AN INVESTIGATION INTO THE IMPACT OF DEBT FINANCING ON THE VALUE OF SMALL MANUFACTURING FIRMS (SMFs) IN BULAWAYO, ZIMBABWE

BY

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ABSTRACT

The study focused on the impact of debt on the value of small manufacturing firms. The study based its arguments on Modigliani and Miller's theory of capital structure, postulated in 1958 and corrected in 1963. The primary aim of the study was to determine if there was any benefit gained by small manufacturing firms (SMFs) as a result of using debt as a source of funding. It also aimed at determining if size of the firm and the products it manufactured had a negative effect on the accessibility of debt to small firms. The study hypothesised that there was a negative relationship between debt and profitability. A negative relationship was also hypothesised between firm size, product manufactured and accessibility of debt. The results of this study indicated a negative relationship between debt and value of a firm as well as product manufactured and debt accessibility. A positive relationship prevailed between firm size and accessibility to debt. The researcher therefore, recommended that SMFs avoid the use of debt if possible. If not, they should pool their resources together so that they can have collateral and also focus on growth as size was found to be positively related to debt accessibility. The government should help by creating a secondary share exchange, conduct awareness campaigns, educate and train small business owners, provide long-term funding, have tax incentives, create a fair business environment and promote youth development programmes.

DECLARATION

I, the undersigned, Obert Matarirano, hereby declare that the dissertation is my own original work, and that it has not been submitted, and will not be presented at any other University for a similar or any other degree award.

Signature: ----------

Date: 28-03-2008 ----------

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DEDICATION

I dedicate this dissertation to my family and friends who supported me throughout the period of my studies. Though they look up to me for some financial assistance, they were patient enough and allowed me to pursue my studies. My best friends Sylvester Machiridza and Plan, I love you.

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CHAPTER ONE

INTRODUCTION TO THE STUDY

1.1 INTRODUCTION

The research at hand relates to the investigation of the effects of debt financing on the value of small manufacturing firms (SMFs) in Bulawayo, Zimbabwe. The research is based on the theory of capital structure put forward by Franco Modigliani and Merton Miller (MM) in 1963. The theory states that the capital structure that a firm chooses does not affect its value, that is, whether the firm uses more of debt than equity or either 100% debt or 100% equity, the value will not be affected except for the deductibility of interest payments when calculating taxable income. The theory of Modigliani and Miller (refer to sec 5.2, p. 99) assumes that a firm's value will be maximised when it employs more of debt in its capital structure. When debt is used in the capital structure, the average cost of capital is reduced and profitability enhanced (Modigliani & Miller, 1963: 434). Section 1.2 below gives a view of the background of the study.

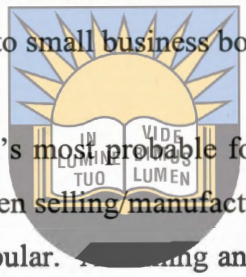
1.2 BACKGROUND TO THE STUDY

Empirical studies on the impact of debt on the profitability of firms using the MM theory on capital structure have primarily concentrated on large firms in developed countries. Examples of researchers who conducted their research in developed countries include Rajan & Zingales, (1995); Wald, (1999) and Raj & Sutthisit, (2003). As Raj & Sutthisit (2003) point out, the firm data used came from the Global Vantage database which only follows companies that are publicly traded on a country's major stock markets. This shows that these types of researches were carried out on large firms. Furthermore, the economies in which the research were done are well developed. This scenario differs from economies of developing countries such as Zimbabwe which is still in its growth phase. The interest rates of these euro zone economies are approximately 3% (Anon., 2006a) compared to the Zimbabwean interest rate which was 300.00% in August, 2006 (RBZ: 2006). The annual interest rates of the United Kingdom and United States of America were 7% and 8% respectively in 1998 and the interest rate for Zimbabwe was at 42% in the same year (Carson: 1999). There was no big shift in interest rates of the two developed economies but there was a major increase in Zimbabwe's rates, from 42% to 300% between 1998 and 2006. The reason for concentrating on interest rates is that they form a crucial part in the cost of debt, consequently affecting the benefits of debt.

Besides the impact of debt on profitability of an SMF, the study also thrives at identifying the effects of firm size and product manufactured on debt accessibility. These objectives were found

necessary for determination of the similarities between factors affecting debt accessibility for small firms in other continents such as Europe, America and Asia and those in Africa. The majority of previous studies done on firm size and debt accessibility confirmed a positive relationship. Researchers of such studies include among others Raj and Sutthisit (2003), Kumar and Francisco (2005), Biggs and Srivastava (1996) and Schiffer and Weder (2001). This study aims at testing this result and see if it applies to Zimbabwe's small firms.

It should be noted here that literature on product manufactured and debt accessibility is rare, prompting for researchers to pioneer studies of this nature. A single article found by the researcher on product manufactured and debt accessibility by Clark, Lan, Taylor and Leung (1998) argues that terms of lending to small business borrowers vary by product manufactured.



It is just reasonable to argue that it's most probable for any financier to look favourably at the track record of any SMF that has been selling/manufacturing a popular product in large quantities rather than a product that is not popular. [illegible]ing an SMF has a contract for exporting for the next five years, the present value of the future cash flow emanating from these contracts should justify a loan of some kind. It is likely that financiers extend debt finance to small firms that manufacture products that have a ready market, domestically or abroad.

The manufacturing sector was selected for this study because the sector is viewed as the leading edge of modernisation and job creation (Tybout, 2000:11). Therefore, because of the importance of the manufacturing sector and the limitation of research done on SMFs and debt usage in Zimbabwe, there is a need for studies in this area. This study was furthermore prompted by the differences in characteristics of areas of study and sizes of firms. Several large manufacturing firms are closing down in Zimbabwe and therefore, attention should be primarily aimed at SMFs to help in the stimulation and sustainability of economic growth in Zimbabwe. Researchers also primarily concentrate on larger firms that have different characteristics from small firms. Some small firms, unlike larger ones, lack collateral, have an unknown financial background and lack economies of scale. In addition, they pay high interest rates, interest premiums and have high termination costs (Kochhar & Hitt, 1998:606). This therefore, might render the MM theory only applicable to large firms.

Dermirguc-Kunt & Maksimovic (2002) found in their research that differences in financial, legal, investor protection and institutional environments are very important to financial decisions thus, capital structure determinants can be expected to differ across countries. Since such differences are important for capital structure, international studies on capital structure are likely to give different results. Therefore, there is a need to test the capital structure in Zimbabwe.

The study area was chosen as it leads to an understanding of whether the use of debt can increase the value of SMFs in Zimbabwe or not. As previously stated, the majority of studies carried out on MM theory have primarily concentrated on applying the theory to large firms in developed countries. There are very few studies which were done in Zimbabwe on debt financing to SMFs. Some of the researchers who conducted these studies include Kapoor, Mugwara and Chidavaenzi (1997), Chigumira and Masiyandima (2003) and Booth, Aivazian, Demirguc-Kunt and Maksimovic (2001). Several of the conducted studies mainly concentrated on the challenges faced by SMFs, but have avoided the impact of debt on SMFs. Therefore, conducting a study on the impact of debt financing on SMFs is very important since it will open up avenues for similar research in the future. Having highlighted the need for carrying out such a study, the definition of SMFs will be addressed in the following paragraph as it will assist in giving a picture of what is meant by an SMF.

An SMF in Zimbabwe is defined by reference to number of employees, total net assets and legal structure (Ngwenya & Ndlovu, 2003: 12). Due to the absence of a Small Business Act in Zimbabwe, a definition from the Small and Medium Enterprises Policy Framework will be adhered to. The framework defines a small manufacturing firm as a business entity with a formal legal structure, employing workers between 4 and 51 and having an asset base of less than 12 million Zimbabwean dollars (Small, Micro & Medium Enterprises, 2002:5-6). Therefore, for the purpose of this study, the above definition will be used except for the asset base, that is a firm employing from 5 to 50 employees and having a formal legal structure. The formal legal structure means that these firms should be registered and have legal duties and responsibilities just like a natural person (Tuck, 2000: 228). The asset base will not be used as it is difficult to attach a fixed value to assets as the value is constantly changing due to high inflation rates in Zimbabwe.

Section 1.3 will elaborate on the statement of the research problem which led to the research being selected.

1.3 STATEMENT OF THE PROBLEM

As suggested by MM (refer to sec 5.2, p. 99), the capital structure which a firm chooses does not affect its value but debt results in a tax advantage. Capital structure refers to the proportion of components used to finance an investment. It should be reiterated here that an investment can be financed by equity (refer to sec 3.3.1, p. 45), debt or a mixture of the two and in most cases, firms finance their investments by a combination of both equity and debt (Correia, Flynn, Uliana & Wormald, 2005:7-1). The aim of the study is to investigate if the use of debt financing results in an increase in the value of small manufacturing firms (SMFs). Alternatively, it can be stated that the aim of the study is to establish if SMFs in Zimbabwe can make use of favourable leverage. Leverage refers to the use of fixed-cost financing such as debt to magnify return and risk (Gitman, 2003:522).

SMFs can make use of leverage to increase profitability as leverage causes a given return on assets to culminate into a higher return on equity if the return on assets earned is greater than the before tax interest on debt (Correia, *et al.*, 2005:14-2 to 14-4). If firms earn a return on assets that is less than the before-tax interest on debt, a negative leverage will prevail and thus, profitability will be declining as a result of using debt. Therefore, the research at hand aims at determining if leverage is favourable and this was done by calculating the Return on Assets. Return on Assets was calculated by dividing earnings before interest and tax (EBIT) by total assets (refer to sec 6.3.1, p. 117).

It is not rational to determine the impact of debt on the profitability of SMFs if the SMFs are not able to acquire debt. Therefore, to increase the value of the study, questions such as "are SMFs able to access debt?" and "does the product manufactured affect debt accessibility?" have to be answered. Several studies which were done before on the use of debt such as the ones carried by Abor (2005), Abor and Biekpe (2005), Booth *et al*, (2001) and Casssar and Holmes (2003) concentrated on the effect of leverage on firms, but did not consider factors such as size of the firm and product manufactured that could hamper the use of debt. This study therefore, links debt usage to its accessibility and this assists in the full utilisation of debt by small firms whilst stakeholders will also be able to fully analyse the use of debt by small firms.

Having formulated the problem statement to the study, the objectives can now be identified.

1.4 RESEARCH OBJECTIVES

Primary Objective

- To determine if there is a negative relationship between the usage of debt in the capital structure and the value of the SMF.

Secondary Objectives

- To determine if there is a negative relationship between the size of an SMF and its ability to access debt;
- To determine whether the product offered by an SMF has a negative relationship with debt accessibility.

Having identified the objectives of the study, tentative solutions to problems at hand can be formulated through the hypotheses. Section 1.5 outlines the hypotheses of the study.

1.5 RESEARCH HYPOTHESES

Primary Hypothesis

- **Ho** - There is a negative relationship between debt usage and the value of an SMF in Bulawayo, Zimbabwe;
- **H1** - There is a positive relationship between debt usage and the value of an SMF.

Secondary Hypotheses

- **Ho** - The size of an SMF has a negative effect on its ability to access debt finance from well established financiers.
- **H1** - The size of an SMF has a positive effect on its ability to access debt finance from well established financiers
- **Ho** - The product offered by an SMF has a negative effect on its ability to access debt.
- **H1** - The product offered by an SMF has a positive effect on its ability to access debt.

Section 1.6 will provide an insight into the significance of the study at hand.

1.6 SIGNIFICANCE OF THE RESEARCH

The research is relevant to different stakeholders in the economy such as prospective investors, managers/owners of small existing firms and the government of Zimbabwe. Information on the impact of debt on the firm's value is of importance to strategy formulation and decision making by the managers of SMFs and this can improve their understanding on the usage of debt in investment financing. This information can further assist managers of SMFs in achieving their objectives of wealth creation and profitability, thereby working towards the objective of the firm which is the maximisation of shareholder's wealth. Commercial banks also need information for use when granting debt to applicants, therefore, information gathered from this research can be useful to them.

The study results can furthermore give insight to SMFs in developing countries as whether to use results of research studies on debt usage done in developed countries as a benchmark for their activities. By carrying out research studies on the impact of debt on the value of SMFs, SMFs can become aware of the differences or similarities between results of developed countries and developing countries.

Besides having a direct impact on SMFs and the economy, the research also has indirect effects. For an economy to grow, it needs small firms to support the corporate companies in its structure, thus job creation and Gross Domestic Product (GDP) contributions. Gross domestic product refers to the value of all final expenditure of goods and services that are produced within the nation (Lipsey & Harbury, 2004). The prosperity of SMFs enhances the growth of the economy by increasing GDP and also assists in creating employment opportunities to citizens, thereby assisting in alleviating poverty and crime. By so doing, the standards of living of Zimbabweans will be improved. The growth of small firms can therefore be improved by formulation of quality and calculated financing decisions.

The section that follows will focus on relevant literature to the topic under study. This will include the theory on which the primary objective and hypothesis and the secondary objectives and hypotheses are based.

1.7 LITERATURE REVIEW

This section focuses on literature relative to the study. This includes information from previous studies and texts that relate to the objectives and hypotheses identified (refer to sec 1.4 and 1.5, p. 6). The literature review supports the objectives of the study and also highlights the results of similar empirical studies that were done previously. It can also serve as a guide as to how information can be collected. The information gathered will be on the MM theory, firm size, debt accessibility and product offered by a firm. The sub-section that follows is on MM's theory of capital structure that is relevant to the study at hand.

1.7.1 The Theory of Capital Structure

The research is based on the hypothesis which was put forward by Modigliani and Miller known as the MM theory of capital structure. Capital structure refers to how investments are financed and this can either be debt or equity or a combination of the two. In 1963, the two researchers demonstrated algebraically that assuming perfect markets, the capital structure that a firm chooses does not affect its value except for the tax deductibility of interest payments on debt. This hypothesis was a correction to the initial hypothesis in 1958 which stated that the choice of the capital structure does not affect the firm's value. This however did not consider taxation of firms. The 1963 view argues that there is an optimum level of leverage which is a point at which average cost of capital is minimized and the value of the firm maximized (Modigliani & Miller, 1963:434). The average cost of capital refers to the cost of debt and equity multiplied by the proportions of each and then summed.

MM's view of capital structure has several assumptions which will be addressed in section 5.2.1 on pages 99 and 100. MM identified three views to capital structure namely Proposition I, Proposition II and Proposition III. This study however will only focus on Proposition II. Proposition I states that it is completely irrelevant how a firm chooses to arrange its finances. If capital markets are performing as expected, all efforts to increase value by tinkering with capital structure are fruitless. Proposition III states that the cut-off rate to be used in investment appraisal is the rate of return appropriate to an all-equity firm. This is so because in an MM world, the weighted average cost of capital is constant and equal to the cost of capital in an all-equity firm. Average cost of capital refers to the average of the totals of different individual sources of

finance (Correia, Flynn, Uliana & Wormald, 2007: 7-2). (For more information on Proposition I and III refer to Modigliani & Miller, The Cost of Capital, Corporation Finance and the Theory of Investment, 1958:268-290 and 1963:434).

MM's Proposition II which the study is based on, states that the cost of equity depends on the required rate of return on the firm's assets, the firm's cost of debt and the firm's debt / equity ratio. As the firm raises its debt / equity ratio, the increase in leverage raises the risk of the equity shareholders and therefore, the required return or cost of equity. The cost of equity is affected by leverage, but the weighted average cost of capital is not. The fact that cost of debt is lower than the cost of equity (refer to sec 3.3.3.3, p. 60) is offset by the increase in the cost of equity from borrowing. The change in the capital structure weights is exactly offset by the change in the cost of equity. The benefit will arise as a result of the deduction of interest payments on debt as they are exempted from being taxed. When income for tax purposes is being calculated, interest paid on debt is subtracted unlike when there is no debt used. The use of debt therefore will result in higher earnings per share to the shareholde[illegible]igliani & Miller, 1963:434).

The MM's proposition II took [illegible] is not the only factor that can affect the value of a firm. Several items have to be analysed closely to determine the optimal capital structure or amount of leverage to be used, such as bankruptcy costs (refer to sec 4.3.3.1, p. 92). Failure to perform these examinations may result in foregoing an optimal capital structure which maximizes the value of the firm.

The tax advantage associated with MM Proposition II is only possible if a firm is always profitable. Debt capacity depends on the future profitability of the firm and a firm is able to increase debt if it performs well. When the firm performs poorly, the use of debt will aggravate the financial distress of the firm as will be illustrated in table 3.2 on page 59 to 60 of this dissertation (Myers, 2001:87). Financial distress refers to the difficulty that a firm encounters in meeting obligations to creditors (Anon., 2006b). Although the proposition suggests that the use of debt will lead to a tax advantage because of tax deductibility of interest payments, a study on Zimbabwe by Booth, Aivazian, Demirguc-Kunt & Maksimovic (2001:96) established no fundamental tax advantage of debt over equity (refer to sec 5.3.1, p.105).

Having the background of the MM theory on capital structure, the following section will focus on background information to the hypotheses of this study.

1.7.2 Background to the hypotheses

This section relates to information which is applicable to debt usage; firm size, debt accessibility and the type of product engaged in as the core components of the hypotheses formulated for this study. Information was accessed from studies which were conducted nationally and internationally on similar topics. Raj & Sutthisit (2003), in their study established that firm size is positively related to debt whilst profitability is negatively correlated to leverage. The conclusion by Raj and Sutthisit indicates a blanket statement as they should have taken cognisance of economic upswings and downswings and low or high interest rates. Economic upswing refers to the expansion of economic activities whereas economic downswing refers to the contraction of economic activities (Lipsey & Harbury, 2004: 311). This is because there is a high possibility that the stage of an economy (upswing or downswing) plays a large part in determining the effect of leverage on profitability. An upswing might promote a positive relationship between leverage and profitability whilst a downswing might not support it. The following subsection will focus on the impact of debt on the profitability of the firm.

1.7.2.1 Impact of debt on the profitability of a firm

The use of debt can either lead to a favourable or unfavourable leverage (refer to sec 3.3.3.3, p. 57). This section will focus on results of similar studies that were carried out previously. Several research studies indicated a negative relationship between debt and profitability.

The study carried out by Zou & Xiao (2006), on financing behaviour of listed Chinese firms resulted in a conclusion that a negative relationship between profitability and firm leverage exists. Another similar research by Lin & Rowe, (2006) also supports the same conclusion. From Lin & Rowe's research, debt ratio is negatively related to state owned enterprises' profitability. If a negative relationship prevails, it will be better for firms to finance their activities with equity.

Another research study which related leverage to profitability of firms was done by Zhengfei, Lansink & Alfons, (2006). The research was carried out on Dutch farms and the result shows that

debt did not have any impact on return on equity. This shows that the use of debt did not result in an increase in profitability, neither did it result in unfavourable leverage.

Abor (2005) conducted a study in Ghana which contradicted the results of the studies above. A negative relationship was found between long-term debt used and Return on Assets and a positive relationship between short-term debt and Return on Assets. Overall, the result indicated a significantly positive association between total debt and total assets and return on equity. Therefore, the value of a firm, according to this study, was increased portraying a favourable leverage.

According to Berkivitch & Israel (1996:209), a firm's debt level and its value will be positively related especially when shareholders have absolute control over the business of the firm and it will be negatively related when debt holders have power to influence the course of the business. Therefore, the impact of debt on value depends on the balance of power within a firm. If shareholders have more power, the relationship will be positive and if debt holders have more power, the relationship will be negative.

Following is a discussion on firm size and debt accessibility.

1.7.2.2 Firm size and debt accessibility

From the studies read by the researcher, it was noted that size of the firm affects debt accessibility to SMFs, especially from banks. Several studies in developing and developed economies found that the size of a firm affects their accessibility to debt finance (Biggs & Srivastava, 1996), (Schiffer & Weder, 2001), (Kumar & Francisco, 2005) and (Raj & Sutthisit, 2003). Access to debt finance is closely related to firm size and small firms tend to receive far less formal credit compared to larger firms. Small firms have much lower leverages and this can be due to inaccessibility to debt markets and a higher risk associated with small firms in respect of failing to pay back the principal and interest on the debt.

A lack of collateral, unknown financial background and a lack of economies of scale are some of the reasons cited for high risk (Biggs & Srivastava, 1996:5). Statistics on Zimbabwe by Biggs and Srivastava (1996:7-9) indicate that the number of small firms that received bank loans is

32%, whilst medium firms were 53% and large firms 62%. Small firms that obtained bank overdrafts is 50% compared to 83% and 90% for medium and large firms respectively. Although there are a considerable percentage of firms obtaining formal debt, the average maturity of that debt is 17 months compared to 40 and 47 months for medium and large manufacturing firms respectively. Generally, this implies that the size of the firm has an impact on its accessibility to debt and the terms and conditions on debt are stricter for smaller than for larger firms.

Kochhar & Hitt (1998: 608) also supported that accessibility to a particular type of financing such as debt depends on firm size. The funding of small firms by banks is limited and banks usually charge significant premiums on debt interest. Interest leveled to loans for small firms is often high, simply because of the perception that they are more likely to fail and therefore are more risky. Banks mostly lend to large firms because they meet the required asset base that small firms do not. The other reason for limited bank loans to SMFs is that administrative costs of maintaining smaller loans are relatively higher than for bigger loans. Small firms also lack detailed information required by banks to a loan.

Some studies found that many small firms diversify away from bank financing even if banks are willing to lend more. The reason being that when a bank makes a loan to a firm, it gains access to the internal records and will be able to influence the activities of the firm. Therefore, for firms to avoid this, they diversify away from the use of bank loans (Rajan, 1992: 1367-1371).

1.7.2.3 Product and debt accessibility

The product plays a crucial role in the banks' determination of debt offering and banks may favour firms in a specific industry or product. Terms of lending to small business borrowers were found to vary by industry (product) thus the amount of loan and interest rates. Term of maturity for the small business loans also depended on the industrial sector of the borrower and his/her products (Clark *et al.,* 1998) (also refer to 1.2, p. 3). The discussion that follows is on the research methods that will be employed in collecting data for analysis.

1.8 RESEARCH METHODOLOGY AND DESIGN

This section discusses the methods and techniques by which the data was collected, where and from whom it was collected, how many respondents participated in the study and what was used to collect primary data. In other words, it comprises a research design and plan, population and sample, data collection instruments, sources and procedures for data analysis.

1.8.1 Research design

This is a plan of the data gathered, from whom, how and when to collect the data as well as how to analyse the data obtained. It is a systematic planning of research, usually including the formulation of a strategy to resolve a particular question, the collection and recording of the evidence and the processing and analysis of this data as well as its interpretation (Bureau of Justice Assistance, 2006) and (Tel el-Far'ah, 2006).

1.8.2 Research method

A quantitative research method of data collection was used. A quantitative research method derives empirical generalisations which may be used to determine future courses of action. It involves obtaining data from a large group of respondents and is the one that can be used in descriptive research studies to quantify data and generalise the results from the sample to the population of interest (Hollensen, 2003:740).

1.8.3 Research format

The research format that was followed is descriptive research which refers to a research methodology that was used to describe a problem or opportunity in detail. It provides answers to questions such as 'who', 'what', 'where', 'when' and 'how'. The reason for using descriptive research for the study is because the research is about identifying the impact of debt financing on the value of small firms and requires information which can provide answers to 'what', 'how', 'where' and 'when' questions.

1.8.4 Research technique

A self-administered questionnaire was used to gather primary data. The questionnaires were handed to owners/managers of SMFs to complete and a fieldworker assisted with misinterpretations. The use of a self-administered questionnaire was more feasible since the

sample size of the research study consisted of 171 respondents which is a number large enough for personal interviews. Self-administered questionnaires are also cheap compared to other forms of data gathering as they can be distributed in large quantities at the same time. They are also free from interviewer bias and the respondents enjoy the convenience of completing the questionnaires at their own pace. In addition, respondents who might otherwise be inaccessible can be accessed (Bryman & Bell, 2003:142) and (Cooper & Schindler, 2003:341).

1.8.5 Population

The population is the universe of units from which the sample is to be selected (Bryman and Bell, 2003:93). The population of the research study included all small manufacturing firms in Bulawayo registered by the ministry of Small Micro and Medium Enterprises. The number of SMFs in Bulawayo adhering to the definition of the research at hand (refer to sec 1.2, p. 4) is 300 (Central Statistics Office, Zimbabwe, 2006).

1.8.6 Sampling procedure

1.8.6.1 Sampling type

The participants were selected using the probability sampling method which constitutes a method that uses random selection to identify respondents. Probability sampling is whereby a sample is selected using random selection so that each unit in the population has a known chance of being selected. Using the probability sampling method, every SMF in the population has a chance of being included in the sample and it is generally assumed that a representative sample is more likely to be the outcome when this method of selection from the population is employed (Cooper & Schindler, 2003:184) and (Bryman & Bell, 2003:93).

1.8.6.2 Sample size

The sample constituted 171 respondents from the total population of SMFs identified in section 1.7.5. For the calculation of the sample size, refer to sec 7.5.3 on p. 135.

1.8.6.3 Sampling technique

A stratified random sampling was used to choose the respondents from the list provided by the Ministry of Small, Micro and Medium Enterprises. This is a process whereby populations are

segregated into several mutually exclusive sub-populations or strata. Stratification is usually more efficient statistically than simple random sampling as each stratum will be homogeneous (Cooper & Schindler, 2003:193-194). This technique is easy to implement and it also reduced researcher bias since all the elements in a strata had equal chances of being included in the sample. This sampling technique made use of simple random sampling thus, the population was categorised into strata and then simple random sampling used to select the participants from the strata (Barnett, 2002:32) and (Bryman & Bell, 2003:96).

1.8.7 Data analysis procedure

Data was analysed using ratio, correlation and regression analyses with the aid of the Statistics Department personnel at the University of Fort Hare. The department assisted in determining relationships between variables such as debt and firm value, debt and size and debt and product.

1.9 OUTLINE OF THE PROPOSED [illegible] REPORT

- **Chapter 1 - Introduction to the study**. This chapter is an introduction to the study at hand. It identifies the research objectives and hypotheses as well as highlighting the methodology to be followed.
- **Chapter 2 - Background to small firms**. Chapter 2 familiarises the reader to the small firms both internationally and in Zimbabwean perspective. It also highlights the importance of small firms, challenges and suggestions as to what could be done to improve on their performance.
- **Chapter 3 - Financing Options for SFs**. In this chapter, sources of finance available to small firms are identified. The effect of debt on profitability is discussed comprehensively in order to bring out the impact of leverage. The researcher dwelled much on leverage than the other alternative source because the research is primarily on the use of debt.
- **Chapter 4 - Value of a firm and cost of debt to small firms**. This chapter discusses how the value of the small firm would be determined and the reasons for using the selected method/s. Cost of debt to small firms was also discussed. All aspects related to cost of debt were discussed as well as differentiation between nominal cost and real cost.
- **Chapter 5 - Theoretical background**. Chapter 5 discusses the theory on which this study is based 'Modigliani and Miller's theory of capital structure'. All necessary factors binding this

theory are discussed. Studies conducted on the use of debt, small firms and product manufactured are also discussed.

- **Chapter 6 - Normative model**. Chapter 6 focuses on conditions that are expected for the objectives of the study to be attained. Ratio and regression analysis will be discussed. Regression equations for the study are also formulated and stated in this chapter. A hypothetical example was used to give an idea of how the actual results could look like.
- **Chapter 7 - Research methodology**. The research methods are comprehensively discussed in this chapter. The scope of the survey, research design, sampling methods as well as ow the study was conducted was outlined. Data preparation, reliability and validity were also discussed.
- **Chapter 8 - Research results**. This chapter contains the responses and some explanations to these responses. Research hypotheses were also tested in this chapter.
- **Chapter 9 - Conclusions and recommendations**. The conclusions and recommendations based on the results of the study were outlined in this chapter. Areas for further studies were also identified and highlighted.

1.10 TIME FRAME AND BUDGETARY CONSIDERATIONS

1.10.1 TIME FRAME

The project ran from the 1st of March 2006 to 30th of December 2007.

1.10.2 BUDGETARY CONSIDERATIONS

The estimated cost of the project was R20 000.00. This cost included traveling costs to company sites, printing and photocopying of questionnaires and the payment of field work assistants.

CHAPTER TWO

BACKGROUND TO SMALL FIRMS

2.1 INTRODUCTION

Recently, there has been an increase in the recognition of the role played by small firms (SFs) in national economies. Their contribution to job creation and poverty alleviation has been recognised by several governments of developing countries to the extent that they are including them in their development plans. The development of the small business sector in Zimbabwe is crucial for the achievement of broader development objectives such as poverty alleviation, spreading employment to rural areas, improving the situation of women and increasing indigenous ownership of investment in the economy (Liedholm & Mead, 1999:1) and (SMMEs, 2002). SFs are considered to be the central point in creation of new businesses in several flourishing economies. They constitute the largest share of the private sector economy representing between 96% and 99% of the total numbers of firms in the developed countries.

This chapter focuses on SFs in Zimbabwe, though at times reference to other economies, developed and developing is made. The purpose of looking at other economies is for comparison's sake and to see how far SFs can contribute to the enhancement of an economy. This chapter encompasses the definition of small firms, the Zimbabwean economic background, the contribution that SFs make to the Zimbabwean economy and internationally, their distribution in Zimbabwe, a breakdown of the manufacturing sector, challenges that are faced by SFs in Zimbabwe and other developing countries and lastly the promotional activities that are being implemented by the Zimbabwean government to assist the growth of small firms. The section that follows focuses on the definition of small firms and the difficulties associated with the formulation of a definition for small firms.

2.2 DEFINITION OF SMALL FIRMS

Defining an SF quantitatively has been and still is a challenge to several countries. No single definition can suit all economies and sectors because different economies have different environments with different features that make it difficult to apply one definition across all borders. Some economies have firms that are labour intensive, some are capital intensive and this difference implies that the capital bases of the economies will be different. Different sectors also have different products and/ services and the number of employees required to perform a job is

also different which makes it impossible to apply a single definition to all sectors. Manufacturing small firms require more employees than small retail shops.

A small firm qualitatively is defined as a separate and distinct business entity, not a part of a group of firms, must include any subsidiaries and branches when measuring the size, must be managed by its owners and be a natural person or a legal person, sole proprietorship, partnership or a legal person such as a close corporation or company (Nieman, Hough & Nieuwenhuizen, 2006:9). The global viewpoint on SFs is discussed in the following section.

2.2.1 Global view on the definition of an SF

In the USA, the definition of a small firm is given by the Small Business Administration (SBA) and depends on the particular application or program of the definition. In some cases, it is defined as having an annual turnover of $750, 000 and in other cases as having an annual turnover of $28.5 million. In other cases it is based upon the number of employees, sometimes one hundred or less but in other cases up to 1,500 or fewer employees. A small firm can therefore earn revenues between $750,000 and $30 million and operate with 10 employees or hundreds depending on the type of business it is in. A small retail business must operate with 50 employees or less and a small construction business can have 200 employees. The United States (US) therefore uses the number of employees and annual revenue to define a small firm (Snyder, 2005). The Small Business Act states that a small business concern is "one that is independently owned and operated and which is not dominant in its field of operation" (U.S. Small Business Administration).

