

**An analysis of factors leading to rising credit risk in
the Zimbabwe Banking Sector**

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DECLARATION

I, Agnes Kanhukamwedo hereby declare that this dissertation is a result of my own investigation and research, except to the extent indicated in the acknowledgements, references and by comments included in the body of the report. I also declare that it has not been submitted in part or in full for any other degree to any other university.

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Student Signature

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Date

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Date

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ABSTRACT

The global financial crisis and increasing vulnerability of banking institutions has created a lot of interest on the analysis of problems banking crisis can have in an economy. Of great interest has been the factors that could cause a crisis in the financial sector, of which credit risk ranks high among other factors. A number of financial institutions in Zimbabwe have collapsed due to negative impact emanating from high credit risk and poor corporate governance practises. Though a lot of research work has been done to analyse factors that influence credit risk in an economy, the majority of the research work in this area has been undertaken in other economies and not much research has been done for the Zimbabwe economy that has gone through economic cycles that were not experienced in other countries.

The main objective of the study was therefore to establish the external and internal factors that influence credit risk in the Zimbabwe banking sector. Macroeconomic factors were considered under external factors while bank specific factors and industry specific factors were classified within internal factors category. An explanatory research design was undertaken to establish the cause and effect relationship of the factors and credit risk. The data collected was analysed using the quantitative methods to obtain descriptive statistics. The study was conducted using correlation and regression techniques for the analysis of data on factors influencing credit risk in Zimbabwe's banking sector ,upon which statistical inference were made.

The research findings revealed that credit risk in the Zimbabwe banking sector was significantly influenced by gross domestic product growth rate, interest rates, unemployment, stock market performance and management efficiency. Analysis of the determinants established that the macroeconomic factors significantly influenced credit risk, followed by the bank specific factors, both at a significance level of $p < 0.05$, while banking industry specific factors have less impact on credit risk.

The research findings will assist the regulatory authorities and management of banking institutions in setting credit policies and taking necessary actions to mitigate the adverse effects credit risk has on banking institutions and overall financial industry performance.

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CHAPTER 1

1. INTRODUCTION

Commercial banks play an important role in the economy. They act as financial intermediaries. Commercial banks mobilise deposits from customers with excess funds and deploy these funds through lending to customers requiring funding. This intermediary role allows circulation of funds from where there is excess to where there is shortfall, providing business opportunities for both parties in the transaction. Deployment of funds where there is a shortfall is done through the lending activity of banks. Lending is one of the key activities of a banking institution and a main source of revenue generation. The lending activity however introduces credit risk to a banking institution.

Credit risk is defined as the risk that the promised cash flows from loans and securities held by financial institutions may not be paid in full (Saunders & Cornet, 2008 and Al-Smadi & Ahmad, 2009). Coyle (2000) defined credit risk as losses from the refusal or inability of credit customers to pay what is owed in full and on time. Chen and Pan (2012) expanded the definition of credit risk to include the degree of financial worthvariations in debt instruments and derivatives due to changes in the underlying credit quality of borrowers and counterparties. Credit risk is also defined as the risk of financial loss if a customer or counterparty to a financial instrument fails to meet its contractual obligations (IFRS).

Summarising the definitions above,credit risk refers to the risk that a borrower will default and fail to honour the scheduled payments in line with the debt instrument contract. The lender is the party that is exposed to credit risk. The risk includes failure to recover the principal and interest, disruption to cashflows, and possibility of increased collection costs which may arise from instituting legal processes to recover unpaid amounts.

Credit risk is an exposure faced mainly by banks when a borrower (customer) defaults in honouring debt obligations on due date or at maturity. This risk which is interchangeably called counterparty risk or default risk may, if not properly managed, put a banking institution into financial distress.

The key element from credit risk definition is that of default of any form on any financial instrument obligation by the borrower, with focus being principally on banking institutions as they are the main originators of credit. There are however other non-banking businesses that also generate credit facilities through trading their goods and services on credit terms and these businesses also thereby get exposed to credit risk.

1.1 BACKGROUND TO THE STUDY

The credit risk in banking institutions has become a topical issue given difficulties being faced by global financial institutions today. An analysis of the causes of global financial crisis, the Euro zone crisis and the fall of world greatest institutions such as Enron points to the question “How best is credit risk being managed”. The seriousness of the impact of the financial crisis has clearly demonstrated how critical commercial banks have been inter-connected to the world economy (Agnello and Sousa, 2011).

Kolapo, Ayeni and Oke (2012) allude that banks are important to economic development through the financial services they provide and consider the intermediation role played by banks to be a facilitator for economic growth. They further state that the efficient and effective performance of the banking industry over time is considered an index of financial stability in any nation. The extent to which banks grant credit to the public for productive activities accelerates the rate of a country’s economic growth and its long-term sustainability.

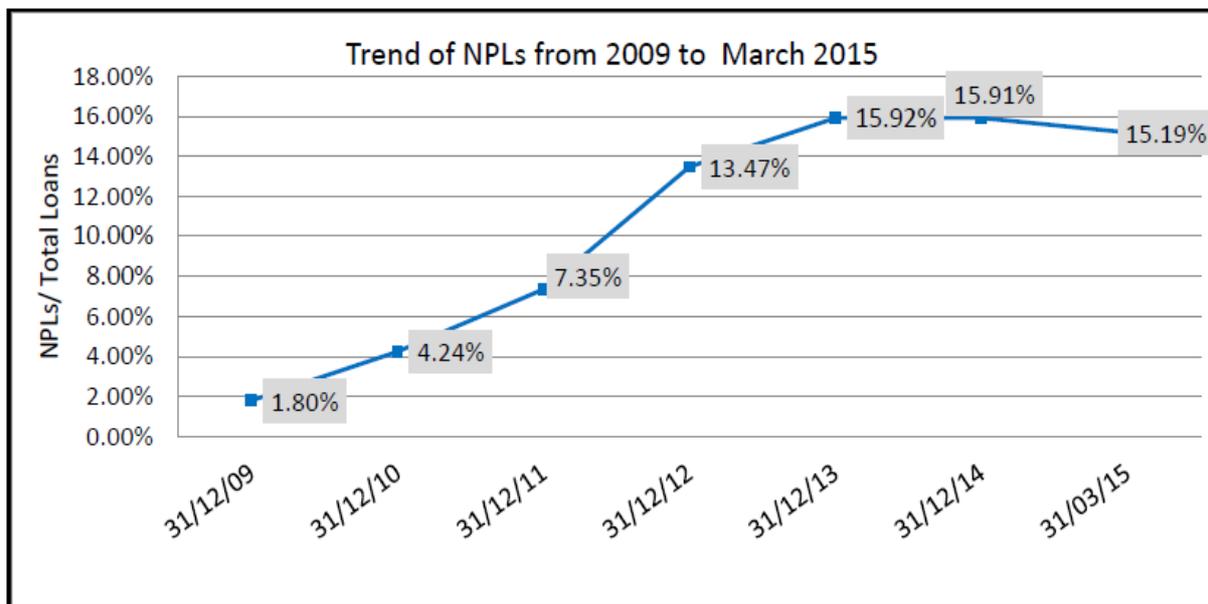
The Zimbabwe banking sector has been reeling with high credit risk. One of the difficulties faced by banking institutions in lending is to precisely forecast whether a loan will be paid back in full and in accordance with the terms and conditions of the credit facility agreement. This uncertainty indicates that lending involves credit risk. Banks use various internal methods such as vetting of clients to reduce loan default rates and consequently minimise levels of non-performing loans. A loan is classified non-performing when payments of interest and principal are past due for over 90 days or more and there are other good reasons to doubt capability of repayments being made in full, (IMF- 2009). Alton and Hazen (2001) concur with the above explanation and describe non-performing loans as those loans which are ninety days or more past due or those loans that are no longer earning the banking institution income i.e. accruing interest. Hennie (2003) agrees confirming that non-

performing loans are those loans which cease to generate income. Non-performing loans consequently have a negative impact on earnings of a banking institution.

The non-performing loans ratio is the key measure that is used to assess the quality of credit portfolios for banking institutions. The ratio is calculated by dividing the value of non-performing loans with the total gross value of a banking institution loan portfolio. The ratio of non-performing loans in the Zimbabwe banking sector has been on an increasing trend since 2009 to December 2014, which is the period of study covered by this report. According to Reserve bank of Zimbabwe Monetary Policy Statement of January 2015, the ratio of non-performing loans was reported to have increased from 1.62% in 2009 to 16% as of December 2014. The acceptable international benchmark for non-performing loans ratio is 5%, indicating the 16% level in Zimbabwe is way above acceptable international benchmark.

Figure illustrates the trend of non-performing loans since 2009, the time at which Zimbabwe adopted the use of multi currencies upto March 2015.

Figure 1: Non performing loans trend analysis



Source: Reserve Bank of Zimbabwe: Banking Sector report for quarter ended 31 March 2015.

Alarms on credit risk in the Zimbabwe banking sector escalated post dollarisation period. The stability of the multi-currency adopted for use in Zimbabwe in 2009 meant that poor

performance on the lending portfolio of a banking institution was a real challenge requiring attention. The case may have been different prior dollarization as the high levels of inflation that were prevailing in the Zimbabwe economy, to some extent, concealed the level of credit risk in bank lending portfolios. This was due to the continued erosion of the value of carrying amounts of loans on bank portfolios due to hyperinflation.

The increase in non-performing loans has resulted in financial distress in the Zimbabwe banking sector as evidenced by some financial institutions that have ceased operations which are listed on page 5. Some banking institutions have been placed under curatorship due to the negative impact suffered as a result of high non-performing loans. Some banking institutions have voluntarily surrendered their banking licenses after failing to cope with the financial distress they found themselves in which was mainly driven by high level of non-performing loans. Some banks have gone into liquidation as prospects of them being revived became illusive.

The bank failures in Zimbabwe post dollarisation era have been mainly accorded by the market and analysts to poor corporate governance practises and high level of non-performing loans which then resulted in crystallisation of other financial risks such as liquidity risk, ultimately leading to poor performance by the banks and erosion of capital levels resulting in the affected banks failing to meet the minimum regulatory capital requirement set for banking institutions. To further illustrate how the issue of credit risk in the Zimbabwe banking sector has become topical, the print media has published a number of articles on the credit risk issues affecting financial institutions in Zimbabwe with appeals being made for banking institutions to employ appropriate risk management strategies as a measure to mitigate credit risk. Reports have also been published in the print media on how the legal courts are being overwhelmed by default cases from financial institutions, further reflecting the deepening of the non-performing loans problem.

With the important role that banking institutions play in the economy, it is considered important to look into the factors driving high credit risk in the Zimbabwe banking sector. A comprehensive analysis of the factors causing high credit risk would assist in proffering measures that can be implemented to mitigate this risk and enable sustainable positive performance of banking institutions.

1.1.1 Zimbabwe Banking Sector Developments

Zimbabwe has experienced a wave of banking crisis. The problem of non-performing loans has been quite common in Zimbabwe. A series of bank closures were witnessed during 2004 and 2005 period due to among other issues, high credit risk. Commercial banks that were closed during this period include Barbican Bank Limited, CFX Bank Limited, Royal Bank Limited, Time Bank of Zimbabwe Limited and Trust Bank Limited. The Reserve Bank of Zimbabwe reported that the demise of these institutions was significantly attributed to non-performing loans (Monetary Policy Statement 2006).

Another wave of bank failures has unfortunately been experienced in Zimbabwe in the post dollarisation period between 2012 to date (2015). A total of 8 banking institutions have ceased operating due to financial distress, (Reserve Bank of Zimbabwe). Nonperforming loans and poor corporate governance practices have also been cited as the major reason behind the recent spate of bank collapses. The affected banks are as follows:

- Afri Asia bank which surrendered its banking license in February 2015;
- Allied Banking which surrendered its banking license in January 2015;
- Interfin Banking Corporation which was placed under curatorship in June 2012 and went into liquidation in 2015;
- Tetrad Bank which was placed under judicial management in February 2015;
- Capital Bank which surrendered banking license in June 2014;
- Trust Bank whose banking license was cancelled in December 2013;
- Royal Bank which surrendered its banking license in July 2012; and
- Genesis Investment Bank which surrendered its banking license in June 2012 after failing to raise adequate financing to meet the minimum capital requirements.

Availability of credit finance from banking institutions has continued to be a challenge as a result of the liquidity constraints in the economy which is partly emanating from the high level of non-performing loans. In a bid to deal with the illiquidity arising from non-performing loans, the Reserve Bank of Zimbabwe has formed a special purpose vehicle known as Zimbabwe Asset Management Company (ZAMCO) whose purpose is to acquire

qualifying non-performing loans from banking institutions with the objective of attempting to liquefy bad loans assets on banking institutions balance sheets.

1.1.2 Structure of the Zimbabwe Banking Sector

The Zimbabwe banking sector was reported to be made up of thirteen commercial banks, three building societies and one savings bank following the demise of some banking institutions post dollarization as mentioned earlier on.

The 1.1 shows the architecture of the Zimbabwe banking sector as at 28 February 2015.

Table 1.1: Architecture of Zimbabwe’s Financial Services Sector as at 28 February 2015.

Type of Institution	Number
Commercial Banks	13
Building Societies	3
Savings Banks	1

Source: Reserve Bank of Zimbabwe: Monthly Reports- March 2015.

1.1.3 Factors Influencing Credit Risk

Given the recent turbulence in the banking sector and the rise in non-performing loans, credit risk has become a topical issue and there is interest in analysing the impact of external and internal factors on credit risk of banking institutions.

Banking institutions performance with regards to credit risk depends on various external and internal factors. External factors are the determinants related to economic environment and are interchangeably referred to as macroeconomic factors while internal factors are bank specific determinants which will also incorporate banking industry specific factors (Naceur and Omran, 2011).

Al-Smadi and Ahmad (2009) in acknowledging the importance of credit risk issues indicated that a comprehensive study and understanding of the manner in which internal and external factors contribute to credit risk warrant further analysis. At macroeconomic level, they identified gross domestic product, inflation and market interest rate as having significant impact on credit risk while at micro level they considered previous non-performing loans, loan growth, loan concentration and bank size as significant determinants.

Llewellyn, (2002) identified the main sources of uncertainty in banks credit portfolio also to be the macroeconomic factors to a greater extent. Economic growth rate measured by gross domestic product has been identified as a key driver of credit risk and it is postulated that adverse trend in economic growth increases level of credit risk. Interest rates and high unemployment rates also influence level of credit risk in a banking sector. The trend of stock market index is also another key factor identified which can to a greater extent indicate how well the economy is performing to mitigate on credit risk.

Macroeconomic variables are observed to have the most significant impact on businesses creditworthiness. According to Figlewski, Frydman and Liang, (2012) macroeconomic variables are categorised into three broad sets. The first category is the general macroeconomic factors such as inflation and unemployment rates. The second category includes directional determinants such as gross domestic product while the third category are the market conditions determinants such as interest rates and stock market index. Favourable macroeconomic conditions are perceived to positively impact on reduction of non-performing loans in banks and, therefore, lower credit risk while unfavourable macroeconomic factors have a negative impact of increasing credit risk. During economic downturns, where macroeconomic variables are adverse, the chance of default increases due to the financial hardships faced by a nation and thus increases the level of non-performing loans.

Internal credit risk determinants relate mainly to management inefficiencies in the banking institutions. Poor credit management practices are mainly characterised by agency conflict on insider lending, unbalanced sector lending, speculative lending and poor credit screening criteria among others. Credit risk management resultantly becomes a key activity of any banking institution to minimise non-performing loans.

A study by Garr (2013) on determinants of credit risk in banking industry of Ghana stated bank ownership structure, operating expenses, efficiency of management, deposit composition and quality, asset quality, capital and size and bank reserve requirement as the bank specific factors that impact credit risk. Garr (2013) further highlighted that credit risk management is indeed a very difficult and complex task in the financial industry because of the unpredictable nature of the macroeconomic variables coupled with the various microeconomic variables which are peculiar to the banking industry or specific to a particular bank. The Zimbabwe banking sector has regrettably been in such an unpredictable macroeconomic environment for a long time and this has compounded to the rising credit risk problem.

It has also been established through literature that there are banking industry specific factors that can have an impact on credit risk levels in the banking sector. Included under this category is the effectiveness of the banks supervision and monitoring role of the Central Banks, availability of other credit risk mitigating tools such as credit reference bureau, level of development of an economy financial sector and competition in the financial sector (Garr 2013).

