallberg and Udell (2009) as:

- A mechanism of exchange as imposed by government regulations or legislations; and
- A voluntary exchange instrument.

2.9.3 The key credit bureau stakeholders

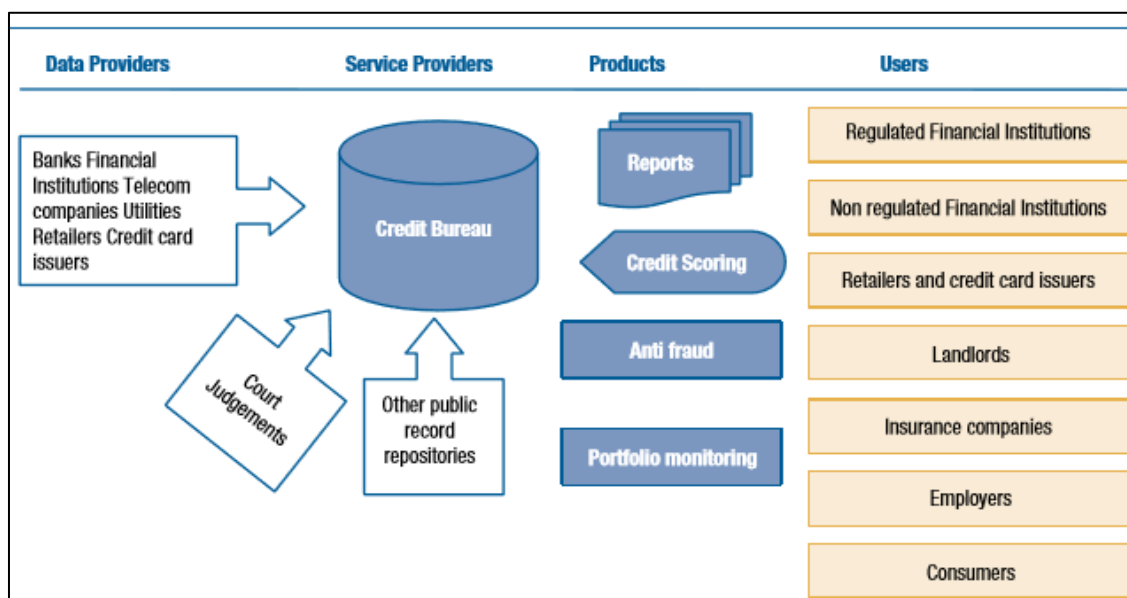
The key stakeholders are the shareholders who lay out capital funding, which enable the credit bureau to set up operations to manage the business and provide further funding to acquire the necessary assets to enable its functioning (World Bank, 2007): A typical credit bureau model will include several key players, who will fulfil a purpose or role that will contribute to the functioning of the credit bureau

- Telecommunications companies and other financial institutions as well as non-financial lenders who contribute their customers' data monthly to the bureau;
- The data custodians within the credit bureaux who are responsible for monitoring quality and integrity of the data supplied by the parties who contribute to the credit bureaux on a day-to-day basis;
- The credit regulator whose responsibility it is to set guidelines, regulations and

rules pertinent to the management of credit information; and

- The man on the street, who is a natural and juristic person, and of whom lenders will assess the risk of non-payment or default prior to extending credit to them. These relationships are depicted below.

Figure 2.5 – Typical model of a credit bureau



Source: World Bank (2007)

Studies by Ferreti (2007) have shown that the World Bank are creating platforms for the implementation of credit bureaux in emerging economies globally that do not have fully functional credit bureaux. These studies further elaborate that credit bureaux preserve a complete data sharing infrastructure driven by the contribution of credit providers about debtors on their books. This information is used to issue a consolidated credit report to third parties at a nominal fee.

2.9.4 External data governance: The Credit Bureau Association

The Credit Bureau Association (CBA) (2017) is a voluntary body that promotes fair and equitable services representing nine of the 14 registered credit bureaux within South Africa. The CBA (2017) mandate is to provide a framework for a sustainable and well-functioning credit information system by facilitating fair practice within the credit bureau industry and by promoting transparency, accountability, high-quality credit reporting and sound business practices. It ensures the confidentiality, accuracy, relevance and utilisation of data in accordance with international best practice and relevant legislation.

The CBA (2017) is committed to promoting equity, social justice and growth within the credit market by ensuring that credit information is reliable and accurate at all times.

The CBA is not a credit bureau. It is an industry body and its members are credit bureaux. These are companies that store and maintain information on consumer credit history. Each credit-active consumer will have a profile with a bureau, and credit providers use this information to assess credit applications (CBA, 2017).

Due to the credit environment becoming more regulated, companies must assume accountability in ensuring that data management is sponsored and owned throughout the organisation in a formal manner, where accountabilities are mandated and clear. The credit department is a key stakeholder in the quality of data as it propagates and uses the data from and for credit extension.

The overall responsibility of the CBA (2017) lies in taking large samples of data for asserting the viability and credibility of complex platforms and systems of credit data within the various telecommunications and financial sectors.

Organisations with inadequate practices in the spheres of data management cannot be considered to have credible data. This is due to the fact that quality becomes crucial to generate appropriate data on the basis of establishing quality data practices and the assertion of data credibility.

2.10 Theoretical review of credit risk management

Various theories on credit risk management have been brought to the fore by numerous scholars including the adverse selection theory, credit rationing theory, information rationing theory, moral hazard theory and information asymmetry.

2.10.1 Adverse selection theory

The adverse selection theory conceived by Stiglitz and Weiss (2009) rests on two main assumptions, that is: loan contracts are subject to limited exposure (i.e. if project returns are less than debt obligations, the borrower bears no responsibility to pay out of pocket), and lenders cannot distinguish between borrowers of different degrees of risk.

In the world of credit extension where simple debt contracts exist between risk-neutral borrowers and lenders, there is a presence of limited liability of borrowers and this imparts a preference for risk among borrowers, and a corresponding aversion to risk among lenders (International Monetary Fund, 2011). The stance of limited liability of the borrowers' results in lenders bearing all the downside risk, and conversely all returns above the loan repayment obligation will accrue to borrowers.

As interest rates rise, it directly affects the profitability of the low risk borrowers disproportionately, causing them to drop out of the loan application pool. This results in an adverse compositional effect where higher interest rates increase the risk of the average applicant pool. Subsequently at high interest rates, the applicant pool is limited to those who could potentially generate high returns, but presumably with lower risk probability. It is then probable that excess demand in the credit market may persist even in the face of competition and flexible interest rates. Existing asset inequalities within the borrowing segments of the population are possibly projected into the future by operation of the credit market, a phenomenon that may cause the persistence of poverty due to how customers are targeted and selected by the lending institutions. By sharing and exchanging information on the Credit Bureau Association's platform about their customers, the telecommunications companies can improve their knowledge of applicants' characteristics and behaviour, when they are required to make a credit decision (Grimshaw, 2010). In principle, this reduction of informational asymmetries can reduce adverse selection problems in lending, as well as change borrowers' incentive to repay their debt, both directly and by changing the competitive structures of the credit market.

Fernández-Ruiz and García-Cestona (2013) report that information sharing reduces adverse selection by improving the telecommunication company's information on credit applicants. In their model, each telecommunications company has privileged information about its own existing credit applicants but no information about applicants external to the company. If telecommunications companies exchange information about their clients' credit worthiness, they can assess the quality of external credit seekers, and lend to them as safely as they would do with their own clients. Information sharing can also create incentives for borrowers to perform in accordance with telecommunications companies' best interests. According to Houwen (2008), information sharing can

motivate borrowers to repay loans when the legal environment makes it difficult for telecommunications companies to enforce credit contracts. In his model borrowers repay their loans because they know that defaulters will be blacklisted, reducing the potential for additional finance in future.

2.10.2 Credit rationing theory

This theory was first introduced by Freimer and Gordon (2005), and later more comprehensively by Stiglitz and Weiss (2009). According to the seminal paper released by Stiglitz and Weiss (2009), unsatisfied agents are considered borrowers. They premise that asymmetric information tends to lead to credit rationing, partly because lenders cannot distinguish between low quality and high-quality borrowers. However, this dominant view is not without criticism as it was vigorously contested by Kallberg & Udell (2009). Their model shows that asymmetric information in active credit markets can lead to the opposite result, which leads to an excess of available credit or (over lending).

Given that telecommunications companies screen and monitor borrowers more efficiently than other institutions, they can thrive in most economies (Freixas & Rochet, 2015). Despite this plethora of valuable information, the relationships between the telecommunications companies and firms in the market are not perfect. Telecommunications companies suffer from informational asymmetries (Freixas & Rochet, 2015), such that evolution of their pricing structures or the rates that they charge (interest rates) cannot withstand the market rates, and this often results in a string of dissatisfied agents or customers.

Stiglitz and Weiss (2009) have proved that credit rationing will occur if telecommunications companies charge similar or the same interest rates to all its borrowers. This is because they cannot distinguish between the risk status of borrowers, and the screening of such borrowers in a perfect way can be expensive. Both these assumptions have been radically simplified and do not occur like this in the real world.

Telecommunications companies have sufficient ability to distinguish their borrowers to a certain degree. Moreover, telecommunications companies face more than only these two types of borrowers. Telecommunications companies would normally charge more

than just one tariff rate to its customers seeking credit. Borrowers with elevated risk levels pay a higher tariff rate and so credit rationing is less likely.

According to Stiglitz and Weiss (2009), adverse selection and thus credit rationing would still occur if telecommunications companies require collateral. They argue that low-risk borrowers are likely to expect a lower rate of return on average. Thus, it is evident that they are less wealthy than high-risk borrowers on average, over a given time period. Low-risk borrowers are therefore not able to provide more collateral.

It can be surmised that increasing collateral requirements may have the same adverse selection effect at a higher interest rate.

2.11 Types of inaccuracies in credit reports and files

Listed below are the types of inaccuracies that are likely to appear in credit files and the reports that are derived from them (Consumer Financial Protection Bureau United States, 2012):

- The scenario of a mixed file where there is the inclusion of records or accounts in a credit file that does not belong to the consumer under review. Credit reports may contain public records or trade lines about an individual other than the one who is the subject of the credit report.
- Omission of records or accounts belonging to the consumer. A public record or credit account that belongs to a consumer's file can be erroneously placed on another consumer's file, also resulting in a mixed file, as detailed above.
- Alternatively, gaps in the data or the matching algorithms of the bureau can also result in a consumer trade line being separated from the rest of the consumer's file and will be omitted in his/her consumer record.
- A consumer's account with a creditor may be misrepresented in a trade line or record by reflecting inaccurate information. A credit file may inaccurately show the status and terms of a valid account and inaccurately depict the credit limit for the account, the date an account was closed, or even whether a trade line is delinquent.
- In the same vein, a debt collection item on a consumer's report may inaccurately reflect an account's debt status or even the amount of money owed by the consumer.

It is noteworthy that some consumers may be mistaken and unaware of the inaccuracies that may exist on their accounts.

2.11.1 Causes of credit file inaccuracies

The inaccuracies identified in Section 6.1 of a report by the Consumer Financial Protection Bureau United States (2012) can come from a variety of sources:

- Data and data entry errors: The parties furnishing information may submit accurate consumer information in an incorrect manner or make typographical mistakes (e.g. transposing two digits in an amount owed (debt collection), transposing first and middle names or completely misspelling names).
- When consumers apply for a loan they can provide inaccurate information to data furnishers. The credit bureau could in turn compile a record for the consumer embedding the inaccuracy.
- Errors in the data can cause the bureau to experience matching issues, and a trade line on a consumer may be placed in a separate file, other than the consumer's original credit file, and it will thus not get included on the consumer's profile.
- Data inaccuracy could further cause a consumer's trade line to get mixed into another consumer's file. This can occur when the error results in the consumer's header information resembles or match another consumer's identity.
- File matching inaccuracies: Errors can occur at the point that the bureau determines which credit file must be matched to the creditor named in an inquiry received from an external third party, or alternatively when the bureau does the assignment of the trade line to an account that it regards as belonging to a consumer.

According to the Consumer Financial Protection Bureau United States (2012), a matching error can occur for a variety of reasons as detailed below:

- When a creditor's inquiries and trade lines contain a limited set of relevant identifiers that relate to that consumer, it may prove difficult to match the information to the correct consumer. A typical example of this would be if an inquiry submitted may omit demographic information such as the date of birth, or it may be incorrect.

- It is common that family members residing at the same address, such as fathers and sons may have similar identity information, like names and surnames, and they may have mingling of their information or the distinguishing information may be ambiguous (e.g. Jr., Sr.).
- It is also widely found that individuals with similar names and identity information often get linked together due to a name being recorded incorrectly.
- At times, it is also a common occurrence that when a consumer amends personal information, e.g. his or her name, the bureau may experience challenges in matching the new trade line to the existing consumer file, until it has sufficient confidence that the additional information can be merged with the existing consumer information. An example of such an occurrence is after a marriage or divorce when a consumer changes names. The information on the name change might remain separated in two different files, until the bureau can link the pre-and post-information.
- Bureau process errors: Errors can also reappear after a consumer has raised a dispute and an investigation has resolved the issue, when the bureau fails to prevent the re-occurrence of the error. These errors may still occur despite efforts by the bureau to permanently remove or even suppress the previously identified inaccuracies.

2.11.2 Identity fraud/theft

A consumer's identity may be compromised when identity thieves create new credit lines, like utility and health care accounts in a particular consumer's name and then never pay these accounts, creating numerous issues on the credit record files (Consumer Financial Protection Bureau United States, 2012). The consumer who is the victim can see his/her credit rating plummet drastically as the account gets pushed into collection status, as the account becomes delinquent.

The fraudulent activity can extend to an existing account and is often disguised by changing the billing address of the consumer with the institution that they are a customer of, or by making purchases online. This activity can often go undetected by both the credit bureau and the consumer for prolonged periods of time, or until the individual in question becomes credit active. Synthetic identities are also created by fraudsters using

an innocent consumer's ID number and other demographic information like one's birthdate or last name.

It is further noted in the The Fair Credit Reporting Act, 15 U.S.C. that inaccuracies may also occur due to process and system limitations experienced by data providers and other furnishers, upon receipt and handling of consumer data. These may include the following:

- Ownership attributed to an account where an individual might only be a user and not authorised to have account ownership;
- Failure to post a payment;
- Payment assigned to an incorrect account;
- The bureau neglects to update records, such as judgments that may still be listed as open even when they have been paid up or a dispute has been resolved;
- The bureau at times fails to amend consumer records, after successful dispute of an inaccuracy, resulting in the incorrect information being re-reported;
- Closed accounts being listed as being open;
- Reporting credit limits that are incorrect;
- Loan information transferred from one owner or servicer to another system resulting in lost payment records or lost data;
- Data furnishers and consumers may not agree on the reported status of credit accounts (for example, if a payment was made late or not); and
- Time delays resulting in differences between when a consumer initiates a transaction to when it is eventually reported to the credit bureau.