The European Union (EU) defines a small firm as a business with fewer than 50 employees and a medium-sized firm as an entity employing between 49 and 250 employees (Anon., 2006d). In New Zealand, SFs are defined as businesses with fewer than 20 employees (Dalziel, 2006). The discussion below focuses on Zimbabwe's perspective of small firms.

2.2.2 Zimbabwe's perspective on the definition of an SF

The definition of an SF depends on the purpose for which it is being made. Various definitions that are proposed are generally based on numbers of employees, asset base and structure and at

times turnover levels or revenue (Ngwenya & Ndlovu, 2003: 12). McPherson (2000) defines small firms as income generating manufacturing, commercial or service activities that market at least half of their production. If the firm is engaged in manufacturing, it is described as a business employing not more than 50 workers but more than 4, having an asset base of less than 12 million Zimbabwean dollars and with a formal legal structure (SMMEs, 2002:6) and (Kapoor, Mugwara & Chidavaenzi, 1997:4). A small firm therefore refers to any business entity that employs more than 4 employees but less than 50 employees. However, for the purpose of the study at hand, only the criterion of a formal legal structure and number of employees was adhered to. The reason for this is that the value of the asset base, because of volatility due to excessive inflation, would automatically be disqualified to act as a criterion.

The following table illustrates the indicative parameters of the small-scale, micro and medium-scale firms as formulated by the SMME Ministry of Zimbabwe. The parameter acts as a basis for defining micro-enterprises, small-scale enterprises and medium-scale enterprises in Zimbabwe.

Table 2.1 Indicative Parameters

Sector	Number of Employees	Asset Base	Legal Structure
Micro-Enterprises			
All sub-sectors	Less than 5	Not relevant	Informal
Small-scale Enterprises			
Manufacturing	Less than 50	Less than $12 million	Formal
Other	Less than 30	Less than $6 million	Formal
Medium-scale Enterprises			
Manufacturing	50 to 75	$12 million to $24 million	Formal
Other	30 to 50	$6 million to $14 million	Formal

Adapted from (Republic of Zimbabwe: Small, Micro and Medium Enterprises Policy and strategy Framework, 2002:6)

Having identified the definition of a small firm to be used in the study, the section that follows focuses on the Zimbabwean economic background. This provides some insights as to the probable cause of an influx of small firms into the economy. An economic history assists in understanding the current issues that are prevailing in the economy and affecting the performance of SFs.

2.3 ZIMBABWE'S ECONOMIC BACKGROUND

Zimbabwe had undergone several development initiatives, all with basically the same objective, which is to achieve sustainable high rate of economic growth and speedy development in order to raise incomes and standards of living of its people. The poverty reduction programs implemented by the Zimbabwean government after its independence in 1980 were expensive and were mainly funded by government borrowing. Due to these excessive expenditures by the government, it sought for ways to finance its activities, thus searching for loans. The World Bank offered a loan on condition that the government embark[illegible] several economic reforms in the broader name "Economic Structural Adjustment Program (ESAP)" (Chigumira & Masiyandima, 2003: 6).

Due to accumulating economic difficulties in Zimbabwe such as stagnant economic growth, low levels of investment and export growth, a high budget deficit and inflation, growing unemployment and a decay of infrastructure, the government accepted these reforms and their implementation started in 1991. The reforms included removal of price controls, removal of wage controls, reduction of government expenditure, removal of subsidies on basic consumer goods, removal of protection of non-productive imports substituting industries and a radical restructuring of the various parastatals and other public enterprises among others. Price controls refer to government interventions in the pricing of goods and services. Governments can intervene by setting price ceilings which is the upper limit imposed on the price of a good and price floor which is the lower limit imposed on the price of a good (Schiller, 1996:68-69). Wage controls refer to government interventions in the wages that are paid to labour (Lipsey & Harbury, 2004: 455). Since ESAP was introduced, the standard of living in Zimbabwe has declined and unemployment and inflation increased (McPherson, 2000), (Sichone, 2006), (Chigumira & Masiyandima, 2003: 6) and (Zwizwai, Kambudzi & Mauwa, 2006).

ESAP did not come up with anticipated outcomes. Instead of improving the living standards of the local citizens, it worsened it. Many government workers were left jobless and even some people who were employed in the private sector were also retrenched. This was due to the liberalisation of the economy which led to removal of protection previously given to domestic firms, thereby opening up cheap markets for the citizens leading to downsizing and closure of several labour intensive firms. Reduction of public expenditure resulted in the abolition of many public subsidies, led to the introduction of fees for education and health and this meant that the poor could not afford these basic amenities (Sichone, 2006)

The increase in unemployment and removal of price controls, coupled with the availability of a skilled and qualified labour force might have been major causes of influx of small firms. In search of ways to survive, the retrenched workers, with the assistance of dismissal lump sums, started small firms to supplement their living. The reason of the new small firms might have been to sustain the living rather than growth and profitability and therefore as a result, the majority of these firms are still small. Apart from being a way of generating income for subsistence, it can also be possible that the influx of SFs was demand driven. The lower purchasing power of consumers might have caused the demand for goods in the formal sector to decline as consumers substitute these for the lower priced goods produced by the SFs. There was a gradual increase in the total number of SFs in Zimbabwe since the introduction of ESAP especially in urban areas (McPherson, 2000). The introduction of ESAP therefore led to the birth of numerous small firms designed to complement incomes and create employment for the many unemployed people as well as the school leavers who could not be absorbed in the formal sector of Zimbabwe.

During the implementation of ESAP, the Government of Zimbabwe deregulated the financial sector, lifted price controls and abolished investment licensing for all, except large foreign investments. Deregulation of the financial sector is the removal of regulations that were initially imposed in the financial sector. These regulations include among others determination of interest rates and control of the distribution of credit (Sloman, 2005:192). By dismantling those economic control measures, the reforms established a better basis for self-sustaining growth for the economy by giving investors freedom of entry and exit as how to run their business.

Prior to 1991 the levels of interest rates in Zimbabwe were controlled and direct controls determined the distribution of credit. There were also laws and regulations, which restricted entry

into the financial sector hence the financial sector was not favourable to SFs. The resultant structure of the banking sector limited market competition because only a few emerging businesses would use capital from banks thereby limiting the number of firms in the market. The poor performance of savings due to these restrictive policies created serious domestic and foreign resource gaps which resulted in low credit availability to the private sector and ultimately, low investment and economic growth. The financial sector reforms implemented in Zimbabwe from 1991 included the decontrolling of interest rates, the removal of credit controls, the easing of financial sector entry restrictions and the decontrolling of the foreign exchange market. The deregulation of the financial sector thus promoted the formation of new small firms as they could afford to get start-up capital easier than before (Chigumira & Masiyandima, 2003:6).

The country's infamous land invasion by black citizens and redistribution might also have played a major role in the influx of SFs especially after the year 2000. Land was taken from white farmers who sold most of their produce at foreign markets thereby generating foreign currency. This created shortage of foreign currency available to businesses and left most companies operating below capacity and others to close down as the majority of the new farmers (mainly blacks) could not produce enough for export. This then led to retrenchments leading to people starting small businesses for subsistence purposes. The negative international perceptions following the implementation of the land reform programme have compounded the country's economic difficulties. The drought, plus the initial uncertainties associated with the land reform programme saw agricultural output fall from a decline of 12.9 percent in 2001, to an expected decline of 20.8 percent during 2002. The country's difficulties which were compounded by drought conditions over the past years have resulted in a shortage of basic commodities such as maize and other inputs into agro-industry and export crops like cotton (Anon, 2006e). All these factors contributed to an increase in the cost of living in Zimbabwe forcing people to start small firms.

In short, it can therefore be suggested that the formation of new small firms was mainly due to economic reforms that were carried out in the early 1990s. ESAP caused the cost of living to be expensive, reduced the disposable incomes of the citizens and therefore forced the search for ways to survive. There was demand for goods from small firms as people could buy on credit and could not afford commodities from well established entities. The deregulation of the financial sector also promoted the starting up of small firms as the conditions were conducive for starting

up of new ventures. The decline in employment levels in the formal sector since the year 2000 due to company closures and retrenchments has resulted in the SF sector assuming a greater prominence in providing livelihood to many families (Gono, 2007:30). In the following section, the contributions that are made by small firms are identified and discussed.

2.4 CONTRIBUTIONS OF SFs TO THE ECONOMY

Among scholars, policy-makers and donor agencies, there has been an increasing awareness of the importance of the SF sector in the development of an economy. Several governments in African countries have explicitly included SF programs as part of their national economic plans (McPherson, 2000). Some of the normally cited contributions include generation of sustainable jobs, reduction of poverty levels, stimulation of economic growth and generation of much needed foreign currency. The development of small firms is thought to be important for economic growth and poverty alleviation as they contribute a great deal towards gross domestic product (GDP) and employment creation (Schiffer & Weder, [illegible]). It is the growth potential for small firms that make them vital to economic transformation (Dalziel, 2006).

Though there might be inadequate information to show the actual contribution made by small firms in developing countries, it is their potential to turn around an economy that usually pushes governments to support them. Several countries accept that small firms dominate their economies in terms of their contribution to GDP, employment generation, training of the youth and creating sustainable living standards (Adei, 2006). SF sector in Zimbabwe contributes more than 50% of the GDP and are responsible for the livelihood of 80% of the population (Gono, 2007:31). The following discussion relates to contributions made by SFs and below is the creation of employment opportunities.

2.4.1 Employment creation

It is mainly understood that small firms produce a larger portion of new jobs. From the period 1990 to 1995, 6.853 million jobs were generated in the USA and of these, 49% came from firms with less than 20 employees (Anon 1a, 2006:30-31). Small firms account for 96% of all firms in New Zealand (Dalziel, 2006). In Canada, 75% of all firms employ fewer than 5 people and of all the firms, more than 95% employ fewer than 50 people (Dulipovici, 2003). In Taiwan, SFs

employ almost 69% of all employees and they accounted for 99.74% of all newly established firms in 2005 (Tsai, 2006). In Italy, 90% of all industrial firms are small and absorb 84% of total employment and in Denmark, 92% of all manufacturing firms are small, employing 43% of the workforce (Barrow, 1998:1). The small firm sector therefore is unarguably the most important tool in several economies as is indicated by the above statistics. SFs drive the economic activities of these countries and the same can happen to all economies including developing countries. They create jobs and are also crucial to the GDP of economies.

There is a growing unemployment challenge in Zimbabwe, rising from 22% in 1992 to 55% in 1997. Secondary school leavers (300 000) enter the job market every year in pursuit of the 10 000 to 16 000 formal sector jobs available (Dawson, 2006). Small firms are one of the crucial sources of employment to these people. SFs contribute a great deal to employment and they account for 60-70% of the manufacturing total in most developed and fast developing economies (Gaomab, 2004).

In Zimbabwe, firms employing between 5 and 50 employees constituted 57.4%, those employing between 49 and 100 employees 38.8%, whilst the firms with 100 or more employees constituted only 3.8% to job creation (Biggs & Srivastava, 1996:46). In industrialised economies, small firms contribute a lot in terms of employment creation. They generate more employment opportunities and at a faster rate compared to large firms. The rate at which new firms start in Zimbabwe is about 19%, however, the majority of these new start-ups employ less than 10 employees. Small start-ups that employ more than 10 employees are less than 10% of all start-ups which shows that few jobs are being created (Liedholm & Mead, 1999:28-29). This then calls for small firms to aim for growth, thereby creating more job opportunities for the citizens. Because of shrinking of the formal sector employment in Zimbabwe, SFs, if fully utilised, can turn around the economy and contribute a lot to job creation which is one of the major challenges facing the economy. This sector has the potential for investment and making meaningful contribution to the wellbeing of an economy.

Studies which were conducted by McPherson between 1991 and 1998 indicated that there was an increase in the numbers of people employed by small firms in Zimbabwe. Urban SFs employment rose by nearly 52% during this period whilst rural SF's employment increased by 9%. During the period 1993 to 1998, urban SF employment increased by nearly 55%

(McPherson, 2000). Taking this growth in employment creation, the SF sector cannot be underestimated for its potential to change an economy in turmoil such as Zimbabwe's. Typically, developing countries have a large number of SFs and these employ a substantial proportion of a country's economically active population. Surveys in several African countries indicate that between 16% and 33% of each country's working age population work in SFs (McPherson, 2000). The following section focuses on another benefit that is brought by small firms, that is innovation.

2.4.2 Innovation

Innovation is one of the most important contributions of small firms to the economy. In most cases, small firms are started and run by entrepreneurs who are creative, innovative and have exceptional vision about success. Economic growth, higher wages, better working conditions and a higher standard of living result from increase in productivity resulting from doing things more efficiently including the introduction of new products and services. This can only happen when an entrepreneur has an idea and puts it (Anon 1a, 2006:32). Tight global competition, trends toward regional economic integration and changes in macro-environment force small firms to be innovative in marketing, sales and design (Tsai, 2006).

Innovation, creativity and originality are the main characteristics of small firm owners and these people drive the growth of economies. They contribute significantly to technological innovations in different economies and there exist several examples to support the innovativeness of small firms. Small firms have contributed significantly to the development of internet and biotechnology. It was, for example small firms that created the personal computer. The innovativeness of small firms is not confined to technology only, for example, they developed fast-food franchising. Innovation by small firms is usually discovery-driven whilst large firms' innovation is design-driven. They are more discovery-driven because they specialise in knowledge-based rather than resource-based and property rights are more likely to accrue to the innovator working in a small firm. There is no country on earth in which small firms have not played an important role in the innovative process (Anon 1a, 2006:32-33).

In Zimbabwe, a study by Biggs and Raturi, (1997) shows that entrepreneurs managed to develop their own purchasing strategies and skills at selecting and importing equipment. Technicians in

small firms were found to have spent more time tinkering with various kinds of simple equipment for local use. The reasons why small firms make changes to new technologies include the need to adapt to local material inputs, to adjust to local energy sources and to reduce the need for skilled operators because of their scarcity. Most of these adaptations were done in-house which indicates some innovativeness by small business owners (Biggs and Raturi, 1997).

Though there are very few studies revealing innovation by small firms in Zimbabwe, their role to innovations should not be under looked. Small firms contribute to innovations in the form of identifying new efficient ways of transformation processes and ways of marketing and distributing their products and services. The reasons for innovation especially in production and marketing may be because of the desire for prosperity and fear of loss of personal assets. Another important contribution is that of producing and distributing goods and services and this is discussed in the following section.

2.4.3 Producers and distributors of goods and services

Small firms fulfill their role in complementing large firms in the supply of goods and services. They even compete with larger entities in the service they offer and provide the services effectively and efficiently as portrayed in several developed economies. Even if the market is congested, small firms will look for specific markets to serve. They can produce goods and services and distribute them to some isolated markets. Small firms will remain the only suppliers when the population or its purchasing power is inadequate to attract large firms. There are also small product markets that are not big enough to attract the interest of large firms which small firms serve (Anon 1a, 2006:34).

Small firms are also very active and important in markets characterised by rapid change and high levels of personal service. Large firms do better in stable industries while small ones do better in rapidly rising or rapidly declining industries such as in Zimbabwe (Anon 1a, 2006:34). This is mainly attributed to the flexibility of small firms and their ability to go directly to the market. It does not take long to change a system in a small firm because of the absence of red-tape which normally prevails in large firms. Small firms can quickly identify trends in the business environment and react to them more rapidly than the larger ones which might even take years. Small firms contribute more than 50% of GDP and are responsible for about 80% of the

livelihood of the population (Gono, 2007:38). Small firm owners also act as leaders in the community. Their role as community leaders is discussed in section 2.4.4.

2.4.4 Community leadership

It is mainly the small firms that contribute much to local communities. Small firms are likely to give more in terms of monetary contributions to the communities through community development projects. Their contributions include among others, business products, facilities and property use, consulting, leadership and support services to local communities. National charities rely on large firms for monetary contributions but local communities rely on diverse types of contributions from small local firms. It is the owners of small firms who are likely to be actively involved in matters concerning the community (Anon 1a, 2006:36).

Small firms can therefore be said to hold together communities. Owners of these firms give something back besides job provision. They are indeed involved in social responsibility as they usually participate in local elections, volunteering works such as sponsoring a local soccer team, engage themselves in fund raises, addresses in public meetings and they may write published articles (Anon 1a, 2006:36). Lastly, their role in economic decision-making is discussed in the following section.

2.4.5 Economic decision-making

Owners of small firms control more personal assets than any other occupational group. Small firms spread economic decision–making through ownership of numerous assets and they make decisions involving relatively large sums if the assets are combined. Although individual Chief Executive Officers (CEOs) of large firms exercise greater economic influence in their decisions than do the individual small firm owners, there are far more small firm owners to balance the relatively few CEOs of publicly-held firms. Therefore, small firm owners constitute an important part in decisions made in large institutions, including government and individual consumer choices (Anon 1a, 2006:36).

The importance of small business therefore lies primarily on the entrepreneurship skills present in the owners of the firms. Entrepreneurship refers to the activities of an entrepreneur which again refers to a person who is committed, self reliable, has a need to achieve, has initiative, is creative and innovative (Rwigema and Venter, 2004:60). Entrepreneurs are the engines that get the economy moving (Fick, 2006). Having an insight into the definition of the small firms, the economic background and the contributions of small firms to economies, the distribution of small firms in Zimbabwe is discussed in section 2.5 below.

2.5 DISTRIBUTION OF SFs IN ZIMBABWE

SFs are scattered all over the country and the actual number of small firms is far more than the numbers reported. Many firms are not registered and nothing is known about them (Liedholm & Mead, 1999: 2). SFs are found mainly in district councils of rural areas and then followed by high density suburbs of urban areas. They are also found in low density suburbs, industrial areas, rural councils, small towns as well as in growth points. The distribution of small firms follows the population density of people, thus it follows the market size. More small firms are found where the population is highest and the reason might be the availability of a ready market (Kapoor, Mugwara & Chidavaenzi, 1997:5).

Apart from diversity in terms of location, there are also different categories of small firms found in Zimbabwe. These include among others retail/commerce, services, manufacturing, agriculture, construction, mining and tourism. According to Kapoor, Mugwara and Chidavaenzi (1997: 6) the retail/commerce sector contributes the most in terms of number of entities with 40%, followed by service and manufacturing with 20% each, then agriculture with 7%, construction and mining 5% each and other sectors including tourism with 3%. According to Ncube and Greenan (2004), the economy of Zimbabwe comprises manufacturing, construction, trade, transport, renting of rooms and flats and services industries. Their proportions to the economy according to number of firms are 42.4%, 1%, 45.2%, 0.6%, 6.8% and 4% respectively.

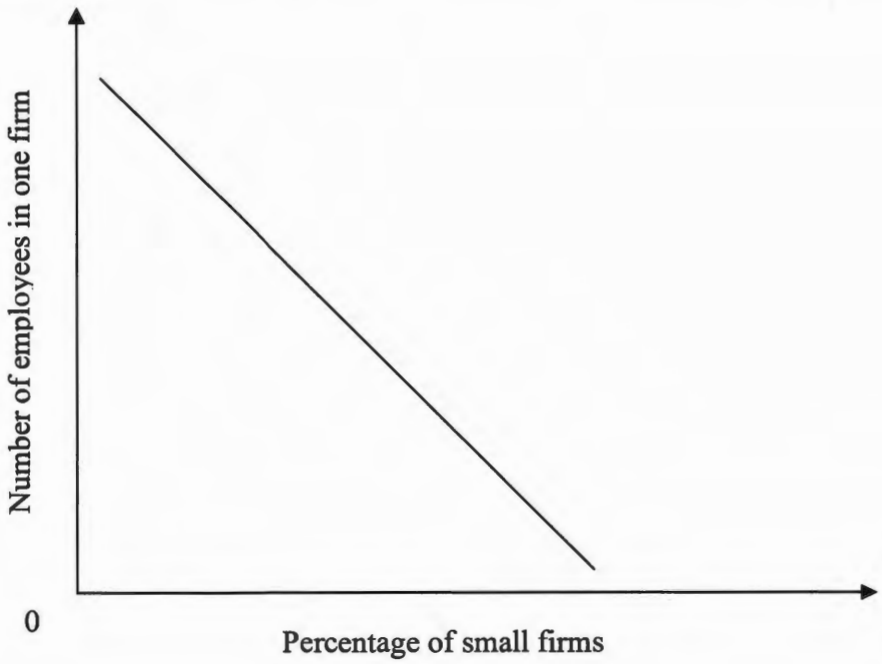
Of all the small firms in Zimbabwe, sole proprietorships constitute 62%, limited liability companies 31%, cooperatives 4% and partnerships 3%. Of these 97% sell their products directly to the consumers whilst 2% sell to rural and urban manufacturing firms and 1% sell to rural commercial firms. The largest numbers of small firm owners are women with the number

decreasing as number of the employees in a firm increase (Kapoor, Mugwara & Chidavaenzi, 1997: 6-7).

The following statistics by Liedholm and Mead (1999:3) further describe the distribution of small firms in Zimbabwe. Small firms employ 27% of people aged between 15 and 64 and 127 people per every 1000 are engaged in SF activities. Of all SFs, 69% are run by a single person and only 2% have workers from 10 to 50. Of the SFs 30% are located in urban areas, 6% are in rural towns whilst 64% are situated in rural areas. In urban areas, 64% constitute manufacturing and 30% commercial and in rural areas 75% are manufacturing whilst 16% are in commerce. Small firms owned by females are 66% and of all workers in SFs, 57% are also females.

All the statistics indicate that there are less small firms with more than 10 employees than those with less than 10. The structure can be exemplified by the use of a pyramid. As we go up the pyramid, the number of firms decrease which implies that many small firms operate with very few people. Figure 2.1 below illustrates the relationship between numbers of employees and number of small firms.

Figure 2.1 Relationship between numbers of employees in a firm and number of small businesses



More SFs are found in rural areas and this might indicate that these are survivalist businesses. As there are very few firms to employ the people in rural areas, some open up small firms to substantiate their survival, thereby the term survivalist. The following section gives a breakdown of the manufacturing sector in Zimbabwe.

2.6 MANUFACTURING SECTOR IN ZIMBABWE

The manufacturing segment has sub-categories that include food processing such as baking, oil processing and grain milling; metal fabrication; garment production; carpentry; beer brewing; pottery; brick-making and plastic production using recycled materials (Kapoor, Mugwara & Chidavaenzi, 1997:6). According to Biggs & Srivastava, (1996:47), small manufacturing firms contribute almost 18% of the overall manufacturing share in Zimbabwe. This is a big share considering that the remaining portion is shared by micro, medium and large manufacturing firms.

Though the sector is crucial for the functioning of the economy of Zimbabwe, it is being constrained by capacity underutilisation, inadequate research and development, reduced agricultural output, price controls since 2001, shortage of foreign currency, fuel, coal and electricity. The metal fabrication sub-sector is affected by lower output from Zimbabwe Steel Company (Zisco), garment production affected by reduced cotton crop and high lint exports whilst the food industry is being affected by lower grain and dairy products as there is a reduction in commercial herd (Mandiwanza, 2007).

Regardless of all the contribution which is made by small firms to all economies, there are several hindrances that negatively affect them from giving their best. Some of the challenges that are faced by SFs are discussed in the section that follows.

2.7 CHALLENGES FACED BY SFs IN ZIMBABWE

Several constraints have prohibited the small business sector from playing a very important role in the economy and among these are lack of access to modern machinery and equipment, a hostile regulatory environment, limited access to funds, high cost of finance, inadequate

management and entrepreneurial skills (SMMEs, 2002). The constraints are mainly felt by small firms that are starting up. The failure rate of start up firms in Africa is 85%, that is, of 100 new firms, 85 will not be successful and will close down (Gaomab, 2004). These challenges faced by small firms can be classified into four groups as suggested by Borgarello, Marignani and Sande (2004: 8). These categories include the credit market, macroeconomic environment, institutional framework and infrastructure and market and these are discussed below.

2.7.1 Credit Market

High lending rates and the use of conventional lending methodologies by banks restrict access to credit by the SFs. Conventional lending methodologies refers to the streamlined lending that follows rigid guidelines for acquiring a loan. Using this criterion, banks focus on risk, reputation, profitability, collateral security and the creditworthiness of proposed projects which favour large firms that could easily meet these criteria whilst the small firms are left with no source of credit finance. Small firms mainly rely on development financial institutions, which cannot provide them with adequate finance because of the over-reliance on the Government and donors for funding. Established banks generally neglect small businesses because of their high transaction costs and low credit worthiness rating. Information gaps and high lending rates have also contributed to less loans being given to SFs (Chigumira & Masiyandima, 2003:6-8)

Banks perceive lending to SFs costly compared to large and well established firms with traceable business and banking records. The costs for lending consist of process costs, administrative costs and the risk of failure attached to small firms. Usually small firms borrow small amounts such that the cost of processing such loans may outweigh the benefits to the lender.

To avoid high risks, banks consider collateral security, character of borrower, business track record, profitability of the venture, production capacity and initial capital prior to loan advancement. Trade liberalisation however, made future profitability of firms uncertain because of fluctuations in the demand for firm's products especially when there are cheaper foreign products being imported. Under such circumstances, large and well established firms with assets that qualify as collateral security and public enterprises that enjoy government guarantees continue to enjoy preferential treatment in accessing debt at the expense of SFs. Most SFs in Zimbabwe start up entities without assets that qualify as collateral security and they have no past business track record that can enable banks to have an opinion on their capabilities and the

viability of the ventures for which the loan is applied for. This missing information on the character and capabilities of SFs acts as a deterrent for risk-averse banks to extend credit to this sector (Chigumira & Masiyandima, 2003:31).

Though there was a reduction in restrictions to lending due to financial reforms, the high and unstable inflation and high interest rates negatively affected the use of debt by SFs. Interest rates are above the average rate of return on investment and discourages investors from borrowing.

Lack of information to SFs on the availability of loans and on how to access them remains another challenge for them. SFs are failing to utilize the cheap loan facilities such as those granted by the government and international financial institutions due to lack of information (Chigumira & Masiyandima, 2003:44). Asymmetric information between credit givers and the receivers creates uncertainties in the business environment. Therefore to reduce risk of failure, lending markets establish high interest rates that favour larger firms ahead of small ones. Banks forge strong linkages with larger firms in order to expand their power and achieve own interests. Small firms also lack power of negotiation for trade credit which large firms can have (Borgarello, Marignani & Sande, 2000:21). The macroeconomic environment also poses some challenges to small firms and this challenge is discussed in the next section.

2.7.2 Macroeconomic Environment

A macroeconomic environment is a business environment which comprises issues such as unemployment, inflation, trade cycle, economic growth as well as exchange rates. The variables in a macroeconomic environment cannot be controlled by a single firm (Lipsey & Harbury, 2004: 241). Instability of the economy is the other challenge facing SFs. The instability of the Zimbabwean economy leads to high lending rates that discourage borrowing by SFs. High inflation leads to a reduction in the real rate of return on projects, reducing the chances of banks extending loans to them as default risk increase. Real rate of return is a purchasing power-adjusted value of money. It tells how much more someone will be able to buy with money at the end of the year and takes into account the effects of inflation in the purchasing power of money. In other words, it is nominal rate of return adjusted for inflation (Marcus, 1999:239). While the private sector has been exposed to foreign competition because of trade liberalisation, its competitiveness has been hampered by high rates of inflation and interest. Emerging entrepreneurs have found it difficult to establish themselves due to uncertain macroeconomic

environmental factors such as high interest rates and unstable foreign exchange rates (Kapoor, Mugwara & Chidavaenzi, 1997: 2).

The tight monetary policy leads to high interest rates and that prevents small business people from achieving their best. High interest rates are also forcing small firm owners to rely on their savings and borrowings from business partners, friends and relatives. The price controls that are implemented by the government are causing a reduction in production and therefore shortages especially in raw materials that are used. The institutional framework challenge is discussed below.

2.7.3 Institutional Framework

Registration costs, bureaucratic processes, lack of information sharing and labour regulations are some of the institutional factors affecting small firms. The process of registering a firm and obtaining a license to commence a business is very onerous and is further complicated by labour regulations (Borgarello, Marignani & Sande, 2004:12).

The regulatory environment in Zimbabwe is complex and there are several bureaucratic requirements that small firms have to go through. A new firm has to register and get the necessary licenses and this process is a major drawback for small business people who are willing to start a new business. The process is expensive and time consuming and applicants have to visit several Government offices before commencing a business. This will at times lead to prospective small business owners foregoing some projects that can be profitable and crucial to the economy. The bureaucratic nature of registration is the main reason why many economic activities are not registered resulting in firms having difficulties in accessing debt from official credit institutions because of their legal structure (Borgarello, Marignani & Sande, 2004:12), (SMMEs, 2002:7) and (Kapoor, Mugwara & Chidavaenzi, 1997:16).

Tax requirements also favour the large scale firms over small ones. This is because small firms do not have personnel to do the accounting for them, as it is costly. The tax structure does not differentiate between large firms and small firms and as a result the financial burden on small firms can be substantial. Besides the high tax liability paid by small firms, the tax return calculations are also complicated to some small firms that cannot afford to employ experts in this

field. A financial burden will be imposed on these firms as they have to pay high fees to experts to fill in the tax return forms (SMMEs, 2002:7) and (Kapoor, Mugwara & Chidavaenzi, 1997:21). Devaluations of the Zimbabwean dollar recently led to a sharp increase in the price of imported equipment which is beyond the reach of several small firms (Dawson, 2006). This meant that small firms have to make do with available equipment which might be old and outdated and thus no longer efficient. Because of this, SFs will not be able to reach their full capacity which they might have if they had access to new and efficient machinery. There is also a shortage of high-quality tools available to SFs.

Apart from registration, taxation and devaluation, the price control by the government is also another blow to growth and prosperity of SFs. The prices of basic goods such as bread, milk and mealie-meal are determined by the government forcing some other small firms to close or reduce scale of production. This is mainly affecting firms engaged in retailing and commerce and the prices that are set at times will lead to losses as the costs involved are high. For example, firms that are located near suppliers and consumers will incur relatively low transport costs compared to those located far from suppliers and customers. With the shortage of fuel in Zimbabwe currently, it is expensive to transport goods from one place to another and consequently rural area firms are more affected. The result is manifested in loss as retailers are forced to sell at the set price. Small firms furthermore also suffer poor infrastructure and markets that are not well defined. Section 2.7.4 focuses on this challenge.

2.7.4 Infrastructure and Markets

Small firms also suffer from a lack of well defined distribution channels. This means that SFs have to use underdeveloped and less formal channels for distributing their products. Many large retail outlets are not prepared to stock goods that are manufactured by small firms, therefore leaving SFs with no channels to market their products to the customers. Several people also view goods produced by SFs to be of inferior quality as compared to those of well established large firms. The market therefore, is small and usually comprises of consumers with inadequate disposable income. Sometimes, this leads to small firms selling their goods on credit to customers who are not credit-worthy thereby increasing the risks of failure.