1.2 RESEARCH PROBLEM

The important role that banking institutions play in developing the financial institutions of their economies cannot be underestimated. Banks are the main source of finance in developing economies such as Zimbabwe. Industry relies on financing from banking institutions for business operations funding.

Most businesses in Zimbabwe found themselves starting from almost a nil position i.e starting afresh from a period of non-trading after dollarisation of the economy in 2009. The businesses therefore required funding from banking institutions to enable them to resume operations. Similarly, individuals also required supplementary funding through bank loans for various personal reasons.

The key challenge that banks face is the failure of customers to pay back the borrowed funds in accordance with the terms and conditions of the loan agreement. The banks generally rely on the goodwill of their customers to service their loans which in turn aid the

required circulation of funds in the economy. Failure by customers to honour their loan obligations results in increasing credit risk for banks. Increasing credit risk stifles the lending and borrowing cycle thereby bringing distress to both the banking institutions, the customers and overall to the economy as a whole, at large.

Garcia-Herrero (2006) and Ramlall (2009) identify poor asset quality, as indicated by the high levels of non-performing loans to be responsible for low profitability for banking institutions. The negative effect of non-performing loans on bank profitability has been corroborated by Sarpong, Winful and Ntiamoah, (2011) in their research on Ghana. Bashir (2000) also confirmed that high loans to asset ratios lead to higher profitability provided the quality of the loan portfolio is good, stressing the importance of a good quality credit portfolio.

The problem therefore is that of rising credit risk in Zimbabwe banking sector and the negative effects being suffered as a result of the credit risk. Credit risk has threatened the survival and profitability of the banking sector. The rising credit risk has contributed to decline in economic growth for Zimbabwe as businesses have faced difficulties in accessing affordable financing that is appropriately tenured to fund their operations.

1.3 RESEARCH OBJECTIVES

1.3.1 Broad Objective

The main objective of this research is to analyse the extent to which external factors, interchangeably referred to as macroeconomic factors, and internal factors influence credit risk in the Zimbabwe banking sector. Under internal factors, a distinction is made between bank specific factors and the banking industry specific factors.

1.3.2 Specific Objectives

The study specifically identifies the following objectives:

- 1.3.2.1** To determine the impact of external factors/ macroeconomic factors on credit risk in the Zimbabwe banking sector.

- 1.3.2.2 To determine the impact of bank specific factors on credit risk in the Zimbabwe banking sector.
- 1.3.2.3 To determine the impact of the banking industry specific factors on credit risk in the Zimbabwe banking sector.
- 1.3.2.4 To recommend measures to address the factors driving credit risk in the Zimbabwe banking sector.

1.4 RESEARCH QUESTIONS

1.4.1 Broad Question

The major research question to this study is annotated as follows:

Which factors are the major drivers and have more explanatory power to the rising credit risk in the Zimbabwe banking sector?

1.4.2 Specific Questions

The study attempts to have answers to the following specific questions:

- 1.4.2.1 What is the impact of external/macroeconomic factors on credit risk in the Zimbabwe banking sector?
- 1.4.2.2 What is the impact of bank specific factors on credit risk in the Zimbabwe banking sector?
- 1.4.2.3 What is the impact of banking industry specific factors on credit risk in the Zimbabwe banking sector?
- 1.4.2.4 What recommendations can be proffered to mitigate the high credit risk in the Zimbabwe banking sector?

1.5 RESEARCH HYPOTHESIS

Credit risk is reported to have affected the Zimbabwe banking sector and threatened the going concern of some banking institutions. Banking institutions in Zimbabwe have been negatively affected as evidenced by poor financial performance of some banks as a result of high credit risk.

The main hypothesis to this study is:

“Credit risk is influenced by adverse macroeconomic and microeconomic factors.”

1.6 JUSTIFICATION OR SIGNIFICANCE OF THE STUDY

Most of the studies on macroeconomic and microeconomic factors explaining credit risk in banks have been carried out in the advanced economies. This include, Aver (2008), on his study of credit risk factor on Slovenian banking system; Das and Ghosh (2007), in their study on determinants of credit risk in state-owned banks in India. These studies have been undertaken under unique regulatory and economic environments where the level of market efficiency is advanced compared to those of emerging and developing countries like Zimbabwe. This study therefore allows focus on the Zimbabwe banking sector that is currently facing high credit risk. The economic cycle that Zimbabwe has gone through has exposed it to issues that may not be common in other countries. While credit risk is known as one of the risks inherent to any banking institutions in any environment or nation, the alarming levels of credit risk in the Zimbabwe banking sector has motivated a research to critically analyse the factors that are determinants of credit risk and have more explanatory power to the high credit risk levels.

The research findings of this study will help in adding literature on effects of external and internal factors on credit risk in the context of the Zimbabwean banking sector. It will also be a valuable addition to the existing knowledge and provide a platform for further research on how the credit risk problems can be dealt with. An understanding of the effects of the external and internal factors on credit risk in the Zimbabwean banking system is important to the senior management and stakeholders in financial institutions in Zimbabwe.

Understanding the subject enables managers to craft appropriate strategies to manage credit risk while it helps other stakeholders to make meaningful contribution on the matter.

This research will benefit the following parties:

- **The banking institutions in Zimbabwe**

The research will provide an analysis of the main drivers of credit risk in Zimbabwe banking sector. This will direct the banking institutions on factors to pay attention to when granting credit. With an in-depth understanding of the key factors, banks will also be able to design appropriate risk management techniques for managing credit risk.

- **The Reserve Bank of Zimbabwe**

The Reserve Bank of Zimbabwe is the registrar and regulator of banking institutions in Zimbabwe. One of the roles of the Reserve Bank of Zimbabwe is to supervise banking institutions. The supervisory role of the Reserve Bank of Zimbabwe includes monitoring the bank's risks. An insight into the main credit risk drivers from this research will provide the Reserve Bank of Zimbabwe with the relevant information which will enhance their monitoring and supervision role of Zimbabwe banking sector.

- **Borrowing businesses in Zimbabwe**

The research will provide educative information to borrowing businesses which will assist them in maintenance of good credit status and enhance responsible borrowing and loan servicing pattern.

- **Individual household borrowers in Zimbabwe**

Individual household borrowers will also benefit from this research through financial intelligence on debt acquiring and servicing.

- **Zimbabwe economy**

Addressing the root causes of credit risk in the banking sector will improve credit availability for the businesses in Zimbabwe. Ability by businesses to get access to credit will assist in business financing. Access to finance will result in increased business activities which in turn bring about economic growth.

1.7 SCOPE AND LIMITATIONS OF THE STUDY

1.7.1 Scope and Delimitation

- The research will be limited to the banks in Harare.
- The research will cover a period of 6 years from January 2009 to December 2014.

1.7.2 Assumptions

In carrying out this study, the following key assumptions were made;

- All banking institutions are represented in the Harare Metropolitan Province.
- The selected sample will be truly representative of all banking institutions in Zimbabwe.

1.7.3 Limitations

In undertaking the research, the researcher expects to note the following limitations:

- As a result of the sensitivity associated with this study, some respondents may be conservative in providing much information due to company policy. To mitigate this, the researcher will emphasize that the information is strictly for academic purposes only and confidentiality will be maintained at all times.
- The targeted sample group shall be limited to Harare Metropolitan Province although the researcher will use a large sample size to ensure fair representation.
- Gathering of primary data is being limited to the use of questionnaires only.

1.8 DISSERTATION STRUCTURE

This research is ideally organised to allow focused attention of the subject area ensuring adherence to the subject matter under review. The research is organized in the form of chapters as follows:

Chapter 1 introduces and provides the background to the study including the current set up of the Zimbabwean banking sector. The research problem is defined. The research objectives and questions are identified and justification of the research is also covered under this section of the research.

Chapter 2 covers the review of literature and related work by other scholars. This chapter allows the researcher to understand the determinants of credit risk for banking institutions from body of knowledge that has been provided by other academics.

Chapter 3 provides the methodology and philosophies adopted in the research exercise. The survey was the major research method used in this study with the questionnaire being the research instrument. Other issues discussed include the sampling methods, data collection techniques, questionnaire design and administration of the survey questionnaire.

Chapter 4 discusses and presents results of research. Confirmation of the research hypothesis is done based on the problem statement. The collected data was analyzed using SPSS.

Chapter 5 summarizes the study from results presented in chapter four and makes conclusions, managerial recommendations and suggestions for further study.

1.9 CHAPTER SUMMARY

The purpose of this paper was to analyse the impact of external and internal factors on credit risk in the Zimbabwean banking sector. This study therefore attempts to fill in the gap in literature by analysing the impact of external and internal factors on credit risk in the banking sector for the Zimbabwean context.

This chapter has introduced the concept of credit risk and non-performing loans. An overview of how high levels of non-performing loans have had negative repercussions on some Zimbabwe banking institutions has been highlighted. The trend of non-performing loans for the Zimbabwe banking sector has been illustrated. The external and internal factors considered determinants of credit risk have been revealed. The problem statement has been articulated together with the ensuing research objectives and research questions to be answered by the study. The significance of the study has been described and the scope and limitation of the study has been explained. The chapter ended by giving a summary of the dissertation outline.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

This chapter covers the literature on credit risk. It gives an insight into the existing literature and research work relating to how external and internal factors influence credit risk in banking institutions. It also covers the theoretical framework on credit risk and evaluates what other researchers have written on external (macroeconomic) and internal (microeconomic) determinants credit risk.

2.2 THEORETICAL REVIEW

There has been some theoretical studies on credit risk and the determinants of credit risk. Most of theoretical frameworks relating to credit risk emphasize on the risk concept, macroeconomic policies as well as structural and governance failures. Described below are some of the theories proffered by some academics on credit risk.

2.2.1 Modern Portfolio Theory

The modern portfolio theory was developed by Harry Markowitz in 1952. The theory postulates that an investor would theoretically be able to maximise his expected return while minimising the variability or risk of returns by investing in a diversified portfolio of assets that have different price movements in a given market. Modern portfolio theory classifies risk into systematic risk and unsystematic risk. The risk that is inherent in the market is referred to as systematic risk. On the other hand, unsystematic risk is the unique risk that exists with the investment of a particular security. Linking the risk type to this study, systematic risk corresponds to external risk variables i.e. macroeconomic factors while unsystematic risk is equivalent to internal risk variables.

An important conclusion from the modern portfolio theory is that one can minimise the unsystematic risk through diversification while diversification is not the solution to systematic risk on the other hand. According to modern portfolio theory, whether credit risk

is diversifiable or not depends on its determinants. This supposes that governance structure of commercial banks cannot eliminate credit risk caused by macroeconomic variable (systematic risk) by diversifying the portfolio within the country. Consequently, risk attributable to the unsystematic factors which in this study are also referred to as internal factors can be well be diversified through sector lending.

2.2.2 Agency Theory

Agency theory sometimes referred to as principal-agent theory explains the conflict of interest between the shareholders who are referred to as the principals and the managers who are referred to as the agents (Jensen and Mecling, 1976). The theory defines agency relationship as a contract where the principal engages the agent to perform some duties on their behalf.

On the basis of the agency relationship, agency conflict may arise between the principal and the agent. The agent, in executing the duties of the principal, may be influenced by own welfare interest which may impair the agent from acting in the best interest of the principal. The agent may therefore engage in activities that depart from shareholder value maximisation.

Relating this to the credit risk aspect, through the influence of the agents (bank manager's) power, some loans may be approved when they do not meet the minimum criteria from the established bank's credit vetting and scoring system. The agent in this scenario may be considering other personal interests that depart from the shareholder value maximisation, which may resultantly increase credit risk for the bank. For example, consideration of insider lending to directors related companies, in some cases, lead to conflict in the decision making by banks managers. This may result in special treatment being given to the applicants and overriding of some internal lending policies being done, which in the end precipitates credit risk.

Theoretical and empirical studies have established that agency conflict in banking institutions is largely attributed by moral hazard, earnings retention, risk aversion and time horizon. The factors therefore determine the extent to which credit quality is likely to be affected as a result of agency conflict. Effective governance structure becomes imperative in banking

institutions to institute balance of power and performance incentives to the managers. Executive share ownership schemes are good pointers of encouraging the employees serve as part owners to minimize principal-agents conflicts (Fenn and Liang, 2001).

2.2.3 Liquidity Preference Theory

The liquidity preference theory was put forward by United Kingdom economist John Maynard Keynes. Keynes observed that, holding other factors constant, people prefer to hold cash (liquidity) rather than any other form of assets and that they will demand a premium for investing in illiquid assets such as bonds, stocks and real estate. The theory states that the compensation demanded for parting with liquidity increases as the period of getting liquidity back increases.

The theory further explains why banks will undertake to compensate for liabilities and also provides essence of why banks will seek compensation for their assets, which are their lending assets. This compensation describes the interest rate factor which is a risk factor affecting credit risk in commercial banks. Therefore, banks will charge higher interest rates where possibility of default is higher and this is because of the risk premium factor that is loaded on the interest cost. Lending rates have been identified as one of the factors that correlate positively with high credit risk.

2.2.4 Deflation Theory

The deflation theory was developed by Fisher (1933). It submits that when the debt bubble bursts, debt liquidation follows resulting in distressed selling of debt and contraction of deposits, as bank loans are paid off. This contraction of deposits causes a fall in the level of prices, which leads to greater fall in the net worth of business, hence precipitating bankruptcies. This consequently leads to businesses operating at a loss which results in reduction in output, trade and in employment of labour. These cycles cause complicated disturbances in the rates of interest and a fall in the value of money.

The complicated disturbances described above can be summed as both external and internal forces (macroeconomic and internal factors) influencing state of over-indebtedness existing between debtors or creditors or both which can result in loan defaults.

2.2.5 Financial Theory

The financial theory pioneered by Minsky (1974) also known as financial instability hypothesis, attempted to provide an understanding and explanation of the characteristics of financial crisis. The theory suggests that, in prosperous times, when corporate cash flow rises beyond what is needed to pay off debt, a speculative tendency develops where there is growth in debt acquisition. This increases the level of credit growth which results in a situation where debt levels begin to exceed what borrowers can pay off from their incoming revenues and in turn produces a credit crunch crisis. A credit crunch is often caused by a sustained period of careless and inappropriate lending which results in losses for lending institutions and investors in debt when the loans turn sour and the full extent of bad debts becomes known.

As a result of such speculative borrowing bubbles, which crystallises delinquent loans, banks and lenders tighten credit availability, even to companies that can afford loans and the economy subsequently contracts.

2.2.6 Theoretical Review and Zimbabwe Case

While the above theories help to explain evolving credit risk, there are some that more reflect relatedness to the Zimbabwe situation than others. The modern portfolio theory, agency theory and liquidity preference theory have more relatedness to the Zimbabwe case.

The modern portfolio theory reflects the difficulty or impossibility of diversifying systematic risk. The agency theory mirrors the issue of poor quality insider lending that have been the major reason for demise of some of the financial institutions in the Zimbabwe banking sector. The liquidity preference theory and its emphasis on compensation for holding less liquid assets, in the form of interest rates, and how the interest rates increase where high risk is perceived reflects lending rate patterns and practices in the Zimbabwe banking sector.

2.3 FACTORS INFLUENCING CREDIT RISK

Literature recognises that factors influencing credit risk can be distinguished into external factors and internal factors. The external factors relate to the macroeconomic factors while internal factors are the microeconomic factors which in this study relate to bank specific factors and banking industry specific factors.

Empirical literature identifies macroeconomic, bank-specific and industry-specific variables as factors affecting credit risk. Garr (2013) establishes that bank ownership (whether locally-owned or foreign) and management efficiency as the bank specific factors, while industry specific factors are financial sector development and competition. The macroeconomic variables considered are interest rates, inflation, government borrowing and the gross domestic product per capita.

2.3.1 External/ Macro Economic Factors

Macroeconomics is a branch of economics that studies the economy of a nation from a broad point of view through the application of macroeconomic factors. Macroeconomic factors are those factors that have impact at a national level and include variables such as inflation rate, unemployment levels, interest rates, rate of consumer consumption, gross domestic product, national income and price levels (Wilkinson, 2005).

Gross domestic product growth rate is considered a key macro determinant of banks performance. Gross domestic product measures the value of output of a nation. During good economic times, the levels of income increase and portfolio at risk is minimal. During economic downturns, the levels of income become constrained and borrowers face challenges in settling their credit obligations. Vazquez, Tabak and Sauto, (2012) contends that there is an inverse relationship between gross domestic product and non-performing loans. This means that where the gross domestic product rate is growing, the non-performing loans ratio decreases. On the other hand, research shows a positive relationship between variables inflation, unemployment and interest rate on non-performing loans indicating that an increase in these variable results in an increase in non-performing loans. High tendencies of credit risk are said to go along with high inflation, high unemployment and high interest rates. These

variables limit the borrower's ability to service their loan obligations and at the same time increase the cost of borrowing (Derbali, 2011).