A court judgment can take up to six months to be transcribed into a written court decision according to the standards set by the South African courts. These disagreements can be addressed, if not always resolved, through the dispute processes that consumers have the right to initiate under the National Credit Act, No. 34 of 2005, but may remain unresolved for indefinite periods of time.

2.11.3 Consumer impact of inaccuracies

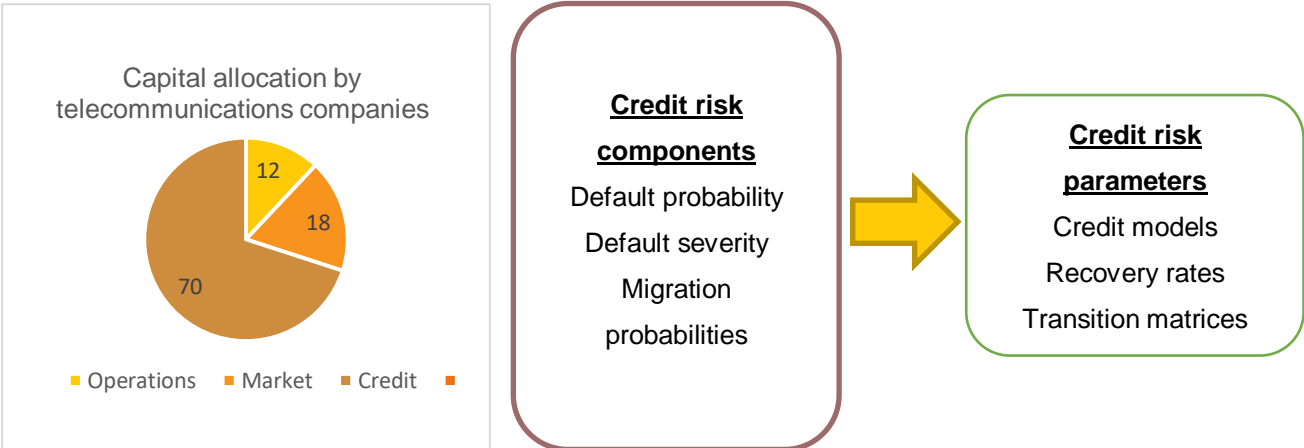
These types of errors may affect the way a creditor or the credit mechanisms of an organisation assesses the credit worthiness of a consumer. Trade line errors in a

consumer’s credit report can both help or hurt a consumer’s credit outcome; when a trade line is omitted it may reduce a consumer’s credit rating (Joseph, 2014). Similarly, a consumer’s credit rating could be unfairly reduced by the addition of a negative trade line that actually belongs to another consumer, or by a duplication of trade lines that the data furnishers and the credit bureau treat as two separate consumer credit relationships. Whereas on the other hand, if a furnisher inadvertently marked a delinquent trade line on an account as current, or if a delinquent trade line was incorrectly assigned to another consumer’s file, this type of error could help the consumer’s credit rating, and the credit provider may extend credit to a consumer who should not get credit at all (Joseph, 2014).

2.12 Management of loan portfolio and credit reporting

It becomes the responsibility of the management team to set up a credit administration team to ensure that the credit granted is properly maintained and administered. The team should create stringent processes for the “gating” of errors that have come through the mechanisms in the application processes, and effectively identify any errors that may have occurred in the data sources used for the credit assessment (Joseph, 2014). These errors must be compiled to sound reporting to be tabled with the relevant furnishers and credit bureaux.

Figure 2.6 – Managing credit risk: The challenge for the new millennium



Source: Stern School of Business (2007)

2.13 Management of credit information

In 2012, the Association of Chartered Certified Accountants (ACCA) reported in a publication entitled, “The rise of capital markets in emerging and frontier economies”,

that when they examined the moderating role of the strength of auditing and reporting standards to the stage of economic development, they were able to conclude three factors; institutional infrastructure, higher education and training and financial market sophistication, that were significant to countries at any given stage of economic development.

To examine the moderate role of economic development in the relationship between independent variables and the soundness of audit and reporting standards, it is noted that the three factors, namely the institutional infrastructure, the demanding financial markets and higher education are relevant for countries at all stages of economic development.

As the research will evaluate the effectiveness of the credit bureaux in their role as data providers to the telecommunications companies in South Africa, it must be noted that finding empirical evidence on the credit bureaux was inherently difficult as very little is factually known about their intricate operations.

Several studies have demonstrated how comprehensive information can assist lenders better predict borrower default. It was also found by Kallberg and Udell (2009) that the historical information collected by a credit bureau has progressively more powerful default predictive power.

Further studies by Kallberg and Udell (2009) showed that by including more comprehensive borrower information into their default prediction models, lenders could significantly reduce their default rates.

Another analogous study also found that there were similar default rate decreases as more information was available on borrowers (Powell, 2008). The dynamics of the credit markets are that by nature they present asymmetric information problems.

It is challenging for lenders to confidently extend credit as they do not know beforehand the past characteristics, credit management behaviour, nor the intentions of potential credit applicants. This then follows that lenders will make decisions based on the average characteristics of applicants rather than on their individual characteristics

(Jentzch, 2008), which could result in moral hazard problems; automatically implying that the probability of payment is lowered resulting in credit being more expensive for the telecommunications company. Jentzch (2008) further states that higher interest rates exacerbate the informational problem and adverse selection, because only higher risk borrowers are willing to accept loans at high interest rates.

2.13.1 Emerging/developing countries' position

In 2006, Stein reported that instituting a private credit bureau in a developing market can pose the following challenges:

- The quality of the data in the existing forms and role clarity of the credit bureau within the financial sector and government;
- Stakeholder support for credible practices within the financial and telecommunications sectors;
- The promulgation of necessary regulations and legislation to ensure the sustainability of private credit registers;
- Creating opportunities to create awareness of benefits of the credit information to lenders and to change perceptions; and
- Ensuring viability for the establishment of such registers in smaller countries with limited infrastructure.

2.13.2 The South African context

According to the National Credit Act, No. 34 of 2005, credit legislation was introduced by the South African Government to govern credit markets. This act formed part of a wide-range refurbishment of legislation intended to shield the South African seeking services in the credit market and creating improved avenues for these consumers to access credit.

Inaccurate credit information (Credit Ombudsman)

Each year increasing amounts of disputes are raised against the credit bureaux, through the Credit Ombudsman. As shown by the Credit Ombudsman's year-end report of 2016, an overall 116 195 disputes were recorded by the credit bureaux during the period from January 2016 to December 2016. This number averages 9 683 disputes per month. Taking the previous year's (2015) figure of 105 129 into consideration, there was a 10.5% increase in the number of disputes raised against

the credit bureaux.

The factors below have had a positive impact on the number of disputes raised by consumers (The Credit Ombudsman Report, 2016):

- The South African Credit and Risk Reporting Association (SACRRA), embarking on Project Evolution, with its key purpose to elevate the quality of information provided to the credit bureaux by credit providers. Its objective of also being fewer reporting errors on the consumer information and fewer complaints downstream to the Credit Ombudsman;
- The credit data providers instituting better efforts to resolve customer complaints, by creating customer support areas, and ultimately less queries to the Ombudsman; and
- The affordability assessment regulations that are embedded in the National Credit Amendment Act, No. 19 of 2014 resulting in a more meticulous credit governing framework.

2.13.3 Disputed consumer credit information

Table 2.1 below is a list of disputes within the credit category only and has been classified by the Credit Ombudsman for ease of reference.

Table 2.1 – Credit disputes (Percentages)

Credit disputes (category only)		2014	2015	2016
		(%)	(%)	(%)
A	An invalid case	39	39	25
B	Insufficient/incomplete credit information	23	16	16
C	Credit grantor did not supply accurate info	8	9	3
D	Outdated credit information	9	6	4
E	Credit receiver was not notified of adverse listing	4	1	3
F	Double listing	1	1	2
G	Fraudulent transactions	3	4	3
H	Removal regulation 2014	-	13	10

Source: Annual Credit Report: Credit Ombudsman (2016)

The discussion below reviews categories (A-H) that are relevant to the credit industry:-

Category A: An invalid case

This type of data is recorded on the credit beneficiary's credit profile. Table 2.1 demonstrates that this sort of data diminished from 39% in December 2014 to 25% in December 2016. The key purpose behind this reduction was that the credit suppliers had started to regularly refresh scheduled installment profiles, and no longer utilise as much of the record history with the credit bureau, as previously done. In a few noted cases, the installment profile record shows that the record is still financially past due or that cash is still owed to the credit supplier, yet the consumer has proof to the contrary. A 60-day window period is given to the credit extenders to provide updated information to the credit bureau.

Category B: Insufficient/incomplete credit information

The information posted on the consumer's account is insufficient to be used for a credit decision. This information may be of a derogatory nature, is not complete, which results in the customer raising an issue with the Credit Ombudsman. Table 2.1 demonstrates that this occurrence has diminished from 23% in December 2014 to 16% in December 2016

Category C: Credit grantor did not supply accurate information

The creditor grantors will contribute additional or new information to the credit bureau each time that a consumer applies for a credit facility. Category C is an event where the credit grantor has supplied incorrect information to the credit bureau and the consumer is seeking to have the information corrected or deleted, in the event that the information does not belong to the consumer. Table 2.1 reflects noteworthy reduction from around 8% in 2014 to 3% in 2016.

Category D: Outdated credit information: Non-compliance with NCA

Negative credit data is required by the NCA to only reflect on a credit beneficiary's profile for a stipulated period. This item reflects that the information had persisted on the profile longer than was required, resulting in a negative impact for the beneficiary. Table 2.1 reflects noteworthy reduction from around 9% in 2014 to 4% in 2016.

The significant issues in this segment are rescinded judgments and rehabilitated administration orders that are not timeously precipitated by the credit bureaux on their data systems. This information is detrimental to a consumer's credit record and can cause credit rejection by lending institutions if not removed within the stipulated time.

Category E: Credit receiver was not notified of adverse listing

It is governed by both the NCA (National Credit Act, No.34 of 2005) and the CPA (Credit Providers Association) that all credit beneficiaries are notified prior to negatively listing them on a credit bureau. This notification must be made twenty days before a person is listed.

A proportion of the cellphone organisations defend that as they are not deemed credit providers, they are not obligated to advise the credit beneficiary of a listing. This position from the cellphone providers may be challenged as they are members of the CPA and should operate within the code of conduct stipulated by the CPA. Table 2.1 above demonstrates that this classification diminished from 4% during 2014 to 3% in 2016.

Category F: Double listing

This category is relevant as it shows where a beneficiary may have been listed more than once for the same negative information. Table 2.1 above shows an increase in this category from 1% in 2014 to 2% in 2016. This category is marginal but may have significant impact on a credit beneficiary.

Category G: Fraudulent transactions

This category has remained stable between 2014 and 2016 at 3%, and entails fraudulent transactions mainly occurring due to an increase in data and identity theft. This is more apparent when telephonic transactions are concluded by the company.

Category H: Removal regulation 2014

The Credit Information Ombudsman included this class of procedure in section 73 of the NCA (2005), where credit beneficiaries who have met a set of criteria may have information removed earlier than stipulated by the NCA. There is a critical drop in this classification from 13% in 2015 to 10% during 2016 due to the section 73 process

which has been widely pitched in previous years.

2.14 Credit amnesty

During February 2014, a regulation regarding the “removal of adverse credit information and paid-up judgments” was duly published by the Department of Trade and Industry (2013). The amnesty regulation required the credit bureaux to remove all existing adverse information and paid up judgements related to a consumers’ credit record. This was effective as at 1 April 2014 and thereafter new default listings could be submitted again. The credit amnesty has caused a lull in the figures related to amnesty removals but increased the number of calls that the Credit Ombudsman had to resolve.

2.15 Key statistics of the Credit Ombudsman Report 2016

Table 2.2 – Key statistics - Credit Ombudsman Financial Report 2016

	Percentage		
	Increase	Decrease	
Disputes closed	-	12.5	4 422
Average days to resolve disputes	9.5	-	5 247
Disputes received by credit bureaux	10.5%	-	116 185
Cost per dispute	-	-	3 288
Total expenses for the year	-	-	13.6M
Percentage of disputes resolved in favour of consumer	-	-	69.4%

Source: Credit Ombudsman (2016)

2.16 Conclusion

The literature review demonstrates the reliance placed by the credit vetting departments of the telecommunications companies on utilising the correct credit information in their decision making, so that they may affect sound credit risk assessment. The accuracy of the data and processes executed will contribute to the success of the telecommunications companies and support a stable financial system in South Africa.

The implementation of robust and informed decision-making mechanisms will promote

transactional access to consumers and contribute to the much-needed economic growth sought by many government leaders.

It has become evident that the impact of incorrect consumer credit information on economic growth has not been examined in great depth in South Africa.

3 CHAPTER THREE

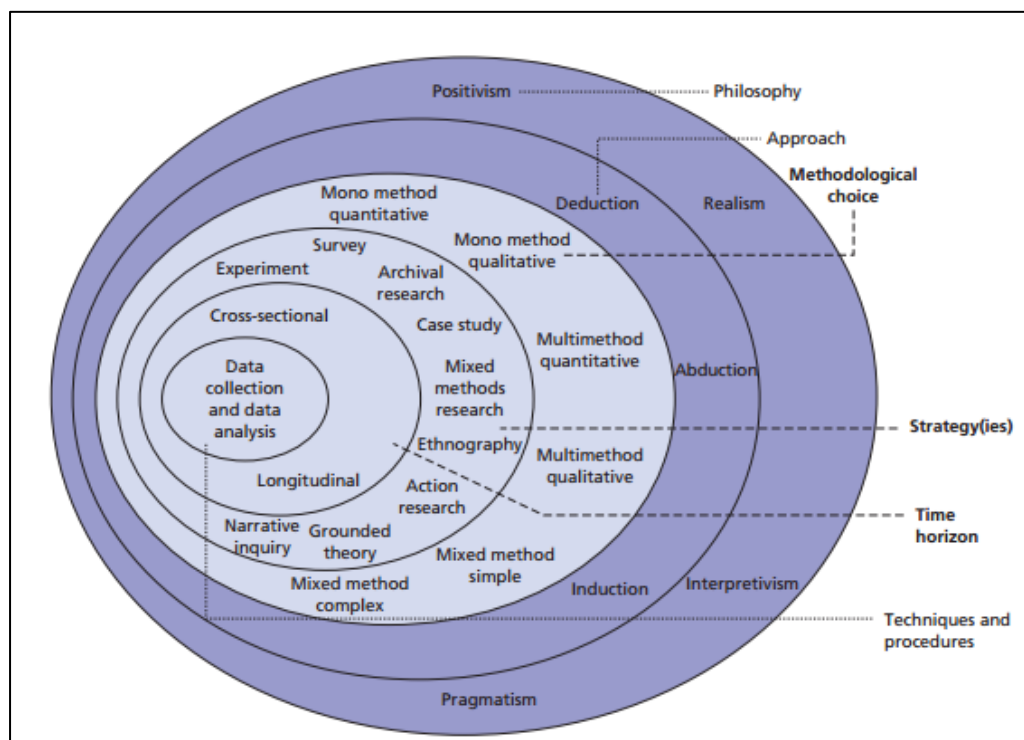
RESEARCH METHODOLOGY

3.1 Introduction

Chapter three will address the methods that were employed for data collection. It will clarify the research scope, define the sample size, segregate the credit officials' demographics, and propose the ethical standpoint and validity parameters of the research.