Small firms in Zimbabwe face stiff competition from large firms. They have to market their goods and services in a marketplace filled with cheap imports from China and the Far East. Small firms have therefore, to prove to the market that their goods are better than the cheap imports or have to look for ways to reduce their costs of production so that they can have a competitive edge in the market. Usually these cheap imports are not durable and small firms have a challenge to prove that their goods offer value for money. Ways should be devised to inform the market about their goods and services at the lowest possible cost. The challenge then, in the face of globalisation, is the high cost of doing business. Ways of out-performing each other should be devised and this cannot come free of cost.

Costs of transporting raw materials and finished goods are very high at the moment. This transport problem is mainly felt by firms located far from their source of raw materials and market and engaged in production of goods. The shortage of fuel in Zimbabwe is felt by many small firm owners and is increasing costs of production. At times, entrepreneurs are forced to buy fuel at illegal parallel markets and/ or buy [illegible] foreign currency which is not readily available.

The state of the roads has been deteriorating for some time now and this is also imposing challenges to entrepreneurs. Due to a bad road network, transportation of raw materials becomes expensive especially to those firms that subcontract the transportation of raw materials. The transportation companies will charge more because of the dangerous condition of the roads. Some firms, especially retailers located in rural areas, are losing lots of revenue because of stock shortages caused by failure to get transport to ferry stock to their areas of business. Some roads that lead to rural areas are so bad that many transport services are not offered to these areas. The problem is rife during the summer season which makes it impossible for any vehicles to cross low areas without bridges or where bridges were destroyed but not yet repaired.

Besides high costs due to a bad road network, there are also electricity constraints. Zimbabwe is currently experiencing severe electricity shortages. This problem mainly affects small firms located in residential areas as they are in the areas that are mainly affected by power cuts. Several small firms unlike larger ones, cannot afford to purchase generators to use in the event of an electricity power cut.

Other challenges include lack of modern technology, incapacity to exploit economies of scale of production and employee expertise. People without adequate expertise are employed since the SFs, because of financial constraints, cannot afford to employ an adequately qualified workforce (Borgarello, Marignani & Sande, 2004:10).

Despite all these identified challenges which are faced by small firms, several governments are striving in eradicating these challenges. The government of Zimbabwe is not an exception to this and it has formulated several policies to assist small firms in working in a conducive environment with minimal obstacles. Section 2.9 below discusses the promotional activities that are being implemented or intend to be implemented.

2.8 PROMOTION OF SFs

Although the small firm sector faces more challenges compared to larger ones, the Government of Zimbabwe is trying hard to support and reduce barriers related to this sector. To create a favourable environment, the Government of Zimbabwe through the ministry of Small Micro and Medium Enterprises has formulated a policy framework to come up with ways to assist small firms. Some of the support systems are already in place whilst some are still to be implemented. The following section focuses on systems that are already in operation.

2.8.1 Systems in place

The government is giving incentives to small businesses at their start up stages and growth phases. The major incentive is on tax breaks and tax concessions. The strategies for achievement of the investment promotion include tax relief and rebates and discounts. A tax relief implies that small firms will not be subject to a full tax liability and therefore will save through payment of lower tax compared to larger firms. The rebates and discounts include discounts on land and services and rate rebates (SMMEs, 2002:8). Currently, SMFs that are situated at Growth Points pay 10% income tax rate for the first 5 years of operation and this encourages small firm investment at Growth Points. For small manufacturing firms that export 50% or more of their output, the tax rate is 20% (Zimbabwe Revenue Authority, 2007).

The government of Zimbabwe, through the Reserve Bank of Zimbabwe (RBZ), has supported the SFs through structures such as the Credit Guarantee Company. This company provides guarantee to loans given to SFs by commercial banks. The RBZ has availed 16 billion Zimbabwean dollars SME Revolving Fund to assist the small firms and this amount is approximately 450 million South African rands. Of the $16 billion, $5 billion goes to women, $5 billion to youth and $6 billion to all other small firms. The funding is available to SFs at an annual interest rate of 50% and funding will be accessed from banks, Small Enterprise Development Corporation (SEDCO) and selected micro-finance institutions. The average lending rate for banks in Zimbabwe is 400% according to The Herald, November 2006. To date, of the disbursed amount, the manufacturing sector has obtained 48% which is by far the largest portion of all the sectors (Gono, 2006:31-42).

The major constraint to small firms' growth and success is lack of access to finance and the higher cost of debt. To avert this, the Government established institutions that will offer credit finance to small firms without asking for collateral and at lower interest rates than prevailing. Technical assistance provided by Zim [redacted] will be strengthened to increase SFs marketing knowledge and to identify market niches. Trade markets had already been put in place to create an enabling environment for the sector in order to improve its operations and expand into the region. The Government has put in place schemes that are going to assist small firms to grow into large firms. These include free training, creation of linkages with local authorities for provision of infrastructures to operate from and programmes on accessing lucrative markets in the form of selling and trade missions (Anon 1c, 2006).

Structures have also been set to facilitate the growth of small firms. The Ministry of Industry and International Trade will be responsible for the provision of promotional and analytical support. The Ministry of Youth Development, Gender and Employment Creation will be responsible for the creation of an enabling environment for the informal sector to be formalised. The latter provides funds through its employment creation fund for start-ups and growing businesses and offers technical and entrepreneurship skills (SMME, 2002: 13-15).

The government has been promoting the small firm sector through various policy documents such as the Framework for Economic Reform, Zimbabwe Programme for Economic and Social Transformation and the Economic Recovery Programme. Support programmes for small firms by the Zimbabwean government include the Small Enterprise Development Corporation, Zimbabwe

Development Bank, Credit Guarantee Company of Zimbabwe, Agricultural Development Bank and the Venture Capital Company of Zimbabwe. All these structures assist small businesses in securing start-up capital and also offer training services for them to be sustainable (SMMEs, 2002: 3). The following section focuses on promotional activities that are being envisaged and are yet to be implemented.

2.8.2 Systems yet to be put in place

The Government of Zimbabwe has devised methods to react to the challenges faced by the small business sector but some are still to be put in place. These promotions are through the creation of an enabling legal and regulatory environment, investment promotion, improving access to finance, access to markets, technology and infrastructure support, entrepreneurial, management and skills development and creation of relationships and partnerships with helpful organisations (SMMEs, 2002: 7-13).

To create and enable a legal and regulatory environment, the Government came up with several strategies. These strategies include among others simplification of complex regulations, improved access to information and centralising and streamlining the procedures. There is an initiation to revise laws and regulations and policy makers will make sure that the regulations are pro-active. Laws and regulations will be drawn up to ensure minimal administrative work. The Small Business Act will be put in place to facilitate the growth of the sector. The act will create an effective mechanism for giving incentives to SFs and will specify rewards and penalties for non-compliance with the provisions. The responsible authority for business formation will simplify and minimize procedures for establishing a business. Local authorities will develop simple procedures that require minimum time and effort to issue the relevant license and permits. Legal reform to remove legal constraints will be undertaken as well as minimising the reporting and administrative requirements (SMMEs, 2002:7-8).

The government encourages business angels, capital ventures and private equity givers to invest in small firms in return for incentives such as tax relief. A business angel is an individual or a small group of individuals who invest in new ventures that show potential for growth (Barrow, 1998:69). To increase funding for SFs, a secondary stock exchange will be set up and this stock

market will primarily cater for SFs and will afford them an opportunity to raise funds through various instruments that include public offers. It will therefore offer vast scope for growth of the sector in terms of securing capital for expansion, research and development, advertising and packaging (SMMEs, 2002:9) and (Bwititi, 2006).

To address the market challenge, the government intends to continuously provide information on market trends. Business associates will provide small firms with market opportunity services. Quality assurance measures and accreditation will be encouraged to enhance product competitiveness. The Standards Association of Zimbabwe will embark on a support programme targeted at SFs. Other intended support systems for the market challenge include marketing and distribution support and trade facilitation (SMME, 2002:9-10).

Other support systems intended comprise technology and infrastructure support and entrepreneurial, management and skills development. The strategies include provision of technological information, provision of [illegible]space, national productivity centre, electronic commerce, entrepreneurship development, business management and support, technical skills training and information and advice (SMME, 2002:10-11).

The Small Business Advisory Council will be established as a public-private partnership. It will give advice to relevant ministers on issues affecting the sector. Small Business Authority will be responsible with SFs development through providing information and guidance, counseling and training, legal advice, financing, marketing support and research and policy formulation (SMME, 2002: 13-15). To attain the objectives of the SF's policies, the Ministry of Small Micro and Medium Enterprises suggest that the Government maintains a level field based on free market principles. The aim will be to develop and maintain free competition and at the same time create an environment for small firms to develop and realize their full potential (SMMEs, 2002:5). Section 2.10 gives a summary of this chapter.

2.9 SUMMARY

From the discussion in all the preceding sections, it can be deduced that small firms are very important to all economies. Depending on the environment they operate in and the support given to small firms by countries, their contributions will differ considerably. The actual contributions

of small firms to different economies are difficult to compare due to the unavailability of one universal definition used to define a small firm. Different countries have different definitions and in most cases it will depend on the use of the definition. For the purpose of the study at hand, the following definition has been adapted: a business entity which has a formal legal structure and employs between 5 and 50 employees. The value of assets was not used because of the volatility in the value due to excessive rates of inflation which dilutes the value of assets. Several countries use number of employees to define a small firm. Difficult though it may be to have a single definition that applies to all, their importance is largely felt by almost all countries. The contribution comes in the form of job creation, innovativeness, production and distribution of goods and services, assisting in community activities and assistance in economic decision making. SF success is mainly dependable on the entrepreneurship skills possessed by the small business owners.

The emergence of SFs in the Zimbabwean economy can be attributed to Economic Structural Adjustment Programme and financial sector regulation that created a good platform for small firms and made it easier for banks to give credit to small firm owners. In Zimbabwe, more SFs are found in rural areas and the majority which operate with less than 10 employees are owned by women and a bigger proportion is engaged in trading business. SFs also face challenges in their operations. Literature has identified failure to acquire credit, unconducive macro-economic environment, unconducive institutional framework, deteriorating infrastructure and markets as the major challenges that are being encountered in Zimbabwe. To counter these challenges, the Government of Zimbabwe has formulated policies and strategies which are intended to create an even operating environment for SFs.

Chapter three focuses on the sources of finance available to small firms. The chapter will encompass the financial markets, types of finance, the sources of finance and the determination of a type of funding to be employed by small firms.

CHAPTER THREE

FINANCING OPTIONS FOR SMALL FIRMS

3.1 INTRODUCTION

In almost every country, there are claims that small firms are disadvantaged because funding is more difficult to obtain than it is for bigger firms. The difficulty of financing for small firms is one of the most frequently heard complaints. Small firms need capital to finance long-term and short-term needs. They need capital to invest in fixed assets, current assets and intangible assets such as buildings, raw materials and trademarks. They also need capital to cater for seasonal fluctuations in demand which may be caused by business cycles, structural changes in the economy and incidental events (Nieman & Pretorius, 2004:172). Without capital to cater for these needs, a small firm cannot prosper.

The generation of capital in sufficient quantities and in the right form is crucial to the success of small firms. Small business owners (SBOs) can either fund their businesses with their own funds or those from other people. There are basically two categories of sources of finance which an SBO can consider when raising funds. These categories are equity and debt finance. Funds that do not need to be returned either as capital repayment or interest fall into the equity category as all other funds that need payment of the initial capital and interest fall into the debt category. A combination of the two can be used to finance a business. There are conditions which SBOs should meet when raising funds otherwise investors will not invest in the business. Finance is traded in the market whereby terms are agreed upon and transactions take place (Correia *et al.*, 2005: 13-3).

This chapter focuses on financial markets where finance is traded; capital structure - thus the type of finance; capital providers and the determination of the type and source of finance. The financial market concept and the forms of financial markets that exist are discussed in the section that follows.

3.2 FINANCIAL MARKETS

Finance is obtained on financial markets which are markets where finance is traded. As in other commodities, markets develop to ensure capital supply meets its demand. On this market buyers and sellers (those who are looking for funding and those willing to supply the funding) meet and discuss terms and conditions for offering funding. Suppliers of finance differentiate themselves

from each other by the way they supply the capital, the type of capital they offer, the levels of risk they are prepared to accept, the price they ask for the capital and the supplementary services they offer (Wickham, 2004:444). These markets are classified into money and capital markets, spot and derivative markets and venture capital markets. Correia, *et al* (2005) identified the abovementioned types of financial markets and these are briefly discussed in the following sub-sections.

3.2.1 Money and Capital financial markets

The money market is primarily for short-term finance and is not situated in one location. Institutions such as merchant banks, commercial banks and finance houses operate the money markets. Capital market on the other hand is for raising long-term finance which is usually used for the purchasing of fixed assets. An example of a capital market is the Zimbabwe Securities Exchange (ZSE). As a rule of thumb, money markets' transactions deal with financial instruments with a life of less than three years and capital markets for financial instruments with a life of more than three years (Correia *et al*, 2005:13-14). A financial instrument is a real or virtual document with contractual provisions that entitle its owners to specific rights and claims on real assets (Brigham & Ehrhardt, 2005:12).

3.2.2 Spot and derivative financial markets

Instruments are traded at the agreed price immediately for spot market and settlement is deferred on derivative markets. The use of derivative instruments allows the creation of finance to suit the particular needs of lenders and borrowers. A spot market is a market whereby commodities are sold at prevailing prices and prices at the spot market are always changing whilst at derivative markets, future prices of commodities are determined at the present (Brealey, Myers & Marcus, 1999: 626 & 678). SBOs have time to use the financial instrument for a certain period before the payment is settled, thereby financing some business activities during the period before payment (Correia, *et al.*, 2005:13-4).

3.2.3 Venture capital financial markets

This is a financial market where funding for new, expanding and entrepreneurial firms is obtained (McLaney, 2000:389). The venture capital market encourages entrepreneurship and gives investors a chance to participate in high-risk speculative projects. This market provides funds and start-up seed capital to high risk small firms. Many new small ventures make use of this market (Marx, DE Swardt & Nortje, 2004:233) and (Rwigema & Venter, 2005:404-406). It should be noted that financial markets are not mutually exclusive as one type of finance can fall into several different financial markets. Having the background of the different types of financial markets, a discussion on the types of funds to be used in the capital structure will preside.

3.3 CAPITAL STRUCTURE

Capital refers to the type of finance which is used in a firm, that is, debt and equity. Capital structure therefore refers to the financing mix being employed by a firm, thus the mixture of debt and equity (Brealey, Myers & Marcus, 1999:9). Capital decisions are the choices that are made by firms in terms of financing instruments and the basic trade-off between using debt and equity (Damodaran, 1999:213). Section 3.3.1 below focuses on one of the proponents of capital that is, equity and its components.

3.3.1 Equity

Equity is the primary source of funding for a small firm. It is money invested in the venture with no legal obligation for small business owners to repay the principal amount or pay interest on it. It does, however, require sharing the ownership and profits with the funding source (Kuratko & Hodgetts, 2004: 483-493). This money comes from the owner's savings and in the case of a company, it will be in the form of share capital and retained earnings. Shareholders' (owners) money does not have to be repaid but they expect an increase in the value of their shares and if a business goes public, they expect a dividend as well (Barrow, 1998:56). In return for the funds advanced, equity holders will have part of the firms' ownership depending on the amount of contribution made. Equity can be raised through two major sources namely public share offering and private placement. Public share offering refers to sale of securities to anyone who wishes to buy and once it has been sold, can be freely traded in the securities markets whilst private

placement refers to the sale of securities to a limited number of investors without a public offering. The securities cannot be freely traded in the securities' markets (Brealey, Myers & Marcus, 1999:353).

SBOs can form a company, a close corporation which refers to a firm that is closely owned by a few people and its shares are not actively traded on the security exchange (Brigham & Houston, 2004:309) or a partnership to attract shareholder's capital, member's interest or partner's contributions or they can approach venture capitalists or business angels to acquire equity (Rwigema & Venter, 2004:401).

The discussion that follows focuses on different sources of equity capital. These constitute family and friends' loans, share capital, retained earnings, industry backup, venture capital, government grants and commercial partnerships which constitute equity especially in companies.

3.3.1.1 Owner's funds

The most convenient source of finance is the owner's funds. These are funds that come from personal savings, investments, sale of assets, inheritances, trust funds and lump sums resulting from a capital gain or a redundancy package among others. Capital gain refers to a profit which is made from the disposal of a fixed asset which was held for more than one year (Brealey, Myers & Marcus, 1999:239). Owner's funds are desirable as no collateral is required to get them. Collateral is an asset or a group of assets specifically named in a debt agreement to which the creditor has claim if the borrower fails to comply with the terms of the agreement (Ainsworth, Deines, Plumlee & Larson, 1997:518). The owner also does not have to share the ownership of the venture with anyone as he/she finances the business with their own funds and there is also no need to comply with any requirements for raising of finance (Wickham, 2004:445) and (Rwigema & Venter, 2004:389). If the funds are not a loan but a gift, it is tantamount to equity.

3.3.1.2 Contributions from family and friends

Research all over the world has concluded that one of the main sources of business finance for small firms is family and friends. Family is the best bet when it comes to understanding what the SBO wants to do and give support, loyalty and a speedy decision. But if a contribution is made

from the family, the small business owner should treat it professionally as this enhances trust and can prevent disputes (MaCleod & Terblanche, 2005:147-148).

3.3.1.3 Shareholder capital

SBOs can form a company in order to raise capital through share offerings. A company can raise funds through the issue of new ordinary shares which the public may take up. Shares are portions of ownership in a company which are sold to the public or private investors to generate capital. The interest of ordinary shareholders is related to the performance of the firm. Their wealth increases by the capital growth in the shares and the dividends received (Rwigema & Venter, 2004:401) and (Correia *et al.*, 2005:13-11).

SBOs can either start a private or public company to raise equity through share issue. A private company is not allowed to offer its shares to the public whilst public companies list and trade shares publicly on the Zimbabwe Securities Exchange. Ownership in a company where shares are used to raise funds is proportionate to the number of shares purchased. Shareholders of a firm are entitled to profits in proportion to the number of shares held. The portion they receive is termed dividend and is paid at the discretion of the firm's directors who decide how much of the profit they wish to retain for future expansion (Rwigema & Venter, 2004:401) and (Barrow, 1998:72).

A firm can issue ordinary shares, deferred shares and / preference shares (refer to sec 3.3.2, p. 50 for more information on preference shares). Ordinary shares are the most common type of share and constitute most of a firm's capital. Dividends on ordinary shares can be paid only once holders of preference shares have received their dividend. Ordinary shares in a public firm must carry equal voting rights whereas private firms can issue ordinary shares with different voting rights. Deferred shares are shares on which dividends are paid out only when preference shares have received their fixed rate of dividend and ordinary shares have received either a specified dividend or dividend for a minimum period. Dividends on deferred shares are paid out only after preferential shares have received their fixed rate of dividend and ordinary shares have received either a specified dividend or dividend for a minimum period (Rwigema & Venter, 2004:402).

Though raising funds through the issue of shares, especially publicly is desirable, it comes under great scrutiny, thus management will spend more time explaining to stakeholders why they run the business the way they do (Barrow, 1998:73-74). This will mean some of the management staff will spend more time dealing with stakeholders' queries rather than doing the planning for the future of the firm.

The raising of equity finance through the issue of new ordinary shares does not come without a cost. Several different expenses are incurred during the process of raising the capital and these costs include listing fees, advertising expenses, professional fees, banker's fees, underwriting commission, taxes and duties among others (Correia *et al.,* 2005:13-11). This implies that the actual value of a share will be less than its quoted price as the other amount will cover for the costs incurred.

3.3.1.4 Retained earnings

Retained earnings are the other part of equity finance and constitute part of earnings available which the company retains. The shareholders would have agreed to forego a dividend in the expectation of future growth. The decision to retain earnings rather than to pay a dividend is determined by the dividend policy of the company. Retained earnings constitute an immediate source of finance since, if they are distributed as dividends, equity funds has to be raised (Correia *et al.,* 2005:13-11 to 13-12).

Retained earnings can be a better source of funding especially when there is a new attractive investment opportunity. This is because there are no other costs such as floatation costs attached to retained earnings as compared to the issue of new shares. Besides the actual costs associated with the issue of new shares, the use of retained earnings for funding is time conservative as no time is spent looking for another type of finance. In business, time is money and time lost will never be recovered. Though profits generated by ventures are available for reinvestment, it should be noted that they do not belong to the venture or the entrepreneur but are the property of investors who are backing the venture. Reinvesting the profits might offer a good investment opportunity but it is an opportunity which investors judge like any other investment on the basis of risk and return. There is also a possibility of taking the profits and seeking alternative investment opportunities (Wickham, 2004:446).

3.3.1.5 Venture capital

Another type of equity finance is capital that comes from venture capitalists. Venture capital is a name given to equity finance provided to support new, expanding and entrepreneurial firms. Much venture capital comes from funds contributed to by a number of smaller investors, in many cases taking advantage of the tax incentives available to providers of equity finance through such funds (McLaney, 2000:389). It is usually equity capital provided to a firm by an investor or investors, in exchange for a share of the ownership of the firm (Damodaran, 1999: 217). This capital mainly suits small firms as it is usually associated with financing of new small firms with higher levels of risk. Most established finance givers shun the small firm sector as it is associated with high risk and high levels of failure. The providers of this type of capital look for high returns and for a firm to get the finance, the owner has to offer part of the ownership of the firm thereby reducing the powers of decision making (Brealey, Myers & Marcus, 1999:369). For more information on venture capital, refer to section 3.4.3 on page 63.

3.3.1.6 Government grants

Governments also offer capital to small firms in the form of development grants and these grants are usually offered to assist new start-ups when capital to invest will be difficult to obtain. Grants have been developed to help fill some of the gaps that exist in the normal market provision. They are aimed mostly to assist areas of high unemployment and economic dereliction and to encourage research, development and innovation (Knott, 1998:138-140). Apart from capital grants, governments also offer support to small firms in the form of consulting services and training. The Government of Zimbabwe offers subsidies for small firms in the form of tax rebates. For a small manufacturing firm that is located at a Growth Point, the tax rate for the first five years of operation is 10% instead of the normal 30%. For a small manufacturing firm that exports 50% or more of its outputs, the tax rate is 20% (also refer to sec 2.8.2, p. 39) (ZIMRA, 2007).

Since no repayment is required, equity capital can be much safer for new ventures than debt financing, yet the SBO must decide on giving up part of the ownership in return for the funding. Having discussed the equity as an alternative source of finance for a small firm, the following section focuses on another alternative of business financing which is preference share issue.

3.3.2 Preference shares

Preference shares contain some characteristics of equity and some of debt (debt will be discussed in sec 3.3.3). A fixed dividend is received from preference shares, which is similar to debt, but in the event that the firm has insufficient funds to pay the preference shareholders' dividend, it may be passed, thus likened to equity. The nominal rate for preference dividends is usually based on the after-tax interest rate for long-term debt. The reason being that interest on debt is deductible for purposes of taxation while preference dividend is not (Correia *et al.*, 2005:13-12 to 13-13).

Preference shares are cumulative preference shares unless they are specifically designated as non-cumulative. Cumulative means that in the event that the preference shareholder dividend is not paid, in the following financial year, the dividend will be the fixed dividend for that year plus the dividend for the previous year which was not paid. The preference shareholder has a right to arrear dividends and they accumulate until paid. Preference shares exist in a variety of forms and these include participating preference shares, redeemable preference shares and convertible preference shares (Correia *et al.*, 2005:13-12 to 13-13).

Participating preference shares are preference shares that have elements of both preference and ordinary shares. They have a fixed dividend and they also share in the remaining profits of the firm in some predetermined proportion to the ordinary shares. Redeemable preference shares are the same as normal preference shares except that the firm has an option to redeem them at a specified price on a particular date. They are attractive to the firm because they offer a degree of flexibility. The investor is at a disadvantage because the redemption may take place at an unfavourable time to him/her. Convertible preference shares are also similar to normal preference shares except that the holder has the right to exchange them for ordinary shares or other securities according to prearranged terms. If the holder believes that the ordinary shares offer a better risk-return relationship than the convertible preference shares, conversion will take place (Correia *et al.*, 2005:13-12 to 13-13). The other component of capital, debt, is discussed in subsection 3.3.3 below.

3.3.3 Debt

Debt is a form of finance which has a fixed cost and firms are obliged to pay interest for its use. This option creates both a fixed obligation to make cash payments and provides debt holders with prior claims if the firm is in financial trouble. Debt finance can also be termed financial leverage (refer to sec 3.3.3.3, p. 57) which is the use of fixed-cost financing such as debt to magnify return and risk (Gitman, 2003:522) and (Damodaran, 1999:219).

Debt comes in the form of short-term, medium-term and long-term finance. Short-term debt is usually less than twelve months, medium-term is between one and ten years and long-term is for longer periods usually more than ten years (Correia *et al.*, 2005:13-13). The determination of short, medium or long-term is at times determined by the type of business a firm is engaged in; short-term finance in manufacturing might be different to the one in construction.

The interest charged on debt for small firms is usually very high due to the perception that new ventures are more likely to fail, therefore more risky. Debt can be at a fixed interest or variable interest and can also be either secured or unsecured. Examples of debt include loans, trade credit, leases and mortgage bonds (refer to sec 3.3.3.1, p. 51 and 3.3.3.2, p. 54 respectively) (Rwigema & Venter, 2004:390). Having discussed the meaning of debt, the following discussion identifies different types of debt.

3.3.3.1 Short-term debt

Short-term debt is usually raised for the purposes of working capital as many businesses are affected by seasonality. Seasonality refers to cyclical and seasonal variations in demand for goods and services due to changes in seasons. Examples include an increase in demand for goods and services in November due to bonuses given to employees, an increase in demand for clothing during the winter season (Marx, De Swardt & Nortje, 2004: 277). They are usually used to finance working capital requirements such as purchasing raw materials and paying debts. Short-term debt is mainly used by firms with cyclical demand, thus demand which fluctuates during the year. Seasonal fluctuations in demand are usually financed through trade credit but it exposes a firm to a higher risk as short-term debt has to be settled sooner than long-term debt (Correia *et al.*, 2005: 13-15). Examples of short-term loans include personal loans, bank overdrafts, credit

cards, revolving credit, bankers' acceptances and trade credit, among others. These forms of short-term debt will be discussed below.

- **Personal loans**

Personal loans may not require collateral but may depend on the individual's ability to repay the loan based on income earned. SBOs can use these loans to finance the business investments available which are relatively easy to get (Rwigema & Venter, 2004:391-392). This type of finance may only be suitable to finance short-term needs for cash as repayment periods are usually short. Personal loans cannot be used to finance long-term financial needs of a firm such as purchasing fixed assets since it is established financial practice to aim towards matching the maturity of the finance with the life of the asset being financed (Correia *et al.*, 2005:11-7).

- **Bank Overdraft**

A bank overdraft is a facility given by banks to allow a person to over-withdraw the amount in his/her bank account. Banks therefore make payments beyond the amount of money in the bank account of a customer. The intention is to give an SBO funds to cater for his working capital. Bank overdrafts are flexible and are relatively cheap with interest charged on the outstanding daily balance. Overdrafts must be repaid in full in the event of any conditions required by the lender being contravened (Rwigema & Venter, 2004:391-392) and (Barrow, 1998:63).

- **Credit cards**

A credit card is a plastic card embossed with the account number, initials and surname of the cardholder to which the account is assigned. The account makes provision for a credit limit that can be used to purchase goods and services and to obtain cash disbursements on credit. These purchases can be made over the telephone, internet or via mail. Repayment of the credit which was extended can be effected through several convenient payment methods and repayment amounts at once or in installments (ABSA, 2007). The use of a credit card does not result in the deduction of money from the borrowers account after every transaction. Rather it allows the borrower to revolve his / her balances at the cost of having interest charged (Wikipedia, 2007). Though interest is charged on the funds used, most cards offer an interest-free period after which interest will be charged (Moodley, 2007). This can be equated to trade credit. As in both cases, an

interest free period can be utilised which results in the use of cost free debt. Credit cards are gaining popularity and are now being used as a source of finance by small business owners.

- **Revolving credit**

Revolving credit is whereby SBOs are granted a line of credit which once a minimum amount of the loan has been repaid, it can be drawn back to its original limit without affecting the repayments (Rwigema & Venter, 2004:391-392) and (Barrow, 1998:63). It is a type of credit that does not have a fixed number of payments. A revolving credit arrangement usually lasts for a few years and formally commits the bank to provide for loans up to some limit for the term of the agreement. The borrower must pay a commitment fee to establish a revolving arrangement, in part to compensate the bank for its legal obligation to honour the agreement (Brealey, Myers & Marcus, 1999:527). It should be noted here that during preliminary interviews with financial institutions' staff, some institutions such as ZB Bank have suspended this facility due to unfavourable economic conditions.

- **Bankers Acceptance**

A banker's acceptance is created when a company sells a bill of exchange to the bank to be settled on a predetermined date. A bill of exchange is a negotiable instrument and is used in the paying of trade credit (Nieman & Pretorius, 2004:179). This is a facility made available by merchant banks whereby a 'special client' borrower is issued a letter of credit permitting the client to draw bills to a specified limit on the bank. This bill is then accepted by the bank and subsequently discounted in the money market and the proceeds net of discount are made available to the borrower. By accepting the bill, the bank assumes responsibility for payment on maturity on the understanding that the client will repay the bank by the due date (Nieman & Pretorius, 2004:179). It is cheaper than a bank overdraft but does not have the same degree of flexibility. The firm is committed to using the full amount of banker's acceptance for the agreed period, whereas the overdraft can be easily managed. Banker's acceptances are mainly used to fund seasonal fluctuations, thus demand which is cyclical (Correia *et al.*, 2005:15-15 to 13-16).

- **Trade Credit**

Trade credit is an offer given by suppliers to sell commodities to firms on credit in the normal course of business. An example is when a firm buys stock on credit from other firms. This

implies that the buyer will not be expected to pay cash for the goods or services purchased (Nieman & Pretorius, 2004: 177). The time lag between the receipt of the goods and payment for them allows the firm purchasing those goods to process or sell some or all of them thereby generating income before the payment for the goods is done. By this option, an SBO can use the funds to generate more income in the form of other lucrative investments. The cost of the materials bought will be paid at a later period allowing the firm to generate income between the purchase of the goods and the payment made for the goods. There is no cost involved on trade credit except when a firm does not utilise the discount period and pays after the agreed payment period has elapsed (Correia, *et al.*, 2007: 12-19).

For a firm to obtain trade credit, suppliers assess the credit worthiness of the buying firm by doing a credit check on the bank account and other trade credit accounts. If credit is granted, certain credit limits and terms will be specified. As the business grows and proves to be an honest and regular payer, the limit will be increased (Nieman & Pretorius, 2004:178). It therefore requires mutual trust especially from the side if they need to continually receive trade credit from suppliers.