Aver (2008) conducted an empirical analysis of credit risk factors affecting Slovenian banking system. The research results established that certain macro-economic factors wield more influence on credit risk. Results of the study confirm that unemployment rate, interest rates and stock market index were critical in influencing credit risk in Slovenian banking system. There was no sufficient association noted to affect credit risk by macro-economic variables of inflation rate, gross domestic product growth rate and exchange rate or growth of import-export trade.

Empirical studies suggest that for every bank crisis, there are some macro-economic variables connecting bank crisis to the economic performance. A banking crisis is a financial crisis that affects banking activity. Banking crisis include bank runs, which affect single banks, banking panics which affect many banks and systemic banking crisis, in which a country experiences a large number of defaults and financial institutions and corporations face great difficulties repaying contracts.

Ramlall (2009) considers interest rate, cyclical output, the level of economic development and stock market capitalisation as determinants of credit risk.

Below is literature on influence of some specific macroeconomic factors on credit risk for banking institutions.

2.3.1.1 Gross domestic product

Gross domestic product is a commonly used statistic for measuring economic performance of a country with an increase in gross domestic product indicating an improvement in the economic performance.

Gross domestic product growth rate is considered a significant macroeconomic determinant of credit risk, offering a foundational relationship to all other macroeconomic factors affecting credit risk. When the gross domestic product growth rate is improving, household's salaries and wages increase which consequently improves the quality of loan portfolios in

banks. On the other hand, when economic growth rate declines, household cash flows are reduced and households prioritise expenditures on consumption rather than on meeting their debt obligations. A favourable economic environment is perceived to relate with better capacity of honouring debt obligations, reducing the ratio of non-performing loans to total loans (Hamerle, Dartsch, Jobst and Plank, 2011).

Several other studies have also found gross domestic product growth rate as a significant variable explaining credit risk. A study by Nkusu (2011), who in his analysis of the issue, using a sample of 26 advanced economies over the period 1998-2009, found that gross domestic product had a negative relationship to credit risk. This is further confirmed in the study by Warue, (2013) and Salas and Saurina, (2002), which showed that banks accumulate risks more rapidly in economic boom and some of these risks materialize as asset quality deteriorates during subsequent economic recessions.

2.3.1.2 Interest rates

Interest rates form the basis of financial intermediation which means banks facilitate mobilisation of deposits by offering depositors an interest rate return on their savings and on the other hand lend these funds at an interest rate, which forms revenue source for the banks. These pooled funds are then diversified through sectorial lending as a means to mitigate risk of loan defaults (Ngugi, 2001). Long term interest rates on lending affect the price borrowers pay on their financial obligations. The higher the price on interest the more likely the borrower will be unable to fully satisfy his obligations to service debt. Interest rates are influenced by the regulatory authority such as central banks and fiscal authorities through monetary and fiscal policy formulation. Interest rates have a direct relationship with credit risk. The higher the interest rates, the higher the probability that the loan will be defaulted and vice versa (Aver, 2008). This confers that the levels of interest rates have a bearing on credit risk in lending portfolios of banking institutions.

Other studies have found lending interest rates as a significant variable explaining credit risk. Warue (2013), in investigating the effects of Bank Specific and Macroeconomic Factors on Nonperforming Loans in Commercial Banks in Kenya found that lending interest rates were both positive and significant in affecting non-performing loans in commercial banks. This goes to confirm previous studies done on the same by Beck, Jakubik and PiloIU (2013),

Souto, Tabak and Vazquez (2009) and Aver (2008). This is however inconsistent with Park and Zhang (2012), who investigated the effects of Macroeconomic and Bank-Specific Determinants of the U.S. Non-Performing Loans: Before and During the Recent Crisis, using two distinct time periods 2002-2006 before the crises and 2007-2010 after the crises and showed that the coefficients for the Federal Funds rate/interest rate was negative in relation to credit risk.

Ngetich (2011) examined the effects of interest rate spread on the level of non-performing assets in commercial banks in Kenya. The study results found a strong relationship between interest spread and the ratio of non-performing loans. The study concluded that interest rate spread affects non-performing loans in banks because it increases the cost loaded on principle amount, calling for strict regulatory framework in credit risk management.

2.3.1.3 Inflation rate

Research studies link the effect of inflation rate to credit risk. Studies assert that there is a positive relationship between inflation and credit risk (Makiyan, 2003). Where the purchasing power in an economy is diminished by increasing inflation, banking institutions performance and profitability is reduced due to increase in portfolio risk.

Other studies also confirm inflation rate as a material variable explaining credit risk. In this regard Mileris (2012) studied the macroeconomic determinants that significantly influence the changes of loan portfolio credit risk in banks of twenty two European Union countries that were grouped into 3 clusters according to their similarity in changes of the doubtful and non-performing loans percentage in banks for the time period between 2007-2011. The study finds that an increase in inflation rate has a profound positive relationship to non-performing loans. This confirms previous studies by Kochetkov (2012), Derbali (2011) and Renou (2011). This is however in stark contrast with Warue, (2013) who employed a Comparative Panel Data Analysis using panel econometrics approach employing both pooled (unbalanced) panel and fixed effect panel models, in investigating the effects of Bank Specific and Macroeconomic Factors on nonperforming loans in Commercial Banks in Kenya, and came to the conclusion that inflation was negatively related to credit risk /non-performing loans.

2.3.1.4 Unemployment rate

The unemployment rate is an additional macroeconomic variable affecting credit risk. An increase in unemployment rate has a negative effect on household's income and therefore inhibits their ability to service their debt obligations. Unemployment also affects firms through decrease in effective demand of their goods and services. This combined effect of joblessness on firms and households, directly affects economic activity and similarly the credit portfolio. Louzis, Vouldis and Metaxas (2010), find that unemployment rate is one of the macroeconomic factors that influences credit risk in Greece.

2.3.1.5 Stock market index

Stock market index is another key variable considered to be a determinant of credit risk in the banking sector. The rise and fall of the stock market index correlates to the levels of disposable income available for investing. Similar to gross domestic product, the stock market index carries an inverse relationship to the quality of loan portfolio. Where stock returns rise, it implies ability to pay debt obligations is improved thus decreasing credit risk (Wong, Wong, and Leung 2010). Wong, Wong, and Leun, (2010) further explain that where stock market indices are going up, this implies positive performance of the companies and where companies are performing well they are in a better position to service their debt obligation thereby limiting the level of credit risk in an economy. Positive company's performance favourably correlates with employment creation and improved income levels hence the hypothesis that there is an inverse relationship between stock market index and non-performing loans.

Empirical literature also reveals that the stock market index is a good indicator of the general financial condition of an economy. The stock market index carries an inverse relationship to the quality of bank loans. An increase in the index reflect that the companies are generally are performing well to attract investors. An increasing index also indicates an able and willing market meaning the market is liquid enough to resort to stock investments. It is this liquidity that has a relationship with how debt obligations are financed (Bonfim, 2009).

2.3.1.6 Exchange rates

The impact of exchange rates on credit risk has also been analysed in literature. Castro (2013), in his analysis of the link between the macroeconomic developments and the bank credit risk in a particular group of countries – Greece, Ireland, Portugal, Spain and Italy (GIPSI), found that there was a negative relationship between exchange rate and credit risk. This confirms previous studies by Zribi & Boujelbene(2011), Vogiazas and Nikolaidou (2011), Gonsel (2008), Kalirai and Scheicher(2002), Aver (2008) and Fofack (2005).

2.3.2 Internal Factors

The main sources of internal factors that lead to credit risk include limited institutional capacity, inappropriate credit policies, volatile interest rates, poor management, inappropriate laws, low capital and liquidity levels, direct lending, massive licensing of banks, poor loan underwriting, laxity in credit assessment, poor lending practices, government interference and inadequate supervision by the central bank (Kithinji, 2010).

Musyoki (2011) investigates the impact of credit risk management on financial performance of banks in Kenya between years 2000 to 2006. The study finds that default rate (credit risk) was a major predictor of banks success carrying a strong inverse relationship to banks financial performance. The study highlights that internal factors play a role in level of credit risk.

Literature also spells out principal-agent relationship as a primary factor influencing the risk appetite of a financial institution. Moral hazard, ownership structure, regulatory framework and governance mechanism form the theoretical micro determinants of credit risk.

In their analysis of determinants of credit risk in Indian state-owned banks for the period 1995-2005, Das and Ghosh (2007) conclude that although credit risk is influenced by macroeconomic variables, the quality of loans is also significantly determined by the single bank individual variables. This was concluded after realising that despite controlling the macroeconomic factors, credit risk was still highly affected by bank specific variables. Evidence from the study indicates that excessive growth of loan book surpasses bank's capacity to monitor the loans portfolio. Also bigger banks proved to have problems with

managing loans than smaller banks. The study concluded that excessive loan growth and institution expansion capacity need to grow along with unimpeachable managerial skills relevant to strategise and manage institutions risk appetite to prevent unforeseen risk.

2.3.3 Bank Specific Factors

A study by Garr (2013) identifies the following as some of the bank-specific factors that impact credit risk: bankownership structure, operating expenses, efficiency of management, deposit composition and quality, assetquality, capital and size and bank reserve requirement.

2.3.3.1 Bank ownership structure

Bank ownership structure is considered a factor that can influence credit risk. It is hypothesised that foreign owned banks perform better than domestic banks on credit risk matrix. Demirguc-Kunt and Huizinga (1998), find in their research study that foreignbanks have better margins and profits compared to local banks in developing countries, while the oppositeholds in developed countries. Garcia-Herrero (2006), also observes that foreign banks generally havebetter production technology, which allows them to be more efficient and better in credit risk management than their local counterparts and their profitability is much better. Bashir (2000) also maintains that foreign-owned banks are more profitable than their domestic counterparts among Islamic banks.

Dietrich and Wanzenried (2009) however contradict the above and indicate that foreign banks in Switzerland are less profitable thanSwiss owned banks.

2.3.3.2 Management efficiency

In a study by Mwaurah (2013), literature review focussed on managerial efficiency as a bank specific determinant of credit risk. Mwaurah (2013) highlighted that commercial banks crisis arises mostly due to insufficient management capabilities and that competency and management responsibility play a crucial role in deciding the risk appetite of a financial institution. The study further asserts that poor credit management practices lead to bad lending which results in a bloated portfolio of unpaid loans.

The Central Bank of Kenya Risk Management Guideline (2013), corroborate that sound bank management need to establish an elaborate system to monitor quality of loans on a day to day basis. It further states that credit policy on lending should explicitly outline procedures on credit appraisal, approval, monitoring and recovery and that the quality of management in a financial institution bears an inverse relationship to credit risk with inadequate governance structures being blamed for increased risk on loan quality.

Al-Smadi and Ahmad (2009) conclude that precautionary credit policies adopted by the banks during periods of high demand for loans result in reduction of the banks' credit risk exposure. Ramlall (2009) also buttress the point that the higher the efficiency level of the bank, the higher its profit level, hence a positive relationship is posited between efficiency and profitability of banks. Maudos and de Guevara (2004) maintain that a good management means picking up high quality assets (low risk and high return assets) and low cost liabilities.

2.3.3.3 Credit growth

During economic expansion, banks often engage in aggressive competition for market share in loans resulting in rapid credit growth. It is purported that the easy way to obtain market share could be to lend to borrowers of substandard credit quality

Kithinji (2010) analyses this phenomenon in a study to investigate the relationship between credit risk management and profitability of commercial banks in Kenya. The study sought to find out how commercial banks profitability was affected by the non-performing loans and growth of credit portfolio in a study conducted between 2004-2008. The study reveals a decline in credit level and improvement in the quality of loans. This improvement was attributed to the compliance by commercial banks to Basel II provisions. However, the regression analysis did not reveal any relationship between profits, credit level and non-performing loans suggesting that other variables apart from credit level and non-performing loans affects profits.

Study by Castro (2013) has also found credit growth rate as a significant variable explaining credit risk. Castro (2013) analyses the link between the macroeconomic developments and the banking credit risk in a particular group of countries – Greece, Ireland, Portugal, Spain and Italy (GIPSI), using dynamic panel data approaches to these five countries over the

period 1997-2011. The study reveals that there is a significant relationship between credit growth and credit risk. The study purports that when credit expands or grows faster, the risk of more defaults in the future may increase because that expansion might be achieved at the cost of more risky loans, the effect of which may not be felt immediately. This confirms the previous studies of Igan & Pinheiro (2011), Mendoza and Terrones (2008) and Tamirisa and Igan (2007) who also found there is a positive relationship between credit growth and credit risk.

On the contrary studies conducted by Dash and Ghosh (2007) shows a negative relationship between credit growth rate and non-performing loans in both the contemporaneous and lagged values in their study of determinants of credit risk in Indian State-owned Banks.

2.3.3.4 Bank size

Salas and Saurina (2002) find a negative relation between bank size and non-performing loans and argue that bigger size allows for more diversification opportunities and spreading of risk.

Louzis, Vouldis and Metaxas (2011) are however of a different opinion and argue that the moral hazard of “too-big-to-fail banks” represents another channel relating bank-specific features with non-performing loans. Stern and Feldman (2004) agrees to this and state that a policy concern is that “too-big-to-fail banks” may resort to excessive risk taking since market discipline is not imposed by its creditors as they expect government protection in case of a bank’s failure. Consequently, large banks may increase their leverage and extend loans to lower quality borrowers precipitating credit risk (Louzis et al., 2011).

2.3.4 Banking Industry-Specific Factors

Garr (2013) considered two industry-specific factors in the study of determinants of credit risk in the banking industry of Ghana. These two industry specific factors are competition and the financial sector development. Other banking industry specific factors that are considered to influence credit risk are the existence of a credit reference bureau and the effectiveness of the supervision and monitoring role of the central banks. The Central banks are the regulators of banking institutions in an economy.

2.3.4.1 Level of competition

Aginer, Demirguc-Kunt and Zhu (2012) and Rose and Hudgins (2008) both agree that competition is good for the banking sector as greater competition encourages banks to take more diversified risks, making the banking system less susceptible to shocks. They both argue that competition tends to squeeze the difference between average asset yields and average liability costs. Jimenez and Saurina (2006) also contend that strong competition among banks or between banks and other financial intermediaries wears down margins as both loan and deposit interest rates get closer to the interbank rate and this has an impact of reducing credit risk through affordable lending rates.

2.3.4.2 Financial sector development

Two major indicators are used to represent financial sector development in literature and these are the ratio of money in the form of saving deposits, time deposit which are assets that are near cash to gross domestic product and ratio of total bank asset to gross domestic product. These ratios according to Tennant and Folawewo (2009) reflect the overall level of development of the banking sector and the level of competition in well-developed banking sectors. An increase in any of these ratios is an indication of improvement in the development of the financial sector and financial sector development is submitted to have an inverse relationship with credit risk.

According to Ngugi (2001) inefficiency in the intermediation process is a characteristic of a suppressed financial system. This is because in a control policy regime, selective credit policies involve substantial administrative costs, and interest rates with set ceilings fail to reflect the true cost of capital.

2.3.4.3 Credit Reference Bureau and information sharing

Literature suggests that credit information sharing has positive effect on credit risk. In their study, Jappelli and Pagano (2000) use survey data in cross-country analysis of Europe and show that credit information sharing leads to a reduction in credit risk.

Auronen (2003) suggest that the theory of asymmetric information indicate that it may be difficult to distinguish good from bad borrowers which may result in adverse selection and moral hazard problems. The theory explains that in the market, the party that possesses more information on a specific item to be transacted (in this case the borrower) is in a position to negotiate optimal terms for the transaction than the other party (in this case, the lender) (Auronen, 2003; Richard 2011). The party that knows less about the same specific item to be transacted is therefore in a position of making either right or wrong decision concerning the transaction. Adverse selection and moral hazard is purported to have led to significant accumulation of non-performing loans in banks (Bofondi and Gobbi, 2003).

The presence of a credit reference bureau in a country enhances information sharing. The Kenyan Banking (Credit Reference Bureau) Regulations, 2008 states that the main role of Credit Reference Bureau is to provide credit histories to financial institutions for them to be able to make lending decisions in order to prevent credit risks. Credit bureaus assist in making credit accessible to more people, and enable lenders and businesses to reduce financial risks. They add that credit bureaus allow borrowers to take their credit histories from one financial institution to another, thereby making lending markets more competitive and in the end, mitigate credit risks and make credit more affordable.