In the research onion by Saunders, Lewis and Thornhill (2012), depicted in Figure 3.1 below, research philosophies which are positioned at the outer layer of the 'research onion', will be the initial topic that will be elucidated in the research methodology of this study.

Figure 3.1 - Research philosophy in the 'research onion'



Source: Saunders, Lewis & Thornhill (2012)

The onion comprises four primary philosophies, which are:

- **Pragmatism**, which entails concepts that are founded on truth that are reinforced by effective and valid action from the basis of the pragmatic philosophy. This philosophy uses a mixed methods approach (Feilzer, 2010).

- **Positivism**, which has a primary focus based on observation constructed in a factual manner. The limitations placed on the researcher is that in a positivist paradigm, findings which are quantified into the research results are grounded purely on facts and the basis of the concept is that the world is considered to be objective and external focussed (Wilson, 2010).
- **Realism**, which is based on scientific methods which allow for the extraction of knowledge containing structures of theory (Novikov & Novikov, 2013).
- **Interpretivism**, which allows the researcher to make assumptions and to interpret the field research. The researcher can gain knowledge about the reality through various levels of social constructs, like consciousness and language (Saunders *et al.*, 2012).

In this study, the undertaking of the stages of the research was principally based on the assumptions, sources and knowledge about credit risk management which included both historical and current information. The researcher's choice of philosophies informed the strategy employed in this field study, which is pragmatism and realism as the principal philosophies aligned to the qualitative research method. These two philosophies were considered most suitable to effectively answer the research objectives considered in this study.

3.2 Research design

Research design normally comprises qualitative and/or quantitative research. In Table 3.1 below, Mesly (2015) elaborates on the differences between qualitative and quantitative research design that should be considered when deciding on a research design.

Table 3.1 - Quantitative and Qualitative Research methods

Qualitative Research Method	Quantitative Research Method
<ul style="list-style-type: none"> ▪ Methods include focus groups, in-depth interviews, and reviews of documents for types of themes 	<ul style="list-style-type: none"> ▪ Surveys, structured interviews & observations, and reviews of records or documents for numeric information
<ul style="list-style-type: none"> ▪ Primarily inductive process used to formulate theory or hypotheses 	<ul style="list-style-type: none"> ▪ Primarily deductive process used to test pre-specified concepts, constructs, and hypotheses that make up a theory.
<ul style="list-style-type: none"> ▪ More subjective: describes a problem or condition from the point of view of those experiencing it 	<ul style="list-style-type: none"> ▪ More objective: provides observed effects (interpreted by researchers) of a program on a problem or condition
<ul style="list-style-type: none"> ▪ Text-based 	<ul style="list-style-type: none"> ▪ Number-based
<ul style="list-style-type: none"> ▪ More in-depth information on a few cases (more and deep collect information but few cases...) 	<ul style="list-style-type: none"> ▪ Less in-depth but more breadth of information across a large number of cases (less and shallow information but large number of cases)
<ul style="list-style-type: none"> ▪ Fixed response options 	<ul style="list-style-type: none"> ▪ Unstructured or semi-structured response options
<ul style="list-style-type: none"> ▪ Statistical tests are used for analysis 	<ul style="list-style-type: none"> ▪ No statistical tests]
<ul style="list-style-type: none"> ▪ Can be valid and reliable: largely depends on the measurement device or instrument used 	<ul style="list-style-type: none"> ▪ Can be valid and reliable: largely depends on skill and detail of the researcher
<ul style="list-style-type: none"> ▪ Time expenditure heavier on the planning phase and lighter on the analysis phase 	<ul style="list-style-type: none"> ▪ Time expenditure lighter on the planning end and heavier during the analysis phase
<ul style="list-style-type: none"> ▪ More generalize 	<ul style="list-style-type: none"> ▪ Less generalize
<ul style="list-style-type: none"> ▪ Human behavior model 	<ul style="list-style-type: none"> ▪ Natural science model

Source: Mesly (2015)

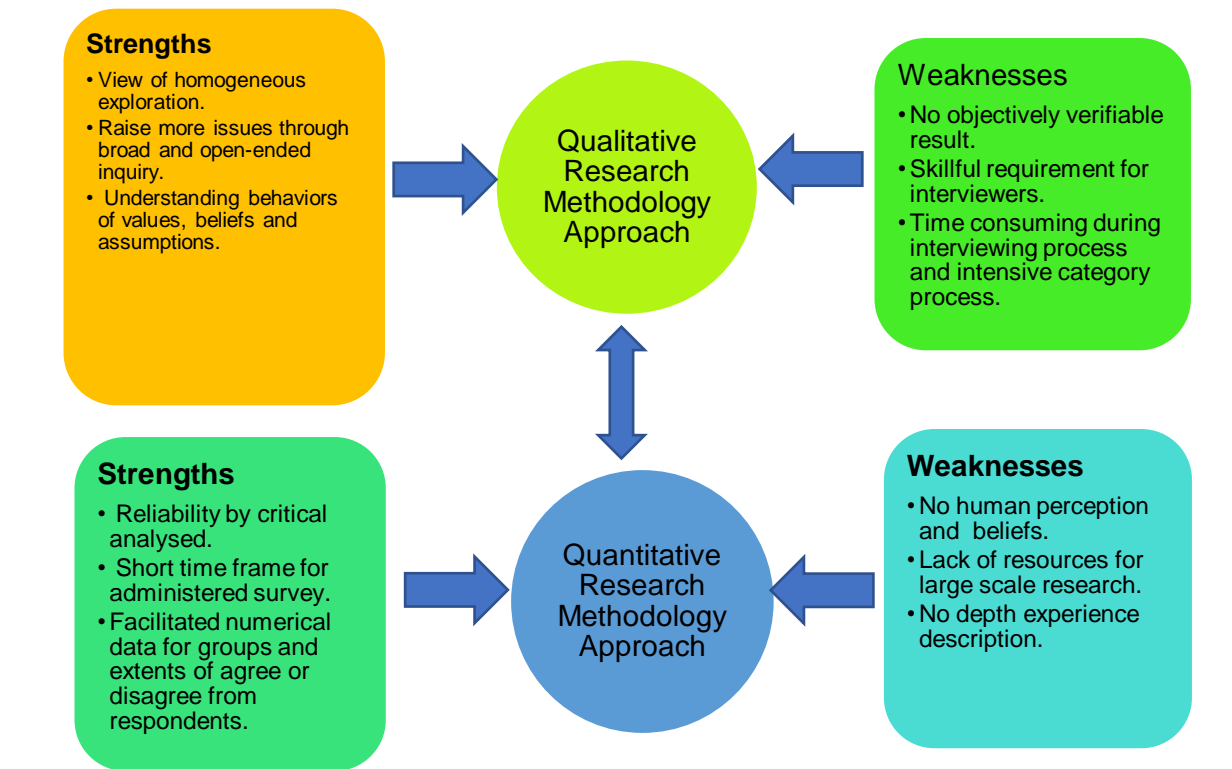
3.2.1 Qualitative research

Qualitative research is principally explorative in its nature. In fulfilling the purpose of creating an understanding and sound comprehension of underlying opinions, this study is based on a qualitative methodology (Bryman & Bell, 2003).

Qualitative research assists in the expansion of ideas as well as suppositions for potential quantitative research that can follow a qualitative study. Some of the approaches used to gain these valuable insights are observations, interviews and also focus groups. A sample size employed by the qualitative research design means that it is typically small to effectively accomplish the prerequisite question of the research method (Easterby-Smith *et al.*, 2012).

The foundation methodology of this study was the qualitative research design. Figure 3.2 below offsets the strengths and weaknesses of the two methodologies, namely qualitative and quantitative research plans.

Figure 3.2 Model of strengths and weaknesses of qualitative and quantitative research



Source: Choy (2014)

Historically the research literature has shown that, when quantitative research is inept to explain the eclectic psychological context of human behavior, the qualitative research method attests to be more effective. As a critical shortcoming, however, qualitative research can be exposed to researcher predisposition and lack efficacy in the generalisation of the results for the wider audience of the study (Easterby-Smith *et al.*, 2012).

According to Halcomb and Hickman (2015), the limitations of a quantitative research study method is proven to be more effective concerning the inadequacies of the qualitative research method. In an attempt to overcome the shortcomings of the two methods, a combination of the quantitative and qualitative research is employed in numerous studies.

Notwithstanding the benefits of the mixed method design there is an underlying weakness, because it involves more resources and a longer time period, given the intricacy of the research design. Additionally, the blend of two research methods can become awkward and the complexity may be compounded in its clarification of data and general examination of the information provided from the two options (Creswell & Lategan, 2003).

This research study is based on the qualitative data method, because it creates parallels from its basic rules to sophisticated issues, such as the effects of data quality from the credit bureaux on the credit standing of the telecommunications companies in South Africa; credit risk management processes; the consequence of substandard and at times inaccurate credit data and uncovering the risks posed to the telecommunications companies. Another gain in selecting the qualitative method is the casual interaction between researcher and participant during the data extraction phases which is not the case with the quantitative method.

Aliaga and Gunderson (2000) purport that the researcher may extract more accurate answers if he/she poses open-ended questions to a participant because:

- They are concise and morally aligned to the individual participant;
- The researcher is not prescriptive in how the participant responds; and
- The construction of the outputs from the participant is detailed and self-explanatory.

The fast pace of change creates further challenges with using the qualitative approach as it could result in the absence of dependable information for certain functions that are relevant to the study or be at risk of varying interpretations of key aspects of the research topic.

The factors above have been weighed and serve to support the choice of the qualitative design for the topic pertaining to credit risk management (Zoellner & Harris, 2017).

The qualitative data collection method is preferred by the researcher as it focusses on a finite and effective sampling size. The qualitative data collection method has a uniqueness in that it evaluates the deviations, discernments and welfare of the

participants, and therefore it is crucial to the review and contemplation given to the extraction of the data obtained (Creswell & Lategan, 2003).

3.2.1.1 *Interviews*

The semi-structured interview process was selected as the data extraction technique as it effectively ring-fenced the data components to be analysed. This data sanctioned the notion that poor quality data from the credit bureaux impacts the functioning of the credit departments and the broader telecommunications organisation.

According to studies by Foxcroft and Roodt (2013), it was found that open-ended tactical questions should effectively measure the objectivity ratios regarding the use of credit bureau data within the South African telecommunications sector. Several other researches support Foxcroft and Roodt (2013) on the premise that interviews are a more credible means to support the research undertaken when compared to other methods.

As theorised by Leedy and Ormrod (2005), based on the nature of the research problem, the context of the dependability and legitimacy will be aligned closely to the hypotheses derived, and it will be necessary to choose the correct the methodology in order to address the research objectives and to deconstruct the data that was compiled and analysed. As a basis to validate the quality of the questions proposed, a similar research study was analysed, and the appendixes were looked at to compare the questioning technique. It has been found to be similar to the questions that the researcher has composed and will be deemed adequate for the study (Leedy & Ormrod, 2005).

3.2.1.2 *Structured interviews*

An interview conducted with a participant, where the questions have been set in advance is referred to as a structured interview (Silverman, 2010). This method has variations to the semi-structured interview

method in that it has a nominal number of open-ended questions that are posed to the participant (Easterby-Smith *et al.*, 2012).

The stance of the researcher is unbiased and neutral in this interview structure, contributing a sense of trust and confidence between the two parties. The researcher withholds all personal views and partiality regarding the questions posed and the responses received.

3.2.1.3 *Semi-structured interviews*

Semi-structured interviews were selected for use in this study and comprised of questions that are germane to the primary research question. As the semi-structured approach is informal in its make up, it permits the participants the opportunity to impart additional information and also creates opportunities for the participants to elaborate on viewpoints shared with the researcher (Easterby-Smith *et al.*, 2012).

The researcher was able to glean more information from the open-ended question format, than just a simplistic “yes” or “no” answer, which was beneficial for the study.

The question framework was deliberately designed so that it began with a relaxed and informal approach, progressing to the thorough, and thereafter posing research focussed probing questions (Silverman, 2010).

3.2.1.4 *Unstructured interviews*

There is extensive emphasis placed on the successful interaction between the participant and the researcher during an unstructured interview. The social element during the interview session sets the basis for the researcher to effectively garner as much unknown information as possible. On the assumptions that the questions are not wholly predetermined, and the participants’ responses are mostly

unknown, mutual trust between the parties is important (Boyce & Neale, 2006).

The observation element of qualitative research is integrated into the unstructured interview process and tends to occur concurrently during all aspects of the field study investigative elements (Patton & Cochran, 2002).

During an unstructured interview, the researcher is exposed to unsuspected veracities during the exchange, thus helping both parties to grow a more comprehensive and considerate understanding of the psychological standpoint of the varying participants (Taylor *et al.*, 2015). Hence, the supposition may be made that unstructured interviews were fitting for this research design.

3.2.1.5 *Focus groups*

The procedure which demarcates several people to be interviewed simultaneously is called a focus group and significant weight is placed on the questions posed, and the answers established (Colucci, 2007).

3.2.2 Quantitative research

As opposed to qualitative research, the method utilised for quantitative research is mostly based on mathematical theories and statistical reasoning, on which it quantifies objective measurements (Leedy & Ormrod, 2005). The preferred primary source of data is extracted through surveys, polling and some form of questionnaire, and if necessary further postulation based on pre-existing data from comparable studies (Leedy & Ormrod, 2005). The quantitative method of research has not been used in this study.

3.3 Sampling design

The sampling methodology was purposive sampling, and it simply translates into meaning that the researcher designated to the participants as per the research proposition and selected the participants in order to fulfil the requirements within the study.

Purposive sampling (also known as judgment, selective or subjective sampling) is a sampling technique in which a researcher relies on his or her own judgment when choosing members of the population to participate in the study.