- **Factoring and Invoice discounting**

Factoring and invoice discounting are other sources of short-term debt together known as debtor financing (Nieman & Pretorius, 2004:179). Factoring is a service offered by factoring companies whereby the factoring company takes over the payment of the goods when they are delivered to the customer. A duplicate invoice is sent to the factoring company which assumes responsibility for the payment. A certain percentage of the value of inventory sold can be withdrawn immediately and the remainder when the customer pays. The factoring company carries the risk of not receiving money if the customer defaults in payment. For this service, a small percentage is paid as a fee and a low interest on money advanced is also charged. Invoice discounting is similar to factoring except that the entrepreneur has to follow the customers for payment and he assumes responsibility for any bad debts. Factoring helps a firm to have cash at all times to run the business efficiently, thus cash for the purchase of raw materials and payment of labour which usually happens when customers are still to pay (Barrow, 1998:65-67). The following section focuses on medium and long-term debts.

3.3.3.2 Medium and long-term debt

These are more formal and take more time to secure than the simple overdrafts. Medium-term debt is finance that usually has a lifespan of between one and ten years whilst long-term debt is finance that usually has a lifespan of more than ten years. These are provided for the purchase of property and assets and are usually secured against existing fixed assets or the one being acquired. There are several costs which are incurred when a term loan is being used. These include among others, legal costs and consultant's fees which might make them more expensive than bank overdrafts. Examples of these medium to long-term loans include instalment loan, instalment sale, hire purchase, leasing and mortgage loans (Barrow, 1998:64), (Rwigema & Venter, 2004:392) and (Van Aardt, Van Aardt & Bezuidenhout, 2002:199).

- **Instalment loans and instalment sales**

An instalment loan is whereby a bank loans to the borrower the full purchase price of the asset and then secures the loan against the pu[illegible]set. In an instalment sale, the bank purchases the asset on behalf of the entrepreneur who then repays the bank in monthly instalments. Once the asset is fully paid, ownership transfers to the entrepreneur (Barrow, 1998:67-68).

- **Term loans**

Term loans are loans that are usually secured against a bond (refer to par 4, p.56 for definition of a bond). They typically carry fixed interest rates and monthly or quarterly repayment schedules and include a set maturity date. Term loans are basically grouped into two categories which are intermediate-term loans and long-term loans. Intermediate-term loans usually run for less than three years and are generally repaid in monthly instalments from a business's cash flow. The repayment is often tied directly to the useful life of the asset being financed. Long-term loans are commonly set for more than three years. Most long-term loans range from three to ten years and some run for as long as twenty years. The assets of the firm usually act as collateral for the loan and they typically require quarterly or monthly payments derived from profits or cash flow. These loans usually carry wording that limits the amount of additional financial commitments the business may take on and they sometimes require that a certain amount of profit be set-aside to repay the loan (Entrepreneur, 2007).

- **Hire purchase**

Hire purchase is like instalment credit and it is whereby a firm uses an asset without paying the full price at once. Instalments will be paid for the use of the asset and the firm has an option at the beginning to become the owner of the equipment after a series of payments have been made (Barrow, 1998:67-68). Under a hire purchase agreement, the firm is technically hiring goods until the final instalment is paid. The firm will not own the goods until then and it can end the agreement and return the goods at any time. However, it will owe any overdue instalments and, if less than half of the total price has been paid, the firm may also have to pay the difference. The lender may be able to repossess the goods if, for example, the firm falls behind with payments but does not have to sell the repossessed goods to reduce the firm's debt (Adviceguide, 2007).

- **Leasing**

Leasing is also another type of long-term funding. The small business owner (SBO) can lease an asset for an agreed period of time after which the asset can be returned or acquired or the lease can be extended. In leasing, a firm gets to [illegible] assets without paying the full cost all at once. Leasing is divided into operating and financing/capital leasing. An operating lease refers to a rental agreement for a period of time that is substantially shorter than the economic life of the leased asset. The owner takes the risk of the asset becoming obsolete and assumes responsibility for repairs, maintenance and insurance. In finance leasing, the lessee (SBO) leases the asset for a better part of its economic life and maintains and insures it (Barrow, 1998:67-68). The leasing firm, for practical purposes, owns the asset in a financing lease (Ainsworth, Deines, Plumlee & Larson, 1997:518).

Combined, instalment loan, instalment sale, leasing and hire purchase are termed asset finance (Nieman & Pretorius, 2004:180). These are funds provided to purchase an asset and in most cases, fixed assets. Small firms can immediately use the agreed asset without paying for it at the same time. Payment will be done in instalments for the duration of the agreement and this can give small firms time to generate income from the asset before paying for it in full.

In most cases, security is required for these term loans and lenders can also impose certain restrictions on the borrower to protect themselves from losing their investment. Examples of such restrictions include maximum permissible equity to debt, working capital ratios and limitations

on the sale or pledge of assets and payments of dividends. Interest rates are generally higher than that of the overdraft and are dependent on the prevailing rates (Nieman & Pretorius, 2004:181).

- **Mortgage bonds**

Mortgage bonds can also be used by small firms to finance business assets. A bond is a written promise to pay a specific sum of money on a specified future date and a mortgage is an issuance of a long-term note with an assignment of interest in property of the seller. Mortgage bonds are primarily used to fund the purchase of fixed assets. The purchased asset is used as collateral for that asset thus in the event that the firm defaults on the payment of the long-term obligation, the asset financed will be sold to recoup the cost (Hillman, Kochanek & Barsky, 2000:13-2 to 13-19).

- **Micro finance**

Apart from debt that is available from well established firms and financial institutions, it can also be obtained from micro-financiers. Interest charged on funds raised through these lenders is not well defined and it depends on the negotiation skills of the small business owner. Micro finance institutions provide a source of funding to those small firms that are excluded from the formal financial institutions. Broadly defined micro finance includes both financial and social intermediation for the low income men and women. Sources of microfinance include micro-lenders and non governmental organisations. Micro-lenders provide small loans that do not require any collateral over short periods of time such as a month. In most cases, they require proof of income and identification documents. Non governmental organisations serve as a channel for donor funding. They provide small loans as well as mentoring to entrepreneurs (Rwigema & Venter, 2004:394-395).

The interest paid on loans can be fixed or variable depending on the terms of the agreement which are usually dependable on the prevailing economic conditions. Fixed rates might work to the advantage of the firm or to its disadvantage. If interest rates increase, it implies that the firm will benefit from the fixed interest rate due to payment of less interest. In the event that interest rates decline, the firm will carry an extra cost as it will pay more interest than the one prevailing in the market. Fixed rates also allow for better future planning unlike variable interest as the interest to be paid is known in advance. By using variable interest rates, the interest to be paid is

equal to the prevailing market rates which might not be foreseen in advance, thereby making planning more difficult (Barrow, 1998:64).

3.3.3.3 The effect of the use of debt on firms

The use of high levels of debt in the capital structure leads to an increase or decrease in the return on shareholders' capital (ROE). ROE refers to the return/monetary gain by shareholders in return for the capital they would have offered to firms. It is crucial to get into some detail on the use of debt (financial leverage) as the study is based on the use of debt to small firms. Therefore, the effect of debt on the returns to shareholders will be emphasised. An analysis of debt usage will give an insight to investors on the benefits and costs of using debt in financing investments. The effect of the use of debt to earnings is illustrated in Table 3.1 that follows.

Table 3.1 The effect of leverage on ROE (positive leverage)

		No leverage (Firm A)	Leveraged (Firm B)
Capital Structure		**R**	**R**
Share capital (equity)		10 000	6 000
Debt (at 15%)		-	4 000
Total capital/assets		**10 000**	**10 000**
Profits			
Income (EBIT)		4 000	4 000
Interest on loan		-	600
Income before tax		**4 000**	**3 400**
Tax @ 30%		1 200	1 020
Income after tax		**2 800**	**2 380**
Return on assets	=	4 000/10 000	4 000/10 000
	=	**40%**	**40%**
Return on equity	=	2 800/10 000	2 380/6 000
		28%	**39.6%**

Adapted from (Correia *et al.*, 2005:14-4)

It can be deduced that by including debt in the capital structure, the ROE of companies A and B changes respectively from 28% to 39.6%. If interest that is paid on debt is low, ROE would be improved by high levels of debt (leverage). It should be noted that high levels of leverage might lead to lead to a return on assets (ROA) which is lower than the before-tax interest rate on debt (negative leverage) especially when there is an economic downswing. Leverage is a financing strategy designed to increase the rate of return on owners' investment by generating a greater return on borrowed funds than the cost of using the funds. Leverage would be positive if ROA is greater than the before tax interest paid on debt and for this reason, the ROA for the purpose of this study, is calculated using income before interest and tax. This enables the comparison between interest paid and the return, that is, the before tax interest on debt and the income before interest and tax. For all other purposes which are not comparative of before tax interest on debt and ROA, the income that is used for the calculation of ROA is the income after interest and tax. Firm B in Table 3.1 illustrates a positive leverage as ROA, 40%, is greater than the before tax interest on debt, 15% (Damodaran, 1999:103).

Debt is always desirable if a firm achieves relatively high profits but if the firm incurs a major drop in income, employing more debt in the capital structure will be detrimental as the firm will not be able to cover the cost of debt. Negative leverage occurs when the firm generates an ROA that is less than the before tax interest on debt. Table 3.2 below illustrates the result if income dropped to R500 due to a drop in demand.

Table 3.2 The effect of leverage on ROE when there is a drop in sales (Negative leverage)

	No leverage (Firm A)	Leveraged (Firm B)
Capital Structure	**R**	**R**
Share capital (equity)	10 000	6 000
Debt (at 15%)	-	4 000
Total capital/assets	**10 000**	**10 000**
Profits		
Income (EBIT)	500	500
Interest on loan	-	600
Income before tax	**500**	**(-100)**

Tax @ 30%		150	-
Income after tax		**350**	**(-100)**
Return on assets	=	500/10 000	500/10 000
		5%	**5%**
Return on equity	=	350/10 000	(-100)/6 000
		3.5%	**-1.6%**

Adapted from (Correia *et al.*, 2005:14-5)

Leverage increases the volatility of earnings thereby increasing the risk of a business. Unlike positive leverage, a negative leverage if it (Earnings before Interest and Tax / Total Assets) is less than Before Tax Interest on Debt, will result as illustrated in Table 3.2. The before tax interest on debt (15%) is greater than the ROA (5%). Equity shareholders are the owners of a firm and therefore the ultimate risk bearers. Firm B must therefore make up for shortage out of its own funds. This means eroding capital of the owners thereby reducing a firm's value. This may result in a firm failing to meet its debt obligations and can lead to failure of the business. Therefore, for leverage to be favourable, earnings before interest and tax should always be higher than the before-tax interest rate on debt (Correia *et al.*, 2005:14-4).

Debt financing can be preferred by small new firms to equity and the reason might be because there is no relinquishing of ownership in exchange for investment as in equity. Equity financing requires that ownership be shared by the SBO thereby reducing the powers of the SBO in decision-making. Due to pressure from shareholders, some efficient decisions might be foregone because shareholders will not be backing them. The major advantage of using debt is its low cost compared to the cost of equity. The reasons for the lower cost of debt include:

- Tax advantage due to the deductibility of interest payments on debt,
- The lower risk associated with debt as debt holders has the first claim in the case of insolvency (Damodaran, 1999:103).

Beside the tax advantage and the avoidance of dilution of ownership, it is also easy to use debt. The reason is that interest cost on debt is usually fixed which allows efficient planning as the cost will be known. As long as the interest on debt is lower than the return that can be earned on the

funds supplied by creditors, this excess return will accrue to the owners of the firm as their benefit of using debt (Bernstein, 1993:610).

There are also costs associated with the use of debt financing that can lead to higher costs of debt being employed. Damodaran, (1999:229-237) identifies the following costs to be associated with debt.

- Borrowing money leads to an increase in the expected bankruptcy costs (refer to sec 4.3.3.1, p. 92). This expected bankruptcy costs can be viewed as a product of the probability of bankruptcy and the direct and indirect costs of bankruptcy. The probability of bankruptcy is the likelihood that the firm's cash flows will be insufficient to meet its promised debt obligations. The direct costs of bankruptcy include legal and administrative costs and indirect costs which occur due to perceptions that an increase in the proportion of debt is due to financial trouble. Customers would think that the firm is in trouble and will stop buying from it (also refer to sec 4.3.3.1, p. 92).
- There are also agency costs associated with borrowing. A firm exposes itself to conflict between debt holders and equity holders as a result of borrowing and pays the price in terms of loss of freedom in decision making. The conflicts will manifest itself in deciding what projects to take, how to finance these projects and how much to pay as dividends (refer to sec 4.3.3.2, p. 94).
- Loss of flexibility is another identified cost. This may crop up as a result of conflicts between equity holders and debt holders leading to the introduction of strict debt covenants that reduce the flexibility of the firm to make investment, financing and dividend decisions (refer to sec 4.3.3.3, p. 95).

Therefore, the capital structure of a firm, thus debt equity ratio, does not necessarily need to be constant since it depends on growth opportunities ahead, the cost of money and the availability of equity and debt capital. At times, it will be difficult to raise money from shareholders if the profits of the firm are not convincing (Barrow, 1998:58-59). There are several financial institutions that can offer capital to an SBO. These institutions that provide financing are discussed in the following section.

3.4 CAPITAL PROVIDERS (FINANCIAL INSTITUTIONS)

Financial institutions are intermediaries which channel the savings of individuals, firms and governments into loans and investments. Financial institutions act as mediators between lenders and borrowers. These institutions include banks, investment institutions, special institutions, venture capital, private equity and micro-financiers (Van Aardt, Van Aardt & Bezuidenhout, 2002:199) and (Correia *et al.*, 2005:13-8 to 13-10). The financial sector for Zimbabwe comprises 14 commercial banks, 5 merchant banks, 4 discount houses, 2 finance houses and 4 building societies. Altogether, there are 29 banking institutions that operate within Zimbabwe (Gono, 2007:12). The discussion below provides information on the financing provided by different financial institutions.

3.4.1 Banks

There are basically two types of banks and that is commercial and investment banks (merchant banks). Commercial banking includes a wide range of services including the offering of accounts in which depositors can put their money and other services relating to finance. Examples include overdraft facilities used for short-term finance, leasing, instalment sale facilities and debt factoring (Rwigema & Venter, 2004:391).

Investment banking also known as merchant banking offers corporate finance thus offering advice and assistance on mergers, corporate structure and raising of finance. Merchant banks borrow money and then lend it out at a higher rate of interest. They also provide funding, usually for short-term or medium-term nature and money market thus actively trading in the money and the foreign exchange markets both for clients and for their own accounts. Investment banks also assist firms that need to raise large amounts of finance and they can assist with a public issue of shares. Large amounts of loan finance can also be raised through investment banks who will act as intermediaries for the borrowers and the investors (Rwigema & Venter, 2004:391) and (Correia *et al.*, 2005:13-9).

Wickham (2004:446-7) differentiated banks into retail and corporate banking. Retail banks usually offer investment capital to new start-ups and expanding small firms. Support is in the form of loan capital and returns are subject to strict agreement. The bank will expect the entrepreneur to make a personal commitment and may seek collateral to reduce the risk of the

deal. Corporate banks are interested in bigger investment opportunities and may settle for longer-range returns. Loan capital dominates in corporate banking but some equity may also be offered. Deals may be quite complex and involve conversions between the two forms of investment-namely equity and debt.

3.4.2 Investment institutions

Investment institutions mainly refer to insurance companies and institutions administering pension funds and unit trusts which are organisations that manage funds invested in a wide range of securities (Tuck, 2000: 460). These institutions are crucial as they have large sums of money under their control. They are major investors as they can back a public issue of finance (Correia *et al.*, 2005:13-9).

3.4.3 Venture capital and private equity

These are mainly meant for small business owners who have demonstrated the viability of their ventures but are unable to source funds [illegible] the formal banking sector. They are equity investments made for the launch, early development or expansion of a business venture. Venture capitalists invest in ventures with high growth and profit potential in exchange for some ownership and control. They look for winners in the market and they also look for substantial shareholding in a firm. They provide technical advice, legal and contractual advice, strategic support regarding mentorship and managerial expertise. They are likely to invest in high-risk ventures that promise significantly higher growth rates and returns than more established, mature ventures. SBOs have to comply with requirements set out by venture capitalists in order to be eligible for funding and support (Rwigema & Venter, 2004:404) and (Barrow, 1998:61).

Venture capitalists are normally bound to the firm for some length of time, without the opportunity to retract capital in response to a favourable change in firm's position. They do not stay with one firm for the rest of its life and therefore, they usually search for firms that are easy to exit (Marx, DE Swardt & Nortje, 2004:233). Venture capitalists fall into two categories, those who think they add value to a business by giving hands-on help and advice as well as investing money and those who just invest their money only and do nothing about management. Usually venture capitalists have a say in decision making of a firm (Barrow, 1998:70).

In order to protect their investment and ensure the desired growth and returns, venture capitalists might join the board of directors or appoint a management team to take over the running of the venture. This is likely when they do not have confidence in the existing management in terms of skills, know-how and expertise. At times, they might feel the need to mentor and play a supporting role to the existing management team whom they assessed to be sufficiently competent (Rwigema & Venter, 2004:406).

Venture capitalist markets have higher transaction costs and there are fewer buyers and sellers. There are also no reporting requirements and information is not freely available to all parties and there may also be different investment objectives for the venture capitalists. The use of venture capitalist funds dilutes the powers of the owner in the business as he/she has to share ownership with other equity holders of the firm. The risk of failure is higher in venture capitalist market than in the formal markets (Correia *et al.*, 2005:13-10) and (Barrow, 1998:61).

In considering a potential provider of ven[illegible]pital, small business owners should consider the following:

- The extent to which the venture capitalist will get involved in the management of the venture,
- The stages of the ventures' development at which the venture capitalist is willing to invest, especially when the SBO is attempting to source start-up capital,
- Whether the venture capitalist has an understanding and knowledge of the industry in which the SBO wishes to break and finally
- Whether the venture capitalist has the necessary business acumen, experience as well as know-how in order to advise, guide and assist the SBO (Rwigema & Venter, 2004:406).

A closer analysis of these factors will enable an SBO in getting the appropriate venture capitalist that can contribute greatly to the success of the venture. Accepting capital without taking a closer look at the provider may lead to problems during the course of the business.

3.4.4 Investment angels (Business angels)

These are informal venture capitalists (refer to sec 2.8.2, p. 38) who are most often wealthy individuals looking to invest in new firms that show promise and potential. They can be

individuals or small groups of individuals. Some investment angels invest as a hobby and are usually friendlier than the normal venture capitalists that are reluctant to invest in starter-ups. Business angels put up smaller amounts of money and they are more prepared to back start-ups and riskier projects compared to venture capitalists. The difference between venture capitalists and the investment angels is that the former seeks financial return on the investment whereas investment angels see their role more as giving back. Whilst investment angels might expect some sort of financial return on their investment, their overriding objectives are often to create employment, promote equity, rejuvenate inner cities and develop communities (Kuratko & Hodgets, 2001:452).

Investment angels differ from other investors in that they have a desire to get involved in the ventures they are backing and in addition to capital backing, they offer their skills, insights and experiences. As a result, they usually seek investment opportunity in ventures where their knowledge or business skills are appropriate (Wickham, 2004:446). Determination of type of capital to employ needs a close analysis as inappropriate capital might contribute to failure of a firm. The discussion that follows focuses on how SBOs can decide on the capital to be used.

3.5 DETERMINATION OF CAPITAL TO EMPLOY

When small business owners want to raise capital, they have to look at five things namely:

- Cost of the funds - as a general rule, funds raised with various forms of debt are least costly;
- Risk exposure - this relates to variability of earnings;
- Flexibility - the range of future lending options that remain open once a specific alternative have been chosen;
- Timing - refers to the specific market conditions prevailing and;
- Control - is the degree of ownership control extended by the existing shareholders. If the SBO is prepared to relinquish and share ownership with other investors, then he/she can use equity capital but if he/she is not prepared to relinquish ownership, then debt might be appropriate (Helfert, 2001:326-329).

Certain considerations have to be made before a small firm owner chooses the funding he is going to use. The type of the asset to be purchased should be related to the finance to be used. It will not be rational to use a bank overdraft to finance the purchase of a motor vehicle. The

lifespan of the asset should be determined for the venture to be able to know the type of finance that is suitable.

It is important that the term of the finance be matched to the purpose for which it is to be used. It is therefore important that the venture distinguish its needs between short, medium and long term to have an idea of which finance to use. The notion of matching the type of finance with the life of an asset is important as the repayments of capital and interest will be paid out of the additional income supposedly generated as a result of employing the asset. Table 3.3 below indicates how the term of the finance can be matched with the lifespan of the assets.

Table 3.3 Matching the term of finance with the lifespan of the assets

Assets to be financed	Appropriate term
Debtors Stock Work-in-progress	Short term
Vehicles Office equipment Computers Plant and machinery Buying a business Buying a franchise Renovation of premises	Medium term
Land and buildings Goodwill	Long term

Adapted from (Nieman & Pretorius, 2004:174)

When a firm is deciding on whether to use equity or debt, the basic principles of finance have to be considered, that is the risk and return trade-off. Risk is increased as the proportion of debt to capital structure is increased. The use of debt increases the risk as interest payments have to be

met regardless of the financial well-being of a firm. The features of debt and equity return, risk and control have to be evaluated in order to determine which source is to be used (Correia *et al.*, 2005:13-16). These features are dealt with in the following section.

3.5.1 Return

A firm must pay interest on debt to the lender, irrespective of its return. It is an advantage when a firm is earning an ROA that is more than the interest payments on debt (positive financial leverage). It will, on the other hand, exert a strain on the firm if it is earning an ROA that is less than the interest payments (negative financial leverage). In the latter, shareholders will earn a return that is lower than the ROA and if the situation persists, the firm will go insolvent. Insolvency refers to the inability of a firm to pay its debts when they become due and insolvency can either be technical or legal. Technical insolvency is whereby the firm is able to pay its debts but has insufficient cash to meet its due obligations (Lovemore & Brummer, 2003:13). Legal insolvency refers to a determination by the [illegible] that the firm cannot raise funds to meet its debt obligations, therefore rendering it insolvent (Brigham & Ehrhardt, 2005:238).

When the returns are lower than the rate of interest on debt, there is one major advantage of using debt and that is the deduction of interest payments on the calculation of taxable income. The actual cost of debt to the firm therefore is the after-tax cost of debt, which is the market interest rate less the marginal tax rate proportion. The actual cost of debt is shown by formula 3.1 below:

Formula 3.1

$$Kd = I (1-t)$$

Where: Kd = cost of debt

I = interest rate payable (Market interest rate)

t = the marginal tax rate (Correia *et al.*, 2005:7-5).

The use of debt therefore reduces the amount of tax to be paid by a firm and increases the return to shareholders whilst the use of equity does not enjoy such benefit (Correia *et al.*, 2005:7-5).

The cost of debt is also usually lower than the cost of equity because of the lower risk to the lender and the tax deductibility of interest payments on debt. The use of debt allows a firm to

lever the return to shareholders thus magnifying returns due to the use of debt (Correia *et al.*, 2005:13-17).

3.5.2 Risk

Risk determines the probability of bankruptcy. A firm with high chances of bankruptcy should avoid the use of more debt in its capital structure as it might fail to pay back its debts when the economy is not performing well. Interest payments on debt must be met in times of losses or profits. In the times of a crisis, this can be a heavy load to the firm and apart from the payment of the interest on debt, the capital has to be repaid at one time. There is also a limit as to the amount of debt that can be raised before the market reassesses the firm's risk profile which will affect the cost of capital. The equity holders will require a greater return on their investment and it will be possible to raise more debt from only marginal lenders who will charge higher interest rates, thus increasing the cost of debt. At times, these lenders will impose some restrictions on the firm for obtaining debt from them. Raising debt [illegible] the firm's flexibility for raising future funds (Correia *et al.*, 2005:13-17).

3.5.3 Control

Raising finance through the use of equity dilutes the control of the existing shareholders. If a firm wants to raise equity finance, it will need to issue new shares which dilute the control and holding of existing shareholders. At times firms counteract this by attaching different rights to ordinary shares. Some firms might issue shares that have the same rights as the existing ones except that they will have no vote. Therefore, in such a scenario, the issuing of new shares will not affect control in the firm.

Raising finance through debt might also come with some effects on control. Providers of debt might impose certain restrictions on the firm as a condition of the loan. These conditions might be to safeguard the debt providers from certain actions that may place them at a disadvantage. The conditions might include restrictions on the payment of dividends, disposition of assets or maintaining certain working capital ratios. A debt provider might also demand a seat on the board or a regular report on the performance of the firm (Correia *et al.*, 2005:13-18).

Apart from the three identified factors to consider when deciding on the type of finance to use, there are some other minor factors to consider such as competition intensity, prevailing economic conditions like interest rates and inflation. Businesses rarely use bank financing in times of high inflation (Bridge, O'Neill & Cromie, 1998:152). Analysis of these factors can also help in determining the cost of finance, thereby coming up with the best financing option that suite the business environment at hand. Not only is the type of capital important but also the provider of that capital. Some providers have strict conditions of getting the capital, thereby hindering the optimal usage of the capital. The following section addresses the choice of the source of capital.

3.6 DETERMINATION OF SOURCE OF CAPITAL

The choice of a capital supplier must be made in the light of the nature of the business (products manufactured), its capital requirements (the amount required), the stage of its development (initiation or growth) and the risks it faces. Investment is a buying and selling process therefore investors will be anticipating a good return from their investments. The SBO will be trying to sell the venture as an investment opportunity and the investor will be looking to buy opportunities which offer a good return (Wickham, 2004:449). The choice of the finance supplier should be related to the aims and objectives of the firm and should be realistic. A small firm cannot choose to use a bank loan for its business if it does not have enough customer base to sustain its business.

The main criteria when determining the source of finance to be used are the conditions attached to the finance. Basically, small firms should look for capital providers that attach few regulations to the use of the funds. The attachment of conditions to funds reduces the powers of SBOs to decide on what to do, when to do and how to do it. This in other words, can lead to profitable investments being left out as some conditions will not allow an undertaking of such an investment.

The conditions imposed by finance providers should be carefully evaluated including the characteristics of these providers. This is mainly important when it comes to venture capitalists as they can offer detrimental advice. They can encourage a premature initial public offering, which refers to the first offering of shares to the general public (Brealey, Myers and Marcus, 1999:371), for a firm to develop their reputation and improve their ability to market the next venture fund. In

this case the venture capitalists will be putting their interests upfront instead of the interests of the firm. The experience of the venture capitalist should therefore be evaluated and one way of performing that is through gathering information such as the number of years the capitalist has been in business and the prosperity of firms that has been funded before.

Small firm owners should also have an idea of how investors evaluate their proposals for funding. Before they even approach or ask an investor for funding, SBOs should have an idea of the expectations of the investor. It will be a waste of time approaching an investor for funding if the SBO knows that the probability of getting the funding is very slim. The expectations of investors are discussed in section 3.7 below.

3.7 CRITERIA USED BY CAPITAL PROVIDERS IN EVALUATING PROPOSALS FOR FUNDING

Capital providers look at the amount required by the firm, the type of technology which the firm is based on, the industry sector and the firm's stage of growth. Different providers have different requirements. Conditions in the market, competitive pressures, management team of the firm, security, duration of payback period, quality of SBO and management team (skills and potential) and the ability to exit the investment are also some of the factors which investors consider when giving out funds (Wickham, 2004:450).

Firms that have greater growth opportunities and are based on research and development are less likely to receive debt-financing because the costs of financial distress are likely to be greater for those firms. If a firm operates in a volatile business environment and its cash flow varies a lot, the likelihood that it will be unable to meet its debt obligations is high and it is therefore less likely to be offered debt. Some debt providers can use the costs of bankruptcy to determine whether to offer debt or not, therefore if bankruptcy costs are low, debt can be offered. If the firm is profitable enough to cover its debt obligations, funding can be obtained in the form of debt.

Bankers would prefer a ratio of 1:1 between borrowed funds and share capital but the risk involved in a business is the most important factor to be considered when they are offering loans. A more useful way of determining debt equity relationship is to compare financial risk to business risk (Barrow, 1998:58). Financial risk is the chance that a firm will default on its debt

(Ainsworth, *et al*, 1997:524) and business risk refers to the volatility of a firms operating profits due to the specific assets owned, regardless of their financing (Myddelton, 2000:181).

Financiers use the opportunity cost concept when investing. Opportunity cost is regarded as return on the best alternative investment that is being forgone. If there are alternative investments available at lower investment costs or offer high returns at the same risk, financiers will go for that because the main purpose of investment is generation of financial gains (Wickham, 2004:445). All sources of debt finance look for asset security to back their loans and the certainty of getting their money back. They charge an interest based on market conditions and their analysis of the risk involved in the proposal. Bankers expect a business to succeed so they can lend more money in future and provide more banking services to loyal customers such as business advice (Barrow, 1998:60).

Getting a loan from a bank usually requires the firm to have sufficient cash flow to cover for the interest payments. Entrepreneurs also need collateral in the form of assets, cash, investments and accounts receivable to secure their loans. Banks use whatever collateral there is to recover the amount lent should the firm default (Bruineman & Venter, 2004:391).

3.8 SUMMARY

Funding is found on the financial markets and there are several different markets where small firms can obtain finance. Though the markets are different, these financial markets are mutually exclusive, thus one type of finance can fall into different financial markets. Finance that is obtained in the financial markets includes equity and debt and these are obtained from investors and lenders. SBOs have to determine the use of the funding before assessing the different types of funding and their providers. After identifying the need, a thorough evaluation of both the funding and its providers should be done in order to have the best funding.

Debt capital providers assess the prospective recipient of funds before they commit themselves. Generally, lenders need security for the debt and low risk associated with the project. They also look at ability of the SBO to pay back the loan and interest immediately and want a loyal long-term customer relationship with the SBO. On the other hand, investors (equity) are mainly risk takers, they invest in high risk projects and expect high growth and returns. They want to take

part in the control of the business and usually involve themselves in the running of the business and at times invest large sums of money (Barrow, 1998:62).

Though there are several options for funding ventures, many entrepreneurs are not aware of them or do not have access to a number of these sources. The sources that they usually use in the early stages of the development of their firms are own savings or resources of kind from family and friends. Some of the reasons cited for failure to get access to funds include high risk, as well as lack of information concerning a track record.

Chapter four focuses on the cost of debt to small firms, that is, the nominal and the actual (real) cost of debt. Factors affecting the nominal cost of debt such as the interest rate, credit risk premium and non interest fees such as commitment fees, transaction costs and collateral will be discussed.

CHAPTER FOUR

VALUE OF A FIRM & COST OF DEBT TO SMALL FIRMS

4.1 INTRODUCTION

This chapter focuses on two items namely, the value of a small firm and the cost of debt as well as how these two items can be measured. It is crucial to have a discussion on the value of a small firm and the cost of debt and its relationship to the value of a firm as this study is on the relationship between the use of debt and value of a small firm. The first part of this chapter discusses the value of a small firm and how it can be determined. The second part focuses on the cost of debt, thus the calculation of the cost debt and the factors that affect its calculation.