Jappelli and Pagano (2000), further assert that sharing of information between financial institutions in respect of customer borrowing behaviour has a positive economic impact. The introduction of Credit Reference Bureaus in financial landscape is an effort to encourage sharing of information by institutions so as to reduce the incidences of serial defaults by bank customers as well as minimise the incidences of non-performing loans. Credit information sharing will allow banks to distinguish between good and bad borrowers. Information sharing will also present customers with the opportunity to negotiate good credit terms when one has a good credit record. This means that the introduction of Credit Reference Bureaus will inculcate a culture of observing credit terms thereby reducing the level of non-performing loans. This is indicative that sharing of information between financial institutions through Credit Reference Bureau is very essential in the management of credit risks (Jappelli and Pagano, 2000)

Petersen and Raghuram, (1994), also agree on the need for credit information sharing and state that the unavailability to banks of data needed to screen credit applications and to

monitor borrowers has an impact of increasing credit risk in the banking sector. They claim that when a bank does not have such information, it faces “adverse selection” or “moral hazard” problems in its lending activity. Adverse selection arises when some information about the borrowers’ characteristics remain hidden to the lender (hidden information), and can lead to an inefficient allocation of credit. Moral hazard arises from the lender’s inability to observe borrower’s actions that affect the probability of repayment. This creates the danger of opportunistic behaviour or moral hazard by the borrower and informational disadvantage by the bank leading to inefficient allocation of credit and then high credit risk.

2.3.4.4 Supervisory and monitoring by Central Banks

Central Banks are responsible for supervising the banking institution of their countries. They provide regulatory frameworks which govern operations of banking institutions. In Zimbabwe this is done through the Banking Act [Chapter 24:20]. There is not yet a lot of literature on how supervisory role of central banks impacts credit risk in a banking sector. However an analysis of the global financial crisis has pointed that inadequate regulation contributed to the crisis.

Merrouche and Nier (2010) highlight that supervision and regulation of the financial system is a key means to prevent crises. Merrouche and Nier (2010) further mention that supervision and regulation of financial system assist in controlling moral hazard and discouraging excessive risk-taking on the part of financial institutions. They attributed the inadequate supervision and regulation as prime candidates to have caused the global financial crisis.

2.4 Credit risk performance measures

There are various ways in which banking institutions can measure the credit risk inherent in their credit portfolios. According to the Reserve Bank of Zimbabwe Banking Regulations(2000), non-performing loans ratio is one of the key measures of credit risk for banking sector. RBZ Risk Management Guidelines No. 01-2006 BSD (2006) and RBZ Technical Guidance on Basel 11 Implementation (2010) explain the concept of loan loss provisioning and bad debts write off in relation to credit risk.

2.4.1 Non-performing loans ratio

Non-performing loans ratio is calculated as shown below:

$$\text{Non-performing loans ratio} = \frac{\text{adversely classified loans}}{\text{gross loans}}$$

According to Reserve Bank Guidelines, adversely classified loans are loans that have repayments that are past due by more than 90 days and these loans are also known as non-performing loans. Alton and Hazen (2001) describes non-performing loans as those loans which are ninety days or more past due or those loans that are no longer earning the banking institution income i.e. accruing interest. IMF (2009) concurs and states a loan is classified “non-performing” when payments of interest and principal are past due for over 90 days or more and there are other good reasons to doubt capability of repayments being made in full. The international benchmark for acceptable non-performing loans ratio is 5%.

2.4.2 Loan loss provisioning

Loan loss provisioning relates to impairment charges that are charged on bank’s financial statement as a provision for losses on credit portfolio (RBZ Risk management Guideline, 2000). It is acknowledged that when credit is granted, not all borrowers will pay up the amounts lent by banking institutions. Credit risk is therefore inherent in lending business from day one of issuing a loan to a customer. As a matter of prudence, loan loss provisions are required to be computed on the credit portfolio of a bank and necessary provisions accounted for in the financial statements. The level of loan loss provisions is determined by the risk assessed to be associated with the credit exposures. This assessment is done on a continuous basis as part of risk management in a bank’s operations. Where the risk is assessed to be high, the level of loan loss provision will also be high and as such high loan loss provisions imply high credit risk levels.

Table 2.1 shows the level of provisions that are calculated on different loan classification grade. Grade 1 represents loans classified to have lower credit risk while grade 10 representing a poor quality asset class, with the grade in between depicting different assessed

risk levels. As shown in Table 2.1, the percentage level of loan loss provisions increase from grade 1 to grade 10 indicating more provisions are made for loans assessed to be riskier.

Table 2.1:Credit Classification and Provisioning Guidelines

Loan classification grade	Level of Provision	Type of Provision
1 – 2	1%	General
3	2%	
4	3%	
5	4%	
6	5%	
7	10%	
8	20%	
9	50%	
10	100%	

Source: RBZ Technical guideline on Basel 11 Implementation (2010)

2.4.3 Bad debts write offs

An unrecoverable loan is eventually considered to be a bad debt and where no prospects of recovery are perceptible. Bad debts are eventually written off and charged to the income statements of a banking institution. The financial statements that have been published by banking institution have disclosed value of loans that banking institutions have written off their books. There has been an increasing trend in “written off” loans indicating high credit risk in the banking sector. When there is an increase in bad debts write offs, this signals bad loan asset quality and high credit risk in the market. The level of bad debts write off is therefore also considered as one of the measures of credit risk level in the banking sector. Bad debts write off affect banking institution financial performance and erode capital of an institution.

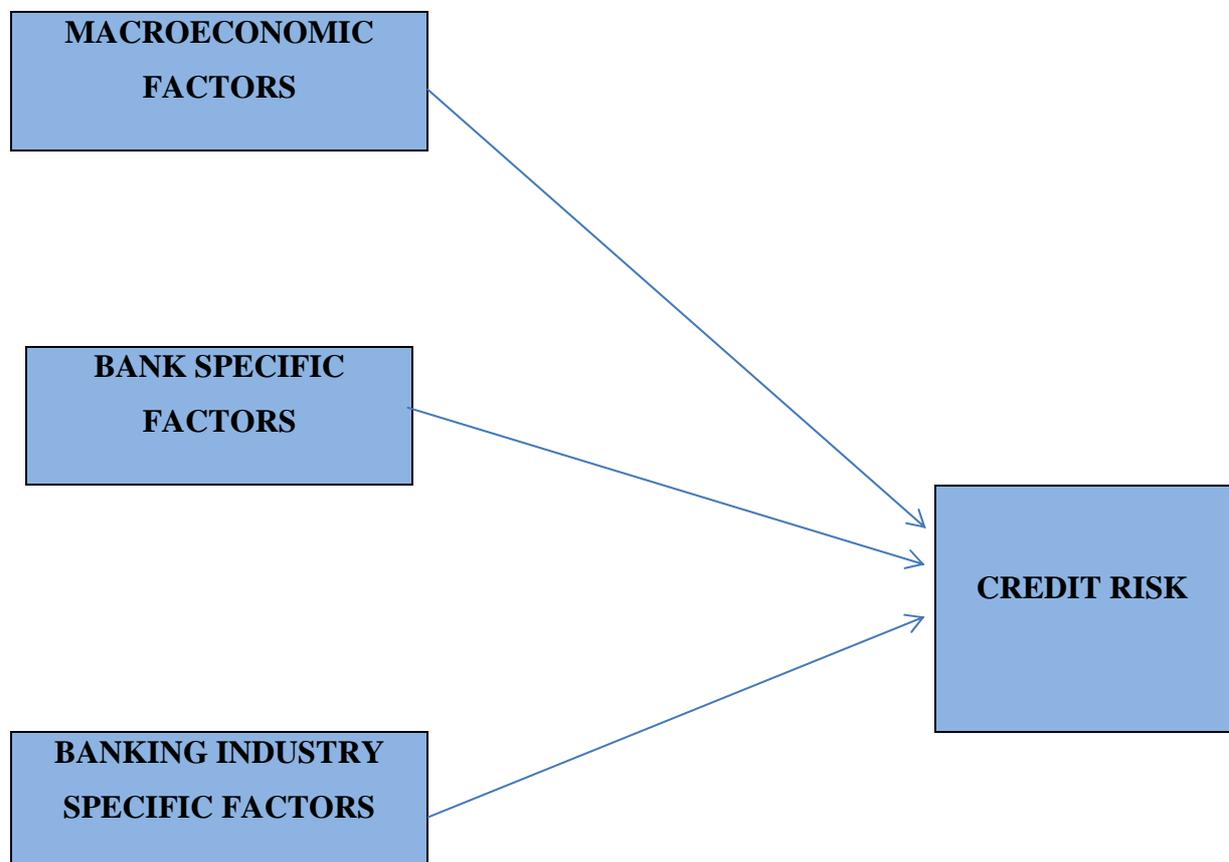
2.5 LITERATURE SYTHESIS AND CONCEPTUAL FRAMEWORK

Elsevier (2009) defines a conceptual framework as a group of concepts that are collectively defined to provide a focus, a rationale and a tool for the merging and interpretation of data. In accordance to the literature reviewed in this study, a conceptual framework was formulated to summarise the factors that influence credit risk as shown below.

Figure 2.1: Conceptual Framework

INDEPENDENT VARIABLES

DEPENDENT VARIABLE



The dependable variable, credit risk, is measured by the level of non-performing loans ratio.

2.6 CHAPTER SUMMARY

The chapter has detailed the literature on factors that influence credit risk. Theoretical review on the concept of credit risk and its determinants was highlighted. Included under theoretical review was the Modern Portfolio Theory, Agency Theory, Liquidity preference Theory, Deflation Theory and Financial

A review of literature on how external and internal factors influence credit risk was undertaken. The chapter ended by giving a conceptual framework on the study based on factors influencing credit risk determined from literature review.

The next chapter provide information on the research methodology for this study.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 INTRODUCTION

The previous chapter reviewed literature on factors that influence credit risk and conceptualised the factors into a model that can be applied to test the influence of external and internal factors on credit risk. This chapter covers methodology used in the research. Saunders, Lewis and Thornhill (2009) contend that research itself requires a systematic approach to finding answers to research problems. This chapter describes the research design and justifies the research philosophy, research strategy, population and sampling size involved, sampling method, data sources and collection, data analysis and the ethical considerations involved in this study. Knox (2004) allude that the researcher is expected to explain, justify and align the research philosophy to the research strategy chosen for any research work they are involved in.

3.1.1 Research Objective

The overall objective of this study was to analyse the extent to which external and internal factors have influenced credit risk in the Zimbabwe banking sector.

3.1.2 Major Research Question

The major research question of this study was to ascertain “Which of the factors (determinants of credit risk) are the major drivers of rising credit risk in the Zimbabwe banking sector?”

3.1.3 Research Hypothesis

The following hypothesis was formulated from the literature review;

“Credit risk is influenced by various adverse external and internal factors.”

3.2 RESEARCH DESIGN

According to Yin (2003), the research design is the logical sequence that connects the empirical data to the study's initial research questions and ultimately to its conclusions. It is the tool that guides the researcher in the process of collecting, analysing and interpreting observations, allowing the researcher to draw inferences concerning causal relations among the variables under investigation. The research design is the investigators overall strategy for answering the research question (Zikmund, 2003). Saunders et al. (2009) indicate that various types of designs have different strengths and weakness and some are better for answering some types of questions than others.

3.3 RESEARCH PHILOSOPHY

Research philosophy relates to how knowledge is developed based on how one views the world (Saunders et al. 2009). Approaches to research are based on the sum total of the researcher's beliefs, norms, values and assumptions about the world (Cooper & Schindler, 2008). There are four main categories of research philosophies namely positivism, realism, interpretivism and pragmatism. This research study was based on the positivism philosophy because it sought to establish cause and effect relationships between the independent variables (factors influencing credit risk) and the dependent variable (credit risk).

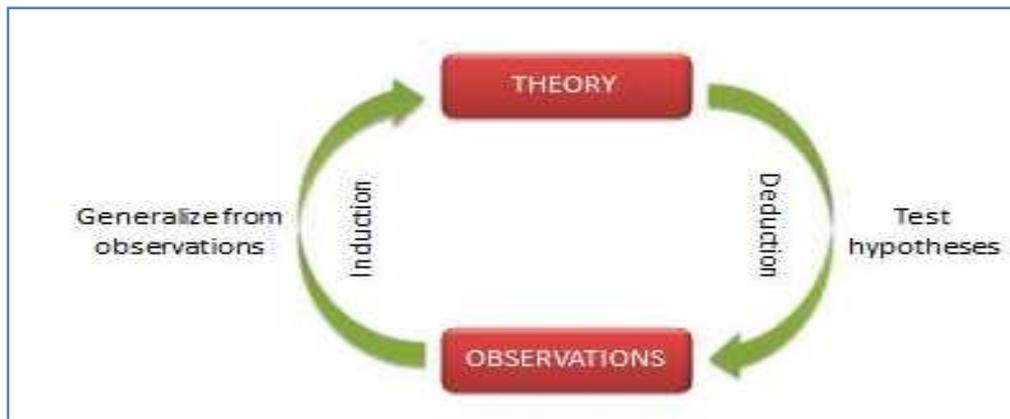
According to Saunders et al. (2009), positivism is a statement about the power of science and of rational thought to comprehend and manipulate the world. Saunders et al. (2009) argue that positivism stems from a movement that rejected the metaphysical and subjective ideas and was interested only in the tangible. Positivism holds that an accurate and value-free knowledge of things is possible. However, positivism's emphasis on the study of tangible human activity such as behaviours and speech limits its application on the intangible or motivation of those externals.

The positivism approach was considered the most appropriate for this study because the variables considered in the study are of a quantitative nature and can be factually measured for example non-performing loans ratio. In addition the research is considering the cause and effect relationship between independent and dependant variables. The positivist approach is deductive and seeks to explain causal relationship between variables (Saunders et al. 2009).

3.4 RESEARCH APPROACH

Good research is based on sound reasoning. Sound reasoning is finding the correct premises, testing the connections between their facts and assumptions and making claims based on adequate evidence. Reasoning is distinguished between two types which is the deductive and inductive reasoning. Figure 3.1 illustrates the two approaches.

Fig 3.1: Research approaches



Source: Bhattacharjee (2012)

3.4.1 Inductive

Young (2007) describes the inductive approach as "inference of a generalised conclusion from particular instances". He argues that this process involves starting with the clues given and determining if they can be combined to give a reasonable solution, without trampling on the clues or throwing out some of them.

3.4.2 Deductive

The deductive approach is described as a process whereby the researchers start with a general theory or hypothesis, which they then test through searching for empirical evidence that either confirms or falsifies it (Daymon and Holloway, 2011). Knox (2004) refers to the term empirical as 'evidence drawn from concrete situations' as opposed to arguments developed either from purely theoretical bases or from experiments.

This study made use of the deductive approach. The deductive approach is associated with the quantitative method of carrying out research. Saunders et al. (2009) have identified two methods of carrying out research namely the quantitative and qualitative methods and assert that quantitative research follows the positivist approach while qualitative research follows the interpretivism approach. According to White (2000), research itself can be done by making use of the qualitative or quantitative approaches.

This study utilised a quantitative research approach. According to White (2000) quantitative research is an iterative process through which evidence is evaluated and theories and hypothesis are refined and tested. Saunders et al. (2009) assert that the quantitative approach is factual, value free, makes use of quantitative data, and that research results have to conform to supported evidence. A positivist researcher uses a mathematical and statistical method to evaluate the results.

The quantitative approach was chosen because the study was explanatory in nature as it sought to establish the cause and effect relationship between the independent and the dependent variable. The study sought to establish the relationship between credit risk performance and bank specific, industry specific and macro-economic factors.

3.5 RESEARCH STRATEGY

There are several ways of doing research and the methods include case studies, experiments, surveys, histories and analysis of archival information (Yin, 2003). Bryman & Bell (2003) also confirm that major research methods include ethnography, surveys, experiments, case studies, and grounded theory. Each of these strategies have peculiar advantages and disadvantages depending on three conditions which are;

- the type of research question;
- the control the investigator has over actual behavioural events; and
- the focus on contemporary as opposed to historical phenomena.