As purported by Guest (2012), purposive sampling (also known as judgment, selective or subjective sampling) relates to a sampling technique in which the researcher relies on his/her own judgement when selecting members of the population to participate in the study.

The years of experience of the selected credit officials have been identified as a critical variable in this qualitative case study and were measured and decrypted in the questionnaire (found in Appendix...) as follows:

Table 3.2 – Sample description of study

General manager credit	= 1
Credit executive	= 2
Head of credit scoring and risk	= 3
Senior credit manager	= 4
Credit manager	= 5
Senior credit supervisor	= 6

The total population of credit officials across the three telecommunication companies is 21 and 16 of these were participants of the study. The 16 credit officials that were selected as part of the sample size was based on the time available for the completion of the study, and the amount of time it would take to conclude the interviews, transcribe the interviews followed by the analysis and findings process. The level of experience in the credit industry is considered as a proxy for understanding the history and the level of impact that credit data has on decision making. This therefore becomes a crucial factor in the analysis.

3.3.1 Reliability and validity

The key considerations for any research are the aspects of reliability and validity as they form the basis on which credibility of the scientific study may be established. Reliability and validity are relevant and important when a qualitative research study is commenced. Most researchers advocate the premise that the philosophies related with quantitative

procedures are also considered as suitable within the reliability and validity structures (Silverman, 2010).

For the reliability and validity of the study to be assured several verification strategies may be employed. These activities are amongst others are: efficient data analysis and collection, developing the theory alignment during the research, development of methodological coherence approaches, ensuring sampling sufficiency, evolving a dynamic relationship between the samples, employing a theoretical mindset as the research information is being accumulated. In context of the research topic each of these will be briefly expanded upon.

Firstly, *collecting and analysing the data in a synchronised and concurrent fashion* is the crux of accomplishing reliability and validity as it creates commonality between that which is known and that which the research aims to make known. The consistent iteration between the data and what is being analysed, forms the cornerstone of the aforementioned verification strategies.

Secondly, the characteristic of *theory development* is consistently create the theoretical and conceptual linkages between the micro standpoint of the data and a macro theory view (Morse and Cheek, 2014). By adopting this method, the research theory is developed in two significant ways 1) as a model for evaluation and expansion of the existing theory, 2) as an output of the research process, rather than being implemented as a template that will advance the research process.

Thirdly, the purpose of methodological coherence is to ensure analogy between the research question and the elements employed during the process.

Qualitative research stresses the need for the questions to be aligned to the method used and that the method is relevant to the analytical procedures and data used. The orientation of these components to the data which support the analytical goals must be clear and continuous verification of previous elements and methodology is essential for coherence (Saldana,2011).

Fourthly, the *selected sample must be relevant* and consist of participants who have noteworthy knowledge of the research topic and who best represent the wider population. This safeguards effective and necessary data saturation across categories, with maximum quality standards of the data and reduction in wastage.

To reach a state of sampling adequacy, Morse postulates that there will be sufficient evidence of replication and saturation, which will indicate that an appropriate amount of data has been utilised to account for all facets of the phenomenon that are being studied (Morse 1991). This process of achieving data saturation ensures that replication in all categories have been achieved, replication by definition warrants completeness and comprehension.

The final aspect is *thinking theoretically* which emphasises the technique of switching between the macro-micro outlooks, and methodically edging forward being aware not to without making intellectual assumptions, but to rather move steadily through the findings, constantly checking and rechecking, and building a solid foundation of discovery. The concepts emerging from the data collected are reconfirmed with each new addition of addition data and this then gives rise to new thoughts, which in turn will be verified in previous research (Morse and Cheek 2014).

When used interactively and incrementally these strategies contribute towards building the rigor and precision needed to ensure reliability and validity.

In order for this qualitative study to provide rational scientific evidence that can be integrated into a developing body of knowledge on credit bureau impacts on an organisation, it will require that the rigor of the study be beyond challenge or question.

A study by Lincoln and Guba (2011), explore the two most important requirements necessary to access validity and reliability in qualitative research, i.e. whether the results or observations are substantial and can be addressed or whether the resultant findings are appropriate. However, these viewpoints are debatable.

Bulmer, Gibbs and Hyman (2006) propose that every subjective specialist should endeavour to accomplish legitimacy without attempting to control the outcomes as indicated by the exploration study, and he/she ought to rather ponder the factors of the exact data. When planning the system of the semi-structured interviews, the researcher ought to counsel with specialists that are in the field of credit, administration data and

data frameworks of the credit divisions (Easterby-Smith *et al.*, 2012). The inquiries should additionally be developed in a straightforward yet precise way, enabling the members to answer sincerely with no psychological strain or weight (Gilbert, 2001).

3.4 Data collection

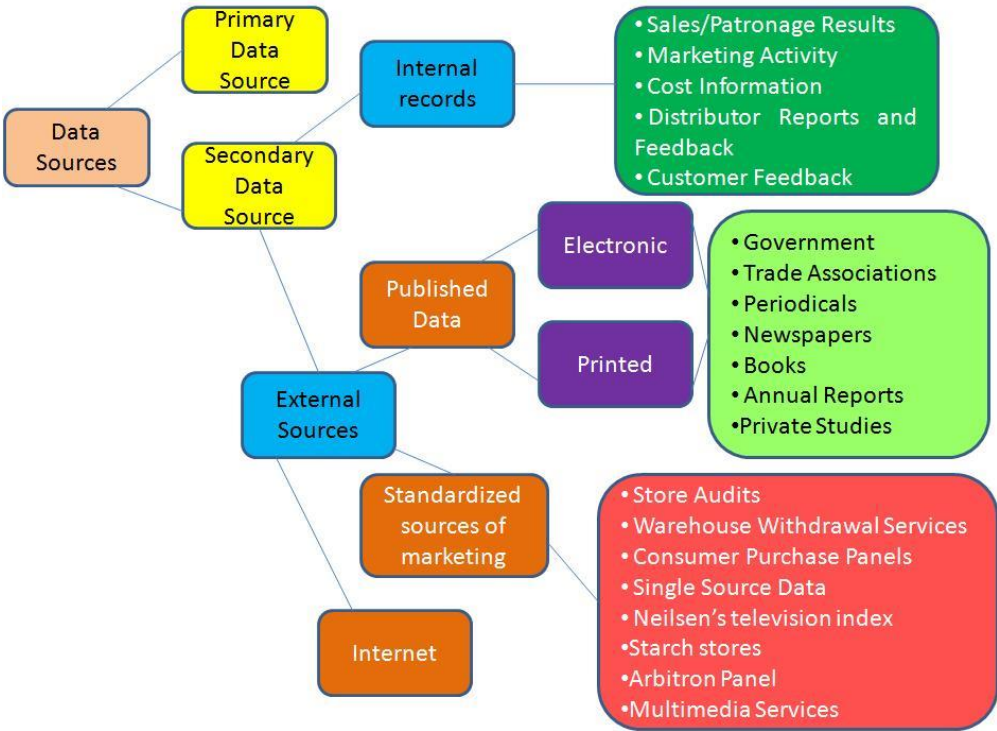
Thomas (2003) purported that data collection can be divided into two groups, which are secondary and primary data collection.

3.4.1 Secondary data

Morse and Cheek (2014) denote research information that is available from former researchers, in the form of journals, case studies, newspapers and administrative records as a source of secondary data that may be used to support primary information.

Various data sources are available to the researcher across the web, and can provide tangible insight to the research topic, in the stages of its development and will assist greatly to establish the content (Thomas, 2003). Internal and external sources may also be ranked as secondary data sources, as per Figure 3.3 below.

Figure 3.3 – Secondary data: Internal and External sources



3.4.1.1 *Advantages and disadvantages of secondary data*

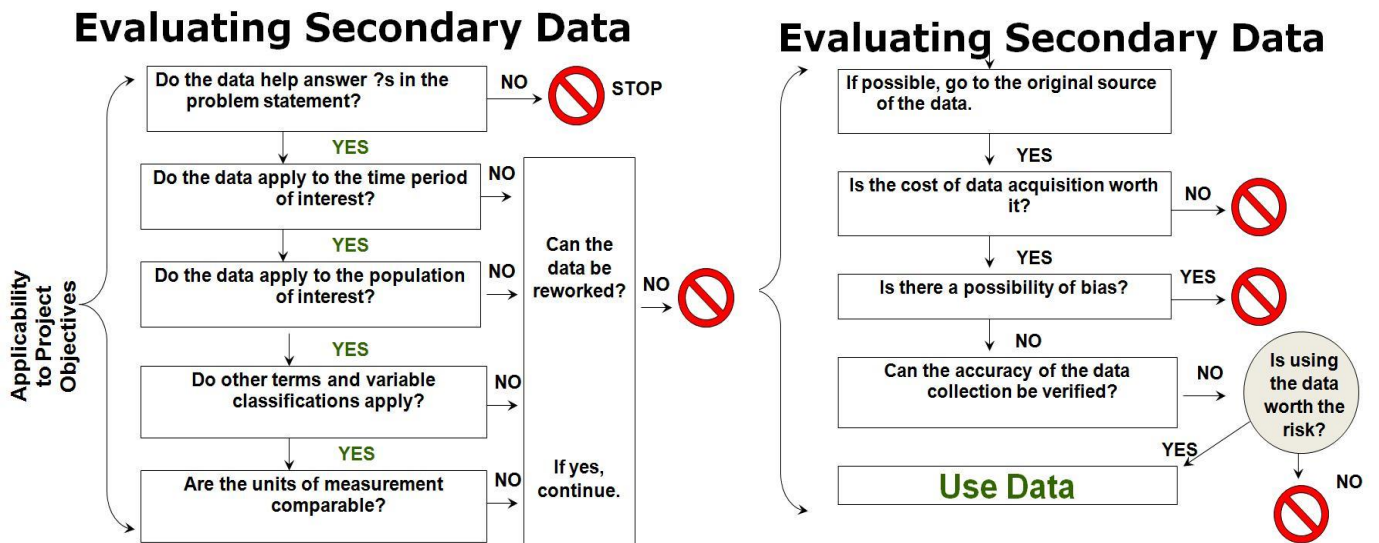
One of the central advantages of secondary data is that it effectively provides a thorough understanding of the research objectives and a sound framework for comparison purposes to the researcher (Bishop, 2007). There are several disadvantages of secondary data that may be relevant to the study. The information may reflect biases of those who hold power within the organisations being researched, and this may limit the scope of the results. It may lack authenticity as the manner in which criteria is defined and measured may vary over time and it could make historical comparisons challenging or documentation may be dated and author biased, and verification of information may prove difficult. Documented information may not be representative of the wider population and information may be withheld by the organisation due to confidentiality or other reasons.

Amongst the other disadvantages of secondary data mentioned above, the three aspects that will have the most negative bearing for the research topic pertaining to credit risk management, were that of varying environmental issues that could deem secondary data inapt for a dissimilar research topic. Considering secondary data from a legal stand point, it could prove challenging due to legitimacy concerns. The time-period of the secondary research could affect its validity and accuracy (Easterby-Smith *et al.*, 2012).

3.4.1.2 *Evaluating secondary data*

The evaluation of secondary data is an iterative process of positive and negative questions, leading the researcher into an alternate direction, until all the questions have been satisfied and the choice to utilise specific secondary data will be made by the researcher, as depicted in figure 3.4 below.

Figure 3.4 – Evaluating Secondary Data



Source: Ali (2012)

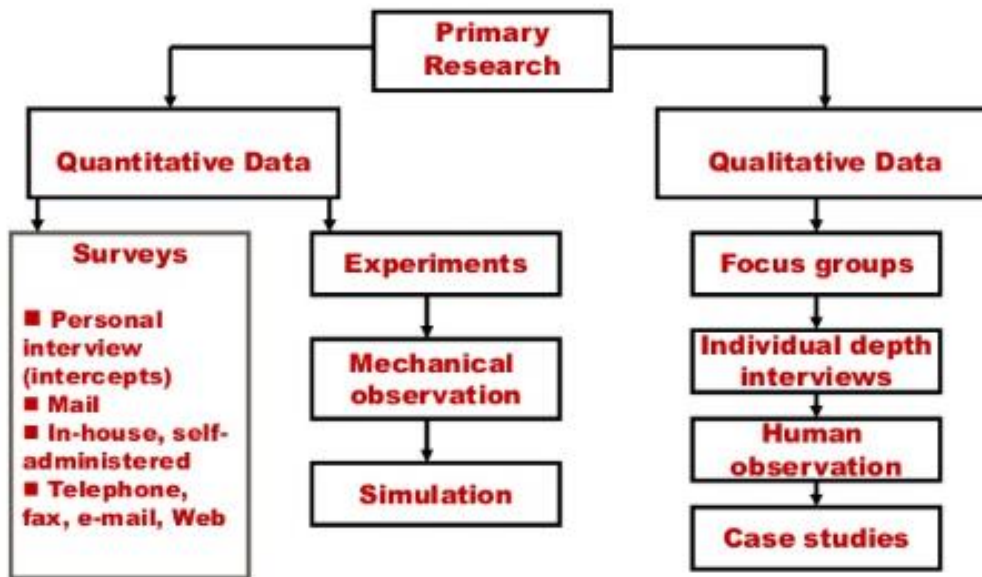
3.4.2 Primary data

The merits of primary data make it a source of research information that is reliable and valid to the researcher and will be sturdily relied on during the construction of the analytical framework. The information source will be dependable due to the concerted efforts of the researcher using several avenues to gather such information, namely observation, focussed experiments, surveys and well-constructed interviews (Blaxter *et al.*, 2006).

Although primary data can be expensive for the researcher or the research team, it is more advantageous when the research covers an explicit area of research, or an area that has not been extensively studied.

By way of giving impetus to the research question the primary data will be the chosen data source to the current research questions (Easterby-Smith *et al.*, 2012).

Figure 3.5 - Related factors that create the primary data source



Source: Howell and Prevenir (2001)

3.4.2.1 *Advantages and disadvantages of primary data*

By being meticulous in making use of the various operational variables and measures, primary data may be accumulated directly by the researcher. Measured data emanates from real life information and events which are deemed to be operationally important (Thomas, 2003).

It is paramount to the research study that primary data is valid, in order that the research question may be justified. Since primary data takes precedence over secondary data in terms of validity, it must be robust enough to support the research propositions.

The level of credibility of the data is increased if the data is compiled by the researcher in a manner that involves careful planning and with efforts concentrated on the integration of the various data elements (Easterby-Smith *et al.*, 2012).

In the researcher's efforts to obtain primary data, it can become increasing costly and may present an advanced

level of time constraints compared to secondary source of data accumulation. Tracking the research from commencement all the way to its conclusion has the potential to make a study more expensive, and the longer the time continuum the greater the cost factor (Thomas, 2003).