4.2 VALUE OF A SMALL FIRM

In short, value means the worth of a firm and it is a futuristic concept. Futuristic refers to the view that value is derived from a firm's future benefits (Kriek, Beekman & Els, 2005:106). The value of a firm can also be defined as the value of all investors who have claims on the firm; thus, it includes lenders and debt holders, who have fixed claims as well as equity investors who have residual claims (Damodaran, 1999:440).

The value of a firm depends on the future benefits that are derived from it. It would be easy to determine the value if future benefits could be easily determined but since it is difficult to know the future, value can be difficult to come up with. Value of a firm can also differ with the person who is valuating it. Owners can attach a high value to their firm whilst lenders might attach a lower value. Value, just like the cost of debt (refer to sec 4.3, p.79), is affected by the risk associated with the firm. The higher the risk associated with the firm, the higher the probability of failure and consequently the lower the value attached to it (Kriek, Beekman & Els, 2005:106).

Basically, there are four approaches to valuating a small firm. These approaches include the dividend yield approach, price/earnings approach, net assets approach and the economic value based on free cash flows. These approaches will not be discussed in detail as neither of them will be used and the reasons will be noted hereafter. The dividend yield approach is based on the notion that the ordinary shares of two different firms should have a similar dividend yield provided that they are roughly similar in size, activity, leverage and proportion of profit paid as dividend. If the shares of one of the firms are quoted and valued by an efficient market, the value of the other one will be done by comparison. The price/earnings approach concentrates on the

earnings and takes the view that the shares of two similar firms will have equal price/earnings ratios. The net assets approach values a firm by reference to individual values of its assets and lastly the economic value approach which uses the estimated future net cash flows of the firm to determine the value (McLaney, 2000:391-393). For a detailed discussion on these small firm valuation approaches, refer to McLaney (2000:391-393).

There are reasons for discarding these approaches for valuation of small firms. The first one is that the dividend and the price/earnings approaches make use of shares which might be non-existent in the majority of small firms in Zimbabwe. Several firms do not have shares that are listed on stock exchanges which makes it difficult, if not impossible to obtain information on shares. The net asset approach makes use of balance sheet values of assets that might not represent the market prices. This is aggravated by high levels of inflation in the Zimbabwean economy which makes it difficult to determine the market price. The economic value approach is also difficult to use for valuation of small firms in Zimbabwe. This approach needs the identification of a discount rate and determination of future cash flows which are difficult for a longer period.

For the above reasons, value of the small firms will be calculated in terms of profitability ratios. Profitability refers to the return on funds invested by the owners and achieved by the efforts of management (Ainsworth, *et al.,* 1997:829). The ratios that will be used include return on assets (ROA) and return on equity (ROE). For the study at hand, book value of assets will be used for calculation of ROA. Value of a firm to the owners is the worth of their equity in the firm. Together, owners and lenders view value as the total worth of the firm's assets. This therefore entails that the value of a firm is equal to the total capital employed which is also equal to the employment of that capital. Any decisions that are made within a firm should be done to maximise the value of a firm and minimise the risk of the firm. Decisions that maximise the value of a firm will result in greater returns being generated by the firm that is, returns to shareholders (Kriek, Beekman & Els, 2005:108). In other words, it can be deduced that a change in the value of a firm can be determined by comparing returns to shareholders. An increase in returns to shareholders implies an increase in the value of a firm and a decrease implies a decrease in value, holding all other things constant.

Since the change in returns to shareholders is a product of the profitability of a firm, the use of profitability ratios can be justified. Determination of value using profitability ratios is easier and they can be appropriate for the determination of the impact of debt on value. Besides being easy to use, the use of profitability ratios to determine the value of a firm is central to a firm's value (Ainsworth, *et al.*, 1997:829). The following discussion takes a closer look at return on assets and return on shareholders equity.

4.2.1 Return on assets (ROA)

ROA is a measure of how well assets have been employed; that is, it is a measure of operating performance (Garrison & Noreen, 1997:798). ROA can also be defined as a measurement of the firm's ability to utilise its assets to create profits by comparing profits with the assets that generate the profits (Gibson, 2004:254). It measures the performance of a firm and can also be used to determine whether firms can use debt favourably or not. It consequently determines whether leverage will be negative or positive, if ROA (refer to formula 4.1, p. 76) is higher than the before tax interest rate on debt, there is a positive leverage which increases value of a firm and if ROA is less than before tax interest on debt there will be a negative leverage (Brealey, Myers & Marcus, 1999:464). It would therefore be wise for management to employ debt in financing if it would lead to an ROA that is greater than before tax interest on debt as returns to owners will be increased thereby maximising shareholders wealth.

Income used in the calculation of ROA is income before interest and tax. Income before interest is used because the measurement being done is for the return on all the assets not just equity investment (Brealey, Myers & Marcus, 1999:464). Including interest expense in the calculation of ROA projects what earnings would have been if the assets have been acquired solely by equity. With this adjustment, ROA can be compared to companies with differing amounts of debt or for a single firm that changes its mix of debt and equity (Garrison & Noreen, 1997:799) and (Correia, *et al.*, 2005:5-17).

ROA is calculated using the following formula:

Formula 4.1

$$\text{ROA} = \frac{\text{Income before interest and tax}}{\text{Average total assets}}$$

This formula includes two fundamental profitability elements; earnings (profit margin) and investments in assets (total assets turnover) (Besley & Brigham, 2000:778). The investment in assets represents the total investment of the business and the ratio of net income to those assets and measures the effectiveness of management in utilising the resources at its command (Ainsworth, *et al.*, 1997:830). It is worthy to mention here that the above formula will only be used for the purpose of determining whether leverage is positive or not. For other purposes, income after interest and tax is used as an enumerator.

4.2.2 Return on owner's equity (ROE)

One of the primary reasons for operating a firm is to generate income for the benefit of the owners. ROE is one of the measures of a firm's success in this regard (Garrison & Noreen, 1997:799). ROE measures the return earned relative to the portion of the firm that belongs to the owner (this return is after interest and taxes). It looks at the return to equity investors using the accounting net income as a measure of this [illegible] is generally defined as:

Formula 4.2

$$ROE = \frac{\text{Net Income}}{\text{Equity}}$$

(Damodaran, 1999:153-154).

Formula 4.2 can further be restated as formula 4.3 to indicate the components of ROE.

Formula 4.3

$$ROE = \frac{\text{Net Income}}{\text{Shareholders Equity}} = \frac{\text{Net Income}}{\text{Sales}} \times \frac{\text{Sales}}{\text{Assets}} \times \frac{\text{Assets}}{\text{Shareholders equity}}$$

(Higgins, 1995:41)

The above formula indicates that ROE is a product of three other ratios, thus profit margin, asset turnover and financial leverage. Profit margin is a ratio that measures a fraction of each dollar (Zimbabwean) of sales that trickles down through the income statement to profits (Higgins, 1995: 43). Asset turnover refers to the sales generated per Zimbabwean dollar of assets and it depends on the nature of assets and the firm's competitive strategy. Profit margin and asset turnover tend to vary inversely that is as one increases, the other will be decreasing. Firms that add significant

value to a product can demand a high profit margin but will have a low asset turnover ratio. Firms that add very little product value have very low profit margins but high asset turnover. It does not necessarily mean that firms with high profit margins are better than those with low margins as it all depends on the combined effect of the profit margin and asset turnover. Any attempt by small firms to increase their profit margin, asset turnover or financial leverage ratios will increase ROE thereby increasing the value of the firm (Higgins, 1995:41-43).

Net income refers to income after all the expenses have been deducted including interest on debt and taxes. In other words, it refers to profit after interest and tax and that is money available to owners of the firm which can be distributed as dividends. Equity, on the other hand, refers to capital that is provided by owners and can be calculated by subtracting debt from total capital. ROE will be the return owners receive from their investment but it does not necessarily mean that the owners will receive this amount as some can be reinvested to increase the value of the firm (future ROE).

In firms that are levered, ROE is usually higher (if leverage is positive) than ROA because of the financial leverage effect. Financial leverage involves acquiring assets with funds that have been borrowed at a fixed rate of return. If the assets that are obtained are able to earn a rate of return that is higher than the fixed rate of return required by the fund's suppliers, then a positive leverage will prevail which will benefit the owners of the firm. This is because ROA will result in a benefit to owners as the actual cost of debt will be less than the before tax interest on debt (refer to section 4.3.1.3 for a comprehensive discussion on after tax cost of debt). Actual amount of interest to be paid is equal to the interest rate multiplied by one minus the tax rate; [interest rate (1 – tax rate)]. This results in a lower cost of debt as compared to the interest rate charged by lenders (Garrison & Noreen, 1997:179-180).

Because of positive financial leverage, having some debt in the capital structure benefits the owner. This can be the reason why several firms maintain a certain level of debt in their capital structures. Returns to shareholders will therefore be magnified due to the use of debt if there is an economic upswing and profits realised. Any financing decision that leads to an increase in ROE should be adopted by management as it leads to maximisation of shareholders wealth. An increase in ROE therefore reflects an increase in the value of a business. It should be noted that debt in the capital structure increases risk and can only benefit the value of the firm if

$\frac{EBIT}{TotalAssets}$ is greater than before tax interest rate on debt. If not, leverage is negative and the value of the firm will be adversely affected.

The effect of financial leverage can be measured by a financial leverage index which is calculated by dividing ROE by ROA. An index which is higher than one indicates a positive leverage and an index which is below one indicates a negative leverage. A financial leverage ratio is used to measure the relationship between total assets and equity capital used to finance it. It is expressed as total assets / equity. The more assets that are financed by equity capital, the higher the financial leverage ratio. In a firm that utilises financial leverage profitably, a higher financial leverage will result in an increase in ROE (Bernstein, 1993:612).

The difference between ROA and ROE is that ROA measures profit as a percentage of the money provided by owners and lenders as opposed to ROE which only measures profit as a percentage of money provided by owners (Higgins, [illegible] Section 4.2 below focuses on the cost of debt for small firms.

4.3 COST OF DEBT TO SMALL FIRMS

The cost of debt refers to the money that has to be paid for the use of debt. It measures the current cost to the firm of borrowing funds to finance projects. Cost of debt is the same as the expected return by the lenders to compensate them for taking on a certain degree of risk or opportunity cost for lending money. Opportunity cost of debt refers to the best alternative use of funds that could have resulted in higher returns which is forgone by a lender (Kriek, Beekman & Els, 2005:127).

Generally the cost of debt is determined by the current level of interest rates, and the tax advantage associated with the debt. As the level of interest rates and the level of default risk increase, so does the cost of debt. The cost of debt is primarily determined by the risk associated with the intended use of debt (Brealey, Myers and Marcus, 1999:283). But since it may be difficult to separate the risk of the use of funds and the risk of the firm, lenders usually use the business risk and the financial risk of the firm in pricing their funds. This is because failure of the whole firm can also lead to the use of the funds not being successful even if the use has low risk.

Since interest is tax deductible, the after-tax cost of debt is the function of the tax rate. The tax benefit that accrues from paying interest, increases as the company tax rate increases (Damodaran, 1999:103). Apart from the interest rate and taxation, there are also non-interest fees which banks charge that affect the pricing of loans by commercial banks to firms (Heffernan (1996:164). The cost of debt to small firms consists of nominal and real cost. The nominal cost of debt is a cost that encompasses inflation premium in its calculation. The real rate cost of debt excludes inflation in its computation. The firm's cost of debt is a nominal cost and therefore, usually higher than the real cost of debt (Correia, *et al.,* 2005:9-6). The formulae to compute the nominal and real cost of debt are outlined below.

4.3.1 Cost of debt computation

As mentioned above, the cost of debt comprises the nominal and the real cost of debt. Nominal rate is usually the same as the interest rate. Cost of debt includes the effect of taxation and inflation in its computation. Section 4.3.1.1 explains the computation of nominal cost of debt.

4.3.1.1 Calculation of nominal cost of debt to small firms

Formula 4.4

$M = (1+R)(1+i)-1$

Where: M = nominal rate of return

R = real rate of return

i = expected inflation rate

(Correia, *et al.*, 2005: 9-6)

The nominal cost of debt in an environment where the real rate of return is 10% and expected inflationary rate of 20% would be;

$(1+0.1)(1+0.2) -1$

$(1.1)(1.2) - 1$

$1.32 - 1$

$= 0.32$ or 32%

The calculation of the nominal cost of debt includes the expected inflation rate whilst the real cost of debt does not include expected inflation in its calculation. As mentioned earlier on, nominal rate of return is the same as the interest rate charged on debt. Interest rate and its components are discussed in the section that follows.

- **Interest rates (Nominal cost of debt)**

Interest rates refer to the price paid for the right to borrow and use loanable funds expressed as a percentage per year. In short, it is the price paid for borrowing funds (Thomas, 2006:99). The interest rate should compensate for inflation; otherwise the lender will be poorer at the time of repayment than the time of making the loan. When the interest rate is determined, the time value of money, the risk of the capital not being paid and inflation all are taken into consideration (Posthumus, Basson, Olivier & Watney, 2000:19).

Interest exists in two forms namely nominal and real interest rate. Nominal interest rate is the actual interest rate, unadjusted for inflation. Real interest rate is the nominal interest rate adjusted for inflation. Real interest rate is therefore nominal interest rate less inflation thus, the difference between nominal rate and average expected inflation rate prevailing. Real interest rate is dependable on the determination of expected inflation and is usually lower than nominal rates. Interest rates rise when expected inflation increases and decreases when expected inflation declines (Thomas, 2006:93&103).

Interest is a product of expected inflation, expected liquidity (preference) and expected risk premium (Myddelton, 2000:13) and (Blake, 1997:44). These variables of interest rate are briefly discussed in the next sections.

➢ **Inflation**

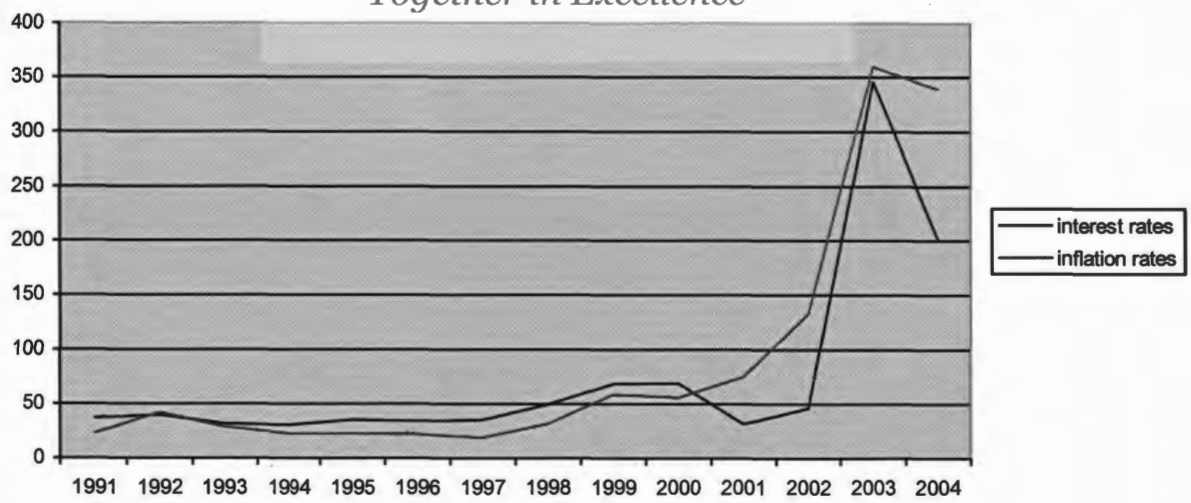
Inflation is the rise in the general level of money prices, measured by the annual rate of increase in the retail prices index (Myddelton, 2000:186). Retail price index is a weighted average of the inflation rates of commodities bought by a typical household (McLaney, 2000:107). Lenders expect to be compensated for inflation. If there is an expected general increase in prices, lenders would want to receive an amount at least equivalent to the principal amount plus inflationary rate (Blake, 1997:46). Rates of interest on debt include an inflation premium which allows for the expected rate of inflation. If the expected rates of inflation are high, the inflation premium

required by the lender will also be high. Inflation therefore affects the cost of debt and it will increase the cost if there are high increase expectations (Myddelton, 2000:17).

Inflation rates in Zimbabwe have been high for several years and continue to sky rocket. According to the Reserve Bank of Zimbabwe (RBZ), inflation was 1070.2% in October 2006, 1281.1% in December 2006 and 2200% by March 2007 (Gono, 2007:24). In Zimbabwe, where expected inflation will be high, firms will pay high interest rates and this will result in a high actual rate of inflation.

Inflation affects the cost of debt as well as taxation. As high rates of inflation prevail, lenders will increase interest rates whilst the government can also increase the tax rates to compensate for inflation. Figure 4.1 depicts the relationship between inflation levels and interest rates using information from the Reserve Bank of Zimbabwe. It shows the average inflation and lending rates for 14 years, from 1991 to 2004.

Figure 4.1 Movement of inflation and interest rates from 1991 to 2004



Adapted from (Reserve Bank of Zimbabwe, 2007)

It can therefore be noted that there is a positive relationship between interest rates and inflation rates. As inflation rates increase, so does the nominal interest rates. This is because the interest rates take into account the inflation premium. Inflation rates were lower than interest rates until 2001 when interest rates were higher than inflation rates. The reason could be due to having an

expected inflation rate that was lower than the actual inflation rates which led to addition of a lower inflation premium to the interest rates. From 2003 to 2004, there was a large drop in the interest rates which widened the difference between interest rates and inflation rates. The probable cause for the discrepancy might be the fixation of interest rates by the central bank.

- **Time preference**

Time preference refers to the ratio between how consumers value present goods as against the same goods in the future. The difference between near and distant future is important in finance. Long term investments may promise returns only after many years whilst borrowers obtaining long term loans are safe because they need not be paid for a long time. Interest rates represent the price of time. Firms often try to match maturities of their liabilities with those of their assets thus, sources of funds to the use of the funds. Annual rates of interest are structured depending on the length of time until a loan matures. The time preference is greatly influenced by expected future rates of inflation (Myddelton, 2000:14-14).

Borrowing short-term funds and lending long-term funds can be dangerous for lenders; they might have to repay the borrowing at short notice without being able to demand repayment of its own long-term investments. Most lenders, due to time preference, want to lend short–term while most borrowers want to borrow long-term. This is because lenders usually prefer to lend for short periods since the debt will be more liquid, thus they can be converted to cash easily without the risk of losing capital value (Blake, 1997:47-48). Also referred to as the liquidity premium, it can also be defined as the cost of money borrowers will be willing to pay to guarantee long-term funding. Borrowers have to offer lenders a premium to induce them to lend for long periods, thereby increasing the interest rates which in turn increases the cost of debt (Myddelton, 2000:13).

Time preference is affected by the time span between the issue of debt and its repayment that is its maturity. A maturity risk premium is demanded by lenders and is affected by its maturity (Moyer, McGuigan & Rao, 2005: 228). The longer the maturity of the debt, the higher will the premium demanded on it be (Brigham & Besley, 2000:53). Risk premium is the other component of interest and is examined below.

➢ **Risk premium**

When lenders lend out funds, they are faced with a credit risk, thus the risk that a loan becomes irrecoverable in the case of outright default or the risk of delay in servicing of the loan (Heffernan, 2001:164). Default refers to the borrower's failure to make scheduled interest payments as stipulated. To reduce the credit risk they face, lenders demand a risk premium on debt taken. The higher the credit risk inherent in a small firm, the higher will be the interest rate demanded by lenders. A risk premium compensating the lender for default risk is embedded in the interest rates of debt (Thomas, 2006: 139-140). Risk premium depends on historical/projected cash flows, credit history, repayment history, outstanding debt, earnings volatility, collateral and wealth of the firm borrowing the funds (Matthews & Thompson, 2005:185).

Risk represents a chance that the actual outcome will be different from the desired outcome. It therefore represents the potential of cash flows to vary from the expected outcome. Lenders determine the probability that the expected return will be different from the actual return (Kriek, Beekman & Els, 2005:52). This therefore means that small firms manufacturing goods that have a ready market are likely to have lower debt costs than those with an unstable market. There are basically two risks associated with small firms that lenders consider when determining the cost to charge on debt. These are business risk and financial risk and will be discussed in the following section.

✓ **Business risk**

Business risk refers to the variability of operating profit and represents the risk that a firm's operations are not profitable. All firms are exposed to this risk though to different degrees. A small firm selling luxury goods will have a higher business risk than a firm that sells basic goods. This is because even in times of economic crises such as in Zimbabwe, the demand for basic goods such as cooking oil will not change a lot as compared to demand for televisions and cars. This portrays the different extent to which firms are exposed to business risk. Business risk is a chance that revenue can be different from what is expected (Kriek, Beekman & Els, 2005:56).

Kriek, Beekman and Els, (2005:57) identified the following events as contributing to an increase in business risk:

- A decrease in sales volumes owing to a recession in the economy, inferior quality products or an increase in competition,

- An increase in selling prices due to an increase in the cost of material, labour or overheads, leading to a reduction in sales,
- Uncontrollable increases in material prices, petrol prices and
- An increase of the fixed cost component of total cost.

The response to these elements will differ with the type of products a firm manufactures. As highlighted earlier on, some firms respond more to these changes than others. Lenders therefore, consider this business risk when determining the cost to attach to their funds. The cost of the same debt will differ depending on the extent of business risk associated with a firm.

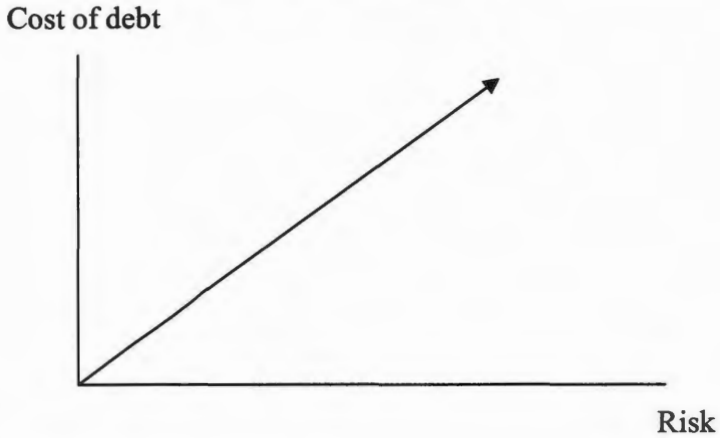
✓ **Financial risk**

Financial risk refers to the way the firm's assets are financed by debt or equity. This risk prevails whenever a firm is making use of debt. It consists of two elements; the risk that a firm is unable to pay interest charges on debt due to insufficient cash and the risk that the firm is unable to repay the debt itself when it is due. Therefore, lenders assess the amount of debt already in the firm (Kriek, Beekman & Els, 2005:57). The [illegible] the proportion of debt in the firm's capital structure, the higher will be the cost attached to debt due to higher financial risk. Though this risk does not prevail in an all equity financed firm, the risk in a firm with debt will be felt by the equity holders. An increase in financial risk puts pressure on the owners of the firm because if interest cannot be paid in full, no earnings will be left to them.

✓ **Total risk**

The total risk, that is business risk and financial risk will determine the cost of debt which a small firm has to pay. Risk therefore will affect the price of debt, thus, the return that lenders will require to compensate for the risk being undertaken. As risk increases, so does the cost/return expected on debt. Figure 4.2 below illustrates the relationship between cost of debt and risk associated with the firm.

Figure 4.2 The price of debt relative to risk



Adapted from (Kriek, Beekman and Els, 2005:54)

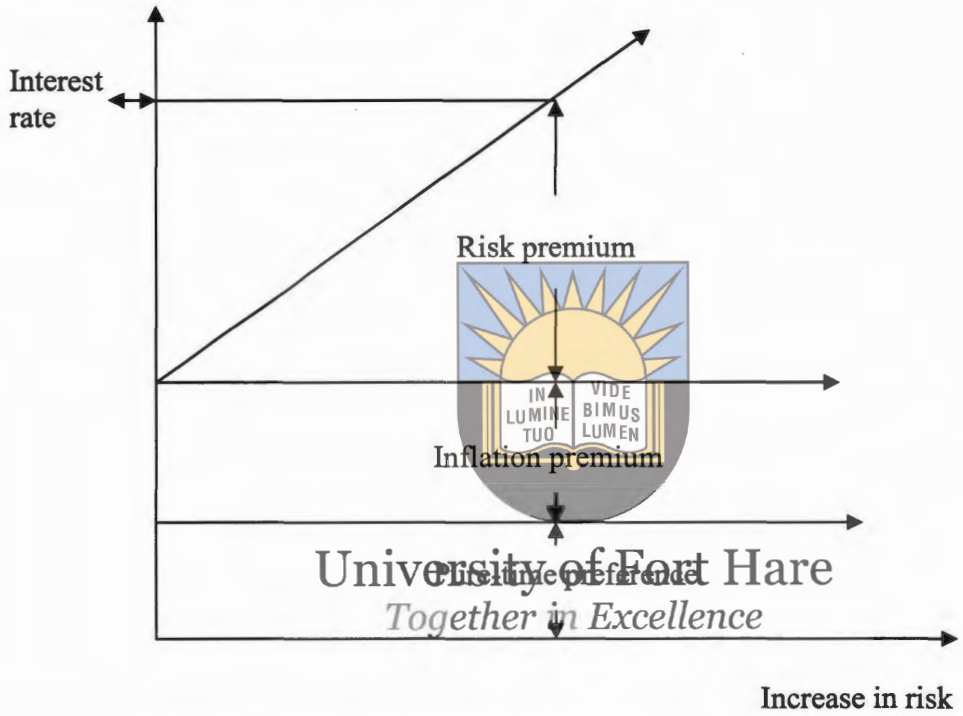
The graph depicts the relationship between the cost of debt and the risk associated with a firm. As the risk associated with the use of money increases, the cost attached to the debt also increases. It should be noted that though the risk of a firm and the cost of debt are positively related, the actual cost charged by an investor on debt depends on his or her risk preferences. Risk preference refers to how much an investor expects to receive due to an increase in risk (Kriek, Beekman & Els, 2005:55). Generally, all investors do not want to take high risk investments unless the compensation is sufficient to justify that high risk. The only difference is that some investors are more risk averse than others therefore charging a high cost on the debt offered. Risk averse is the extent to which a lender reacts to a change in risk associated with a firm. The cost of debt to small firms is usually high because it is relatively difficult to determine the risk which is associated with the specific firm (Kriek, Beekman & Els, 2005:54).

At times, risk is related to the owner/manager of the firm. A small business owner with an established track record will be regarded as less risky to lend to than someone with no business experience. Small firms usually have to pay a high risk premium because they are generally perceived to be risky thus; they are more likely to default on interest or principal payments (Myddelton, 2000:18).

The relationship between the components of interest can be explained with the aid of Figure 4.3 below. The graph relates the return required by the lender (interest) to risk at the same time encompassing the time value of money and inflation. It summarises the calculation of interest and

proportion of each. Risk premium is the primary component of interest as it constitutes a greater proportion followed with inflation premium and lastly, time preference. The lower the risk associated with the firm, the lower is the interest rate charged on debt.

Figure 4.3 Relationship between interest rate and risk



Adapted from (Myddelton, 2000:19)

In order to minimise the credit risk, lenders perform the accurate pricing, credit rationing and use of collateral. When pricing, the loan lenders wish to ensure that the price of the loan exceeds a risk adjusted rate and includes any administrative costs. The loan rate therefore would include the market rate, risk premium plus administration costs. By credit rationing, certain types of loans may be restricted to a selected class of borrowers. Lenders usually restrict the amount small firms can borrow according to some criterion such as wealth (Hefferman, 2001:182).

Collateral can be described as an asset pledged by a borrower to a lender. Lenders use collateral to reduce credit risk. If the price of collateral becomes more volatile such as in Zimbabwe, then for an unchanged loan rate, lenders will demand more collateral to offset probability of loss on credit (Hefferman, 2001:183). In the case of default the lender has the right to seize the collateral and sell it. Lenders determine the desirable advance to be made against collaterals. The collateral

commonly takes the form of an asset such as property, account receivables or inventory. The lender obtains a security interest in the collateral through the execution of a security arrangement with the borrower that specifies that the collateral is held against the loan.

Higher interest rates makes borrowing expensive for firms and an increase in interest rates will further increase the cost of debt (Sloman, 2005:227). Interest rates have been high in Zimbabwe and are still very high. The overnight nominal interest rates of the Reserve Bank of Zimbabwe are currently pegged at 600% for secured instruments and 700% for unsecured instruments (Gono, 2007:24). Overnight interest rate is the price paid for one day loans. It is the equilibrium outcome of supply and demand for bank reserves (Moschitz, 2004). For small firms to employ debt successfully, they have to earn a return that is more than these interest rates.

Most banks in Zimbabwe use a flat interest rate to their clients and this rate is determined by the Reserve Bank of Zimbabwe. The reason for this is that the loans that are given to small firms come from the Reserve Bank and are dis[illegible] through commercial banks. Therefore, as the RBZ is the provider of the funds, it is the one that determines the interest rate to be paid. The interest rate will be the same across all banks. Section 4.3.1.2 discusses the real cost of debt which does not take expected inflation in its computation.

4.3.1.2 Real cost of debt to small firms

Formula 4.5

$$R = \frac{1+M}{1+i} - 1$$

(Correia, *et al.*, 2005:9-6).

Where: R = the real cost of debt

M = the nominal cost of debt or interest rate

i = the inflation rate

Given interest rate of 32% and expected inflation rate of 20%, the real cost of debt would be;

$$\frac{1+0.32}{1+0.2} - 1$$

$$\frac{1.32}{1.2} - 1$$

$1.1 - 1$

0.1 or 10%

The above formula only computes the cost of debt and excludes the tax advantage of debt. The cost of debt should therefore include taxation in its computation. The after tax cost of debt is discussed in the section below.

4.3.1.3 Real after-tax cost of debt

To obtain the after tax cost of debt, formula 4.6 is used.

Formula 4.6

$$R_{dr} = \frac{1+M(1-t)}{1+i} - 1$$

Where: t = tax rate

(Correia, *et al.*, 2003:140).

Formula 4.6 removes the tax advantage in its calculation, thereby portraying the real after tax cost of debt. The real after tax cost of debt can be either negative or positive. The following example illustrates a positive real after tax of debt: *A firm with an interest rate on loan of 20%, a tax rate of 30% and expected inflation of 10%, will, using the formula for real after tax cost of debt will have the following real after tax cost of debt.*

$$\frac{1+0.2\,(1-0.3)}{1+0.1} - 1$$

= 3.6 %

A negative real after tax cost of debt will be explained using the same example except for the change in expected inflation only. The expected inflation rate is now 30% and there is no change in interest and tax rate.

$$\frac{1 + 0.2\,(1 - 0.3)}{1 + 0.3} - 1$$

$= -12.3\ \%$

It can then be deduced from the above examples that as expected inflation rate increases, the real after tax cost of debt will decline (refer to sec 4.3.1.1, p. 81 for more information on inflation). Tax rate affects the real after tax cost of debt and it will be discussed below.