Saunders et al. (2009) assert that the research strategy is the process of how the researcher responds to the research questions and argue that while some strategies are suited to either deductive or inductive methods, there is not one strategy that is more superior to the others

and more importantly, they are not mutually exclusive. The application of these methods is dependent on the type of questions (what, why, how) that are meant to be answered in the research.

In this study a survey method was adopted. O'Leary (2005) defines a survey as the organised collection of raw data in a structured questionnaire and responses from a sample of respondents. Saunders et al. (2009) state that the survey method is a popular and common strategy in business and management research and is most frequently used to answer who, what, where, how much and how many type of questions and it is also associated with the deductive approach. Its advantages are that surveys are popular and allow for the economic collection of large amounts of data from a sizeable population and this also justifies the selection of the survey strategy in conducting this research.

Saunders et al. (2009) stated that the survey strategy allows collection of quantitative data which can be analysed quantitatively using descriptive and inferential statistics and that was the case in this study. Data were collected on the performance of the credit risk and how it is being influenced by the independent variables categorised as bank specific, industry specific and macro-economic factors.

3.6 TIME HORIZON

Time horizons that can be used for a research study include cross sectional study and longitudinal study. Cross-sectional studies are carried out once and represent a snapshot of one point in time while longitudinal studies are repeated over an extended period (Saunders et al. 2009). A cross-sectional study time horizon was made use of in this research. According to Saunders et al. (2009) a cross sectional study is the study of a particular phenomenon (or phenomena) at a particular time. A cross-sectional design provides a snapshot of the variables included in the study, at one particular point in time. This research was interested in a snapshot of the impact of independent variables to the dependent variables. The time horizon for this study was the financial periods from the year 2009 to the year 2014.

3.7 RESEARCH INSTRUMENT

Table 3.1 below lists the possible data collection techniques that are available in undertaking a research study.

Table 3.1: Data Collection Techniques

	<i>Exploratory research Unstructured</i>	←————→	<i>Survey research Structured</i>
Interviews	In-depth and open	Critical incidents	Interviewer keeps to a script and there are answer options
Panels	Focus groups		Delphi technique
Questionnaire	Lots of white space on the page		Tick boxes
Observation	Keeping a research diary	Checklists and categories	Completing an observation schedule Activity sampling
Documentary	Rhetorical analysis		Statistical analysis of themes

Source: Fischer (2010:p175)

A questionnaire was the primary data collection instrument used in the study. The questionnaire was used because it is cost effective. In this study the questionnaires were distributed to the recipients mainly via e-mail and this allowed for easier access to a wider audience of targeted respondents. One of the advantages of using questionnaires is that the responses are usually well thought out because of the ample time that respondents get to fill them out. The respondents were given two weeks to fill in the questionnaire. The use of the questionnaire was also primarily motivated by that the questionnaires addressed the specific research questions in this study.

3.7.1 Questionnaire Scales

According to Saunders et al. (2009), four types of rating scales have been identified namely nominal, ordinal, interval and ratio. The nominal scale has the lowest precision whereas ratio has the highest. Most researches have employed the scale that was developed by Likert (1932). The Likert scale is a rating method that increases the variation in the possible scores

that a respondent can choose from. The scale used in the questionnaire had the form of a 5 point scale. Below is the tabulated format of the Likert scale that was used in this study.

Table 3.2 Likert Scale

VeryLow	Moderate	High	VeryLowHigh
---------	----------	------	-------------

The questionnaire used in this study had an introductory letter as shown in Appendix I. Closed ended questions with specific answer choices were used in the questionnaire as shown in Appendix II. Five-point (5) scales were used consistently in a similar fashion in the questionnaire. As a way to maintain respondents' comprehension and interest, the questions and statements were kept short but as comprehensive as possible.

3.7.2 Pre-testing the Questionnaire

Knox (2004) states that questionnaires may have the disadvantage of failure by respondents to understand the questions. In light of this, a pilot test of the questionnaire was sent out to assess the questions and answers for practicability. The research instrument was pre-tested by administering the questionnaire to a limited sample of 12 respondents with good knowledge on credit risk matters. Their responses were analysed and areas of refinement and clarification of research questions in the instrument were adjusted for. The respondents with lending experience also tabled opinions with regards to the clarity of each question, the relevance and completeness of the variable under study and any challenges they faced in completing the questionnaire which enabled the perfection of the research instrument.

In addition to the pretesting process, the questionnaire was also submitted to a University of Zimbabwe senior lecturer with vast experience in survey studies. This allowed for critical assessment of the entire research instrument. Expert input obtained during the questionnaire design also assisted in ensuring that the pre-test document was close to the final version of the questionnaire.

A reliability test was undertaken based on the responses obtained from the pilot study. A Cronbach alpha of 0.852 was achieved on testing reliability for the single questionnaire items

while a Cronbach alpha of 0.736 was achieved for the reliability test of the categorised items. The Cronbach alpha provided confirmation for the reliability of the research instrument as it was above the recommended threshold of 0.7.

3.8 DATA SOURCES

There are two main types of data sources namely, primary and secondary. This research made use of both types of data.

3.8.1 Primary data

This is data expressly collected for the purpose at hand. It is gathered directly from the elements of the population. Its advantage is that the particular information sought is obtained.

Primary data on the variables under study were collected through the use of a structured questionnaire distributed to the carefully selected sample respondents that were made up of people who have knowledge in the subject area of credit risk in the banking sector. The sample elements were people exposed to management of credit risk in their normal course of duty and possessed relevant experience in the field.

The choice of this type of data was based on the fact that it was essential to get first-hand information from personnel that deal with the issue of credit risk in their day to day operation.

3.8.2 Secondary data

Secondary data is data that is collected from records holding the primary data. The main sources of secondary data for this study were Reserve Bank of Zimbabwe Reports for Banking Sector on statistics such as non-performing loans ratios, interest rates; Zimstats for statistics on gross domestic product, inflation; and Zimbabwe Stock Exchange for trend on the stock market indices. These sources of secondary data were useful in providing information on the key statistics of some of the variables mentioned above that were under consideration in this research study for the time horizon of the study. Appendix III to

Appendix V at the end of this report show statistics on data that was collected from secondary sources.

3.9 POPULATION

3.9.1 Target population

The target population is the actual population to which the researcher wishes to generalise (Saunders et al. 2009). The study population is the collective of study units for which the values of the variants of interest could possibly be determined. The target population for this study were the banking institutions in the Zimbabwe banking sector. The sample frame was the register of licensed banks from Reserve Bank of Zimbabwe. Table 3.3 shows the segment within the financial sector which the researcher collected data from.

Table 3.3: Target Population

Type of Institution	Number
Commercial Banks	13
Building Societies	3
Savings Banks	1

3.9.2 Sampling techniques

Sampling techniques are methods used by the researcher to derive a sample from a population. Zikmund (2003) defines sampling as a process of selecting representative subset of observations from a population to determine the characteristics of the random variable under investigation. Sampling is classified into two basic methods which are probability and non-probability sampling (Saunders et al. 2009).

3.9.2.1 Non-Probability Sampling

Non-probability sampling uses the subjective approach and the probability of selecting the population elements is unknown (Cooper and Schindler, 2003). Types of non probability sampling include quota sampling, convenience sampling and purposive sampling. The major

disadvantage of non-probability sampling methods is the possibility of unrepresentative nature of the sample which is likely to result in biased results.

3.9.2.2 Probability Sampling

Probability sampling is based on the concept of random selection, a controlled procedure that assures that each population element is given a known non-zero chance of selection (Cooper and Schindler, 2003). Probability sampling is further subdivided into simple random, systematic, cluster and stratified sampling techniques. Simple random sampling involves the selection of the sample at random from the sampling frame using either random numbers or a computer to ensure that each member of the population has an equal chance of being selected. Systematic sampling involves employment of a systematic way of selecting items. The first item can be selected at random and thereafter every *n*th item selected based on the system employed. Stratified random sampling is a modification of random sampling in which the population is divided into two or more relevant and significant strata based on one or a number of attributes. With cluster sampling, the population is broken down into classes called clusters and the sample of clusters is selected randomly (Cooper and Schindler, 2003).

3.9.2.3 Procedure

For the purposes of this study, simple random sampling was used for the selection of banking institutions used as sample population in this study. Stratified sampling was used for the selection of respondents from the sampled banking institutions. The respondents sample was divided into three strata according to position as shown in Table 3.4. Each stratum was deliberately accorded a proportionate representation depending with the population in that category with the lending managers constituting the largest sample because of their numbers.

3.9.3 Sample Size

A sample is a small part of anything designed to show attributes of the whole. A sample approximates the measurement of the whole population well enough, within acceptable limits. Fisher (2010) maintains that the size of the sample required is dependent on the size of margin of error the researcher is prepared to accept and the size of the population from which

the researcher is going to take the sample from. In this study, the researcher was prepared to take a margin of error of $\pm 5\%$.

The selected sample consisted of 12 banking institutions from the target population of 17 banking institutions shown in Table 3.3. The research strategy was aimed at collecting representative data from the selected 12 banking institutions in the Zimbabwe banking sector. The key respondents in this study were the lending manager, credit managers and senior bank managers. Of the 12 banking institutions used in this study, at least 8 to 11 responses per each banking institution were considered depending on the size of the bank, to constitute a representative sample.

3.9.4 Administration of the Survey Questionnaires

Table 3.4 shows the distribution of the research questionnaire and the methods used. The questionnaires were distributed mainly through electronic e-mails to the intended recipients while some for selected recipients were hand delivered.

Table 3.4: Distribution of Self-Administered Research Questionnaires

Respondents	Electronic Questionnaires (E-mailed)	Paper Questionnaires (In person drop-off)	Total
Lending managers including branch managers	50	10	60
Senior bank managers	22	5	27
Credit managers	33	10	43
Total	105	25	130

Obtaining responses from sample elements is one of the issues considered challenging in data collection process. There is a risk of low response rate which would have a negative impact on the success of the research process. Respondents were given two weeks to complete the questionnaire with follow ups done in an effort to increase the response rate. Follow up were

done after end of week one. Hard copy questionnaires were delivered to the targeted respondents in person where responses were not received from the email channel.

3.10 DATA ANALYSIS

Data analysis is a process of analysing the collected data, screening responses for anomalies, and organising data with the aim of revealing valuable information and coming to logical conclusions for decision making (Zigmund, 2003).

3.10.1 Analytical Procedure for the Quantitative Research

The Statistical Package for Social Sciences (SPSS) Windows was used to analyse data in this study. The questionnaire had questions formatted on a five-point Likert-type scale. The data were first examined using descriptive statistics to identify the frequency distributions. The Kolmogorov-Smirnov and Shapiro Wilk test of normality was carried out to ascertain whether the data followed normal distribution or a non-normal distribution. Results from this test determined whether parametric or non-parametric test would be used in data analysis. Correlation analysis was used to establish the association among the factors and then regression analysis was used to identify the causal relationship between the variables under study. ANOVA technique was used to test the significance of each independent variable to the dependent variable of credit risk. The Kruskal-Wallis H test was also done to establish statistical significance of respondents. For statistical significance, the significance value must be less than 0.05.

3.11 RESEARCH VALIDITY AND RELIABILITY

According to Carcary (2011), validity is the extent to which a research instrument measures what it is supposed to measure. Validity is concerned with whether the findings are really what they appear to be about. Schiffman and Kanuk (2000) view validity as the extent to which measurements are useful in making decisions relevant to a given purpose.

Reliability is concerned with whether alternative researchers would reveal similar information (Easterby-Smith, Thorpe and Lowe, 2002). According to Schiffman and Kanuk (2000), reliability is the extent to which measurement can be depended on to provide consistent and unambiguous information. A reliable instrument would continue to give the same results (repeatability) that are stable and dependable.

Quantitative research is characterised by issues of validity and reliability. Reliability determines the degree of consistency of a research instrument. In this study, reliability was measured using the Cronbach's alpha which estimates reliability by determining the internal consistency of a test.

Validity assesses the measurement ability of the instrument. The questionnaire for this study was pilot tested to assess if the research instrument was indeed measuring what it is expected to measure. Construct validity was also considered. Construct validity examines how well the instrument measures the theoretical phenomenon. An instrument is said to possess construct validity when it behaves the way it has been theorised.

3.12 ETHICAL CONSIDERATIONS

Access to the relevant respondents was considered pertinent and ethical considerations were made in obtaining data from relevant respondents. The research followed ethical procedures in ensuring that participation from relevant respondents was voluntary and information from recipients was treated with high confidentiality. Permission from the bank officials was sought. The consent from all respondents was obtained by way of an informed cover letter explaining the purpose of the research and respondents were guaranteed of their anonymity since no personal identifiers were used and no confidential data other than the generic information such as designation and years served in current position was required.

3.13 RESEARCH LIMITATIONS

The target population of this research comprised of bank employees who have busy schedules and found it difficult to spare time to respond to the research questionnaire. Furthermore, the existence of 'Confidentiality and non-disclosure policies' in some banks made some respondents reluctant to freely respond to the questionnaire. Several follow-ups were made to

ensure that the questionnaires were responded to and respondents were assured anonymity to guarantee confidentiality of the highest level.

3.14 CHAPTER SUMMARY

This chapter has discussed the research design used in the study and the justification for the chosen research design. A detailed account of how the data was collected and analysed for the purpose of testing the hypothesis was highlighted. The data was collected through the use of questionnaires. The target population and sample size was explained. The next chapter focuses on data analysis, findings and discussions.

CHAPTER FOUR

DATA ANALYSIS

4.1 INTRODUCTION

The preceding chapter focused on the research methodology that was used to carry out this study with a detailed description of the research design, research strategy, sample and sampling methods. In the previous chapter data collection procedures, steps and how the data was going to be analysed was also highlighted. This chapter is going to present how the collected data was processed and analysed by the researcher. The researcher used descriptive and inferential statistics to analyse the data. The chapter further provides the basis upon which conclusions and recommendations of the study were made.

4.2 RESPONSE RATE

The response rate from a sample of 130 targeted respondents was satisfactory. Out of the 130 questionnaires that were distributed, 91 questionnaires were successfully completed and returned for analysis. This represents a response rate of 70% which is adequate enough to warrant validity of the study findings. The response rate is consistent with Grays (2009), who postulated that where the researcher distributed the questionnaire whether physically or by email the response rate is generally high. The chart below shows a graphical presentation of the response rate.

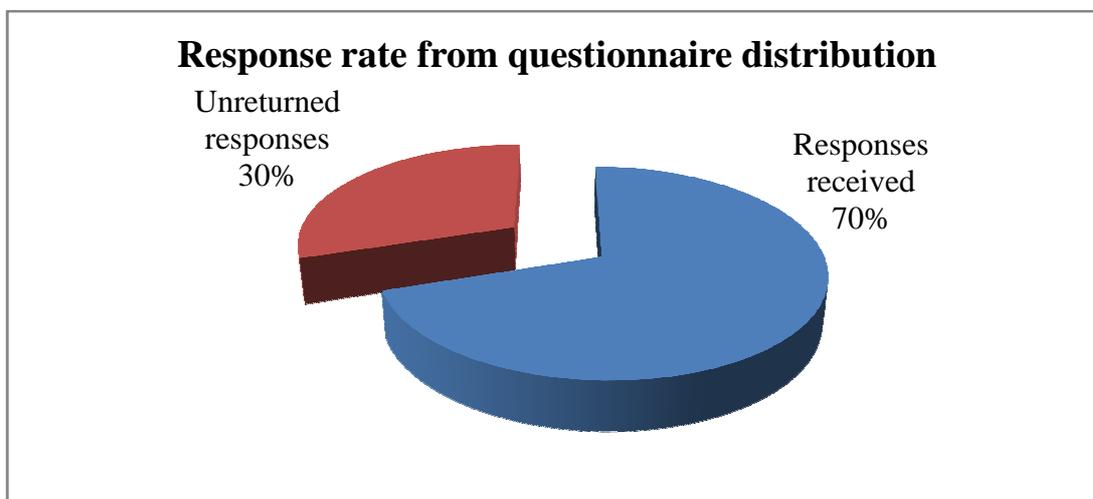


Figure 4.1 Response Rate

4.3 DEMOGRAPHIC CHARACTERISTICS OF THE RESPONDENTS

Statistics were obtained from the respondents indicating various demographic characteristics that included position in organisation, number of years held in that position, academic qualification and level of understanding of credit risk issues in the Zimbabwe Banking Sector. The results were analysed and presented as follows:

4.3.1 Job Title

The study sampled respondents who were deemed knowledgeable on the subject of credit risk in Zimbabwe banking sector. This was necessary due to the need for basic understanding on the subject. The table below shows the statistic on the respondents categorised per job title.