A research study based on primary data will weigh heavily on the resources or participants, and they may encounter restraints regarding time, and so may affect the research, if they have lack of flexibility or encounter personal and professional challenges. Secondary data has a vast array of information from several sources, and this pose very little restriction on the research project (Easterby-Smith *et al.*, 2012).

The telecommunications companies were selected based on their market share and are deemed to be the top three market shareholders in South Africa. The target population was selected across the three companies with an objective to have all credit designations within the credit vetting department fairly represented in the field study.

To initiate the participants about the process, emails classified as electronic communication were circulated to the credit officials, which housed the consent forms and questionnaire. The complete population of the relevant credit officials across the telecommunication companies selected was twenty-one. Although the researcher intended to utilise the entire population for the study, three members of the population declined to participate due to international work commitments and two others cited personal reasons. The sample size for the study was therefore sixteen.

The credit officials forming part of this study typically direct the complete lending process, including the initial application and underwriting review, which will result in the denial or disbursement of the credit request. The credit managers in large telecommunications companies normally have a team of credit and financial officials managing the paperwork related to a credit application, but the decision lies within their credit accountability. In addition to this, credit officials will be further expected to do management reporting on the repayment status of approved accounts, and to lead collection initiatives on accounts that have fallen delinquent.

As part of the procedure to initiate the participants, detailed notification sheets were circulated to participants advising them that their participation in the study will not attract remuneration and that participation was entered on a voluntary basis. During the course of the study the participants were meticulously led through the informed consent procedures. Part of the data collection components included demographic data, which comprised years of experience, age, race and level of highest education, and designation and position held.

Table 3.3 below illustrates the advantages and disadvantages of each data collection method.

Table 3.3 – Advantages and disadvantages of data collection methods

METHOD	ADVANTAGES	DISADVANTAGES
Surveys	<ul style="list-style-type: none"> • Anonymous completion possible • Can administer to groups of people at the same time • Can be efficient and cost effective 	<ul style="list-style-type: none"> • Forced choices may miss certain responses from participants • Wording may bias responses • Impersonal
Interviews (individual/ in-depth)	<ul style="list-style-type: none"> • Can build rapport with participant • Can prove to get additional information • Can get breadth or depth of information 	<ul style="list-style-type: none"> • Time consuming • Expensive • Interviewing styles and wording may affect responses
Focus Groups	<ul style="list-style-type: none"> • Can get common impressions quickly • Can be an efficient way to get breadth and depth of information in a short time frame 	<ul style="list-style-type: none"> • Need experienced facilitator • Can be difficult and costly to schedule a group of 6–8 people • Time consuming to analyze responses
Observation	<ul style="list-style-type: none"> • Can view program operations as they occur 	<ul style="list-style-type: none"> • Difficult to interpret observed behaviors • May influence behaviors of program participants • May be expensive and time consuming to record each individual event
Document Review	<ul style="list-style-type: none"> • Can document historical information about your program • Does not interrupt program routine • Information already exists 	<ul style="list-style-type: none"> • May be time consuming • Available information may be incomplete • Gathering information is dependent on quality of records kept

Source: Centers for Disease Control and Prevention, USA (2015)

3.4.3 Data analysis

The Inductive Thematic Analysis (ITA) process was applied to the data that is gleaned from the qualitative interview process. The ITA extrapolates indicative and probing and recording themes or patterns from an extracted data source (Guest, 2012). Themes or patterns are similar trends that occur across a dataset that the researcher is working on, and these datasets are important, as they describe or clarify a phenomenon, or can be closely related to a specific emerging research question. Themes are patterns across datasets that are important to the description of a phenomenon and are associated with a specific research question.

The ITA process of analysis is a wide-ranging method used to scrutinise and detect coding aspects from the extracted and most credible textual data streams. Further to this, Easterby-Smith *et al.*, (2012) expand and hypothesise that this technique of data investigation is arranged around the methodological and theoretical perspectives, with the conclusions based on the participants' actual experiences.

After having analysed the data from the interviews the researcher is able to draw common themes from the information available and use this as a foundation to formulate the most apparent set of themes (Grimshaw, 2010).

According to Fugard & Potts (2015), the Inductive Thematic Analysis method is most popular as it categorises each participant's contribution into differing classes based on the threads in the responses. This study intended to outline a common trend experienced by credit officials, because of poor data quality on their decision making and functioning of the credit department. Hence, the study analysed the data from the participants' recorded responses and attempted to determine a shared tendency in the behavioural patterns, which in turn validated the findings (Golafshani, 2003).

Ethical considerations

The research proposed involved two consent forms, namely form A and form B, which were issued to all members via the email system. In order to obtain affirmation to participate in the research, the forms required signatures from participants. To assure participants of confidentiality of their participation in the study, form A served as the authorisation to proceed on this basis. It further served as a mechanism to ensure security of information, participant privacy, and protection of all intellectual property of the study. In order to keep account of the details of the interview, form B provided details of the consent to conduct the interview recording.

Thomas (2003) suggests that consent denotes that the participants being interviewed are well conversant about the goals of the investigation. In this study, all information was password protected on the researcher's laptop. In accordance with the protection of information rules, all data will be discarded after the study is concluded.

The principal motivation behind sharing the goals of the study was to assist with setting the context of the study so that the potential participants' entitlement to autonomy during the interview was upheld and that the participants had clarity about the research objectives. Complex expressions and scientific verbiage were avoided whenever possible.

3.5 Conclusion

The pivotal elements that are examined in this Chapter incorporated sampling techniques, scope of the study, and information gathering methods. The Chapter additionally consolidated the data collection method, together with reliability and validity factors that were considered. Moral contemplations were satisfactorily examined with an attention on participant protection.

4 CHAPTER FOUR

DATA ANALYSIS AND INTERPRETATION

4.1 Introduction

In this penultimate Chapter of the study the researcher will present the results of the research which will be followed by an analysis and discussion. The Chapter will also review the primary data derived from the interviews with the credit officials, and the relevant complementary research areas. This Chapter will further highlight the response rates of the participants, an evaluation of the data sourced from the study, and finally, a summary of the findings. The presentation of the results is aligned with the research objectives of the study as outlined in Chapter 1.

The main objectives of the interview questions were as follows:

- What are the perceptions of the credit officials of the impact of the accuracy of the data on the credit component of the telecommunication company?
- What are the threats for telecommunication companies on the poor governance of data placed in the public domain by credit bureaux?
- What is the effect of asymmetry of information on the selection processes applied by the credit departments of the telecommunications companies; and
- How may the quality of the credit bureau data in credit risk decisions impact the South African telecommunications companies?

As discussed earlier, the participants of the study are the credit officials of the three major telecommunications companies in South Africa, separated by designation within the company. This population is represented in Table 1.1 in Chapter one and has been reflected here again.

The top three companies are illustrated below as A, B and C in no particular order and includes the relevant designations within the companies.

Table 4.1 - Key credit staff for each telecommunications company

Designation within the company	Company A	Company B	Company C
General manager credit	-	-	X
Credit executive	X	X	X
Head of credit scoring and risk	X	X	X
Senior credit manager	X	X	X
Credit manager	X	X	X
Senior credit supervisor	X	X	X
Total	5	5	6

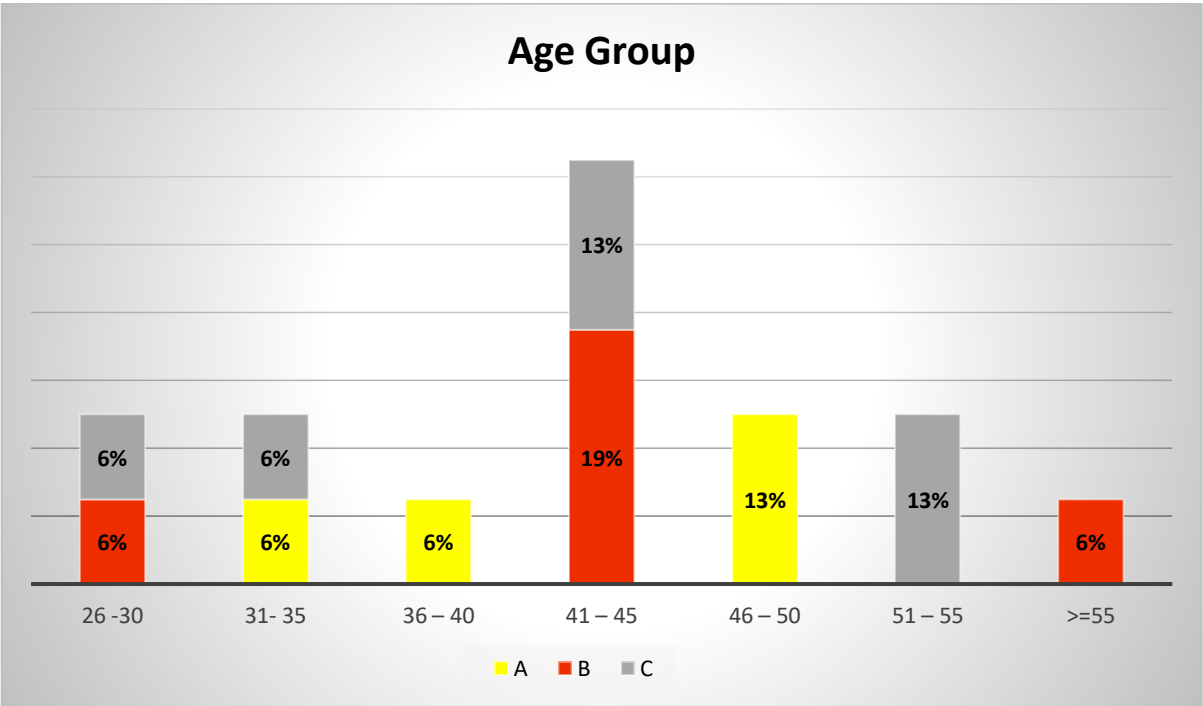
The results will be reported in respect of the groups above. Relevant demographic information like age, gender, employment designation, company employed at, number of years in telecommunications industry, and number of years in credit risk management will be presented along with reasons for the inaccurate information on consumers' credit reports. The risks faced by the telecommunications company when risks are present in the operations of the credit department will also be discussed.

4.2 Age profiled

The age profile of the credit officials shows that 24 percent of the participants are within the age group range of 26 to 35, distributed across the age categories 26-30, and 31-35 represent 12 percent, with an additional 12 percent in each age group respectively. Some further 6 percent were in the age group 36-40 years of age, and 58 percent were in the age group of between 41 and 55 years distributed across the categories 41-45 at 32 percent and 46-50 at 25 percent, and the category 51-55 at only 6 percent. The remaining category not represented in the graph is the younger age group of 21-25 years, which is a common age group for most banking and telecommunications organisations in South Africa. None of the participants randomly selected were of this age group. The remaining percentage is of the older age groups of the reference list, namely older than 55 years of age at 6 percent, representing the age group who are approaching early retirement which is also deemed normal in South African institutions. The age categories of the credit officials who responded to the study is represented in

a graphical format in Figure 4.1 below. The Figure 4.1 further shows that 30 percent of the participants were between ages 26-40 and 12 percent are employed by organisation A, and 6 percent at organisation B with 12 percent at organisation C. Fifty eight percent of the participants are between the ages 41-55 and 13 percent are employed at organisation A, and 19 percent at organisation B and 26 percent at organisation C. Company C has 6 percent of the participants in the study that are older than 55 years of age.

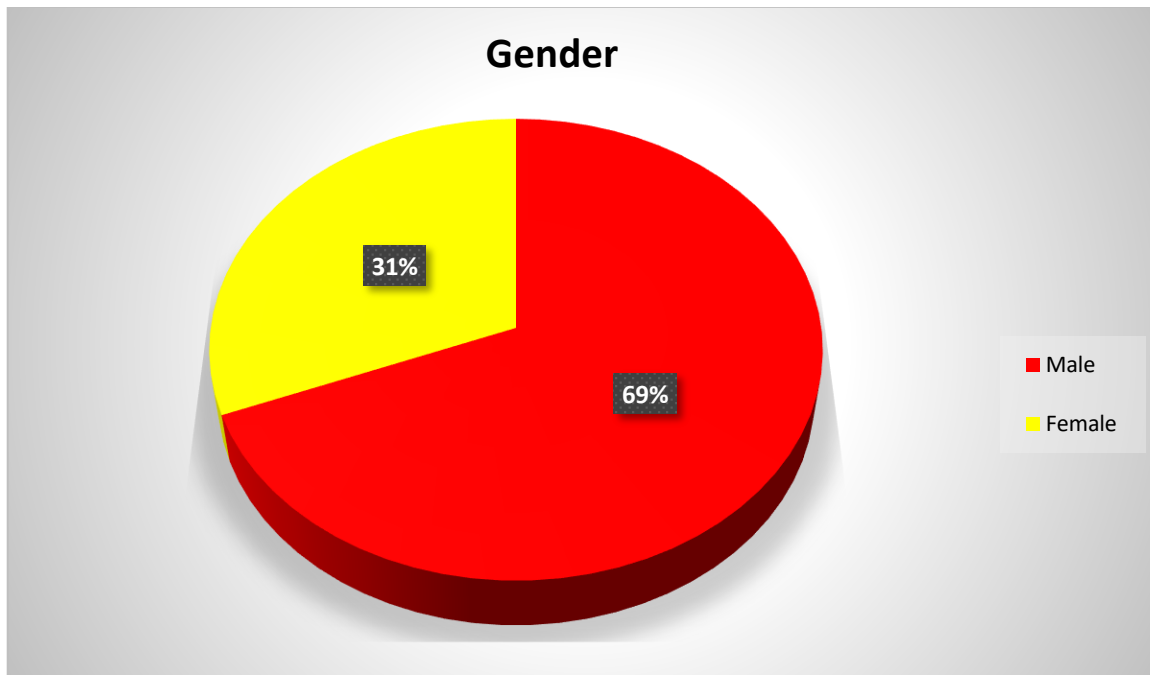
Figure 4.1: Age profile of credit officials by organisation



4.3 Gender distribution

The gender distribution of the study as shown in Figure 4.2 indicates that 69% of the participants were males while 31% were females.