- **Tax rates**

As indicated in formula 4.6 above, there is a tax advantage associated with the use of debt. Interest payments on debt are exempted from the calculation of taxable income. Therefore, a tax benefit is gained through the payment of interest on debt. Since interest is tax deductible, the after-tax cost of debt is the function of the tax rate. The tax rate that accrues from paying interest makes the after-tax cost of debt lower than the pre-tax cost (market interest rates). The tax benefit increases with an increase in the tax rate. The formula for calculation of the after-tax cost of debt (also refer to formula 3.1, p. 67) is as follo

$$Kd = I\,(1-t)$$

Where: Kd = cost of debt

I = interest rate payable (Market interest rate)

t = the marginal tax rate

(Correia, *et al.*, 2005:7-5).

It should be noted that when firms calculate their cost of debt they use nominal cost of debt as it includes the effects of inflation. The time value of money is very important as one dollar today will not be of the same value as one dollar tomorrow. It would be a misrepresentation to use the real cost as the value is always changing due to high inflation in Zimbabwe. For this reason, nominal cost of debt is used to calculate the after-tax cost of debt.

The after-tax cost of debt is a decreasing function of the tax rate. A firm with a higher tax rate enjoys more benefits by paying lower taxes (Damodaran, 1999:226). This can be exemplified by the following; *Two firms, A and B have a before-tax interest on debt of 70% but the tax rate for firm A is 30% and 20% for firm B. The after-tax cost of debt for these two firms is as follows*:

Firm A, Kd = r (1 – t)

70 (1 – 0.3)

70 (0.7)

= 49%

Firm B, 70 (1 – 0.2)

70 (0.8)

= 56%

This example clearly illustrates the relationship between the after-tax cost of debt and the tax rate thereby supporting the statement that the after-tax cost of debt is a decreasing function of the tax rate. As tax rate is increased, the after-tax cost of debt decreases.

In Zimbabwe, the company tax rate is 30%. It must be reiterated however, that there are some incentives for small manufacturing firms that lead to a reduction in the tax rate. Small manufacturing firms located at growth points are taxed at 10% for the first five years. Manufacturing firms that export 50% or more of its outputs are taxed at 20% (ZIMRA, 2007). Therefore, the after-tax cost of debt for the firms paying 30%, 20% and 10% will be different; with the firm paying 30% having a lowest after-tax cost of debt and the one paying 10% tax rate having a highest after-tax cost of debt. Although firms paying higher tax rates enjoy more tax benefits of debt if profitable, a lower tax rate increases the profits of small firms that do not use debt.

While interest and tax rates are the most important factors affecting the cost of debt, there are also some other factors that should be considered as they increase the effective cost of debt. Besides charging high explicit interest rates, other fees such as compensating balances, commitment fees and transaction costs are demanded by lenders and indirectly increase the cost of debt. These are discussed below.

4.3.2 Non-interest fees

Heffernan (1996:164) describes non interest fees as fees apart from the interest rate which affect the pricing of loans by commercial banks to firms. Non interest fees are primarily paid by small firms because they are considered a high credit risk. Furthermore, information on the performance of small firms is expensive to gather since small firms are not listed on the stock

exchanges or rated by credit agencies. Non-interest fees that affect pricing of debt include transaction costs, commitment fees and compensating balances. Of these non-interest fees, only transaction costs was found to apply to Zimbabwean banks and is therefore the only that will be discussed.

4.3.2.1 Transaction costs

Transaction costs can be described as the costs incurred by commercial banks in evaluating the loan applications of small firms. They include verification costs, monitoring costs and enforcement costs. Verification costs are costs that arise from the evaluation of the proposal for which the funds are required. Obtaining reliable information on the credit worthiness of small firms is difficult and costly. Once a loan is made, the lender will monitor the progress of the firm and ensure that the funds are used in accordance with the purpose agreed (Matthews & Thompson, 2005:37).

All these costs should be compensated by the borrower thereby increasing the cost of debt and these costs are passed by the banks to small firms in the form of transaction costs. The more carefully a loan appraisal is done the higher the transaction costs. This implies that there is a trade off between the cost of default risk and transaction costs (Nieuwenheizen & Kroon, 2003:129).

4.3.3 Other factors that affect cost of debt

There are also other variables that affect cost of debt to small firms. These variables include among others, bankruptcy, agency and loss of flexibility. Though these variables do not have a cost that can be clearly identified, they affect the cost of debt in some way. The discussion that follows will briefly highlight the effect of these variables on the cost of debt.

4.3.3.1 Bankruptcy

Borrowing money leads to an increase in expected bankruptcy costs. The bankruptcy cost is a product of the probability of bankruptcy and the direct and indirect cost of bankruptcy (refer to the definition below). The probability of bankruptcy is the likelihood that a firm's cash flow will be insufficient to meet its debt obligations. Though such a failure does not automatically imply

bankruptcy, it does trigger default and its consequences. The probability of bankruptcy is a product of the size of operating cash flows on debt obligations and variance in operating cash flows. The larger the operating cash flows relative to cash flows on debt obligations, the smaller the likelihood of bankruptcy. The probability of bankruptcy increases as firms borrow more money. The more variable the operating cash flows of a firm are, the higher the probability of bankruptcy (Damodaran, 1999:229).

If there is a probability of bankruptcy, the current market value of the firm is reduced. Increased financial leverage (use of debt) affects the costs of financial distress. Lenders foresee the costs associated with bankruptcy and realise that if bankruptcy occurs, the lawyer's fees will come out of the value of the firm. For this reason, they demand compensation in advance in the form of higher promised interest rate. This reduces returns to equity holders and reduces the market value of the firm (Brealey, Myers & Marcus, 1999:410).

The cost of bankruptcy is not obvious and cannot be easily quantified. Bankruptcy affects everyone involved in the firm including lenders and equity holders. It includes direct and indirect costs (direct bankruptcy costs are explained below while indirect bankruptcy costs are discussed in the following paragraph). The direct cost is the one which is incurred in terms of cash outflows at the time of bankruptcy. These cash outflows include legal and administrative costs of bankruptcy. The more the firm owes, the higher the chance of default and therefore, the greater the expected value of associated legal costs. A higher chance of default will consequently result in a higher cost of debt (Brealey, Myers & Marcus, 1999:410).

Indirect costs also arise as a result of the use of debt. If a firm has a higher probability of bankruptcy, a perception that the firm is in financial trouble will develop among the stakeholders. The general perception that the firm is in financial trouble may lead customers to stop buying the products because of fear that the firm will go out of business. Suppliers may start demanding stricter terms to protect themselves against the possibility of default, leading to an increase in working capital and a decrease in cash flows. The third indirect cost of probability for bankruptcy is the difficulty the firm may experience in trying to raise additional capital for its projects, both equity and debt investors are reluctant to take the risk. This would lead to capital rationing constraints and the rejection of good projects (Damodaran, 1999:230).

The extent of bankruptcy costs differs with firms, thus some firms incur more costs of bankruptcy than others. The following types of firms incur more bankruptcy costs than others:

- Firms that sell durable products with long lives that require replacement and services such as geysers;
- Firms that provide goods for which quality is an important attribute but difficult to determine in advance. Quality of firms is therefore primarily determined by the status of the firm;
- Firms producing products whose value to customers depends on the services and complements supplied by independent firms such as jelly cookers and;
- Firms that sell products that require continuous service and support from the manufacturer such as photocopying machines (Damodaran, 1999:230-231).

Any information that portrays instability of the firm and chances of closing down will greatly affect the above mentioned firms. The situation would be different with firms that produce simple products that do not require servicing and complimentary goods.

4.3.3.2 Agency costs

Agency costs are costs that arise as a result of conflicts between lenders and equity holders (Besley and Brigham, 2000:20). Equity holders and lenders do not always agree on the best course of action for the firm, largely because they have different claims to the firm. Equity holders, who receive a residual claim on the firm, tend to favour actions that increase the value of their holdings even if that means increasing the risk that the lenders will not receive their promised payments. Lenders prefer assets with low risk whereas borrowers will use the borrowed funds in risky operations. Lenders want to preserve and increase the security of their claims but since equity holders generally control the firm's management and decision making, their interests will dominate lenders' interests, unless they take some protective covenants. Protective covenants are restrictions on a firm to protect lenders (Brealey, Myers & Marcus, 1999:353). A firm exposes itself to this conflict and its negative consequences by borrowing more and incurs costs in terms of real costs and loss of freedom in decision-making (Matthews & Thompson, 2005:35) and (Damodaran, 1999:232).

The conflict between equity holders and lenders is expressed in decision-making regarding investment and financing. Owners support investing decisions that earns a return that exceeds the cost of that investment whilst lenders might not go for it as it can increase the risk associated with the firm. Owners can shift risk to lenders by taking on much riskier projects than lenders would expect them to do. When it comes to financing new investments, owners would usually want to finance the investments by debt and use the assets as security for that debt thereby providing new lenders with prior claims. The owners would provide new lenders with prior claims to assets so that the return demanded by lenders on debt would be low. Whilst equity holders would want to provide new lenders with prior claims on assets, existing lenders do not want to provide new lenders with priority over their claims since it makes their debt riskier (Damodaran, 1999:233).

Financial distress costs are high when conflicts get in the way of running the business. Financial distress costs are costs arising from bankruptcy or distorted business decisions before bankruptcy (Brealey, Myers & Marcus, 1999:412). Owners are tempted to forsake the usual objective of maximising the overall market value of the [redacted] and pursue narrower self interests instead. They usually want to increase their returns at the expense of their creditors (Brealey, Myers & Marcus, 1999:412). The agency costs of disagreements would come into play when lenders believe that there is a significant chance that owners' actions might make them worse off. Agency costs are costs of resolving conflicts among owners and lenders (Myddelton, 2000:179). They can build this expectation into debt-prices by demanding much higher rates on debt (Damodaran, 1999:235).

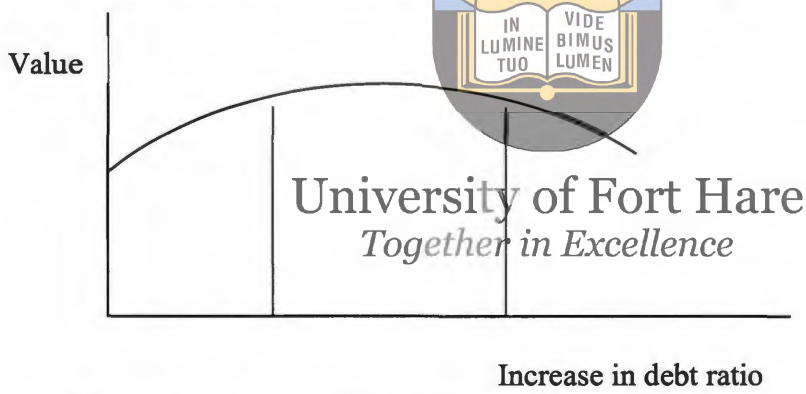
4.3.3.3 Loss of flexibility

Flexibility refers to the ability of a firm to alter its operations depending on how the conditions of the business are changing (Brigham & Houston, 2004:464). Loss of flexibility is a by-product of conflicts and thereby leads to strict agreements with lenders. These will reduce flexibility of firms to make investments and financing decisions. The use of debt might lead to stringent conditions being set by lenders leading to inability of firms to decide on investment and financing decisions that lead to an increase in value of a firm. The value of the firm may be maximised by preserving some flexibility to take on future projects as they arise. Flexibility provides managers with more breathing space and more power and it protects them from the monitoring that comes from lenders. There is a cost associated with flexibility; monitoring large cash balances earns low

returns whilst excess debt capacity implies that the firm is giving up some value and has a higher cost of capital as equity costs more than debt (Damodaran, 1999:237).

From this discussion, it can be noted that cost of debt to small firms does not only mean the interest rate paid by firms, but should also include other direct and indirect costs. Such costs include non-interest fees, bankruptcy costs, agency costs as well as loss of flexibility costs. It can also be noted that there is a relationship between value of a firm and its debt ratio which explains why discussions on these two components were combined in this chapter. This relationship can be explained by the use of the Figure 4.4 below.

Figure 4.4 Relationship between firm value and debt ratio



Adapted from (Myddelton, 2000: 148)

The graph clearly shows that the value of a firm is increased when debt ratio is increased to a certain point where the value will start declining as debt is increased in the capital structure. This therefore suggests that there is an optimal capital structure where the value of a firm is maximised. Small firms should therefore use the capital structure that maximises the wealth of the firm. Section 4.4 summarises this chapter.

4.4 SUMMARY

It was highlighted in this chapter that the value of a firm refers to the net worth of a firm and is futuristic. No value would be important if there are no future cash flows to be derived from the firm. Value of a firm is affected by risk encompassed in the firm as well as the debt ratio. Value and risk have a negative relationship, thus when risk increases, the firm value decreases whilst firm value and debt ratio are positively related to a certain point often which they will be negatively related (as shown in Figure 4.4, p. 96).

The cost of debt is affected by the interest rate and taxation. Interest rate is a product of time preference, inflation premium and risk premium. There are also other costs that affect the cost of debt. These include non interest fees such as commitment fees, transaction costs and compensating balances. Other costs include bankruptcy, agency and flexibility. These increase the actual cost of debt. Though these costs also apply to large firms, they are higher for small firms causing debt to be more expensive for them.

The chapter that follows examines the theory on which this study is based, that is the Modigliani and Miller's (MM) theory of capital structure, 1958 and modified in 1963. The primary emphasis will be on Proposition II of MM theorem of capital structure which states that the way a firm is financed does not affect its value. Components, assumptions and the loopholes of this theory will also be discussed. Background information on the identified hypothesis will also be expounded in this chapter thus the impact of debt on value, debt accessibility and the relationship between products manufactured and debt accessibility for small firms in Zimbabwe.

CHAPTER FIVE

THEORETICAL BACKGROUND

5.1 INTRODUCTION

This chapter focuses on the theory of capital structure by Modigliani and Miller (MM), originally formulated in 1958 and then modified in 1963. The theory is divided into three propositions, thus Propositions I, II, and III. Though this study will base its arguments on MM's Proposition II of the capital structure theory, it is imperative to have a discussion on Proposition I as it gives the background to proposition II. The reason being that Proposition II emanates from and is an extension of Proposition I. Therefore, its review will shed more light as to how proposition II emanated. The chapter will also discuss empirical studies conducted on MM theory of capital structure to identify if results of this theory can be obtained in real world scenarios. International and local studies on firm value and capital structure will be reviewed as will studies that are related to the hypotheses of this study. These include studies on the use of debt (financial leverage) and the value of small firms and accessibility of debt to small firms. Section 5.2 below discusses the MM theory of capital structure.

5.2 MODIGLIANI AND MILLER'S THEORY OF CAPITAL STRUCTURE

The study at hand acquires its main hypothesis from the theory of capital structure that was put forward by Modigliani and Miller in 1958 and corrected in 1963. The original theory in 1958 argued that firm value and average cost of capital are independent of its capital structure, thus whether a firm is financed by 100% debt or 100% equity, the cost of capital and its value will not change. What only change is how the earnings of a firm are distributed among its capital providers (Modigliani and Miller, 1958: 268 - 269). The theory consists of three propositions of which the second one is dependent on the first whilst the third proposition is dependent on propositions I and II propositions. Propositions I and III have no impact on this study but Proposition I will be briefly discussed to foster a better understanding of Proposition II. To allow the attainment of their objectives, MM used several assumptions in constructing their theory. These assumptions are discussed in section 5.2.1.

5.2.1 Assumptions

Several assumptions were used by MM in 1958 to allow the achievement of their objective, that is to prove that there is no relationship between capital structure and firm value and its average cost of capital. There are five basic assumptions used and these will be briefly discussed below.

- There are no corporate taxes, thus firms are not taxed for the income they generate. This assumption was made in order that their experiment could produce meaningful results,
- Business risk is constant. This was included in order to control for risk factors other than financial leverage. By holding business risk constant between the levered and unlevered firms, focus can be directed to potential firm value or cost of capital differences that can only be attributed to capital structure differences and not differences in business risk,
- No growth in cash flows. This was done for the sake of convenience and makes the calculation easier since the zero growth reduces the cash flows to a simple perpetuity,
- Perfect capital market conditions prevail. This refers to a number of assumptions that include:

✓ No transaction costs for buying and selling securities,

✓ Information about the firm is readily available at no cost and is the same for all investors,

✓ No significant influence on security prices by an investor and

✓ Borrowing and lending is at the same rate by all investors.

No bankruptcy costs. This basically means that if a firm goes bankrupt, it can still restructure its assets or liquidate its assets at fair value. This implies that debt holders do not sustain any losses in the event of bankruptcy and a firm is able to raise as much debt as it pleases at a constant rate (for a comprehensive discussion on bankruptcy, refer to sec 4.3.3.1, p. 93) (Modigliani and Miller, 1958:261 - 272). All these assumptions were used in proposition I whilst the assumption on no corporate tax was relaxed in the corrected theory in 1963. The discussion in section 5.2.2 will focus on proposition I of the MM theory of capital structure.

5.2.2 Proposition I

Proposition I states that the market value of any firm is independent of its capital structure and is given by capitalising (discounting) its expected return at the rate appropriate to its class. Capitalisation is whereby the value of a firm is obtained by dividing earnings with cost of capital. The use of earnings is more appropriate when the earnings are expected to be maintained (Knott, 1998:197). This proposition can be restated in terms of the firm's average cost of capital which is the ratio of its expected return to the market value of its securities. This in effect means that the average cost of capital to any firm is independent of its capital structure and is equal to the capitalisation rate of a pure equity stream of its class. Put differently, Proposition I states that the value of a firm and its cost of capital are independent of the capital structure employed (Modigliani and Miller, 1958:268 - 269).

Algebraically, Proposition I can be represented by equation 5.1 as follows:

Equation 5.1 $V_L = V_U$

Where: V_L = Value of a levered firm and,

V_U = Value of an unlevered firm

This proposition argues that value comes from earnings generated by the assets owned. Since the capital structure does not affect the assets owned, the earnings are not affected and as a result, value is not affected. Figure 5.1 illustrates this proposition.

Figure 5.1 Illustration of MM's proposition I

As the diagrams indicate, the value remains the same regardless of how the firm is financed. The capital structure only determines how earnings will be shared. Though the structure of the circles is different (the first one is partitioned), their sizes remain the same and this explains Proposition I. MM agreed that debt is generally cheaper than equity because of less risk associated with debt holders and therefore came up with proposition II which is discussed below.

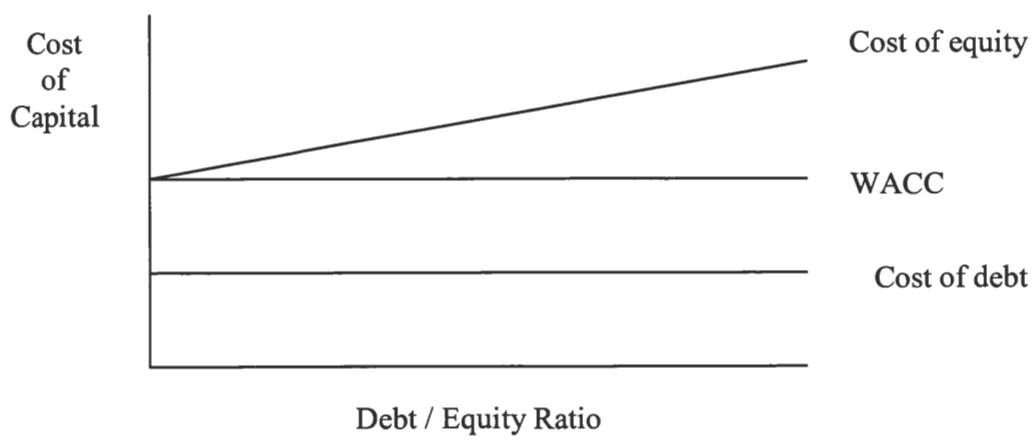
5.2.3 Proposition II

Proposition II is derived from proposition I and it states that the expected rate of return on the shares of any firm belonging to the same class is a linear function of leverage. Put differently, the expected yield of a share is equal to the appropriate capitalisation rate for a pure equity stream in the class, plus a premium related to the financial risk equal to the debt-equity ratio (Modigliani &

Miller, 1958:271). Modigliani and Miller argued that the cost of capital is independent of the capital structure, hence the value of the firm is independent of the proportion of debt to total capitalisation. The model argues that increased leverage results in shareholders requiring an increased return to equate the increased risk. The change in required equity return will offset any possible benefit from cheap debt. As leverage increases, the weighted average cost of capital will remain constant so no optimal level of capital leverage exists (Vigario, 1999: 4).

Using their (MM) assumptions, Figure 5.2 depicts the effect of debt on the capital structure. Generally, debt is cheap, therefore desirable as it can lead to an increase in return on equity (refer to sec 3.3.3.3). As debt financing increases, the initial effect would be to lower the average cost of capital thus increasing the value of the firm (Vigario, 1999:4). But according to Proposition II of 1958, the benefit of low cost debt does not necessarily lead to an increase in firm value. Proposition II also argues that the use of debt can temporarily cause the average cost of capital to decline, but it is only for a short term as the process of arbitrage will force the average cost of capital of a levered firm to rise and be in line with the average cost of capital of an unlevered firm. Arbitrage occurs if two similar assets sell at different prices thus investors would buy the undervalued securities and simultaneously sell the overvalued securities, earning a profit in the process and this will eventually cause the prices of the two assets to be equal (Brigham & Ehrhardt, 2005:584).

Figure 5.2 Diagrammatic illustration of MM theory of capital structure



Adapted from (Vigario, 1999:5)

As illustrated in figure 5.2, the average cost of capital is constant regardless of the capital structure. This is because the use of debt would lead to increases in probability of bankruptcy, thereby increasing the risk of equity holders. The lower cost of debt would offset the increase in risk due to use of debt. Cost of debt is generally lower because risk associated with debt is low as debt holders have the first claim in the case of insolvency (Damodaran, 1999:103). Therefore debt holders will charge less cost on their debt compared to equity holders who bear all the expenses in the event of bankruptcy. Small firms will therefore not increase firm value by playing with capital as it leads to no increase in firm value.

In 1963, the assumption of no corporate tax was relaxed and proposition II generated different results. When taxes are considered in the theory, the relationship between ordinary share yields and leverage will no longer be the strictly linear one as given by the original Proposition II in 1958. If return increases with leverage (positive leverage), the yield will tend to rise as the debt equity ratio increases. With corporate income tax under which interest is a deductible expense, gains accrue to shareholders from having [illegible] the capital structure, even when the capital markets are perfect. The effect of leverage on value is thus solely a matter of the deductibility of interest payments for tax purposes. The modification in 1963 argues that there is an increase in the after-tax yield on equity capital as leverage increases (Modigliani & Miller, 1963:434-439). The new implication therefore is that the employment of debt financing in the capital structure leads to an increase in the value of a firm and the value is increased solely because of the tax advantage not because debt is cheaper than equity. Stated differently, this can only happen if leverage is favourable (refer to sec 3.3.3.3, p. 58 for leverage).

Basing on the revised MM's Proposition II, the optimal debt ratio for a firm is 100% debt. In such an environment, where debt has tax benefits, the value of the firm increases by the present value of tax savings for interest payments. Equation 5.2 shows the value of a levered firm considering the adjustments.

Equation 5.2. $V_L = V_U + T_b$

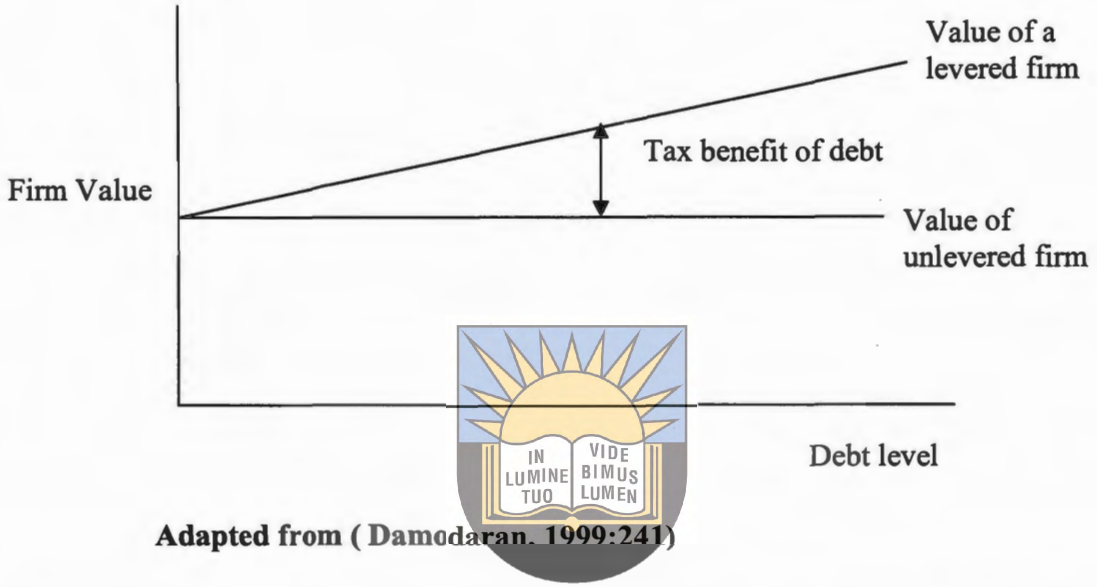
Where: V_L = Value of a levered firm

V_U = Value of an unlevered firm

T_b = Tax benefit from the use of debt (Damodaran, 1999:240).

The value of a levered firm can graphically be represented by Figure 5.3 below.

Figure 5.3. Value of a Levered firm: MM with taxes.



Adapted from (Damodaran. 1999:241)

The introduction of debt into the capital structure leads to a tax shield benefit whilst such a benefit does not accrue if equity is used. The tax shield benefit is the interest expense multiplied by the corporate income tax rate and is illustrated by the following equation:

Equation 5.3 Annual tax shield benefit = T (i x B)

Where: T = Corporate income tax rate

i = Interest on debt

B = The amount of debt in the capital structure

(Moyer, McGuigan & Rao, 2005:375)

The use of debt in capital structure should be done in light of the cost benefit analysis so that the optimal capital structure can be implemented. The benefits of debt such as tax shield benefits and efficient management should be weighed against the costs such as bankruptcy and agency. Since the difference in value, according to MM theory, is the tax shield, the decision whether to employ debt or not should be done by comparing the tax shield against bankruptcy and agency costs. If the tax shield is greater than bankruptcy and agency costs, financial leverage leads to an increase in firm value and that financing decision should be adopted. If the opposite transpires, then

leverage would lead to a decrease in value of a firm. The following discussion is on research that has been carried out relating to the hypotheses at hand. Refer to sec 1.5, p. 6 for more information on hypotheses.

5.3 EMPIRICAL STUDIES ON THE HYPOTHESES OF THE STUDY

Studies ranging from those supporting the theory of capital structure by MM and those disputing it will be reviewed (these were briefly discussed in chapter 1, sec 1.7.2). International and local (within Africa) research will all be reviewed. The review of both international and local research will assist in the identification of international and local factors that affect results and application of the MM theory. This can give policy-makers an insight as to factors that can hamper economic prosperity and search for ways to reduce the negative impact of such factors. The studies to be reviewed include studies on the capital structure and firm value, use of debt and value in small firms, debt accessibility, size of firms and products of a small firm and accessibility to debt.

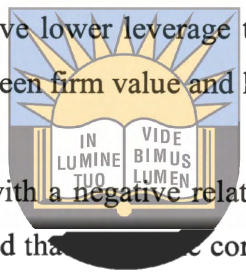
5.3.1 Capital Structure and Firm Value

Although MM theory suggests that the use of debt should lead to a tax advantage because of tax deductibility of interest payments in the computation of taxable income, this does not apply to all firms. Studies conducted on related topics produced mixed results, some indicating a positive relationship between debt usage and firm value whilst others show a negative relationship. It is worth noting that only a single study was identified regarding debt usage and small firms in Zimbabwe. If there are any other studies done, the researcher did not manage to access them.

A study on Zimbabwe and other developing countries by Booth, Aivazian, Demirguc-Kunt and Maksimovic (2001) established no fundamental tax advantage of debt over equity. They found out that debt is negatively related to profitability. Kahle & Shastri (2004) also found a negative relationship between debt and firm value. They found that firms that issue equity have larger tax benefits from option exercise than firms that issue debt. Tax benefits from option exercise refer to tax advantages that arise as a result of the use of share options compared to the use of debt. Share option refers to a way of raising capital through offering shareholders shares which they can purchase at a lower price than the market one. The study carried out by Zou and Xiao (2006), on financing behaviour of listed Chinese firms also echo the same sentiments. A negative

relationship between profitability and firm leverage was found. Similar research by Lin and Rowe, (2006) also reached the same conclusion. From Lin and Rowe's study, debt ratio is negatively related to state owned enterprises' profitability. This might imply that returns on assets ($\frac{EBIT}{TotalAssets}$) were lower than the before tax interest on debt which indicates negative leverage.

Shyam-Sunder and Myers (1999) suggest that firms prefer to finance investments first from retained earnings, second from debt and third from equity. This suggests that more profitable firms should have lower leverage ratios than less profitable firms since they are able to finance their investment opportunities with retained earnings. Profitable firms tend to use earnings to pay down debt and would, therefore, have lower leverage than less profitable firms. This therefore portrays a negative relationship between firm value and leverage.



Though several studies concluded with a negative relationship between the use of debt and the value of a firm, it should be reiterated that the conditions of the areas of study might differ with the economic conditions prevailing in Zimbabwe, resulting in generation of different results. Some studies found no significant relationship between the two whilst other researchers found a positive relationship. A research study conducted by Zhengfei, Lansink and Alfons, (2006) on Dutch farms resulted in the conclusion that debt did not have any impact on Return on Equity (ROE). No impact on ROE shows that the use of debt did not result in any effect on profitability.

Abor (2005) conducted a study in Ghana which contradicted the results in the studies already discussed. A negative relationship was found between long-term debt used and return on assets (ROA) and a positive relationship between short-term debt and ROA. Overall, the result indicated a significantly positive association between total debt and total assets and ROE. Therefore, the value of a firm, according to this study, is increased as debt is used, portraying a favourable leverage. This implies that return on assets obtained in these firms was above the before tax interest on debt to allow for favourable financial leverage.

Driffield, Mahambare & Pal (2007) found that firm value is increased by high leverage. High leverage may reduce the agency costs of outside equity and increase firm value by encouraging managers to act more in the interests of shareholders. More efficient firms may choose lower equity ratios than others because higher efficiency reduces the expected costs of bankruptcy and

financial distress. According to Berkivitch and Israel (1996:239), a firm's debt level and its value are positively related especially when shareholders have absolute control over the business of the firm and it will be negatively related when debt holders have power to influence the course of the business.