Table 4.1: Job title of respondents

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Credit manager/analyst	30	33.0	33.0	33.0
Lending/Branch manager	40	44.0	44.0	76.9
Senior management	21	23.1	23.1	100.0
Total	91	100.0	100.0	

The analysis above indicates that 33% of the respondents were credit managers or analysts, 44% were lending/branch managers and 23% were in senior management. The above analysis also indicates the calibre of the respondents who were targeted for this research given its specialised nature and the need to have respondents who have an appreciation of the matter that was at hand.

4.3.2 Number of years held in the position

The table below shows the number of years respondents had in their respective positions of employment.

Table 4.2: Number of years in position of respondents

Numberofyearsposition				
	Frequency	Percent	Valid Percent	Cumulative Percent
Valid				
Less than one year	0	0	0	0
One year to less than 3 years	11	12.1	12.1	12.1
3 years to less than 7 years	26	28.6	28.6	40.7
7 years to less than 10 years	24	26.4	26.4	67.0
10 years and over	30	33.0	33.0	100.0
Total	91	100.0	100.0	

From the table above, the analysis shows that the respondents had worked in their position for a reasonable length of time and this indicate they had reasonable experience in their relevant positions. Only 12% of the respondents had less than three years' experience with the rest having more than 3 years' experience. The over 10 years' experience range had the largest count of the respondents at 33%.

4.3.3 Level of education

The table below shows the level of education attained by the respondents to the questionnaire.

Table 4.3: Level of education of respondents

Level of education				
	Frequency	Percent	Valid Percent	Cumulative Percent
Valid				
Diploma	2	2.2	2.2	2.2
Degree	39	42.9	42.9	45.1
Masters	42	46.2	46.2	91.2
Other	8	8.8	8.8	100.0
Total	91	100.0	100.0	

The analysis above shows that out of the 91 respondents, 43% were educated to degree level, 46% were educated to masters degree level and about 9% had other levels of qualifications with only 2% with diploma level of education. This generally shows that the respondents who participated in this study were educated enough to understand the issues under discussion in this research.

4.3.4 Understanding of credit risk

The table below shows an analysis of the level of understanding of credit risk by the respondents of this study.

Table 4.4: Level of understanding of credit risk of respondents

Level	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Satisfactory	4	4.4	4.4	4.4
Good	45	49.5	49.5	53.8
Excellent	42	46.2	46.2	100.0
Total	91	100.0	100.0	

Despite having collected data on the educational qualifications of respondents, the research also collected data with regards to the respondent's level of understanding of credit risk issues. This was because some people may have good academic qualifications but may lack an acceptable appreciation of the credit risk issue in the Zimbabwe Banking Sector which was a key element of significant importance in the study. The respondents generally had a good understanding of credit risk as indicated by statistics in the table above. Only 4.4% of the respondents had satisfactory understanding of credit risk while 49.5% and 46.2% had good and excellent understanding of credit risk respectively. The respondents good understanding of credit risk positively contributes to the quality of the results of the study.

The chart below shows an analysis of the level of understanding of credit risk by the respondents of this study.

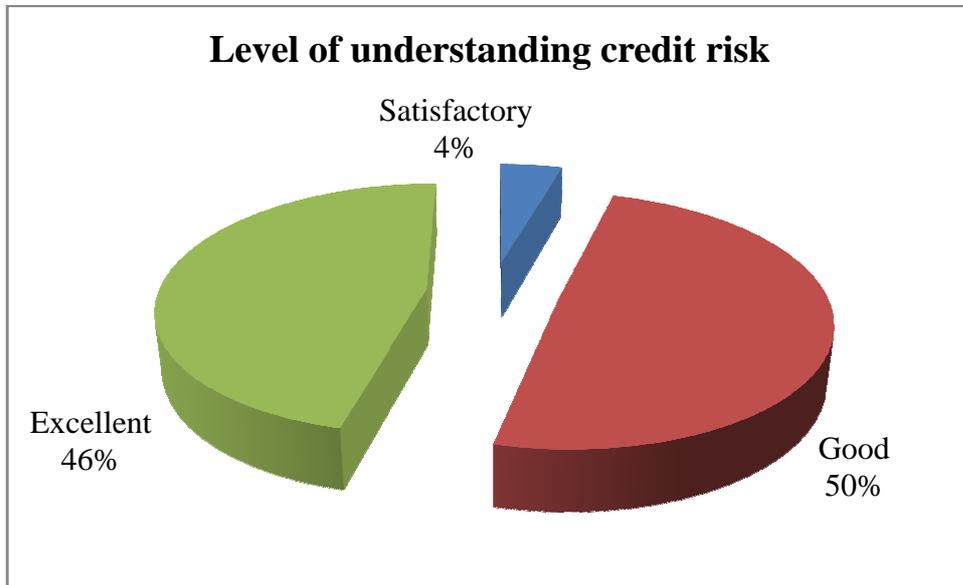


Figure 4.2 Level of understanding of credit risk of respondents

4.4 RELIABILITY TEST

The coded sample data was tested for reliability in order to confirm the internal consistency between the variables. This was done using the Cronbach's Alpha coefficients measure which ensures that the instrument's items that were included are all measuring the same constructs. Although different reliability levels are required depending on the nature and purpose of the scale, Haire et al. (2006) recommend a minimum level of 0.7.

The table below show the overall cronbach alpha coefficient for the data that was used in the study.

Table 4.5: Overall Reliability Test

Reliability Statistics	
Cronbach's Alpha	Number of Items
0.774	35

As shown by the results in Table 4.5, the internal consistency of the overall reliability test gave a Cronbach's Alpha coefficient of 0.774 which is greater than the acceptable benchmark of 0.7.

The reliability test also included checking each variable in the study for validity confirming if the items loaded were sufficient to make the questionnaire instrument reliable. In the results shown in Table 4.5 below all the variables yielded a cronbach alpha value greater than 0.7 with macroeconomic factors (0.817), bank specific factors (0,825), industry factors (0.866), and credit risk (0.850) implying that all the scales in the study are reliable and valid to the instrument.

The table below show the overall cronbach alpha coefficients for the variables that were used in the study.

Table 4.6: Reliability statistics of the variables

Variables	Number of Items	Cronbach's Alpha value
Macro-economic factors	9	0.817
Bank Specific factors	8	0.825
Industry factors	5	0.866
Credit risk	13	0.850
Overall Cronbach's Alpha	35	0.774

The validity of the instrument was further checked using content analysis. Face validity was mostly used as the use of subject experts was made to come up with a valid instrument (Grays, 2009). A pilot study was done prior to the distribution of the final questionnaires with selected sample of respondents with experience in credit risk issues to check for adequacy and validity of the instrument. The results of the pilot study were then used to validate the instrument while making adjustments to other variables until the acceptable reliability was achieved.

4.5 NORMALITY TEST

The data in Table 4.7 below present normality tests based on the Shapiro-Wilk test. Shapiro-Wilk (s-w) test is a measure that can be used to test a sample size of less than one thousand items. The test determines the normality of distribution of the data set. According to the results in table 4.9 below, a statistic value of 0.943 was achieved with a significant value of ($p < 0.05$) thereby indicating that the sample is not normally distributed hence non-parametric tests were conducted.

Table 4.7: Normality test of the sample

Tests of Normality						
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
CREDIT_RISK	.098	91	.031	.943	91	.001

a. Lilliefors Significance Correction

To further illustrate that the research results were not normally distributed, the three independent variables had their results plotted on a Q-Q Plot. The use of Q-Q plots to compare two samples of data can be viewed as a non-parametric approach to comparing their underlying distributions. The research results plotted on the Q-Q Plots are as shown in Figure 4.3 to 4.5 below.

Figure 4.3: Detrended normal Q-Q Plot of macroeconomic factors

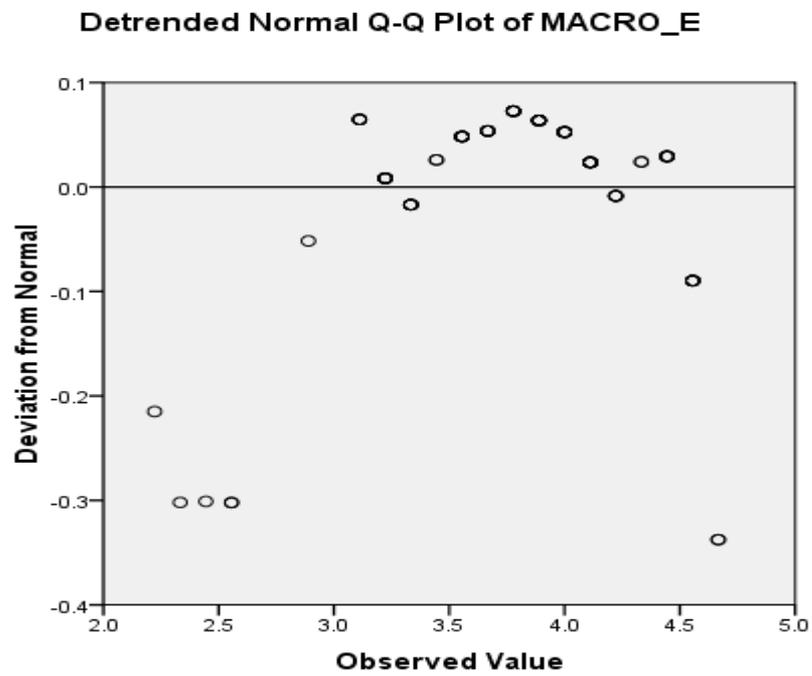


Figure 4.4: Detrended normal Q-Q Plot of bank specific factors

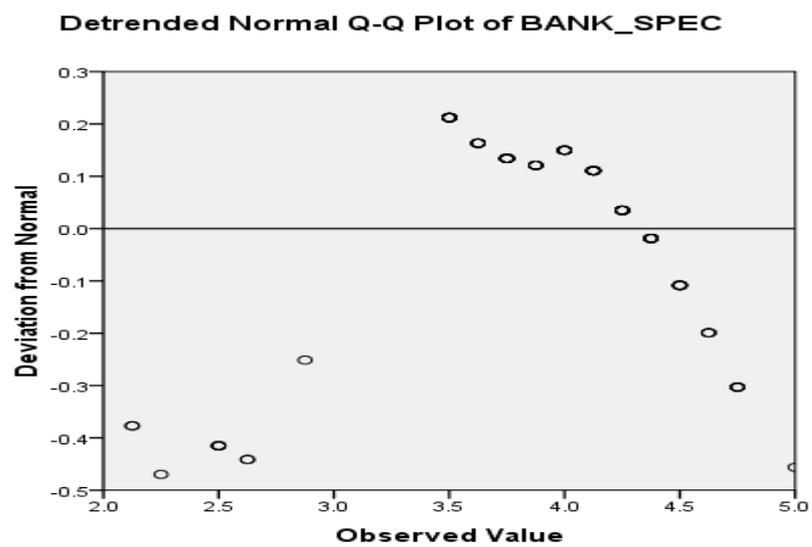
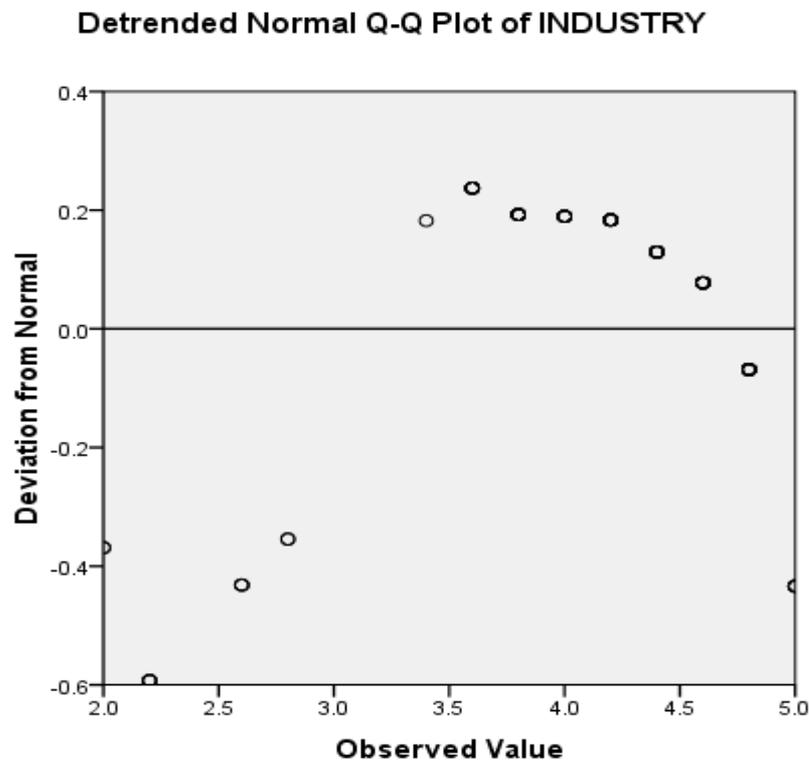


Figure 4.5: Detrended normal Q-Q Plot of industry specific factors



4.6 CORRELATION ANALYSIS

The Spearman Rank correlation was conducted in order to test the hypothesis. Correlation analysis was conducted to determine how the variables were correlating with each other and also how they were each in turn correlating with the dependent variable, credit risk. The results from the correlations were examined using the Spearman's rank correlation "rho" because the sample data was non-parametric. The Spearman's correlation is a non-parametric rank-based statistical test for unevenly distributed data (Zammit, 2010). The Spearman's correlation was therefore used because the sample data was ranked and not normally distributed. The correlation analysis also further showed the direction of strength of the relationship. Table 4.8 show the results of the correlation coefficients of the variables that were under study.

Table 4.8: Correlation analysis

Correlations

			MACRO ECONOMIC	CREDIT RISK	BANKSPEC IFIC	INDUSTRY FACTORS
Spearman's rho	MACROECO NOMIC	Correlation Coefficient	1.000			
		Sig. (2- tailed)	.			
		N	91			
	CREDIT_RIS K	Correlation Coefficient	.881**	1.000		
	Sig. (2- tailed)	.000	.			
	N	91	91			
	BANK_SPEC	Correlation Coefficient	.479**	.650**	1.000	
		Sig. (2- tailed)	.000	.000	.	
		N	91	91	91	
	INDUSTRY	Correlation Coefficient	.490**	.601**	.728**	1.000
		Sig. (2- tailed)	.000	.000	.000	.
		N	91	91	91	91

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

The correlation takes a range from -1.0 for a perfect negative relationship to +1.0 for a positive relationship (Kanbur 2009).

Interpretation of the results of the correlation analysis between the independent and dependent variable is as described below:

4.6.1 Macro economic factors and credit risk

According to the results in Table 4.8 it was observed that there is a statistically significant and strong positive relationship ($r= 0.881^{**}$, $p<0.01$) between the macro economic factors and credit risk in the Zimbabwe banking sector. This means that an improvement in the macro economic factors will improve the credit risk in the banking sector in a positive way. The performance of an economy was indicated to have a significant impact on credit risk. Where the macroeconomic factors are adverse, the credit risk performance would also be affected adversely.

4.6.2 Bank specific factors and credit risk

The results in the table 4.8 indicate a statistically significant, positive and strong relationship between the bank specific factors and credit risk ($r=0.650^{**}$; $p<0.01$). These results imply that a positive improvement in the bank specific factors will result in a positive improvement of credit risk. The strength of the relationship between bank specific factors and credit risk was however not as to the level of that of macroeconomic factors and credit risk.

4.6.3 Industry factors and credit risk

The results in table 4.8 reflect there is a significant positive relationship between the industry factors and credit risk ($r=0.601^{**}$; $p<0.01$), though the strength of the relationship of this variable was the lowest compared with the other two variables, macroeconomic factors and bank specific factors.

The results of the correlation analysis of the three independent variables with the dependent variable confirm the hypothesis of this study which states that adverse external and internal factors result in rising credit risk in the banking sector of which the opposite also holds true to say that favourable or improvement in external and internal factors would result in improvement of credit risk levels in the Zimbabwe banking sector.

4.7 REGRESSION ANALYSIS

Additional tests to determine the causal-effect relationship was carried out using regression analysis. Regression is considered to be more rigorous and a robust test compared to the correlation coefficient analysis which only determines whether variables are related. The researcher carried out a regression test to determine if the independent variables of macro economic factors, bank specific factors and industry factors can be predictors of credit risk level in the Zimbabwe banking sector. Table 4.9 below depicts the regression model.