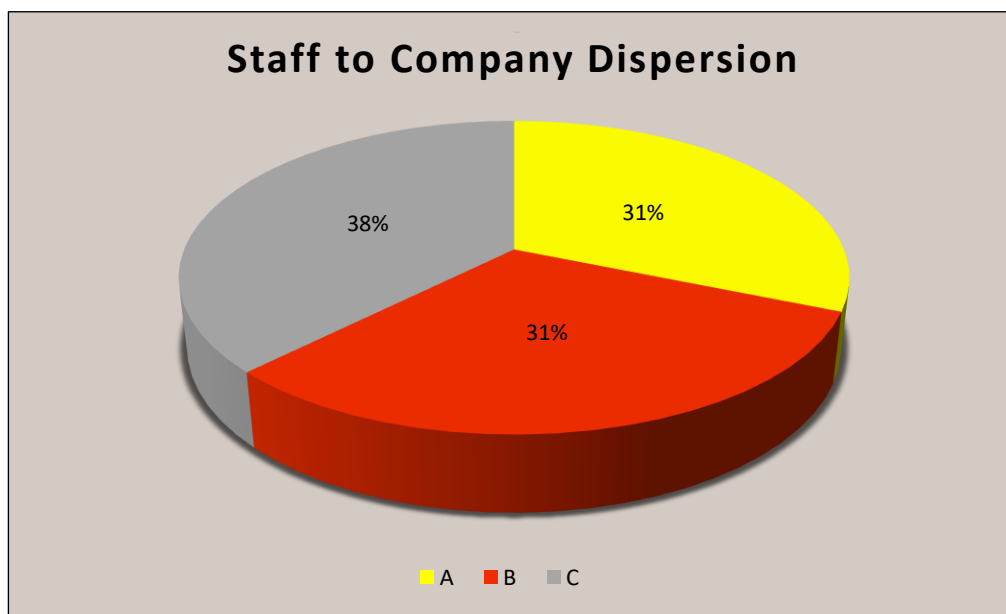
Figure 4.2 - Gender distribution



4.4 Employment designation and company

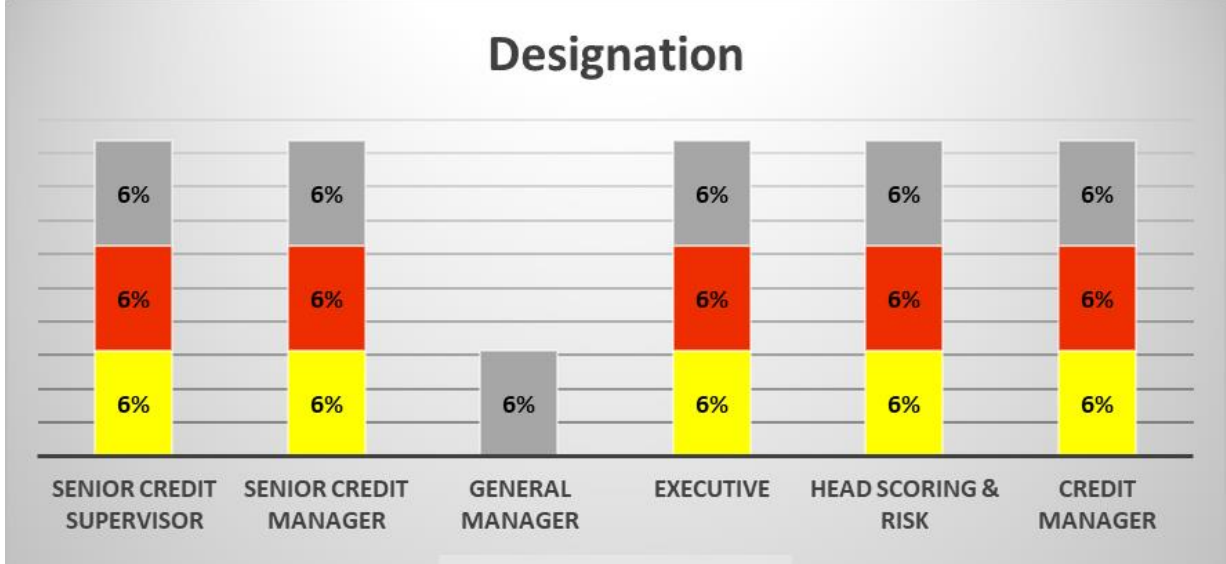
Figure 4.3a below indicates that 31 percent of the participants are employed by company A and B respectively, while 38% of participants are employed by company C.

Figure 4.3a Dispersion of staff to company



In Figure 4.3b below, the designations of the credit officials are reflected. At the outset of the study, the researcher intended to fairly represent each designation level within the study as illustrated in the graph below.

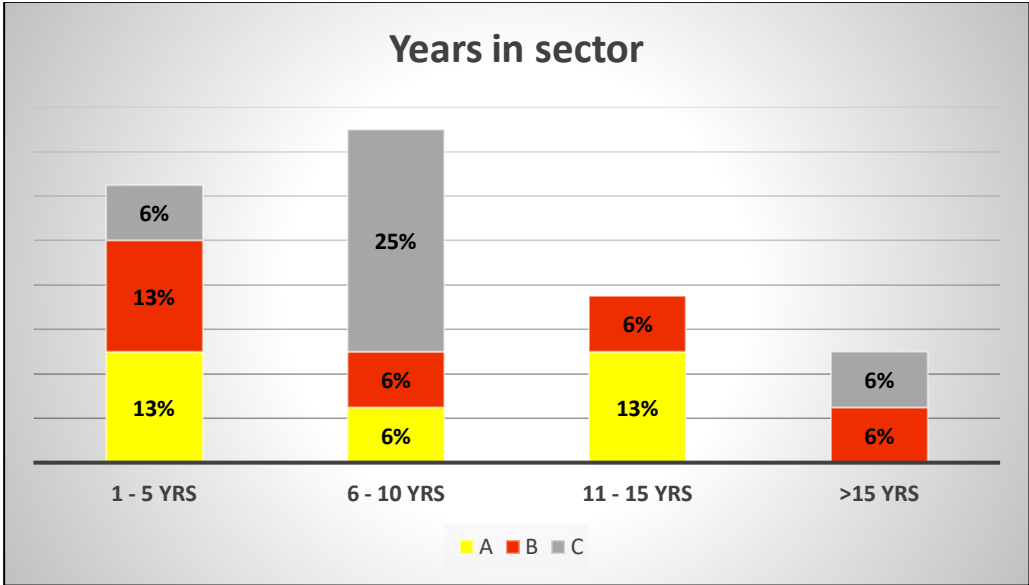
Figure 4.3b Employment designation per company



4.5 Number of years in the telecommunications sector

As can be seen from Figure 4.4 below, the highest percentage of tenure in the telecommunications industry under review is 37 percent and the participants have been in the sector for between 6-10 years. The second largest representative group is with tenure from 1 to 5 years and they comprise 32 percent of the participants. Only three of the participants have worked in the industry between 11 to 15 years and they constitute 19% of the participants. Only two participants in the survey have worked in excess of fifteen years in the sector and comprise 12 percent.

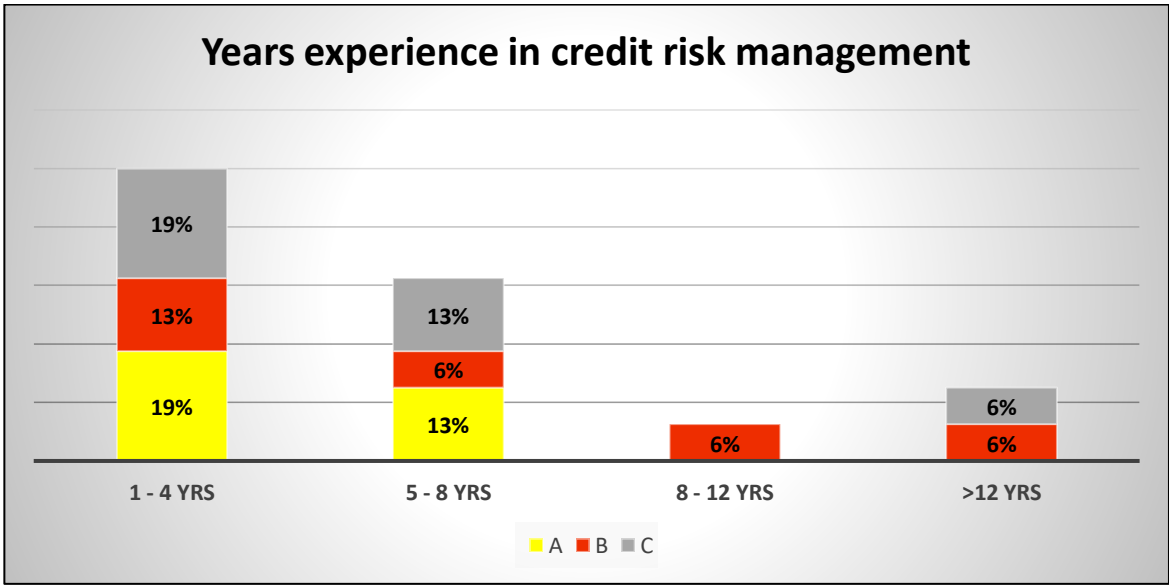
Figure 4.4 Number of years in the telecommunications industry



4.6 Number of years of experience in credit risk management

Figure 4.5 below indicates that 51% of managers claim to have 1-4 years of experience in credit risk management. The second largest group (32%) of managers in the credit risk sector indicated that they have work experience of 5-8 years in the mentioned field. Further to this, 6% have been serving in the industry for between 8 and 12 years. Only 12% of the participants have in excess of twelve years of experience in the industry. Company A does not have any participants longer than 8 years in the industry.

Figure 4.5 - Years of experience in credit risk management



4.7 Data analysis relating to the research objectives

The primary research objective of this study was to explore the effects of data quality from the credit bureaux on the credit standing of the telecommunications companies in South Africa.

Whereas the secondary research objectives comprised a discussion on the role the information serves within the telecommunications environment and explore the consequences that poor data quality may pose to the company. Furthermore, perceptions of the credit officials around the impact on the credit component of the company, highlighting possible threats and its impact on the credit selection process were to be identified.

Five key themes were identified from the interview plan, namely:

Table 4.2 - Key themes derived from the interview schedule

1. Key driving reasons for incorrect information
2. The Organisational performance impact
3. The opportunities for risk mitigation within the processes
4. Exploring the role of the credit bureau
5. The rights of the consumer

The themes and sub themes presented above will present a way forward and seeks to address the study objectives set out further to this the scrutiny and interpretation of the information presented will contribute towards resolving the problems detailed in the field study proposal.

4.7.1 Theme one: Key driving reasons for incorrect information

The information which is utilised by the telecommunications companies in their credit decisions goes through several organisations and processes before it is ultimately used for credit decisions (refer to Chapter 2). By fielding questions 7, 9 and 21 from the interview schedule, (Appendix A), the researcher was able to explore this theme, in an attempt to identify probable points of data failure.

The opening question in this theme may seem arbitrary to most observers but it is a relevant one, as it has been observed from the theoretical research (Hillman, 2003) that users of the data broadly assume high levels of accuracy from the credit bureaux. Question 21 opens the first theme **“In your experience are you aware that information from the credit bureau may be incorrect?”**

This question intended to solicit the extent of reliability that each participant places on the reliability of the data presented to them by the credit bureau. As such, 12 of the 16 participants were explicit in their response, that data may have inaccuracies, whereas four participants shared a different view, which saw them being reasonably comfortable with data quality.

Participant “5” summed up his view on data being inaccurate with statistics. He said: *“I have been doing credit for many years, and I have come to know that the bureaux deal with an excess of 20 million consumer credit records, and close to 12 million of those are impaired records. Dealing with this amount of data, they are bound to have inaccuracies, it’s inevitable”*.

Participant “14” shared this sentiment when she further expanded on the view of participant 5, that: *“...Some of the credit bureaux have better systems and algorithms, and their data quality may be more reliable, but more often than not, we deal with incorrect data on a daily basis”*.

Participants 3, 13 and 8 added that as they do not have further means to establish the data accuracy, they simply assume accuracy and base their decisions on the data presented. The similar view was shared by participant 15 as well, with a majority of participants indicating their reluctance to place confidence on the accuracy of the data.

Question 7 probed specific reasons for their views on data being inaccurate from the credit bureaux based on their experiences in the credit environment of the telecommunications companies. One of the participants (11) who took part in the study stated: *“It is my experience that consumer information received from the credit bureau is not sufficient or the record is incomplete, so it’s not possible for our credit systems to*

pick up the information, and use it in a decision, this results in the information being ignored during decision making”.

Participant 1 corroborated participant 11 sentiments when he said: *“Our credit vetting systems do not have the ability to integrate other information in order to verify data quality, so we rely on the decision the systems give us”.*

Participants 2, 9 and 16 shared quite similar views in that, given the time limits placed on their decision making, they have to place huge reliance on the data that is provided in order to decide as time is a limited resource during their work day.

Further to this another participant (7) stated that: *“There are many occasions when the data record we receive from the bureau appears to be complete and recent at the time of decision making, but subsequent to the decision we find that information that was supposed to have been recorded on the customer record at the time we retrieved the information is not present”.*

Based on the responses from participants 11 and 7, it can be said that the telecommunications company places itself under credit scrutiny from the Credit Regulators based on the provisions of the National Credit Act, No. 34 of 2005. In so doing, the mandate of the act can be referenced to the extent that it may set aside a consumer’s debt obligations, under any credit agreement that was instituted by a creditor where all elements of the debtor’s risk were not accounted for. This means that if a lender or bank failed at the time of credit extension to take into cognisance a consumer’s financial position, including living expenses, verification of income, any other existing debt, or further other obligations before extending more credit, the court is at liberty to cancel the debt outright (Greuning & Bratanovic, 2009). If the customer debt has the potential of being cancelled it, places risk on the telecommunications company in terms of its assets that have been extended to the consumer as well as reputational liability, that can be linked to reckless lending.

Question 9 explores whether the inaccuracy of data has any impact on the decision making of the credit vetting team. Participant 4 explained that: *“at times derogatory information will appear on a record of a consumer, but that information might later be*

found not to be related to that customer record. This then results in us either penalising an applicant as being high risk for a credit extension, or at worst we might decline the applicant outright”.

The majority of the participants were of the view that the data has tangible impact on their decisions. This view supported by Finlay (2008) urges that “decisions need to be taken about how to manage delinquencies so that the likelihood of the account recovering is maximised and potential future losses due to bad debt are minimised”.

In a report by the Consumer Federation of America (CFA) (2002) and the National Credit Reporting Agency (NCRA) (2002), several studies were consolidated that have brought to light the high level of errors that exist in credit bureau reports. The composition of reports indicated that errors on credit bureau reports placed 20 percent of the American credit-active population at risk of being mispriced and many more were being misclassified as subprime consumers. This case study is highly relevant to the South African scenario as well, where information is linked to the incorrect person and places that person in a higher risk category.

The findings from the participants’ responses and the literature indicate that incorrect information results in the misrepresentation of a consumer’s credit ability and derogatory information also further detracts the credit vetting department’s ability to function optimally.