Muradoglu & Sivaprasad (2006) came up with two different results concerning returns and leverage. In Utilities, Oil and Gas risk class, returns increase with firm leverage whilst for other risk classes, this is not the case as returns decline when leverage increases. To these researchers, leverage is a matter of industry risk, that is, the risk inherent in a specific industry of firms (Besley and Brigham, 2000:460). Leverage is being affected by the industry risk which cannot be changed by a single firm.

Several reasons can be given to support the differences which include among others, difference in tax rates, differences in general economic conditions, fiscal and monetary policies as well as industrial factors such as risk of the industry. The differences in the results are therefore caused by different factors prevailing in an economy or specific industry. Sections 5.3.2 and 5.3.3 are discussions on studies done relating to the primary and secondary hypotheses respectively.

5.3.2 Leverage and value of small firms

Most studies regarding capital structure were done using information on large firms. Very few focused on the effect of capital structure on small firms. This may be because information concerning large firms can be easily obtained as compared to small firms who sometimes do not keep records of their operations. For this reason, it is necessary to review studies that focused on small firms. This section will begin with studies that found a positive relationship between leverage and value of small firms and then studies that indicate a negative relationship will be discussed after.

Kyereboah-Coleman (2007) found out that most microfinance institutions employ high leverage and finance their operations with long-term as against short-term debt. Microfinance institutions are small businesses that offer small amounts of funding to small business owners over short periods of time such as a week or a month. Highly leveraged microfinance institutions perform better by reaching out to more clientele and they enjoy economies of scale. This therefore

indicates a positive relationship between leverage and value of small firms, that is, as debt ratio increases in the capital structure, so does the value of the firm. The results show that a highly leveraged microfinance institution compels management to put in measures and mechanisms to reduce default rates in order to improve on the institution's profitability and to be able to honour its debt obligations. This implies a positive association between profitability and leverage. Michaelas, Chittenden & Poutziouris (1999) also support the proposition that leverage has a positive impact on performance of small firms. The explanation of positive relationship is also supported by Driffield, Mahambare & Pal (2007) who suggested that high levels of debt will force management to work tirelessly in order to comply with debt conditions.

However, some studies find a negative relationship between capital structure and profitability of small firms, (Shyam-Sunder & Myers, 1999, Jordan, Lowe & Taylor 1998 and Hall, Hutchinson & Michaelas 2004). Kahle & Shastri (2004) provide evidence that direct bankruptcy costs increase as firm size decreases. This implies that the tax shield benefit for small firms as a result of debt will not cover bankruptcy costs, thereby leading to a decline in firm value.

Esperança, Gulamhussen & Pereira (2003) found a significant negative relation between profitability and debt to equity ratios which portrays negative leverage. This would mean that the return on assets rate is lower than the before-tax interest on debt. The suggestion was that only less profitable firms have a tendency of using debt as their retained earnings cannot cover all expenses and investment requirements. Abor & Biekpe (2005) also found a negative relationship between profitability and debt ratios (long-term and short-term) which proposes that less profitable small firms are more likely to require debt financing than more profitable ones. This implies that higher profits increase the level of internal financing, thus, small firms that generate internal funds generally tend to avoid external debt finance. While profitable firms may have better access to debt finance than less profitable ones, the need for debt finance may possibly be lower for highly profitable firms if the retained earnings are sufficient to fund new investments. Therefore the more profitable the firm, the less it has to borrow.

The size of a firm and the products it manufactures also has an impact on the accessibility of debt. Larger firms and firms manufacturing easy to sell products tend to obtain debt much easier as compared to small firms manufacturing specific products. Studies on this issue are discussed in the next section.

5.3.3 Debt accessibility to small firms

Just like leverage and value of firms, studies on debt accessibility for small firms also have mixed results. Several studies conducted have concluded that the size of a firm affects debt accessibility to small firms, especially from banks. Such studies include Biggs & Srivastava (1996), Schiffer & Weder (2001), Kumar & Francisco (2005), Raj & Sutthisit (2003) and Kahle and Shastri (2004). All these studies indicated a positive relationship between debt issued and firm size. In Zimbabwe, GONO (2007), identified access to debt financing to be a significant impediment to the creation, survival and growth of small firms whilst larger firms can get funding from banks more easily. Access to debt finance is closely related to firm size and small firms tend to receive far less formal credit compared to larger firms. Small firms have much lower leverage and this can be due to inaccessibility to debt markets.

Size seems to be a major discriminatory factor for access to financing, particularly long-term credit according to Esperança, Gulamhussen & Gama, (2003). Ability to provide collateral (additional security on a loan) is a determinant factor for undertaking credit operations. By demanding collateral, creditors transfer the monitoring costs inherent to debt to the small business owners. During credit negotiations, creditors weigh the collateral value much more than the earnings registered in firm accounts, probably due to the shortage or lack of credible information about small firms.

Abor & Biekpe (2005) also obtained the same results that show a positive relationship between debt ratio and size of the firm. This is explained by the fact that relatively bigger firms are more diversified and are perceived as having lower risk. Thus, they are capable of attracting more debt especially long-term debt. Smaller firms, on the other hand, have difficulty in attracting long-term debt because of the severe information asymmetry problems between owner-managers of the small firms and potential lenders. Also long-term debt is likely to be proportionally more expensive for small firms because of the fixed transaction cost. The information asymmetries and transaction cost arguments therefore limit the attractiveness of debt to small firms.

A study by Hutchinson and McDill (1999) concluded that small firms find it difficult to access debt finance and they also pay high costs for funds because of high risk embedded in their operations. Likewise, Kahle & Shastri (2004) found that long-term leverage increases with firm

size and collateralisation. Large firms with more assets to act as collateral find it easier to obtain debt. The study also found that short term leverage is positively related to size. Kochhar and Hitt (1998:601) also supported the fact that accessibility to a particular type of financing such as debt depends on firm size. The funding of small firms by banks is limited and banks usually charge significant premiums on debt interest. Interest leveled on loans for small firms is often high, simply because of the perception that they are more likely to fail. Banks mostly lend to large firms because they meet the required asset base that small firms do not. The other reason for limited bank loans to small firms is that administrative costs of maintaining smaller loans are relatively higher than for bigger loans.

An unknown financial background and a lack of economies of scale are some of the reasons cited for high risk (Biggs & Srivastava, 1996:5). It can be reiterated that statistics on Zimbabwe by Biggs and Srivastava (1996:7-9) indicate that the number of small firms that received bank loans is 32%, whilst medium firms were 53% and large firms 62%. Small firms that obtained bank overdrafts are 50% compared to 83% [illegible] for medium and large firms respectively. Although there are a considerable percentage of firms obtaining formal debt, the average maturity of that debt is 17 months compared to 40 and 47 months for medium and large manufacturing firms respectively. Generally, this implies that the size of the firm has an impact on its accessibility to debt and the terms and conditions on debt are stricter for small than for larger firms.

The product manufactured by a firm also plays a crucial role in the lenders' determination of debt offering and consequently lenders may favour firms in a specific industry or product. Lenders are less willing to invest in projects with highly specific products unless they are compensated for the greater risk with higher interest rates. Specific products are assets that are expensive to acquire and difficult to sell as they have specific uses (Kochhar & Hitt, 1998:602).

Some studies however, have reached a conclusion that debt is readily available to small firms but it's only that small firms do not like to use it. One of the major reasons cited for this is conservation of controlling power. As debt is issued, some lenders can impose conditions and some might even involve themselves in the running of the business such as choice of investments. Such studies found that several small firms diversify away from bank financing even if banks are willing to lend more. The reason being that, when a bank makes a loan to a

firm, it gains access to the internal records and it will be able to influence the activities of the firm. Therefore, for firms to avoid this, they diversify away from the use of bank loans (Rajan, 1992: 1367-1371).

Though several studies have portrayed that small firms have difficulties in obtaining debt, there is evidence that they make great use of it. A study by Abor & Biekpe (2005) indicated that 41.39% of the total assets of firms studied were financed by debt. This is a relatively high percentage considering the difficulties of acquiring debt presented by the discussed studies.

A positive relationship between long term debt ratio and age of the firm was identified by Abor & Biekpe (2005). This implies that older firms are believed to have good track records and as such are able to access debt more easily than newer firms that have no track record or credit history. Relatively mature small firms in terms of their age in business are assumed to have good reputation with both long-term and short-term debt providers, thus increasing their chances of attracting more debt capital. The relationship with debt suppliers is also considered to be a crucial factor to accessibility of debt to small firms. Biggs & Shah (2006) found out that for small firms, its size and length of relationship with the supplier are both important determinants of access to credit. In the absence of good information on small firms, credit suppliers use firm-size for evaluation of credit worthiness. Thus, only large firms would get debt without difficulties.

Michaelas, Chittenden & Poutziouris (1999) also confirmed that size of a firm, product type and its age affect accessibility of debt. They also realised that profitability has an effect on the level of both the short and long term debt in small firms. The study provided evidence which suggest that the capital structure of small firms is time and industry dependent, that is, the time frame for which the firm has been in operation and the risk of the industry. The length for which the firm has been operating can serve as proof that the firm is profitable.

This discussion shows that even if debt might have a positive impact on firm value, several small firms have challenges in securing debt. Assets owned and products produced by small firms also contribute to the accessibility of debt thereby constraining small firms from using debt. Raj and Sutthisit (2003), in their study came out with a result which indicates that firm size and tangible asset ratio are positively related to debt whilst profitability and probability of bankruptcy are negatively related to leverage.

5.4 SUMMARY

This study is based on MM theory which was originally postulated in 1958 and then modified in 1963. This theory has three propositions but the study will only make use of Proposition II. The original theory proposed that value of a firm is independent of its capital structure. This was corrected in 1963 to include the tax shield benefit to conclude that a firm using debt in its capital structure will have a higher value than the one with equity.

It was highlighted in this chapter that research relating to MM theory produced mixed results that is, results that confirm that leverage is positively related to firm's value and those that contradict this result. Mixed results were also obtained from studies relating leverage and value of a small firm and debt accessibility to small firms. Reasons for these differences can range from differences in general economic conditions, specific industry factors and fiscal and monetary policy differences.

Chapter six discusses the expected scenario to support the hypotheses of the study at hand. A normative model will be discussed including regression models that will be used to analyse the data and test the hypotheses.

CHAPTER SIX

NORMATIVE MODEL

6.1 INTRODUCTION

The primary objective of this study is to determine whether debt could be used favourably by small manufacturing firms in Zimbabwe. It also determines if firm size and product manufactured affected the accessibility of debt to small manufacturing firms. There are certain conditions that need to be satisfied to meet these objectives and this chapter will focus on these conditions which allow the achievement of the objectives. A brief discussion on the ratios that are used to estimate the relationship between debt and firm value and between debt accessibility and products manufactured and firm size are outlined. Regression models on the impact of debt on profitability (value) and the impact of product manufactured and firm size to debt accessibility are estimated (refer to sec 6.4.1, p. 119). The rationale, components, advantages and the limitations of using regression analysis are also discussed and a hypothesised example on the mechanism of the regression analysis provided. Section 6.2 focuses on the conditions that were expected to prevail in order for the study to achieve its intended goals.

6.2 NORMATIVE MODEL

Three hypotheses namely; a negative relationship exists between debt usage and value of a firm, the size of a firm is negatively related to its ability to access debt and lastly, the products manufactured by a firm have a negative effect on accessibility to debt (also refer to sec 1.5, p.6) are tested in this study. For these hypotheses to be proved, small firms should have debt in their capital structures. Without the use of debt, the study is of no importance and for this reason, only small manufacturing firms that have a certain percentage of debt in their capital structures were used for analysis. Apart from debt, there are also other conditions which needed to be satisfied such as number of employees (50 or less but more than 4), knowledge of the value of total debt in the capital structure, total assets, the type of assets, annual earnings as well as equity capital value. The firms were to be engaged in manufacturing activities, that is food manufacturing and processing, garment production, carpentry and pottery and steel works, among others. These conditions were to be met for the researcher to be able to determine the debt ratio, return on assets and return on equity as these ratios were to be used in conjunction with the regression and correlation analysis to test the hypotheses.

The research at hand used ratio, correlation and regression analysis methods to test the hypotheses. This was a process whereby the following stage was dependent on the previous one. Correlation testing which refers to the strength or degree of linear association between two variables (Gujarati, 2003:23) depended on profitability ratios whilst regression testing depended on correlation testing results. Two types of ratios were used, namely, profitability and debt ratios. The profitability ratios were used to determine the profitability (value) of small manufacturing firms using debt for their financing activities. Since the study focuses on determining the effect of debt on the value of small manufacturing firms, a change in profitability of a small firm using debt would predict the effect of debt on firm value. Debt ratios were used to determine the capital structure of small firms. Regression equations (models) were formulated to enable the testing of hypotheses. But before regression analysis is used, correlation testing was used to determine if there was any need to use regression analysis.

6.3 DATA ANALYSIS METHODS

The data collected was analysed initially by the use of profitability ratios. The debt ratio was used to determine the capital structure of small manufacturing firms and the ratio used was the total debt to total assets one. Return on assets (refer to sec 4.2.1, 75) and return on equity (refer to sec 4.2.2, 76) are the profitability ratios that were used to determine the relationship between debt and value. The impact of debt finance on profitability involves the analysis of profitability ratios such as return on assets and the return on equity (Gitman, 2003:98). For this reason, the ratio analysis was the best method of determining the relationship between debt and profitability.

Debt and profitability ratios were further regressed to determine the strength of statistical significance of the relationship between debt and profitability of small manufacturing firms. Statistical significance refers to the probability of truth of a research finding (Creative Research Systems, 2007). Apart from regression of profitability ratios, regression analysis was also used to determine the relationship between debt accessibility to small firms and its products and size. Section 6.3.1 below will discuss the ratio analysis to be used for this study.

6.3.1 Ratio analysis

As highlighted in section 6.3, two ratios were used for this study to partially achieve the objectives of this study. The impact of the usage of debt on profitability can be examined by comparing the returns on equity of firms with different capital structures. For example, if firms with high levels of debt are enjoying more returns on equity, it would imply that debt is having a positive impact on the profitability of small firms.

Debt ratio is the ratio of total debt to total assets and measures the percentage of total funds provided by creditors. Total debt for the calculation of this ratio would include both long-term and current liabilities. Generally, it is perceived that the higher the debt ratio, the higher the financial and the higher the returns. This follows the general perception that the higher the risk of an investment, the higher the returns of such investment. The debt ratio is calculated by dividing total debt by total assets (Correia, *et al.*, 2005:5-15). Debt ratio measures the proportion of a firm's total assets that are financed with debt (Moyer, McGuigan & Rao, 2005:100). For this study, the debt ratio was used to determine the amount of debt in the firm's capital structure for the purpose of regression.

A firm's profitability demonstrates how well the firm is making investment and financing decisions. If a firm is unable to provide adequate returns, it may be unable to maintain and increase its asset base (value). Any small business owner who is interested in the long-term survival of his firm will be interested in profitability ratios (Moyer, McGuigan & Rao, 2005:102). Profitability ratios show the combined effects of liquidity, asset management and debt management policies on operating results. Asset management refers to how assets of an organisation are utilised and maintained whilst debt management refers to how debt is raised, used, obtained and repaid. If these policies are appropriate and realistic, they will be shown in favourable profitability ratios (Brigham & Houston, 2004:103). The profitability ratios of the business are a reflection of how profitable the available capital has been employed in the activities of the business, that is, it determines to what extent the business obtained a satisfactory return on available capital (Conradie & Fourie, 2002:73). Profitability ratios try to assess the impact of leverage on shareholders returns.

Return on assets, also referred to as return on investment, measures the profitability of the firm as a whole in relation to the total assets employed. It was used to determine if small manufacturing firms are enjoying positive leverage or not. The ratio of net profit after interest and taxes to ordinary equity measures the return on equity (Correia, *et al.*, 2005:5-16 to 5-17). ROE will be used to determine the relationship between the debt ratios and profitability. Therefore, for the purpose of analysis, profitability was represented by ROE. The profitability of own capital is an indication of the return that small business owners have earned on equity capital annually. The profitability of equity is influenced by the extent to which the business makes use of the borrowed capital. Small business owners strive to raise this ratio as high as possible, through positive leverage, so that their wealth is increased (Conradie & Fourie, 2002:74-75).

Ratio analysis provides insight into a firm's operations but the interpretation is subjective rather than objective as it depends on the perception of the analyst. It is difficult to assess how good or bad a ratio is. Some ratios might indicate strong points while others might indicate weak points and it is difficult to assess to what extent the strong points offset the weak points. Ratio analysis also studies the performance of firms based on industry averages. These are the primary ratios for a large number of firms in the same industry. However, factors such as different accounting policies can create large differences in inter company comparison and make industry averages less meaningful. Inflation also distorts the real meaning of ratios as financial statements are normally prepared on historic cost basis, unadjusted for inflation. By doing this, the accounting amounts are removed from economic value and this will reflect an understatement of fixed assets while the actual value of long-term debt will decline (Correia, *et al.*, 2005:5-22).

To determine more objective assessments different from ratio analysis that uses historic information, analysts established regression models. The following discussion will focus on regression analysis, definition of a model, advantages of using a model and its limitations.

6.4 THE REGRESSION ANALYSIS

Regression analysis is a statistical methodology that utilises the relationship between two or more quantitative variables so that a dependant variable can be predicted from the other, or others. Its purpose is to establish a relationship between two or more variables (Griffiths & Wall, 2000:689). Regression analysis is concerned with the study of the dependence of one variable

(dependent variable) on one or more other variables (explanatory variables) with a view of estimating the average value of the dependent in terms of the known values of the explanatory variables. Regression analysis is concerned with statistical dependence among variables, that is, statistical relationships among variables. The regression analysis determines the pattern and strength of the correlation between variables (Gujarati, 2003:18, 23).

Regression analysis can be conducted using two different methods; two-variable (bivariate) regression analysis method and multiple regression analysis method. A two-variable regression analysis method is used when a study being done is of the dependence of one variable (dependent) on only a single explanatory (independent) variable, for example, the dependence of value on debt ratio. A multiple regression analysis is used when a dependent variable is being tested on more than one explanatory variable, for example, the dependence of debt accessibility on firm size and product manufactured by a small firm (Gujarati, 2003:24-25). The study at hand uses both regression analyses as will be shown in section 6.4.1.

The regression analysis was done with the use of cross-section data that is, data on variables to be tested collected at the same point in time. The results therefore would portray the situation at the time of collection of data. Time series data was going to be the most favourable but due to limitations on financing and time, it would be difficult to implement it. Time series data is data gathered at different times such as different years (Gujarati, 2003:25-27).

The regression model results in a prediction equation known as a regression equation. A regression equation estimates the effect of debt on the profitability of small firms as well as the effect of firm size and product type on debt accessibility. A regression equation explains the behaviour of one variable in relation to the behaviour of another variable. The effect of debt on profitability can be positive or negative so the estimated regression equation will be used to estimate this. It must however be noted that this estimated regression equation can only be used to ascertain the impact of debt on the profitability of the firms that use debt in the sample as a whole.

Two regression equations were formulated to test the hypotheses and these include simple linear regression model and multiple linear regression model. The primary hypothesis was tested by the simple linear regression model as it tests the dependence of the dependent variable (profitability)

on only one explanatory variable (debt ratio). The multiple linear regression model was used to model the relationship between debt accessibility and firm value and products manufactured. Section 6.3.1 below provides a detailed analysis of the estimated regression equations in order to determine the impact of debt on the profitability of small manufacturing firms as well as the impact of firm size and products manufactured on debt accessibility.

6.4.1 Regression Equations

It is worthwhile to mention here that before the regression analysis is done, there is need to test if there is any relationship between variables. The determination of any relationship was to be done by the use of correlation testing. Correlationship testing determines if a relationship exists between variables and is the first phase before regression analysis is done. The regression analysis would only be significant if there is a relationship found between variables. If no relationship exists, it will not be necessary to use regression analysis.

The regression equations below estimate the relationships between (i) profitability and debt, and (ii) debt accessibility and product and size of the firm. Equation 6.1 below estimates the relationship between profitability of a small firm and its debt ratio. A two-variable regression equation was used as there are only two variables in the equation, thus one dependent variable and one explanatory variable.

Two-variable regression equation

Equation 6.1

$P = \alpha + \beta_1 \text{Debt ratio} + \varepsilon$

Where P refers to profitability

α is a constant.

β_1 measures association between profitability (P) and debt ratio thus, the amount by which P changes on average when debt ratio changes by one unit

ε is the error or disturbance term (refer to sec 6.4.1.1, p. 121)

The suggested equation (6.1) comprises a dependent variable, an independent variable, a constant as well as the error term. These components are discussed in section 6.4.1.1.

6.4.1.1 Components of the two-variable regression equation

➢ **Dependent or response variable**

According to Levin & Rubin (1998:699) a dependent is a variable to be predicted. It represents the element or condition that is dependent on the value of one or more independent variables. The dependent variable in the regression equation 6.1 is profitability (return on equity) denoted by P. This is the variable that is expected to change as the debt proportion changes in the small manufacturing firms' capital structure.

- **Profitability (P)**

Profitability represents the dependent variable in regression equation 6.1. The primary hypothesis of this study suggests that profitability is affected by the amount of debt in the firm's capital structure. Stated differently, it is assumed that profitability is dependent on the debt capital. The strength of the relationship will be measured by the regression analysis. Esperança, Gama & Gulamhussen (2003) also used the regression analysis to determine the relationship between profitability of small firms and debt. Their results suggest that there is a negative relationship between profitability and debt to equity ratios confirming that less profitable firms are more prone to require external financing. The relationship between debt and profitability of a firm should be viewed in the light of interest rates. If the before-tax interest on debt is more than the return on assets, then debt would lead to negative leverage.

➢ **Independent variables**

An independent variable is a variable whose value determines the dependent variable (Levin & Rubin, 1998:699). Independent variables can be more than one variable. In regression equation 6.1, the independent variables include debt ratio, the intercept α, the regression coefficient value β_1 and the disturbance term ε. A change in the usage of debt by a small firm is expected to affect profitability. The error term, the coefficient value and the intercept are constant independent variables in any regression equation. These variables are explained in the section below.

- **Intercept (alpha)**

It is a constant, that is, even if the debt ratio is zero, the value of a firm would have some positive or negative value. Whether it is rational for a firm to have a value even if the debt ratio has a

zero value depends upon the hypotheses to which the regression analysis is being applied (Watsham & Parramore, 1998:188). The intercept represents the value of the dependent variable (profitability) when the values of the independent variables are zero.

- **Regression coefficient values or parameter estimates**

If from the calculations β is not zero, debt will have an effect on firm value. β represents the regression coefficient that is, the slope of the line along which the scatter of data observations lies. It can be interpreted as indicating the percentage change in variable P that is caused by a one unit change in the value of β. If the value of β is positive, the variables will be positively correlated and if it is negative, the variables will be negatively correlated (Watsham & Parramore, 1998:188-189).

- **Debt ratio**

This represents an independent variable, thus the change in profitability is dependant on the amount of debt in the firms' capital structure. Debt for equation 6.1 was measured by the debt to assets ratio. A similar study by Ze-Wei Yu, Mei-Chu Ke and Mei-Sheng Huang (2002:260) and Fatoki (2006) also used the debt to assets ratio as the measure of debt in their studies.

- **Error or disturbance term**

In determining the impact of debt (independent variable) on profitability (dependent variable), it is assumed that all other factors (apart from debt) affecting profitability of a firm are held constant. The influences of all other variables affecting profitability such as the sales and the market, except the ones noted in the regression equation, can be captured by one single variable called the error term ε (Gujarati, 2003: 43-45).

The symbol ε in regression equation 6.1 on page 119 is the error or disturbance term which is also referred to as the residual. It reflects the fact that usually, at least, the movement in the dependent variable will be imperfectly described by movements in the identified explanatory variables alone. There will be other factors not captured by the model. If the hypothesis is realistic, these other variables (sales and the market) should be relatively unimportant (Watsham & Parramore, 1998:189). The error term suggests that there are other variables besides the identified explanatory variables that affect the dependant variable therefore it is a surrogate for all

variables that are omitted from the model that collectively affects the dependant variable (Gujarati, 2003:43-45).

Multiple regression equation

A multiple regression equation is used to estimate the relationship between one dependent variable and two or more explanatory variables. Two multiple regression models are formulated. The first one relates to the relationship between profitability and short and long-term debt and the second one is between debt accessibility and firm size and products manufactured. Multiple regression equations are used because the dependence of the dependent variable is being tested on more than one explanatory variable.

The first multiple regression equation is similar to equation 6.1, the only difference being that equation 6.2 split debt into short and long-term debt so that a clear picture is portrayed regarding the effect of short-term or long-term debt on profitability. The aim of separating the two from total debt is for the researcher to determine if the relationship between profitability and total debt is different from that of profitability and short-term and long-term debt. It should be noted that equation 6.2 does not substitute equation 6.1 but complements it. It only explains the relationship that prevails between profitability and short-term and long-term debt. The estimated relationship is shown in equation 6.2.

Equation 6.2

$$P = \alpha + \beta_1 \text{Short-term debt} + \beta_2 \text{Long-term debt} + \varepsilon_1$$

The explanations of all the variables in this equation remain the same as in equation 6.1 on page 120. The only difference is that debt was divided into long-term and short-term to determine the impact of each. The estimated regression equation for debt accessibility and firm size and product type is shown in equation 6.3 below.

Equation 6.3

$$D = \alpha + \beta_1 \text{Size} + \beta_2 \text{Product} + \varepsilon_1$$

Where, D refers to debt accessibility

β_1 is the amount by which debt (D) changes on average when size changes by one unit and all the other explanatory variables remain constant. It measures the association between size and debt accessibility adjusted for all other explanatory variables

6.4.1.2 Components of the multiple regression equation

For all regression equations, the description of the dependent, independent, intercept and error term is the same. The only difference is on the type of variables. The intercept, regression coefficient and the error term were discussed in section 6.3.1.1 and will not be discussed here. Only three variables will be discussed and these include debt accessibility, size of the firm and products manufactured.

- **Dependent variables**

- **Debt accessibility (D)**

Debt accessibility in regression equation 6.3 represents the dependent variable. The equation implies that the amount of debt available to small firms is dependent on certain variables. The interest on this equation is to determine the extent of the effect of the independent variables on debt accessibility. For this study, debt accessibility is measured by the use of debt to total assets ratio. This is then regressed to determine the strength of the dependence of this variable (debt accessibility) on identified independent variables.

- **Independent variables**

- **Size of firm**

Size of the firm is one of the independent variables in equation 6.3 and is expected to influence the amount of debt accessible to small firms. Size is introduced in the regression equation because small manufacturing firms are by definition limited to a certain size class. Size of a firm in this study was measured by the number of employees in that firm. This is because of the

volatility in Zimbabwe's economy which makes it difficult to use monetary value as the value is always being affected by inflation. For a small manufacturing firm the number of employees must not exceed 50. Studies on the impact of debt on the profitability of small manufacturing by Tze-Wei-Fu, Mei-Chu Ke & Yen –Sheng Huang (2002:261) and Fatoki (2006) also used the number of employees as a measure of size in their regression equations.

- **Products manufactured**

The products manufactured by small firms are also expected to influence the accessibility of debt to small firms. The products were grouped into five different categories and a numerical value was attached to each category. The categories included garment production, food manufacture and processing, metal fabrication, carpentry and pottery and other, which consisted of products not mentioned. Each category in the regression analysis was represented by numerical values. Garment manufacturing was represented by 1, food processing by 2, metal fabrication by 3, carpentry and pottery by 4 and lastly 'other' by 5. A study by Esperança, Gama & Gulamhussen (2003) also incorporated the products in the regression model to determine the influence of asset composition on corporate debt policy of small firms.

Every model has its strengths and weaknesses. Its usage depends on the situation in which it is intended to be used. Section 6.4.2 discusses the advantages of using the regression model to test the hypotheses at hand.

6.4.2 Rationale for using regression models

A regression model measures the strength of the relationship between the dependent variable (which is the variable been explained) and one or more independent variables, known as explanatory variables. The reasons for using a regression model for this study include amongst others;

- A model (regression model) quantifies the relationship between two variables. It determines whether the relationship is positive or negative. It is the regression analysis that can quantify the results and also produce results that can be used to accept or reject the hypotheses; and
- A regression model, in addition, determines whether the relationship is statistically significant or insignificant. The significance level in applied economics is usually 5% or below (Gujarati, 1995:5).

6.4.3 Limitations of the regression equation

A regression model might not represent the prevailing situation that is, it might omit some crucial variables such as the availability of customers and the cost of resources that make the results of the regression analysis less valid. The regression model also does not include variables that have unavailable quantitative information such as wealth of the small business owner. This can then force analysts to omit the variable even if it has great theoretical relevance. It is also possible that the behaviour of some small business owners is affected by intrinsic behaviours and these cannot be explained by regression analysis (Gujarati, 2003:45-46). Various researchers have used regression equations in several studies. A closer look at these researcher's studies reveal the following.

6.5 SIMILAR STUDIES USING REGRESSION EQUATIONS TO ESTIMATE THE IMPACT OF DEBT ON PROFITABILITY

The regression equation for this study has been adopted from previous related studies on the impact of the use of debt on profitability of firms. Esperança, Gama & Gulamhussen (2003) used an estimated regression equation to investigate the impact of debt on the profitability of small firms in Portugal. Their study found a significantly negative relationship between the use of debt and profitability. The results may imply that the costs of using debt were more than the benefits brought by its use. Rate of return on assets ($\frac{EBIT}{TotalAssets}$) was less than the before tax interest rate on debt meaning a negative leverage.

Mesquita and Lara (2002:12) estimated a regression model to investigate the impact of debt on the profitability of Brazilian firms. The study found a significantly negative relationship between debt and profitability also portraying negative leverage. They attributed their results to the high interest rate that prevailed in the Brazilian economy during the period of study. Tze-Wei-Fu, Mei-Chu Ke & Yen-Sheng Huang (2002:261) also used an estimated regression model to investigate the impact of debt on the profitability of small manufacturing firms in Taiwan. From their study, they found a significantly negative relationship between the use of debt and profitability. The study also attributed the negative relationship to the high interest rate that

persisted in Taiwan in 1997. The following section illustrates the use of regression analysis using a hypothetical example.

6.6 THE REGRESSION EQUATION ON THE IMPACT OF DEBT ON PROFITABILITY IN PRACTICE

The examples used in this section use the estimated regression models to test the hypotheses at hand. This will only show how the analysis will be done and the figures being used here are hypothetical. Equation 6.1 will be used to test if debt ratio has an impact on the profitability of a firm. If the regression coefficient is not zero, it would mean that debt has an effect on the profitability of a firm. If the coefficient is negative, it implies a negative relationship and if positive, it implies a positive relationship. Regression equation 6.3 relates to debt accessibility to firm size and products manufactured. The same deduction for equation 6.1 would also apply to this equation that is, if the coefficient value is negative, a negative relationship exists and if positive, a positive relationship exists. The regression analysis will be done by the Statistics Department Personnel at the University of Fort Hare. Section 6.6.1 below depicts an example showing the mechanism of the estimated regression equations using hypothesised data set. This will enable a clear understanding of the interpretation of the regression results.