Table 4.9: Model summary

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.928 ^a	.862	.857	.18817

a. Predictors: (Constant), INDUSTRY, BANK_SPEC, MACRO_E

Results shown in table 4.9 above showed that 86.2% of credit risk in the Zimbabwe banking sector is influenced by the independent variables of macroeconomic factors, bank specific factors and industry factors.

Table 4.10: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	19.222	3	6.407	180.946	.000 ^a
	Residual	3.081	87	.035		
	Total	22.302	90			

a. Predictors: (Constant), INDUSTRY, BANK_SPEC, MACRO_E

The independent variables of macroeconomic factors, bank specific factors and industry factors proved that they were predictors of credit risk. As depicted in Table 4.10 above, the model was considered a fit or significant in predicting credit risk as evidenced by value F (180.95) and p-value of 0.0000.

Table 4.11 below shows the individual contribution of each factor in predicting credit risk

Table 4.11: Regression Coefficients

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	.450	.165		2.737	.008
MACRO_E	.748	.041	.819	18.344	.000
BANK_SPEC	.161	.035	.202	4.554	.000
INDUSTRY	.030	.030	.046	.999	.321

a. Dependent Variable: CREDIT_RISK

The beta coefficients revealed that the macro economic factors have more power and high significance in explaining the contribution of the factors to credit risk in the Zimbabwe banking sector ($\beta = 0.891$; $p < 0.01$). The bank specific factors also have power in explaining the contribution of the factors to credit risk in the Zimbabwe banking sector ($\beta = 0.202$; $p < 0.01$). Industry factors on the other hand had low explanatory power of credit risk in the Zimbabwe banking sector with $\beta = 0.046$ and low significance level.

4.8 KRUSKAL-WALLIS TEST

The Kruskal-Wallis H test is a rank based non-parametric test that can be used to ascertain if there are statistically significant differences between independent variables on a continuous or ordinal dependent variable. In this study, the Kruskal-Wallis test was conducted on three variables; number of years held in position by respondent, level of education of the respondent and the level of understanding of credit risk issues. This was done to find out if there were any statistical significant differences in relation to level of credit risk as measured by non-performing loans ratio, level of loan loss provision and bad debts write offs. The results of the test are as depicted in the tables below:

4.8.1 Number of years held in position

Table 4.12: Number of years held in position test statistic

Ranks

	Number of years in position	N	Mean Rank
NPL	1 - < 3	11	25.00
	3 - < 7	26	51.46
	7 - < 10	24	42.96
	> = 10	30	51.40
	Total	91	
PROVISIONS	1 - < 3	11	27.32
	3 - < 7	26	49.15
	7 - < 10	24	40.08
	> = 10	30	54.85
	Total	91	
BAD_DEBTS	1 - < 3	11	31.68
	3 - < 7	26	55.90
	7 - < 10	24	38.38
	> = 10	30	48.77
	Total	91	

Test Statistics^{a,b}

	NPL	PROVISIONS	BAD_DEBTS
Chi-Square	9.882	10.849	9.369
df	3	3	3
Asymp. Sig.	.020	.013	.025

a. Kruskal Wallis Test

b. Grouping Variable: Number of years in position

The significance level of $p < 0.05$, reflect the link between years of experience in a position of respondents and their perception on credit risk issues as measured by non-performing loans ratio, level of loan loss provision and bad debts write offs. This is quite reliably true as with more experience in credit related environment, an individual tends to appreciate the aspect much more from the experience gained in the field.

4.8.2 Level of education

Table 4.13: Level of education test statistic

Ranks

	Highest level of education	N	Mean Rank
NPL	Diploma	2	68.00
	Degree	39	37.40
	Masters	42	53.81
	Doctorate	8	41.44
	Total	91	
PROVISIONS	Diploma	2	41.75
	Degree	39	42.64
	Masters	42	46.79
	Doctorate	8	59.31
	Total	91	
BAD_DEBTS	Diploma	2	30.50
	Degree	39	47.53
	Masters	42	47.33
	Doctorate	8	35.44
	Total	91	

Test Statistics^{a,b}

	NPL	PROVISIONS	BAD_DEBTS
Chi-Square	9.674	2.858	2.242
df	3	3	3
Asymp. Sig.	.022	.414	.524

a. Kruskal Wallis Test

b. Grouping Variable: Highest level of education

Table 4.13 reveals that the Chi-Square test was statistically insignificant on provisions and bad debts though statistical significance was evident on non-performing loans ratio where $p=0.022$ and below 0.05. The other categories had a p statistic that was greater than 0.05. In

interpreting these results, it shows that the level of education per ser may not necessarily have a link with perceptions on credit risk. A general insight on non-performing loans ratio can however be expected as educated people generally have an idea on economy current affairs where they can pick up issue on what is being reported about non-performing loans ratio. However to have a deep insight on issues to do with loan loss provisioning and bad debts write offs as it relates to banking sector credit risk will now require intricate knowledge of the aspects of credit risk which is a specialised field.

4.8.3 Understanding of credit risk

Table 4.14:Level of understanding of credit risk test statistic

		Ranks	
	Understanding of credit risk	N	Mean Rank
NPL	Satisfactory	4	31.50
	Good	45	42.24
	Excellent	42	51.40
	Total	91	
PROVISIONS	Satisfactory	4	42.50
	Good	45	39.10
	Excellent	42	53.73
	Total	91	
BAD_DEBTS	Satisfactory	4	56.50
	Good	45	43.39
	Excellent	42	47.80
	Total	91	

	NPL	PROVISIONS	BAD_DEBTS
Chi-Square	3.972	6.995	1.287
df	2	2	2
Asymp. Sig.	.137	.030	.525

a. Kruskal Wallis Test

b. Grouping Variable: Understanding of credit risk

A test on the rating of respondents understanding of credit risk was not statistically significant for non-performing loans ratio and bad debts write with statistical significance on loan loss provisioning where $p=0.030$ and below 0.05.

4.9 DISCUSSION OF RESULTS

4.9.1 Findings in relation to literature

The main thrust of the research was to establish cause and effect relationship between independent variables picked from literature review and credit risk. The study also had an objective to establish which of the independent variables had more explanatory power on the rising credit in the Zimbabwe banking sector. The independent variables considered in the study were macro-economic factors, bank specific factors and industry factors.

4.9.2 The impact of external factors on credit risk in the Zimbabwe banking sector

According to the findings above it was revealed that unemployment rate, interest rates and gross domestic product growth rate were the most contributing factors within the macro economic factors category. These findings were supported by Derbali (2011) who pointed out that gross domestic product growth rate is considered a key macro determinant of credit risk in banks. During economic booms, income levels are high and portfolio at risk is minimal. The findings were also inline with Vazquez, Tabak and Sauto (2012) who contends that there is an inverse relationship between gross domestic product and non-performing loans.

The results also support findings by Llewellyn (2002) who identified the main sources of uncertainty in banks credit portfolio to be the macroeconomic factors to a greater extent. In his study, economic growth rate measured by gross domestic product was identified as a key driver of credit risk and it was postulated that adverse trend in economic growth increases level of credit risk. Interest rates and high unemployment rates were also concluded to influence level of credit risk in a banking sector. The trend of stock market index was also another key factor identified to indicate to a greater how well the economy is performing to mitigate on credit risk.

The results of this study also support findings by Aver (2008) who conducted his research of credit risk factors affecting Slovenian banking system. The research results established that certain macro-economic factors exert notable influence on credit risk. Results of the study confirm that unemployment rate, interest rates and stock market index were critical in influencing credit risk in Slovenian banking system.

4.9.3 The impact of bank specific factors on credit risk in the Zimbabwe banking sector

On the internal factors Kithinji, (2010) pointed out that the main source of micro economic factors that leads to credit risk include limited institutional capacity, inappropriate credit policies, volatile interest rates and poor management. This was confirmed by this research as the most contributing factors under bank specific factors were level of management efficiency, risk management culture, corporate governance and repayment. Mwaurah (2013) pointed that commercial banks crisis arises mostly due to inadequate management capabilities and that competency and management responsibility play a crucial role in deciding the risk appetite of a financial institution.

According to the survey which was conducted by Das and Ghosh (2007) it was also noted in the study of the Indian banks that, although credit risk was influenced by macro-economic variables, the quality of loans was significantly determined by the single bank individual variables. This was concluded after realizing that despite controlling the macroeconomic factors, credit risk was still highly affected by micro factors.

4.9.4 The impact of the banking industry specific factors on credit risk in the Zimbabwe banking sector

Though findings from this research indicated that industry factors are part of the factors influencing credit risk, the significance of these factors on the matter on hand was not substantial. The other two factors; macroeconomic factors and bank specific exerted more impact on the credit risk levels in the Zimbabwe banking sector.

4.10 HYPOTHESIS TESTING

The model for credit risk was found to be as follows:

$$\text{Credit Risk} = \beta_0 + 0.819 \text{Macro Economic} + 0.202 \text{Bank Specific} + 0.046 \text{Industry Specific}.$$

It is clear from the table above that the coefficient for macro economic in the model above is the most significant and followed by bank specific factors with industry factors having less significance. This leads to the conclusion that macro economic and bank specific factors have a significant effect on credit risk in Zimbabwe banking sector while the banking industry factors exert less influence on credit risk in the Zimbabwe banking sector.

The hypothesis:

H0: Credit risk is influenced by various adverse external and internal factors.

H1: Credit risk is not influenced by various adverse external and internal factors.

It is therefore accepted and concluded that credit risk in the Zimbabwe banking sector is influenced by various adverse external and internal factors as justified by macro-economic factors and bank specific factors impact obtained from the results of the study. The external factors are represented by the macroeconomic factors while the internal factors are represented by bank specific factors. The hypothesis H0 is therefore accepted.

4.11 CHAPTER SUMMARY

This Chapter presented results and the various analysis conducted to test the hypotheses. Of the target sample of 130 respondents, 91 agreed to participate in this study that sought to establish the influence of external and internal factors on credit risk in the Zimbabwe banking sector. The variables namely macroeconomic factors, bank specific factors and industry factors were assessed to determine their impact on credit risk in the Zimbabwe banking sector. The results showed that independent variables of macroeconomic factors, bank specific factors and industry factors account for 86.2% influence on credit risk in the banking sector. The next chapter concludes the study, gives recommendations and suggests areas for further study.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

5.1 INTRODUCTION

This chapter presents conclusions and recommendations of the study. The research limitations along with contributions of this study are also discussed. The chapter will also suggest areas for further study identified by this research.

This research analysed the impact of external and internal factors on credit risk in the Zimbabwe banking sector.

The data for this study were based on the questionnaires administered to respondents from the banking institutions in Zimbabwe. The statistical method used to test the hypotheses was correlation and regression analysis. After analysis and review of existing literature and different theoretical perspectives, the researcher developed a theoretical framework on credit risk and developed a hypothesis.

This research on credit risk was motivated by challenges being faced in the banking sector where the rise in credit risk has resulted in the demise of some banking institutions. The closure of banks has had a negative impact on the economy as a whole and also the public confidence in formal banking system has been affected due to experiences that the customers have gone through when banks close. The rising credit risk has negatively impacted growth prospects of the Zimbabwe economy as businesses have faced difficulties in accessing credit to fund operation and for those that do manage to access credit financing; the borrowing cost has been prohibitive. The analysis of factors leading to high credit risk in the Zimbabwe banking sector was found to be important in providing guidance on how to deal with this matter that has a significant impact on both the Zimbabwe banking sector and the Zimbabwean economy as a whole.

Conclusions and recommendations from this study are detailed below.

5.2 CONCLUSIONS

The results from this study support the intuition from theoretical framework and empirical evidence and that credit risk in banking institutions is influenced by macroeconomic and bank specific factors. The macroeconomic variables were found to have more influence on credit risk. The insight obtained from this finding is that this may be so because the macro economics of a country sets the tone for the business environment in general. A prospering economy is considered to have a favourable business operating environment and this creates a foundation for the success of all the other industries within the economy.

Bank specific factors were also found to have significance on credit risk in the Zimbabwe banking sector. This supports the intuition that well managed institutions create a platform for sustainable business success.

This concludes that credit risk in the Zimbabwe banking sector is influenced by gross domestic product, interest rates, unemployment, stock performance and management efficiency when all working simultaneously.

The following conclusions were drawn against each of the objectives that were highlighted in Chapter One.

Objective 1: To determine the impact of external factors on credit risk in the Zimbabwe banking sector.

The study concludes that the prevailing credit risk is being affected by the macro economic factors.

The macro-economic factors that were considered in this study are unemployment rate, decreasing gross domestic product, high interest rates, and low inflation rate, decreasing stock market index/performance, low income levels / GDPPC, foreign currency exchange rates, high government debt levels and huge balance of payment deficit.

This study concludes that in Zimbabwe, the most contributing macro-economic factors are unemployment, interest rate, stock market index and gross domestic product. It was also

concluded inflation rate and exchange rate are not significantly contributing to the current performance of credit risk in the Zimbabwe banking sector.

Objective 2: To determine the impact of bank specific factors on credit risk in the Zimbabwe banking sector.

The study established that bank specific factors as affecting credit risk within their institutions.

The bank specific factors that were considered in the study include management efficiency, bank risk management culture, bank size, corporate governance practices, bank ownership structure, credit growth/ market share drive, loan portfolio management practises, financial performance pressure on management/ targets and current short term repayment period.

This study concluded that the most contributing bank specific factors to credit risk in Zimbabwean banking sector were management efficiency, risk management culture, corporate governance and repayment period. The study also concludes that in Zimbabwe bank size and bank ownership are not contributing much in affecting the current performance of credit risk.

Objective 3: To determine the impact of banking industry specific factors on credit risk in the Zimbabwe banking sector.

The study found and concluded that the industry specific factors do affect credit risk in Zimbabwe but rather to a lesser extent than bank specific factors and macroeconomic factors. While the factors considered under this objective were considered important, they were found to have less significance in explaining credit risk in the Zimbabwe banking sector.

It was found and concluded that the level of supervision and monitoring of banks by the RBZ, the absence of a well-established credit reference bureau, the level of competition in the banking, information sharing among banks and lack of imposition of personal liability to bank directors guilty of abuse of office do contribute to credit risk but rather to a lesser extent and were not of significance.

5.3 MANAGERIAL RECOMMENDATIONS

The following are some managerial recommendations from the study;

5.3.1 Recommendations on external factors influencing credit risk

The study has shown that the external factors/ macroeconomic variables exert significant influence on credit risk in the Zimbabwe banking sector. This finding is key for policy makers to take cognisance of this matter. In making efforts to manage credit risk in the banking sector, it must be observed that the banking industry is part of the larger economy and as such, issues of credit risk cannot be tackled in isolation of the greater issues of the economy. The interrelatedness of the economy performance and credit risk points that it is important for the policy makers to address the fundamentals of the economy so as to create an environment that is conducive for business prosperity.

5.3.2 Recommendations on bank specific factors influencing credit risk

It has been established from the study that management efficiency is vital in the operation of banking institutions. Management efficiency incorporates various aspects to include effectiveness of a bank's credit policy, management skills, the vetting of prospective borrowers, portfolio management and risk management among others. It is therefore important for central banks to tighten the governance structures in the banking industry to promote compliance, accountability and transparency to enhance a strong and sound banking system.

The significance of bank specific factors also highlights the need for banking institutions to take staff training on the various aspects of banking operations seriously. Due to the difficulties in the operating environment, institutions have been forced to implement drastic cost cutting measures and in this light, there has been a general tendency to cut on staff cost which include staff training. There is need for a mind-set shift in considering training as a cost. Instead, training must be considered as an investment in human capital that is essential in contributing to the success of the organisation. It is therefore recommended that focussed training be done for bank employees to enhance their management capabilities. The addressing of management capabilities will have a positive effect on the issues to do with

crafting sound credit policies, enhanced analytical skills in vetting prospective borrowers. It is also recommended that due to complexity of transaction in the environment, training be also extended to secondment of staff to advanced techniques in developed countries. With globalisation, boundaries in trade have been removed. Exposure to advanced nation expertise would also assist in minimising the skill gap between the advanced world and developing world which would enable the parties to have almost an equal edge when dealing on transaction and with parties beyond local borders.