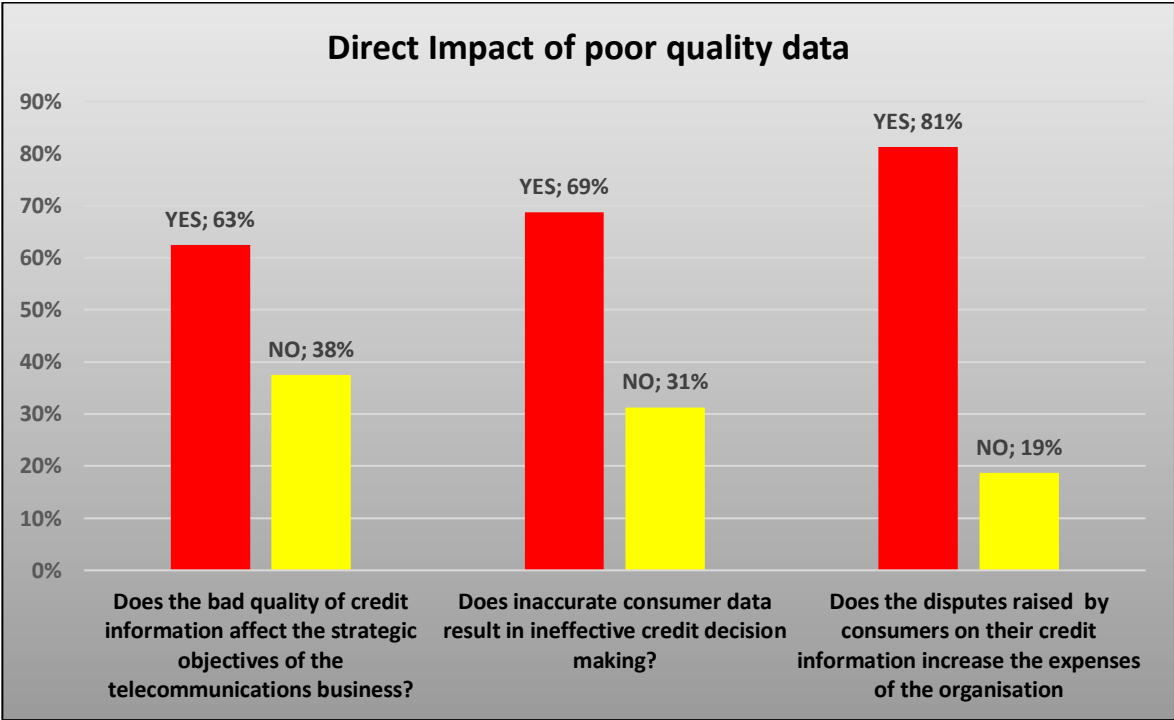
4.7.2 Theme two: The organisational performance impact

This theme is examined through questions 8, 10, 12 and 13 that were posed to the participants as a way of extracting their perceptions and views on the contribution and/or influence of the impact on the organisation’s strategic performance and profitability, when poor quality data is presented by the credit bureau during the credit decision process. Numerous challenges were cited by the participants, as expanded upon below.

Most managers (81%) indicated that disputes by consumers on their credit information increases the expenses of the organisation (Figure 4.6). A further 69 percent believed that inaccurate consumer data results in ineffective credit decision making, and 63

percent believe that bad quality credit information affect the strategic objectives of the telecommunications business.

Figure 4.6 - Direct company impact of poor-quality data



Participant “12” responded to **question 8** in the affirmative as follows: “*Yes, it certainly does, as we incur duplication of effort in the decision-making process, to ensure that information we are using is correct, and I have at times, resorted to seeking additional information from an alternate credit bureau when I am doing a high value decision that may have higher than usual risk attached to it*”. He further added an additional comment: “*The additional bureau information costs the company money and also the time spent by officials also results in a loss of revenue*”.

This was corroborated by Participant “3” when she pointed out that: “*it may cost additional when we make more effort to ensure a decision is sound, but it also saves the company in the long run on bad debt that may be incurred if the correct decision is not made.*”

As postulated by Rosenberg and Gleit (1994), the quantitative methods of credit management assists with increasing the credit grantors’ profits (through granting credit

to more creditworthy consumers) and reducing losses (by denying credit to non-creditworthy consumers), again reinforcing the premise of good credit selection, contributing to profitability.

In response to **question 10**, participant 14 adds that: *“It is unfortunate that it has become the norm in my company that queries are raised by customers due to incorrect information provided by the credit bureaux. When this occurs it creates additional work for the query staff and also takes long periods of time and numerous communications to resolve the issues.”* Similar views were shared by 81% of the participants of the study.

In response to **question 12**, participant 5 shared that at times she is concerned that her decisions may be incorrect when she relies solely on the data provided by a single credit bureau. At times she indicated that she will check information on an alternative credit bureau when making decisions of higher value to ensure that it is a sound decision. This corroborates with 69% of the participants’ feeling that their decision making might be ineffective. It would be biased to state that incorrect data only poses a problem for the consumer, as this is a problem that impacts lenders, the credit bureaux themselves as well as the borrowers who may be erroneously prejudiced by poor quality bureaux reports.

Participants 1, 9 and 14 also share the discernments expressed by other participants and emphasised the increasing bad debt that is becoming evident due to the overall dysfunctional information but placed significant weighting on the data from the bureau that they used in the decision making.

Participant 14 more particularly presented unique insights when she shared views on the impact of the consumer and the company as follows: *“as he/she may be extended credit but will pay higher premiums for that credit due to an inaccurate set of data linked to his/her credit profile. Information asymmetry, in both a positive or negative sense creates bias and misrepresentation for either the lender or borrower and leads to unnecessary costs for both parties”*.

A report undertaken by Anderson (2007) which was commissioned by the Credit Bureau Association in America, highlighted that of the 15 703 applicants that were declined

based on the data from the credit bureaux, 7.8 percent proceeded to ask for their credit reports, 1.9 percent disputed the information presented in their reports, and 11.8 percent of the decisions taken had to be overturned as the information was incorrect. A study that was conducted by the NCRA (National Credit Reporting Association, Inc.) in 2004 brought to light significant percentages of and incorrect matching stale data, and missing information.

In response to the questions pertaining to the objectives of the organisation being impacted by data inaccuracies from the credit bureau, participant 15 brings another perspective when she says that: *“targets and objectives set by the organisation in line with its financial performance could be impacted over time by poor quality information received by the credit bureaux. The impact might not seem significant in the short term but is definitely significant over longer financial cycles”*. The response from participant 15 is supported by 63% of the participants who felt the objectives of the organisation may be negatively impacted versus the 38% who felt that it might have a lesser impact.

The Federal Reserve Bank of Philadelphia (2005) makes a poignant observation in their study which states that the cost of not being able to obtain a loan for a borrower could be way higher than the cost of a lender simply not being able to extend that loan to the borrower. This is due to the fact that the full extent of the borrower’s losses is not fully represented in the credit bureaux report and there can be extenuating losses that the borrower bears, which may not be apparent. Being declined for debt based on incorrect information can have dire consequences for borrowers who need financial assistance.

In the South African context, where several consumers live on the bread line, access to credit may be life changing for them. The participants’ responses above indicate that resolving incidents of incorrect information on customer records is time consuming, not easy to resolve and result in extended periods of time spent by credit personnel in an attempt to resolve the dispute with the customer. Further to this, the telecommunications’ KPIs and targets may be impacted over extended periods of using incorrect consumer data in credit decisions.

4.7.3 Theme three: The opportunities for risk mitigation

The participants were asked what they believed were the means to curb the impact of poor quality data on credit risk. For Question 27, participant 13 recommends that: *“the onus to ensure that information from the bureau is accurate also lies with the telecommunications company. There isn’t robust monitoring of credit information within the telecommunications company, or at the very least some level of revalidation of the information prior to a decision being taken”*.

Further to this, another participant (4) lists the challenges as follows: *“Due to the whole chain of acquiring the credit information lacking checks and balances it will be extremely difficult to pinpoint the point of failure. There are several points of failure; the accuracy of the information provided by the consumer to the credit extender, then the information that is accumulated by the credit extender and sent to the credit bureau, and lastly the information that the credit bureau receives, therefore the credit bureau needs to ensure robust validation is implemented to ensure quality to the end user.”*

The World Bank (2007:67) indicates that: *“Credit reporting systems should effectively support the sound and fair extension of credit in an economy as the foundation for robust and competitive credit markets. In doing so, credit-reporting systems should be safe and efficient and fully supportive of data subjects and consumer rights.”* This statement holds true, but the caveat is that the value that the credit bureau provides is in direct proportion to the level of accuracy of the data they provide to lenders, about consumers.

Participant 9 shared valuable insight into the process that the credit bureaux utilises to gather information that it records in its databases and suggests that: *“The process of retrieving court records is hugely manual and has to be hand written from the original records and then transferred to their databases. This results in room for errors. These processes need to be made more electronic and automated. The opportunity for errors will diminish if these processes are made electronic.”*

The responses received from participants 9 and 4, indicates that the credit bureaux need to implement measures and systems to ensure that their products that are distributed in

the market are reliable and sound, and that credit personnel are calling for more accountability from them.

Similarly, participant 13 shares the sentiments expressed by other participants and additionally points out that: *“the manual process of capturing data from court records may result in poor quality of information. It is a need that the supporting court processes become more electronic and reliable, therefore decreasing the margin for errors during the recording process”*. She adds that: *“perhaps this initiative needs to be initiated by the Credit Bureau Association (CBA) in partnership with impacted parties”*.

As postulated by Sinare (2008), credit bureaux are seen as information brokers, who are obligated to provide relevant, reliable and comprehensive data on the credit repayment behaviour and current debt exposure of applicants of credit. This statement however does not always hold true as demonstrated by responses from the participants, and it may put credit extenders at risk, as they place full reliance on data quality. Further findings by Avery, Calem and Canner (2003) indicated that when a consumer has court instituted debt obligations (bankruptcies or tax infringements), or poor credit repayment behaviour, they are exposed to higher interest rates on the debt that is extended versus those consumers who do not hold negative information.

The theme to investigate the opportunities that exist to mitigate the risk to the consumer and the telecommunication company yielded robust contributions with participants becoming animated about their ideas and contributions. The questions and discussions revealed that opportunities do exist that may be explored.

4.7.4 Theme four: Exploring the role of the credit bureau

The active participation and role of the credit bureaux were solicited in Questions 20, 27.5 and 27.6. Participant 2 stated that: *“The credit bureau can only get better at doing what it needs to do, if they have some sort of information sharing platform, where all players are represented, and can freely share the challenges they are experiencing. I know this is needed but there, must be commitment.”*

Participant 16 adds that: *“The credit bureau association is a very important driver of change within the credit industry and they would be the best initiators of more stringent*

processes and governance, by the credit bureaux.” Further to this he added that: “perhaps the consequences for the credit bureaux are too lenient; therefore, we do not see any urgency on their part to make bigger strides towards higher quality.”

In response to Question 20 that asked if the credit bureaux need to provide more consumer and end user education within the telecommunications industry, participant 9 says: *“Yes, there is mushrooming interest, and a growing need for better understanding and it is needed more by the consumer on the street.”* Participant 11 concurred by saying that: *“it’s a big issue that many consumers don’t even know what information is out in the public domain about their credit behaviour. They are oblivious to the accuracy of the information as well. Perhaps a national campaign is needed to create awareness and bring better awareness to the consumer of the importance of maintaining and taking good care of the public record held by the credit bureau as it may impact many aspects of his/her financial worthiness”.*

4.7.5 Theme five: The rights of the consumer

The critical role of credit in the economy is best summed up in the policy framework of the Department of Trade and Industry (DTI, 2004). It may be deemed a somewhat older post but the researcher finds it relevant and topical today. The researcher also finds that themes four and five are closely related in this posting.

Credit enables people to have use of a product or service, at a cost represented by an interest rate, prior to their having paid for that product or service or, where an item cannot be afforded from a single month’s salary, to spread payments over a number of months (DTI, 2004). This document goes on to describe credit as a “double-edged sword,” because of the “considerable imbalance of power between consumers and credit providers,” due to poor consumer education levels and knowledge of consumer rights, and inability to enforce such rights through negotiation or legal action (DTI, 2004): Credit cannot therefore be seen as a universal basic service to which access should be extended in the same way as access to water, health care and electricity. There is a greater need to balance access to credit with protection for consumers, especially the vulnerable.

Perceptions and views on consumer rights impact as probed by Question 18 yielded the following responses from the participants. Participant 7 said: *“Absolutely, it goes without saying that if a consumer is being negatively impacted, but has no knowledge of such an impact, it does start to encroach on his rights as a consumer, because he could be regarded as a very high risk or even as having committed extensive credit breaches and he may not even be aware of it, as it has huge potential to be incorrect.”*

This was corroborated by participant 8 who contributed: *“Sometimes a consumer who is new to credit and is not too well informed about the processes involved may be declined for credit based on incorrect information. It is extremely likely that that consumer will never investigate why, and may have been denied access to credit based on an inaccuracy”*. She further added that *“we may be contravening the National Credit Act, by these events”*.

A note out of a Reserve Bank (2003) report states that: *“A sustainable route out of poverty however, usually requires the ability to utilise financial services to build capital”*. It is relevant to the telecommunications market as the cellular phone becomes more than just a means to talk to another person but it is instead fast becoming a necessity and not a luxury, for people from all walks of life.

Participant 12 further elaborates: *“If a consumer needs credit, and is turned away incorrectly that is not right. We will have no idea about the impact it may have in his or her life, for example if that money was needed for further education of a child, or a sick family member etc.”*

Participant 11 contradicts the sentiments expressed in terms of consumer rights being breached. He says: *“Consumers need to make an effort to understand that their credit records are the very essence upon which a telecommunication company and most financial institutions base their decision to extend credit. Information and help is readily available to all.”* Whilst participants 4 and 13 also contend that they believe that: *“the telecommunications company can do more to advise a consumer as to the information he has on his credit record.”*

Participant 6 agrees that: *“the reason for “decline” is shared with the customer, but we are not really allowed to give out all the information that is on the customer’s credit*

record, as that can only be done by the credit bureau. I think that we should advise that they contact the bureau or the credit Ombudsman for help.”

4.8 Conclusion

Chapter Four is presented in a set of structured themes that were informed by the literature review and responses received from the participants who formed part of the study. The high-level findings have highlighted that poor-quality data from the credit bureaux have tangible impacts on several functions of the telecommunications companies.

5 CHAPTER FIVE

RECOMMENDATIONS AND CONCLUSION

5.1 Introduction

The final Chapter of the research presents the key findings and conclusions are drawn from the findings that are tabled together with recommendations.

The conclusions and recommendations made by the researcher are considered in line with the objectives of the study that explored the effects of data quality from the credit bureaux on the credit standing of the telecommunications companies in South Africa.