5.3.3 Recommendations on banking industry specific factors influencing credit risk

Though these factors may have been concluded to have a lower significance compared to the other two factors that were considered in this study, it would be negligent for them not to be given due attention. The banking industry factors that were considered in this study such as existence or establishment of a credit reference bureau, imposition of personal liability on directors found guilty of office abuse, efficient supervision of banking institutions by the central bank tend to instil discipline in the market. This discipline is bound to bring responsible behaviour by all the players in the market i.e. borrowers, banking institution, directors of banking institutions. It is therefore recommended that the banking industry factors be taken into consideration and the regulatory authorities put appropriate measures to monitor and implement the necessary regulations.

5.4 LIMITATIONS

Although this study has achieved its objectives, there were some limitations that were faced during the research. The major limitation was the limited time frame within which the researcher had to conduct the research. In addition, the researcher faced difficulties in obtaining questionnaire responses from some other respondents that had been identified for the research.

The second limitation is that the study population was limited to the Harare metropolitan province only. Respondents from other cities were not included in the sample. While it is acknowledged that Harare is the business hub for the Zimbabwe economy, there is a possibility there could be salient features in other provinces that could have enriched the data of this study.

The third limitation is that the political environment which has major influence on macroeconomic variables was not adequately represented in the model. This is due to the fact that the macro economic variables of developing economies, as they operate on markets forces, they are highly affected by political factors.

5.5 FUTURE RESEARCH DIRECTIONS

This study was restricted to banking institutions only. Credit risk is a phenomenon that affects all credit granting organisations and this includes non-banking financial institutions such as retail chain stores who sell their products on credit, manufacturing companies among others. Other financial institutions such as micro finance institutions were also not included in the sample. It is this researcher's view that the study should be extended to these other credit granting organisations. Considering the current high informalisation of the Zimbabwe economy, the informal sector find it much easier to obtain credit from micro finance institutions than commercial banks. The researcher therefore recommends that future studies also include micro finance institutions in the sample.

Secondly, the study was based on a snap survey (cross sectional study). The researcher recommends that a longitudinal study be undertaken to ascertain if the pattern remains the same as the economic cycles vary over time.

Lastly, in developing economies such as Zimbabwe, political influence affects macroeconomic variables to a larger extent. Macroeconomic variables were concluded to be the main determinants of credits risk in this study. It is on this account that further research may incorporate adjustment of political influence to establish the extent to which macroeconomic variables affects credit risk devoid of political influences.

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APPENDIX I: RESEARCH INTRODUCTORY LETTER



15 June 2015

Dear Sir/Madam

RE: MASTERS IN BUSINESS ADMINISTRATION RESEARCH QUESTIONNAIRE

My name is Agnes Kanhukamwe, a Masters of Business Administration student with the University of Zimbabwe at the Graduate School of Management. As part of the degree programme requirements, I am conducting a research on a topic entitled: **An analysis of external and internal factors leading to rising credit risk in the Zimbabwe Banking Sector.**

I kindly request your valuable contribution through completion of the attached dissertation questionnaire. The research is purely for academic purposes. The results will therefore be treated with high level of confidentiality and professionalism. After completion, please return the completed questionnaire by email to *agnes.kanhukamwe@fbc.co.zw* or contact me directly on 0772 100 022 for physical collection of the completed questionnaire.

Your cooperation will be greatly appreciated.

Yours faithfully,

Agnes Kanhukamwe
MBA Graduate Student

APPENDIX II: RESEARCH QUESTIONNAIRE

Research Topic: An analysis of external and internal factors leading to rising credit risk in the Zimbabwe Banking Sector.

Please indicate your answer by putting a tick/ x in the box.

Section A – This section seeks to collect Background Information relevant to the study

A1. Please tick to indicate your job position from categories below?

- (i) Senior management
- (ii) Lending/Branch manager
- (iii) Credit manager/analyst

A2. Number of years held in that position

Less than 1 year 1 – 3 year +3 – 7 years + 7 – 10 years 10 years +

A3. Highest Education Level

Diploma Degree Masters Doctorate Other(*specify*)

A4. How do you rate your level of understanding of credit risk issues in the Zimbabwe Banking Sector?

Bad Fair Satisfactory Good Excellent

Section B – This section seeks to collect information on external factors influencing credit risk in the Zimbabwe banking sector

Please indicate the extent to which you agree that the prevailing external/ macroeconomic factors listed below have contributed to the rising credit risk in the Zimbabwe banking sector on a scale of 1-5 where:					
Strongly disagree =1 Disagree=2 Moderate=3 Agree=4 Strongly agree=5					
	1	2	3	4	5
B1 Unemployment rate					
B2 Decreasing gross domestic product					
B3 High interest rates					
B4 Low inflation rate					
B5 Decreasing stock market index/performance**					
B6 Low income levels/ GDPPC					
B7 Foreign currency exchange rates					
B8 High government debt levels					
B9 Huge balance of payment deficit					

***Measure of listed companies performance*

Section C – This section seeks to collect information on internal factors influencing credit risk

Please indicate the extent to which you agree that the bank specific factors listed below have contributed to the rising credit risk in the Zimbabwe banking sector on a scale of 1-5 where:					
Strongly disagree =1 Disagree=2 Moderate=3 Agree=4 Strongly agree=5					
	1	2	3	4	5
C1 Management efficiency					
C2 Bank risk management culture					

C3 Bank size					
C4 Corporate governance practices					
C5 Bank ownership structure					
C6 Credit growth/ market share drive					
C7 Financial performance pressure on management/ targets					
C8 Current short term repayment period (loan tenures below three years in most cases)					

Section D – This section seeks to collect information on banking industry specific factors influencing credit risk

<p>Please indicate the extent to which you agree to statements on the “banking industry specific factors” below in relation to the rising credit risk in the Zimbabwe banking sector on a scale of 1-5 where:</p> <p>Strongly disagree =1 Disagree=2 Moderate=3 Agree=4 Strongly agree=5</p>					
	1	2	3	4	5
D1 The level of supervision and monitoring of banks by the RBZ has impact on credit risk level					
D2 The absence of a well-established credit reference bureau has contributed to rising credit risk					
D3 The level of competition in the banking sector has influenced credit risk					
D4 Information sharing among banks enables reduction of credit risk in the banking sector					
D5 Lack of imposition of personal liability to bank directors guilty of abuse of office impacts on credit risk					

Section E to F– These sections seeks to collect information on credit risk performance as measured by Non-performing loans ratio, Loan loss provision and Bad debt write off.

Please indicate the extent to which you agree to statements in relation to credit risk measure of non-performing loans ratio on a scale of 1-5 where:					
Strongly disagree =1 Disagree=2 Moderate=3 Agree=4 Strongly agree=5					
	1	2	3	4	5
E1 Non performing loans ratio is the key measure of credit risk					
E2 The level of non-performing loans ratio for the Zimbabwe banking sector is high					
E3 A high non-performing loans ratio trend generally result in an increased risk premium charge on interest rates					
E4A high non-performing loans ratio creates a negative perception on the soundness of financial institutions					
E5 The central bank and the banking sector consider the issue of non-performing loans to be a high risk issue					
E6 The establishment of a special purpose vehicle “Zamco” will improve non-performing loans ratio in the Zimbabwe banking sector					

Please indicate the extent to which you agree to statements in relation to credit risk measure of loan loss provisions on a scale of 1-5 where:					
Strongly disagree =1 Disagree=2 Moderate=3 Agree=4 Strongly agree=5					
	1	2	3	4	5
F1 Rising credit risk results in increase in loan loss provisions on banks financial statements					

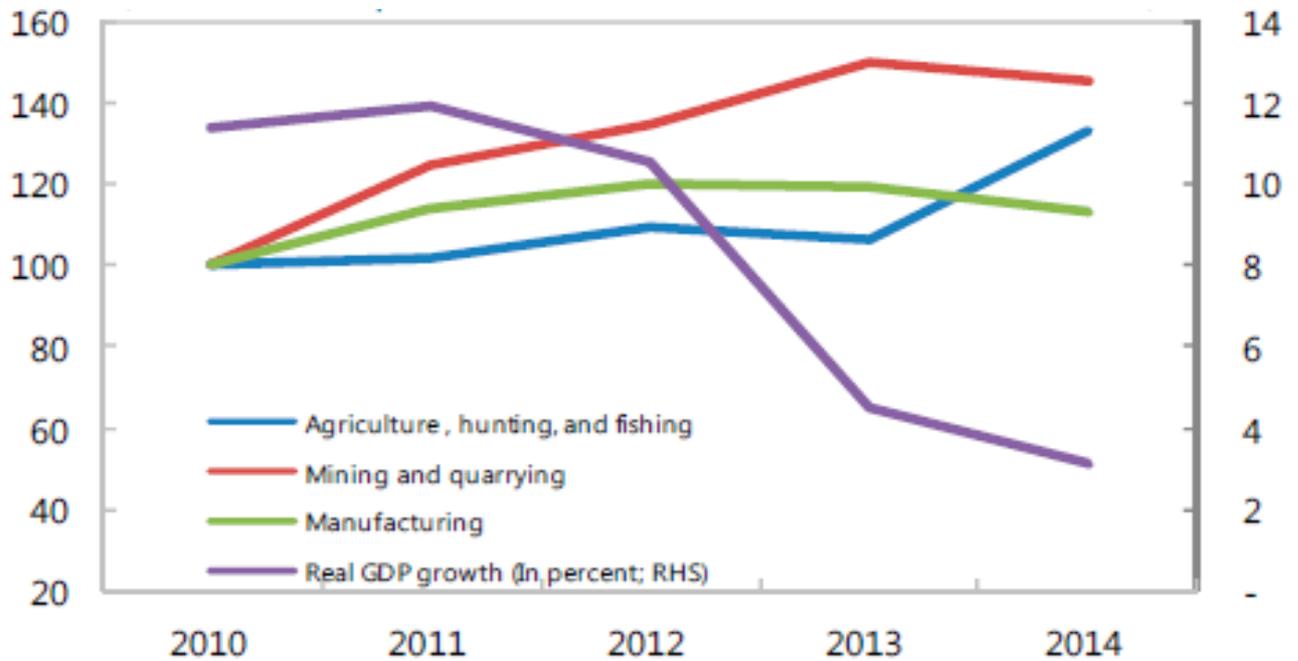
F2 High loan loss provision negatively affects the profitability of a banking institution					
F3 Adequate loan loss provisions cushions a bank from negative shocks of credit risk					

<p>Please indicate the extent to which you agree to statements in relation to credit risk measure of bad debts write off on a scale of 1-5 where:</p> <p>Strongly disagree =1 Disagree=2 Moderate=3 Agree=4 Strongly agree=5</p>					
	1	2	3	4	5
G1 Bad debts write off is an indicator of poor performing loans					
G2 There has been an increase in bad debts write offs in the banking sector from 2009-2014					
G3 The rate of recovery of bad debts written off has been low in the banking sector					
G4 The writing off of bad debts negatively affect the capital position of a banking institution					

THANK YOU FOR YOUR PARTICIPATION

APPENDIX III: GDP TREND 2010-2014

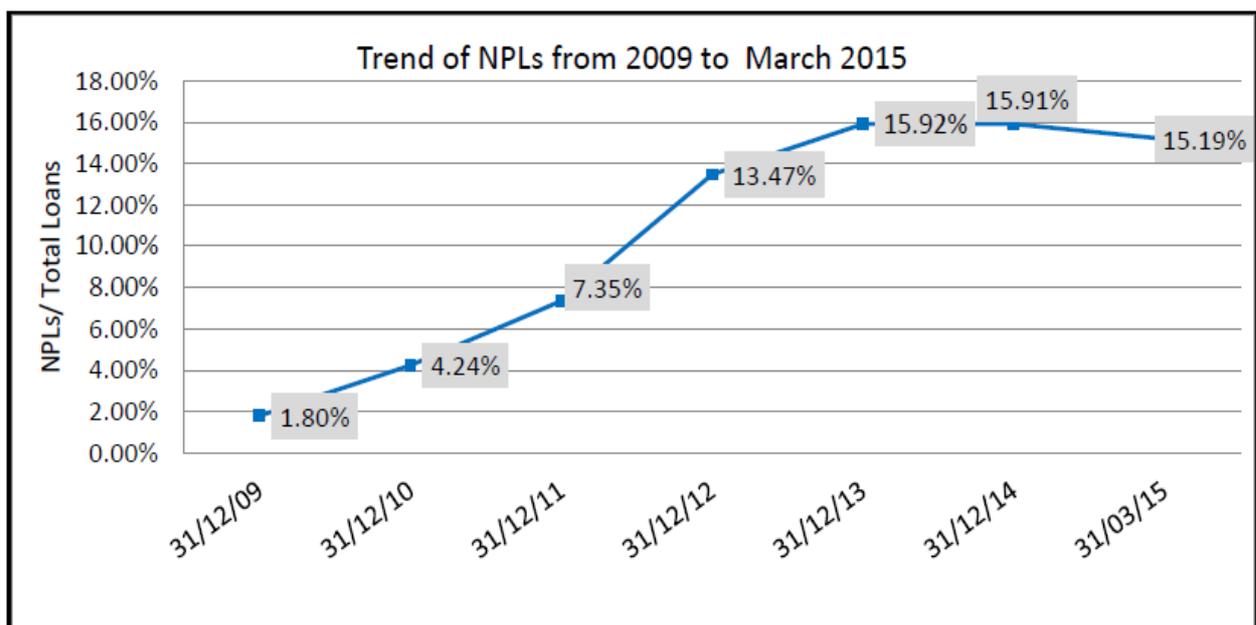
Output Growth: 2010-2014



Source: Zimbabwean Authorities and IMF Estimates

APPENDIX IV: NON PERFORMING LOANS RATIO TREND 2009-2015

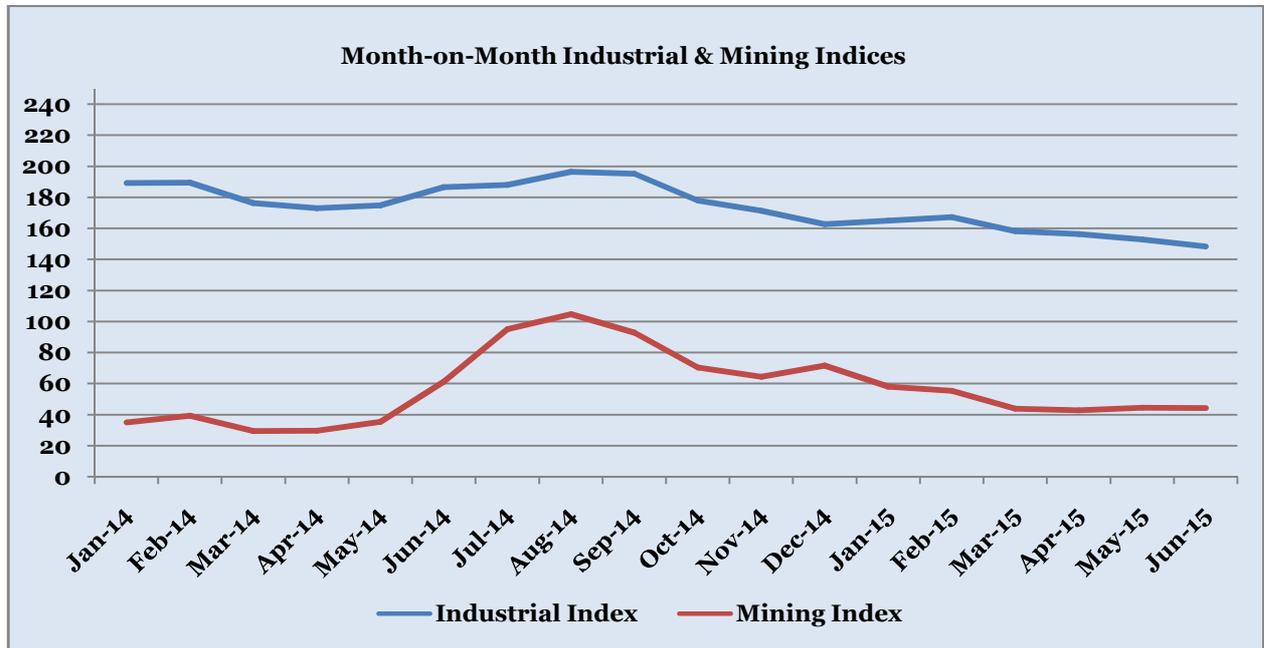
Trend of Non-performing Loans: December 2009 - March 2015



Source: RBZ Banking Sector Report for Quarter Ended 31 March 2015

APPENDIX V: STOCK MARKET INDICIES TREND

Month-on-Month Industrial & Mining Indices: January 2014 – June 2015



Source: ZSE & FBC Securities Ltd