5.2 Summary

The credit officials selected for the study spanned several designation levels within the three organisations. They had varying levels of experience in the industry and within credit management. The study revealed that the credit officials of the telecommunications companies make extensive use of credit bureau information in their decision making, and it is the key component used in their automated and manual decision-making processes. The study further established that credit vetting relies heavily on the information produced by the credit bureaux to estimate the risk rating of a consumer, and to subsequently make an offer based on the risk rating achieved. The final risk rating is calculated after applying their own business rules and combining this with the bureau rules and risk ratings. Further to this, during the appraisal process credit officials assess the consumers' ability to repay the credit that is extended.

The study established that the credit officials have incidences where information received from the credit bureaux are either incomplete, not related to the consumer in question or may even be incomplete or outdated.

The participants of the study unanimously agreed that the use of credit checks on a regular basis enhances credit management. However, they add that it can also result in unnecessary expenses and time allocation to queries resulting in a dispute from a consumer with regards to the information on the credit bureaux, which was used to make a decision. They also explained that strategic objectives related to bad debt targets and key performance areas may be impacted by decisions made using information that may

be irrelevant or incorrect. A classic example of such an event may occur if they extended credit to a consumer whose credit record appeared to be “good”, but it was later discovered that critical information was omitted from the customer record that was used for the decision. This type of incident may lead to bad debt for the organisation. The organisation could be deemed to be making ineffective decisions and lead to reputational and legislative risk for the organisation.

When discussions on how to mitigate some of the risks inherent in the current credit processes were tabled, it was evident that none of the organisations, except organisation A, analysed and monitored the data received and neither did they assess the decisions taken. It was further also established that all the credit officials shared similar opinions on the additional validation required by the credit bureau. Officials were of the opinion that the credit bureaux needed robust validation rules in order to ensure that better data quality is extended to the telecommunications companies.

5.3 Recommendations

The researcher tables recommendations based on the objectives of the study as follows:

- Current development trends within the parameters of credit risk management highlights the strategic nature of the credit risk decision. As such, the inclusion of the portfolio theory to credit risk is an essential recommendation for all senior level staff within the credit management teams (Crouhy *et al.*, 2001).
- There are currently twenty credit bureau organisations in South Africa, but presently the key players in the consumer and credit vetting arena are Transunion Credit Bureau, Experian Credit Bureau, Compuscan Credit Bureau in that order, related to market share. The study also recommends that there is the need for telecommunications companies to enhance their credit vetting techniques, by using a “multiple bureau” strategy, whereby they use two or more credit bureaux to validate consumers who are deemed higher risk in order to ensure that they are privy to all information available on the consumer. Employing more stringent vetting processes at the decision stage could mitigate the credit risks the organisation faces.
- It is often said, what is not measured cannot be quantified - likewise the researcher recommends that more intense monitoring mechanisms be put in place in order to measure the impact on revenue and performance. The

reputation of the organisation may be impacted by making unsound credit decisions. Participants have voiced the need for more monitoring, as it has been noted that some organisations do dedicate limited time to monitoring credit performance. More specifically company B, where officials raised serious concerns about the lack of capable resources as well as system limitations to provide the information that may assist in this endeavour.

- On review of the credit risk processes during the interview sessions, a few recommendations were extracted, namely:
 - A closer working relationship or partnership is needed by the credit bureaux, the Credit Bureau Association and the telecommunications companies. It is recommended that a more representative forum be established to robustly address concerns raised by the credit officials. Several participants raised the need for wider collaboration.
 - A feedback loop on issues raised must be created by the credit departments. None of the departments have any level of dedication to this task and based on the high reliance placed on the bureau it almost seems self-explanatory that a designated relationship custodian be established in each credit department to advise of challenges and partner with the credit bureaux to create ease for all parties.
- Customer support can also be provided by the telecommunications companies to advise and direct customers who may experience challenges with accessing credit to the correct support structures, instead of immediately distancing themselves from customers in crisis.
- There must be an analysis of credit data with respect to every regulatory and statutory requirement within the financial sector prior to it being deemed reliable for use in the public credit domain. It may further be a crucial requirement for assessing and documenting the eligibility of loan applicants for a specific category of credit offering, so as to support the training and understanding of the users of such information.
- As per Basel Committee on Banking Supervision (2003), the Capital Accord requirements, proposals and development of various quantification methods as well as the acceptance of credit vetting strategies have all led to a major paradigm

shift in the way the industry views credit risk management in its entirety. The above literature extracted from the Basel Committee on Banking Supervision (2003) supports the various viewpoints received from the participants, and clearly points out the need for the telecommunications companies to increase their levels of compliance with the Basel and NCA regulations.

- The researcher recommends, that the credit bureaus institute a consumer sanction and consent process for all reported records, whereby each reported record has been viewed and agreed by a consumer on a yearly basis, this process will assist in curbing the possibility of the consumer being misrepresented by the data provider or credit bureau. This recommendation may entail system infrastructure, additional costs and involve high levels of customer engagement. As a cost mitigating factor, the authenticated records may be billed to users of the bureau at a higher cost.
- The National Credit Regulator albeit having played a significant role in regulating the governance of credit in the country, the researcher believes can institute a merit system or impose fines to non-performing data providers, as the consequences for poor or inaccurate data is non-existent. The demerit system will ultimately rank the credit bureaus based on data quality and consumer innovation, and imposing fines will induce an environment of responsible credit for all stakeholders. The current status quo being that the dire consequences of the actions of the credit bureaus are carried by the credit provider and the consumer.
- The researcher has worked in credit markets for a number of years and has recognised the benefits the credit bureaus bring to the telecommunications companies in lowering the cost of making credit decisions and that sound credit data improves the performance of the market in which it is utilised. There is therefore a need that telecommunications credit grantors be selective with the credit bureau providers they partner with, as the impacts on their market is immense if data is of poor quality. In competitive credit markets informed selection becomes crucial as cost savings ultimately translate to lower prices and a wider product range availability for the market.
- The relation between the availability of comprehensive, accurate and timely credit report data contributes significantly to the mobility of both market capital and labour in the South African economy. The researcher wants to recommend

further studies into credit reporting as arguably one of the crucial elements of the South Africa's infrastructure and that it may underpin the pace of productivity growth in the ensuing years.

- A further suggestion regarding research relates to how the negative impact on consumers who find themselves in debt cycles that may take years to overcome correlates to further degradation of consumer well-being and ultimately the state of the economy.
- Financial institutions and telecommunications companies in South Africa need to find a quantifiable methodology to measure reputational risk, as business ethics and credit reputation start to take centre stage in the present business success metrics.

5.4 Limitations of the Study

The participants in the study were likely to be reluctant when providing information fearing that the information may be used against the credit bureau or that it may place the telecommunications industry in a negative light. The study handled the problem by issuing an introductory letter from the University of the Free State and assuring them that the information they provide would be treated confidentially and it would be used purely for academic purposes. The participants of the study were mostly senior members of staff and their time available for the interviews were limited and some interviews were done over several intervals. The researcher also encountered challenges in eliciting information from certain participants as some of the information required was subject to their attitudes, emotions, feelings and perceptions. These challenges at times lead to a lack of concise responses due to the veil of confidentiality surrounding the telecommunication industry.

5.5 Areas for further research

The study sought to determine the effects of data quality from the credit bureaux on the credit standing of the telecommunications companies in South Africa.

Further research is recommended on the effect of credit bureaux on financial performance of financial institutions in South Africa, given the levels of data discrepancies in credit bureau data. Further research should also be done on the

relationship between credit management and non-performing loans in the telecommunications companies in South Africa and on the reasons for loan default in these companies.

5.6 Conclusion

From the findings, the study found that the credit vetting processes by its nature of extending credit to consumers will have an impact on the credit standing of a particular company. If these processes are flawed in any manner their impact could increase in severity and negatively influence the credit standing of the particular telecommunications company.

From the responses of the participants it has been found that poor quality of the credit bureau data results in added expenses, additional financial and bad debt risk as well as potential for legislative and reputational risk to the company. The credit officials have stated a need for more robust validation from the credit bureaux and also that their own organisations seek to implement internal monitoring of data quality used for decision making. The ramification of not having these checks in place puts the company at risk of credit inefficiencies.

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APPENDICES

1. Appendix A: Questionnaire: Credit managers and Analysts

(Please tick the appropriate boxes)

Indicate your age group

1	<=20	
2	21 -25	
3	26 -30	
4	31- 35	
5	36 – 40	
6	41 – 45	
7	45 – 50	
7	51 – 55	
8	>=55	

Indicate your gender

1	Female	
2	Male	

Indicate where you are currently employed

1	Vodacom	
2	MTN	
3	Cell C	

The answers to the questions 4 to 7 should be based on your experience in risk management/ credit risk management of telecommunications.

Indicate number of years in the sector

1	1-5	
2	6-10	
3	11-15	
4	>15	

Indicate number of years' experience in credit risk management

1	1-4	
2	5-8	
3	8-12	
4	>12	

Indicate the causes of inaccurate credit information on consumers' credit report in respect of your institution

(1 – very low frequency, 2 – only slightly frequent, 3 – rather frequent, 4 – extremely frequent) Please tick the appropriate box next to each item.

	Types of triggers	1	2	3	4
7.1	Incorrect information supplied by consumers				
7.2	Incorrect information provided by creditors				
7.3	Human error				
7.4	Duplication				
7.5	Completeness of data (Incomplete)				
7.6	Timeliness of data being presented by the credit bureau				
7.7	Outdated information				
7.8	Credit Bureau validating rules				

The answers to questions 8 to 10 should be specifically related to your telecommunications company.

Does the bad quality of credit information affect the strategic objectives of the telecommunications business?

1	Yes	
2	No	

Does inaccurate consumer data result in ineffective credit decisions making.

1	Yes	
2	No	

The dispute by consumers on their credit information increases the expenses of the organisation.

1	Yes	
2	No	

To what extent do you agree with the following statements? Please indicate your answer using the following 5-point Likert scale where:

(1 – strongly disagree, 2 – disagree, 3 – neutral, 4 - agree, 5 – strongly agree)

My experience is that inaccurate data consumes time to process credit applications.

1	2	3	4	5
---	---	---	---	---

My experience is that inaccurate credit information results in a high rate of defaults, bad debts and write-offs.

1	2	3	4	5
---	---	---	---	---

The incorrect consumer data raises high provisions which affect the profits of the business.

1	2	3	4	5
---	---	---	---	---

My experience is that due to incorrect consumer data the telecommunications business requires higher pricing of its products.

1	2	3	4	5
---	---	---	---	---

In my knowledge, inaccurate credit reports impede access to credit for consumers.

1	2	3	4	5
---	---	---	---	---

My observation is that incorrect credit information contributes to consumer over- indebtedness.

1	2	3	4	5
---	---	---	---	---

My conclusion is that due to higher pricing consumers move to the competitors of the business for better cost of credit.

1	2	3	4	5
---	---	---	---	---

My experience is that consumer's feel like their rights are violated when their credit information is incorrectly recorded resulting to them being unable to access funds.

1	2	3	4	5
---	---	---	---	---

My observation is that due to the fact mentioned in number 19 above, consumers lose confidence in the business and withdraw their applications.

1	2	3	4	5
---	---	---	---	---

My observation is that credit bureaux should intervene with more education and awareness on the client's credit reports.

1	2	3	4	5
---	---	---	---	---

- **In your experience are you aware that information from the credit bureaux can be incorrect?**
- **Do you believe incorrect data can have an impact on the risk profile of your organisation?**
- **Do you believe that the credit bureaux have adequate measures with which to monitor quality of information?**
- **Do you believe that the time lapse between a derogatory action being taken against a consumer to the time it is available to credit institutions is reasonable?**
- **Does your company monitor data deviancies, on credit bureaux data?**
- **Do you receive customer queries due to data issues, presented by the credit bureau?**

What can be done to mitigate this risk?

1	Better data management by the bureaux	
2	Electronic data submissions from the courts to the credit bureaux	
3	Credit Risk departments doing closer monitoring of data received	

4	Segmentation of customer queries to ring fence issues	
5	Feedback loop to the credit bureaux	
6	Direct Escalation loop to the Credit Ombudsman	

2. Appendix B: Questionnaire: Participant Consent Form

PARTICIPANT CONSENT FORM: A

Title of Research Project:

A Case Study of the impact that inaccurate credit information has on the key functions within the credit department of a telecommunications company

2.1 Introduction

My name is Vaneetha Govender, I am a postgraduate student at the University of the Free State Business School. I am conducting a study which you have been selected to participate in.

2.2 Brief Description of Research Project

Data from the credit bureaux are a fundamental part of the components used to make a credit decision in telecommunication companies. This research study is based on understanding the impact that poor quality, or at times missing data received in consumer records from the credit bureau can impact the functioning of a credit department of a telecommunications company and also the impact it may have on the risk standing of the organisation.

The factors that are identified that act as catalysts for inferior quality and the reasons that this study is relevant will be intensively researched and analysed. Finally, recommendations are given to assist credit officials, credit data providers and the Credit Ombudsman to identify these challenges and to provide adequate solutions to assist the credit industry to partner with necessary parties to address the problem.

2.3 Participation Involvement

Should you consent to participate, you will be required to undertake an interview with the researcher.

2.4 Participation Time

Duration of the interview is estimated at 30 to 45 minutes of your time.

2.5 Participation Involvement

Selection of participants is based on random selection (non-probabilistic sampling)

2.6 Benefits

This case study is important for future research as very little studies exist in this avenue, and the given the state of most economies, credit risk management has taken on a significant role in the supporting the robustness of company performance as well as the broader economy but increasing more vital is the well-being of the consumer in this information. Credit Organisations will be well placed to ensure close monitoring of data used within their organisations and data suppliers will be under pressure to ensure accuracy and timeousness of data sold to the industry. The credit governing bodies will need to take a more frontal role.

2.7 Rights

Your participation is voluntary.

3 Appendix C: Research Consent Statement

Research consent statement

I consent to be interviewed by Vaneetha Govender for a case study *of the impact that inaccurate credit information has on the key functions within the credit department of a telecommunications company*

I understand the following:

- *My participation in this interview is voluntary*
- *I may refuse to answer certain questions*
- *I may withdraw my consent at anytime*
- *My responses will remain confidential.*

	Participant	Witness
Sign		
Date		

4 Appendix D: Research Consent Statement for recording

Consent Form: B

Consent Form for Recording

I consent to be interviewed by Vaneetha Govender for a case study *of the impact that inaccurate credit information has on the key functions within the credit department of a telecommunications company*

I understand that:

The tape and transcripts will not be seen or heard by any person other than the researcher.

No identifying information will be used in the transcripts or the research report

	Participant	Witness
Sign		
Date		

If you have a concern about any aspect of your participation or any other queries please raise this with the researcher.