6.6.1 A hypothetical example depicting the relationship between debt and profitability using regression analysis

This example was constructed using a set of assumptions to enable the researcher to reach the intended results, thus, determining the impact of debt on profitability of firms. These assumptions will be discussed in section 6.6.1.1.

6.6.1.1 Assumptions

As indicated in section 6.6.1 above, assumptions are used to enable the researcher to arrive at intended conclusions. These are just a set of statements that are assumed to prevail in an environment. The assumptions are as follows:

- The sample consists of thirty small manufacturing firms;

- Financial information for small firms is readily available, that is income statement and balance sheet figures;
- There is an average use of debt across firms. These were estimated based on debt ratios that were found by several studies; 41.39%, Abor & Biekpe (2005), 47.3, Fatoki (2006). The average use of debt might be caused by the difficulties faced by small firms in accessing debt or the desire by small business owners to preserve the control of their businesses;
- The debt that is used by small manufacturing firms is obtained from banks;
- Firms in the sample have low profitability values (return on equity) of between 0.9% and 3%. This is assumed to be caused by the high use of debt coupled with the high cost of funds. It is assumed that the interest rate is high.

6.6.2 Result of regression analysis (refer to Addendum 2(a) and (b))

The results of the regression analysis using hypothesised dataset (refer to Addendum 4(a) and (b)) based on the assumptions mentioned above are discussed in this section. The parameter estimate of -0.00020126 indicates that there is a negative relationship between debt and firm value. Though there is a negative relationship between debt and firm value, a P value of 0.9876 shows that the relationship is statistically insignificant. The reason being that 0.9876 (99%) is above 5% which is the significance level. The r value for the analysis is -0.00296 (0.3%) which is very small to determine any statistical significance. This therefore implies that there is no relationship between debt ratio and ROE due to the insignificance of the result. The correlation analysis also supports this result.

Regression analysis for the second and third hypothesis (equation 6.3) provided evidence that there is a statistically significant positive relationship between debt accessibility and firm size and negative but insignificant relationship between product type and debt accessibility. The parameter estimate for firm size is a positive 0.67141 while the P and r values are <.0001 and 0.75791 respectively. The parameter estimate measures the change that will be brought as a result of change in firm size whilst the P value shows the significance of the relationship. The r value shows that there is a high statistical significance shown by this relationship. The relationship is such that high debt ratios are associated with high firm sizes. For product type, the parameter estimate is negative 0.39745 which indicates a negative relationship that is, a decrease of debt

ratio as we move from one category of product to another. The hierarchy is from food manufacture to garment production to carpentry and pottery to metal fabrication and other, respectively. However, this relationship is insignificant as the P value (0.6669) is greater than 5% which is the significance level used. The insignificance of the relationship can also be supported by a low r value of -0.08077. Firm size therefore affects debt accessibility regardless of what the firm manufactures (for more information on the results, refer to Addendum 2(a) and (b) at the end of this dissertation).

The generation of no significant relationships between debt and profitability and debt accessibility and products manufactured might have been caused by the way in which the data for this analysis was collected. It might have been mixed in a way that failed to determine any relationship. The same methods used here will be used to analyse the real data collected from the field. The following discussion is on the expected output of the estimated regression equations.

6.7 EXPECTED OUTPUT OF THE ESTIMATED REGRESSION EQUATION

This study hinges on the assumption that the interest rate in Zimbabwe is high at 300% as of May 2007. Apart from high interest rates, small firms usually pay extra costs for the use of debt which causes the cost of debt high. The output of this regression equation is expected to reveal that debt has a negative impact on the profitability of small manufacturing firms. There is also a possibility that a positive relationship can be found for firms that are using cheap government debt which is paid at 50% concessionary interest rate. This rate is subsidised by the government and is very low considering that the market interest rates stand at 300%. For such firms, it will be cheap to use the debt since they do not have to pay the full cost of debt as the loan interest is subsidised by the government.

6.8 SUMMARY

This chapter has focused on ways in which data were analysed, that is ratio analysis, correlation and regression analysis. It has also examined the definition, purpose and the rationale for using a model for data analysis. Regression equations have been estimated to show the impact of debt on the profitability of small manufacturing firms. The result of the regression equation reflects whether the impact of debt on profitability of small manufacturing firms is positive or negative. It

will also determine if debt accessibility is affected by firm size and products manufactured. The regression analysis portrays whether the results are statistically significant or not.

Chapter seven focuses on the research methodology. It provides a detailed analysis of the study unit, the study population, sampling method and the sample size. In addition, the questionnaire design, pre-testing and data analysis procedure will be explained. Finally, the chapter will examine the reliability of the results. The various errors such as response and non response errors that can affect the validity of the results will also be discussed.

CHAPTER SEVEN
RESEARCH METHODOLOGY

7.1 INTRODUCTION

This chapter discusses the methods and techniques by which the data was collected, where and from whom it was collected as well as the sample size used. In other words, it focuses on sampling procedures that were followed for this study. It furthermore comprises a research design and plan, population and sample, data collection instruments, sources and procedures for data analysis. The reliability and validity of the data collected was also discussed to establish the validity of the results. Section 7.2 highlights the focus of this study.

7.2 FOCUS OF THE RESEARCH STUDY

The aim of this study was to investigate if debt capital had any impact on the value (profitability) of small manufacturing firms in Zimbabwe. It also determined whether there existed a statistical significance between the relationship of debt and the value of small manufacturing firms. In the investigation, the study also determined if the size of a firm and the products manufactured by the small manufacturing firm had any influence on the accessibility of debt to small manufacturing firms. Section 7.3 focuses on the scope of the survey.

7.3 SCOPE OF THE SURVEY

7.3.1 The Survey Area

The study was carried out on small manufacturing firms situated in Bulawayo, Zimbabwe. The manufacturing sector in urban areas constituted almost 64% of all small scale business activities (Liedholm and Mead, 1999:3). According to Biggs & Srivastava, (1996:47), small manufacturing firms contributed almost 18% of the overall manufacturing share in Zimbabwe. Bulawayo was chosen because of its importance to the economic contribution of the country.

7.3.2 The Study Unit

The study was on small manufacturing firms adhering to the definition given by the Ministry of Small, Medium and Micro Enterprises of Zimbabwe. Manufacturing activity was broadly defined to include food processing, textile, metal fabrication (manufacturing building materials, agricultural products, fencing materials), carpentry (sculptors and furniture), paper and paper

products, plastic products, brick making and leather products among other products. The importance of this sector to the wellbeing of the Zimbabwean economy necessitated the selection of this sector. Having discussed the survey area and study unit, the survey population is discussed in the following section.

7.3.3 Survey population

The population was the universe of units from which the sample was to be selected (Bryman and Bell, 2003:93). It referred to all the cases which conformed to the specifications which define the object of the research (Buckingham & Saunders, 2004:52). The population of the research study included all small manufacturing firms in Bulawayo registered by the Ministry of Small, Medium and Micro Enterprises. The survey population for this study was obtained from the Ministry of Small, Medium and Micro Enterprises' database. The database was recent and the Ministry of SMME is currently using it in their research about small firms. The database indicated that there were 300 small manufacturing firms in Bulawayo, adhering to the definition which was used (refer to sec 2.2.2, p.19).

According to the information given, garment manufacturing constituted 25% of the population; food processing, 32%; metal fabrication, 14%; carpentry and pottery, 7% and all other products constituted 22%. These were the proportions that were used to determine the sub-samples. Using this intuition, the sub-sample sizes were as follows:

- Garment manufacturing - 43
- Food processing - 56
- Metal fabrication - 24
- Carpentry and pottery - 12
- Other - 36

TOTAL SAMPLE = 171

Research design, which is the organisation of the survey, is examined in section 7.4 below.

7.4 RESEARCH DESIGN

This is a plan of the data to be gathered, from whom, how and when to collect the data. It is a systematic planning of research, usually including the formulation of a strategy to resolve a particular question, the collection and recording of the evidence and the processing and analysis of this data as well as its interpretation (Bureau of Justice Assistance, 2006) and (Tel el-Far'ah, 2006). Section 7.4.1 below relates to the research method followed by the researcher.

7.4.1 Research method

This study followed a quantitative research design. A quantitative research method derives empirical generalisations which may be used to determine future courses of action. This type of research design involves obtaining data from a large group of respondents and is used in descriptive studies to quantify data and generalise the results from the sample to the population of interest (Hollensen, 2003:740). Tustin (2005:90) argues that a quantitative research design requires statistical summarisation. The research at hand required statistical summarisation, that is, determination of any relationship between value of a small firm and the use of debt in capital structure as well as the extent of the relationship. The research format is discussed below.

7.4.2 Research format

A descriptive research method was applied to the study. Descriptive research describes a marketing problem or opportunity in detail. It provides answers to questions such as "who", "what", "where", "when" and "how" and determines the levels of relationships between variables (Cant, 2003:31). Descriptive research method was most applicable as the study required information related to "what" and "why" questions. Its purpose was therefore, to verify the identified hypotheses (refer to sec 1.5, p. 6). Section 7.4.3 addresses the research technique used.

7.4.3 Research technique

A self-administered questionnaire was used to gather primary data. A self-administered questionnaire is a self-report data collection instrument that is filled by the research participants (Tashakkori & Teddlie 2003: 303). The questionnaires were given to owners/managers of SMFs to complete and a fieldworker assisted with any misconceptions. Questionnaires were most useful

when the researcher wanted to summarize facts about a fairly large population (Buckingham & Saunders, 2004:53). The use of a self-administered questionnaire was more feasible since the sample size of the research study consisted of 171 which was a number too big for personal interviews. Self-administered questionnaires were used for the following reasons:

- The researcher was interested in collecting data from a large group of respondents;
- Self-administered questionnaires were convenient as respondents could complete the questionnaire at their own time;
- They were cheap compared to other forms of data gathering as they could be distributed in large quantities at the same time;
- They were also free from interviewer bias and;
- Respondents who might otherwise be inaccessible could be accessed (Bryman & Bell, 2003:142).

Section 7.5 that follows elaborates on the sampling procedure followed for this study.

7.5 SAMPLING PROCEDURE

Cooper & Schindler (2003:179) described sampling as the procedure by which some elements of a given population are selected as representative of the entire population. The primary idea of sampling was that by selecting some elements of a population, the researcher can draw conclusions about the entire population. A sampling method can be classified as probability or non probability. The following section examined the sampling method selected by the researcher for the study and the motivation for selecting the sampling method. It also examined the sampling method and the sample size used for the research study and furthermore explained the rationale for using the particular sampling method and how the sample size was calculated.

7.5.1 Sampling type

The respondents were selected using the probability sampling method which constituted a method that uses random selection to identify respondents. Probability sampling is whereby a sample is selected using random selection so that each unit in the population has a known chance

of being selected. Using the probability sampling method, every SMF in the population had a chance of being included in the sample. It is generally assumed that a representative sample is more likely to be the outcome when this method of selection from the population is employed (Cooper & Schindler, 2003:184) and (Bryman & Bell, 2003:93).

7.5.2 Sampling technique

Stratified random sampling was used to choose the respondents from the list provided. Stratified random sampling refers to a process whereby populations are segregated into several mutually exclusive sub-populations or strata (Cooper & Schindler, 2003:193). Initially, the sample size was calculated using the population of the study elements. This sample size was then grouped into categories (strata) using product manufactured as the basis for categorisation (refer to sec 7.5.3 on p. 135). The basis of the categorisation was the percentage proportion of each category to the population. The proportion of each segment to the total sample was used to determine the participants from each category. For example, there were 75 garment manufacturers, 300 SMFs which gives a proportion of 25% (75/300 x 100). The sub-sample size for garment manufacturers was therefore 43 (25% of 171). The use of stratified random sampling allowed the researcher to achieve the third objective of the study, which was, determination of the impact of product manufactured to debt accessibility. This method was easy to implement and it also contributed to reduction of researcher bias since all the elements had an equal chance of being included in the sample.

7.5.3 Sample size

The correct sample size in a study is dependent on the nature of the population and the purpose of the study. The sample size usually depends on the population to be sampled (Martins, 1999:262). For the study at hand, the sample constituted 171 respondents from the total population of SMFs identified. Formula 7.1 below was used for the calculation of the sample size since it is relevant to studies where a probability sampling method is used (Roberts-Lombard, 2006:87).

Formula 7.1

$n \geq N/ (1+Nd^2/10\ 000)$, where:

N= Total population

d= error estimate with a confidence interval of 95%

n= sample size

Therefore, $n \geq 300/ [1+300(5)^2/10000]$ which implies that $n \geq 171$

This sample was then categorised using the product that is manufactured by the firm. The proportion of each product in the population was used to determine the number of elements in each category (refer to sec 7.3.3, p. 132). Organisation of the survey, that is how the data was collected and the design of the instrument, was discussed in section 7.6.

7.6 ORGANISATION OF THE SURVEY

This section examined the rationale for using questionnaires as a method of data collection for this study. The importance of a well-designed questionnaire and the choice of questions will be discussed.

7.6.1 The Questionnaire

The primary research instrument for this study was a questionnaire. A questionnaire is a prepared set of written questions, for purposes of statistical compilation or comparison of the information gathered (Buckingham & Saunders, 2004:43). It can also be regarded as a data-collection instrument that sets out the questions to be asked in a formal way in order to produce the desired information. The researcher used questionnaires for the research study because of the following reasons:

- They could be standardised and applied in the same way to all elements (Buckingham & Saunders, 2004:53);
- They allowed the collection of a large amount of data;
- They were economical in terms of money and time;

- The use of the questionnaires enabled respondents to remain anonymous and be honest in their responses;
- They were also free from interviewer bias and the respondents enjoyed the convenience of completing the questionnaires at their own pace and
- Respondents who might otherwise have been inaccessible could be accessed.

7.6.2 Questionnaire design

Three types of questioning techniques were used in the questionnaire. These included multiple choice rating questions, dichotomous questions and open ended questions. Use of such questioning techniques made the completion of the questionnaires easy for respondents and reduced the time spent on completion of a single questionnaire. To encourage participation, the layout of the questionnaire was kept simple and straightforward. The questionnaire consisted of twenty six questions. The areas covered by the questions included biographical information, financing information, the use of debt and [illegible]ccessibility. Such information was fundamental to the achievement of research objectives.

The first section of the questionnaire, Section A, was used as a qualification question for the respondents. It determined whether the selected respondent was qualified to participate in the survey or not. The question in this section asked respondents on whether they make use of debt in their financing or not. The responses from respondents who did not make use of debt would therefore, not be used for analysis.

Section B of the questionnaire had four questions that required biographical information which gave general information concerning the respondent and the firm. Such information included sex of the respondent, his/her age, the position he/she held in the firm as well as number of years the business had been running. This information helped the researcher in finding out if these biographical factors had an impact on the performance of the firm.

Section C required information on the use of debt as well as capital structure information, that is, how the operations of the business were financed. The questions in this section asked for value of capital, long-term debt, assets financed by long-term debt, interest payments as well as profits

generated. This information enabled the researcher to test the primary hypothesis of the research, which stated that there was a negative relationship between the use of debt and the value of a small manufacturing firm (refer to sec 1.5, p.6). This information also portrayed the financial performance of the small manufacturing firm.

The fourth section, section D, contained information relating to debt accessibility to small manufacturing firms. The section contained seven questions that were related to accessibility of debt to small manufacturing firms. The information obtained in this section was used to test the two secondary hypotheses which were:

- Ho 1 - The size of an SMF has a negative effect on its ability to access debt finance from well established financiers.
- H_1 1 – The size of an SMF has a positive effect on its ability to access debt finance from well established financiers
- Ho 2 - The product offered by an SMF has a negative effect on its ability to access debt.
- H_1 2 – The product offered by an SMF has a positive effect on its ability to access debt.

The questions that were used in the questionnaire included:

- Dichotomous questions and
- Multiple choice questions.

A dichotomous question is a question which offers two alternative answers to choose from. A multiple choice question is a fixed question with more than two alternative answers. The researcher used dichotomous questioning because of the following reasons.

- Some questions in the questionnaire had only two possible answers. For example, questions relating to the gender of the respondents; and
- The ease of coding and analysing since the responses were predetermined.

The researcher used multiple choice questions for the study for the following reasons:

- The result of the pre-test revealed that these types of questions were easy to answer by the respondents. Non response error was thereby reduced; and
- The ease of coding and analysing since the responses were predetermined.

Fourteen of the twenty six questions were closed-ended (pre-coded) thus, they had fixed responses. A pre-coded question is one where the respondent is confronted with a pre-set range of possible answers and has to select one or more (Buckingham and Saunders, 2004:73). The respondent was limited to choosing from a set of alternatives. Pre-coded questions were used because of their easiness in responding since alternatives were already given. They were also less time consuming for the respondent compared to open ended questions. Pre-coded questions were easy to code and analyse since the responses were predetermined.

Though they had their fair part of advantages, pre-coded questions are not always the best. The problem is that respondents are not allowed to record what they really experienced. For example, an alternative of between 15 and 20 can be the right option for a respondent but not accurate as the actual answer could be 18. But due to pre-coding, the respondent will not be able to write 18 but choose an alternative of between 15 and 20.

To cater for the shortcomings of the pre-coded questions, the remaining twelve questions were open-ended questions. Cooper & Schindler (2003:362) described open ended questions as ones that do not limit the responses of respondents, but provide a framework of reference for their answers. The respondents were free to provide answers, in their own words to the questions in the questionnaire. Open-ended questions are devices that deal with cases not covered by the pre-coded questions and besides that, they can also open up important insights into respondent motivation and perception (Aldridge & Levine, 2001:29). Though difficult to code, open-ended questions were used to promote the accuracy of data. Data collected using open-ended questions were then grouped according to the responses to come up with conclusions. The data was quantified so that it could be analysed quantitatively using statistical methods.

7.6.2.1 Testing the questionnaire

The questionnaire was pre-tested to twelve respondents in the sample to ensure its reliability and validity. Reliability refers to the degree to which the collected data meet the standards of quality to be considered reliable whilst validity refers to the degree to which the interpretations and conclusions made on the basis of the results meet the professional standards of rigor, trustworthiness and acceptability (Tashakkori & Teddlie, 2003: 714 & 717). The purpose of the pre-testing was to remove ambiguities in the questionnaire. The emphasis of the pre-tested

questionnaire was on assessment of comprehension, potential ambiguity and terminology. Initially, it was seen that the questionnaire had questions that had one similar answer as all the twelve pre-tested respondents gave the same answer. Pre-testing the questionnaire made it simpler and more precise and removed ambiguities. It finally saved as identification of some missing important questions that provided crucial information. One such question that was missing in the pre-test instrument was the interest paid by small manufacturing firms and that was included in the final instrument. The way in which the questionnaire was administered is discussed below.

7.6.2.2 Administration of the questionnaire

To select the respondents, proportionate sampling was used which is whereby each stratum's share of the population is represented (Cooper & Schindler, 2003:195). Initially, the sample size was determined and strata identified. The proportion of each strata in the population was then determined and it was found out that garment manufacturing constituted 25%, food processing 33%, metal fabrication 14%, carpentry and pottery 7% and lastly other has 21%. Knowing that the sample size was 171, percentages of each stratum were used to determine the size of each stratum, for example, the size for garment manufacturing sample would be 25% of 171 which was 43 participants. This was done to all strata to determine the number of respondents from each stratum. From the list obtained from the ministry of Small Micro and Medium Enterprises, small manufacturing firms were grouped according to their strata, such as protective clothing would be under garment manufacturing. From these categories, elements were selected randomly.

The self-administered questionnaires were distributed to respondents who were selected using systematic random sampling. The researcher thoroughly explained the contents of the questionnaire to four field workers who then distributed the questionnaires to the respondents. The fieldworkers assisted the respondents with clarifications on areas which were not clear to them. The researcher used fieldworkers to collect the data because the respondents were widely scattered all over the city of Bulawayo. Besides that, the researcher did not have a good understanding of the city and it was therefore time saving and economical to use people with a better understanding of the city. The next section elaborates on the data preparation for this study.

7.8 DATA PREPARATION

Once the questionnaires were returned, they were prepared for data analysis. Data analysis usually involves the reduction of accumulated data to a manageable size, developing summaries, looking for patterns and applying statistical techniques. It also includes the interpretation of research findings in the light of the research questions and determines if the results are consistent with the research hypotheses and theories (Cooper & Schindler, 2003:87). Data preparation involved editing, coding and its processing. Section 7.8.1 discusses the editing of data.

7.8.1 Editing of data

Editing involves a thorough and critical examination of the completed questionnaire in terms of compliance with the criteria for collecting meaningful data, and in order to deal with questionnaires not duly completed (Cooper & Schindler, 2003:236). Editing of data detects errors and omissions, corrects them where possible and certifies that the minimum data quality standards have been achieved. The primary purpose of editing was to make sure that data were accurate, consistent with the intent of questions, uniformly entered, complete and arranged to simplify coding and tabulation. Data collected from the respondents were thus edited to achieve the objectives of the research to be accomplished.

7.8.2 Data Coding

Coding involves applying a set of rules to the data to transform information from one form to another. It involves converting the questionnaire into numeric form in order to allow for quantitative analysis (Terreblanche & Durrheim, 2002:98). Responses from each item on the questionnaire were coded for easy classification. Figures were assigned to responses so that they could be grouped into a limited number of categories. The classification of data into limited categories was necessary for data analysis. Coding assisted the researcher to reduce a larger number of responses into a few categories, containing critical information required for analysis (Cooper and Schindler, 2003: 456). Fourteen questions were pre-coded in the questionnaire which made it easier for them to be entered onto a spreadsheet.

7.8.3 Data Processing

The processing of the data was done with the assistance of statisticians in the Department of Statistics at the University of Fort Hare using the Statistical Analysis System (SAS). SAS is an integrated set of modules used for manipulating, analysing and presenting data. The SAS package consisted of a statistical number of written computer programs which can be stored on the computer. This relieved the researcher of the necessity of writing his own program. The SAS program is also written to be flexible in terms of data that can be used, the minimum or maximum sample size and the number of variables allowed (Cooper & Schindler, 2003:509).

7.8.4 Data Analysis

The primary aim of collecting data in research was to test the research hypotheses. For the hypotheses to be tested, data collected had to be interpreted, that is, explained and given meaning. Data analysis referred to the process of breaking down the collected data into constituent parts in order to obtain answers for hypotheses tests. Data analysis for the study was done by using ratios and descriptive and inferential statistics. Section 7.8.4.1 below briefly discusses the ratios used for analysis.

7.8.4.1 Ratio analysis

Ratios were used for this study to partially assist in the attainment of the objectives of the study. The effect of leverage on the value of small manufacturing firms was done by the use of return on assets ratio (ROA) / return on investment (ROI). This was calculated by dividing profit before interest and tax by total assets/investment. This ratio percentage was compared to the before-tax interest on debt. A ROA greater than before-tax interest on debt portrays a positive leverage whilst a ROA which is less than before-tax interest on debt implies a negative leverage (refer to sec 3.3.3.3, p. 57 for a discussion on leverage). The results of the study portrayed a negative leverage by firms using debt. Descriptive statistics are explained in the following section.

7.8.4.2 Descriptive statistics

Descriptive statistics are used to describe the characteristics of a population or a sample. Descriptive statistics are used for descriptive analysis and this was the first stage in data analysis. It aims at describing data by investigating the distribution of scores on each variable. It allowed the researcher to present data in a manner that was easily interpretable. Section 7.8.4.3 below briefly discusses inferential statistics.

7.8.4.3 Inferential statistics

The study at hand, though it required descriptive analysis, went beyond the description of the sample only. The study was also interested in determining the cause of the relationships identified. Inferential analysis was used and this allowed the researcher to draw conclusions about the population based on data obtained from the sample (Collins & Hussey, 2003:196). Section 7.9 below discusses the reliability of the data and result.

7.9 RELIABILITY OF THE RESULT

Reliability is the likelihood that a research instrument will produce similar results each time it is used. Survey variables may not precisely correspond to the phenomena they are meant to be measuring. A survey is a method of gathering information about a specified group of people by asking them questions (Buckingham & Saunders, 2004:294 & 296).

Terreblanche and Durrheim (2002:117) identified subject error and subject bias as major factors that pose a serious threat to the reliability of data. Reducing these sources of error could help ensure validity. According to Cooper and Schindler (2003:218), the researcher could improve reliability by minimising the subject error and bias.

Churchill (1998:532) notes that properly conducted sample surveys yield useful information estimates, but not exact values. A sample is a cross- sectional study in which a sample is selected to be representative of the target population and in which emphasis is on the generation of summary statistics such as averages and percentages. The major types of errors in research are

sampling, response and non response errors (Loubser, 1999:215). These errors are discussed below.

7.9.1 Sampling error

Sampling errors arise from estimating a population characteristic by looking at only one portion of the population rather than the entire population. It refers to the difference between the estimate derived from a sample survey and the true value that would result if the whole population was tested under the same conditions (Loubser, 1999:289). Sampling error was minimised in the survey by using a large sample size of approximately 57% of the population (refer to sec 7.5.3, p. 135). A large sample size was more likely to reflect the characteristics of the whole population.

7.9.2 Response error

Response errors usually stem from [redacted]rors, misunderstanding of questions or the reluctance to answer them as well as incorrect entries by interviewers. They are estimated inaccuracies that can be introduced potentially by the researcher, the interviewer or the respondents. The researcher may make an error in the design of the measurement instrument or may not properly define the problem and the related information required. Response errors can also occur when the respondent deliberately or mistakenly provides incorrect answers to the survey questions (Cooper & Schindler, 2003:332). In this study, response errors were minimised through the pre-testing of the questionnaire. The contents of the questionnaire were thoroughly explained to the fieldworkers who gathered the primary data to avoid response errors. Data for this survey was collected from owners/managers who were willing to participate.

7.9.3 Non-response error

A non-response error is an error caused by failure to contact all members of a sample and/ or the failure of some contacted members of the sample to respond to all or a specific part of the questionnaire (Loubser, 1999:286). The non-response error occurs because people who respond to the survey may not have characteristics similar to those who did not. Groves, Dilliman, Eltinge and Little (2002:32) argue that the rule of thumb in the research industry is that a response rate above 50% is sufficient to minimise response bias. The response rate for this study was 51%

which implied that response bias was minimised. The response rate for the survey was summarised in Table 7.1 that follows.

Table 7.1 Size of the sample and the extent of non- response

Sample Category	**Number**	**%**
Initial sample	171	100
Unavailable	25	15
Discarded (no use of debt)	59	34
Total sample loss	**84**	**49**
Usable sample	**87**	**51**

The response rates, in table 7.1, are in line with the requirements for correlational studies as indicated by Loubser (1996:230). He stipulates that a sample size of 30 subjects is required to establish the existence or non- existence of a relationship.

Having discussed the reliability of the data, validity of the findings will now be discussed.

7.10 VALIDITY OF THE FINDINGS

The validity of a measure depends on how accurately it expresses a phenomenon (Buckingham & Sunders, 2004:65). Validity refers to the ability of a scale or measuring instrument to measure what it is designed to measure (Zikmund, 2003:302). The literature on research methodology (design) identified three major and common ways of ensuring validity, namely:

- Content validity;
- Construct validity; and
- Criterion- related validity

Of the three ways to ensure validity, the researcher used content and construct validity steps and these are elaborated on in the section that follows.

7.10.1 Ensuring content validity

The content validity of the measuring instrument is the extent to which the instrument provides adequate coverage of the concept. According to Cooper and Schindler (2003:211), if the instrument contains a representative sample of the subject of interest, then content validity is good. This implies that the goodness of content validity, for this study, can be assured if the investigative questions adequately cover the debt financing (leverage) and debt accessibility concepts. The research literature agrees that content validation is a judgmental process that can be done in many ways. According to Cooper and Schindler (2003:21), the researcher may use personal judgment or may use a panel of experts to judge how well the instrument meets standards. The researcher used personal judgment in ensuring content validity because he felt that all major components of the research study were covered in the questionnaire.

7.10.2 Ensuring construct validity

According to Terreblanche and Durrheim (2002:83), construct validity testifies how well the results obtained from the use of the questionnaire fits the theories around which the test is designed. Though the results of the study did not support the MM theory of capital structure, several studies in Africa generated the same result that leverage does not lead to an increase in a firm's value. Among the researchers include Fatoki (2006); Booth, Aivazian, Demirguc-Kunt and Maksimovic (2001) and Kahle & Shastri (2004). This then supports the construct validity of the findings.

7.11 SUMMARY

This chapter provided a description of the methodology applied to this study. This included the focus of the study, scope of the survey, research design, sampling procedure, organisation of the survey, data preparation, reliability and validity of the findings. These were comprehensively discussed and the rationale for using the selected methods of data collection was also highlighted. The content and structure of the questionnaire, which was the primary data collection instrument was discussed and the justification for the questions used was done.

The following chapter will present and discuss the results of the study. The chapter will concentrate on the respondent's answers to the questions in the questionnaires. Tables, pie charts and bar charts were used to aid the analysis of data. Results obtained on each question in the

questionnaire were compared with empirical studies to confirm their consistency or inconsistency. Furthermore, hypotheses will be tested to determine the impact of debt on profitability as well as the impact of firm size and product manufactured on debt accessibility.

CHAPTER EIGHT

RESEARCH RESULTS

8.1 INTRODUCTION

This chapter presents the results of the fieldwork that was conducted. Hypotheses of the study were tested and results presented. In the presentation of the results, the series of questions relating to a specific hypothesis were stated. Each question was restated as in the research instrument and the rationale for asking those specific questions was highlighted. Responses for each question are presented and analysed and at the end of each series of questions pertaining to a specific hypothesis, the hypothesis concerned will, as a result of the statistical testing, be accepted or rejected. Hypothesis testing is the use of statistics to determine the probability that a given hypothesis is true.

To aid data analysis, tables, pie charts and bar charts were used. The presentation of results followed the structure of the questionnaire, that is, use of debt first followed with biographical information, then the effect of debt on profitability/value and lastly, the effect of size of a firm and the product manufactured on debt accessibility. To statistically measure and interpret the relationship between the dependent variables and the independent variables, regression equations (refer to equations 6.1, 6.2 and 6.2) were used. The testing of the hypotheses was done using Statistical Analysis Software (SAS) with the assistance of the statistical department at the University of Fort Hare. Section 8.2 that follows discusses the results obtained from the fieldwork that was done.

8.2 SURVEY RESULTS ON A QUESTION TO QUESTION BASIS

8.2.1 Section A: Use of debt

This section of the questionnaire was used as a qualification question for the respondents. It determined whether the selected respondent was qualified to participate in the survey or not. The question in this section is discussed below.

Question 1: Do you use debt in financing some of your business activities?

The researcher used this question to identify respondents who participated in the survey. Since the study was on determining the relationship between debt and value, as measured with profitability, it was imperative that the respondent used debt in financing the business activities. Collecting data from respondents not using debt would have been a waste of time as the data

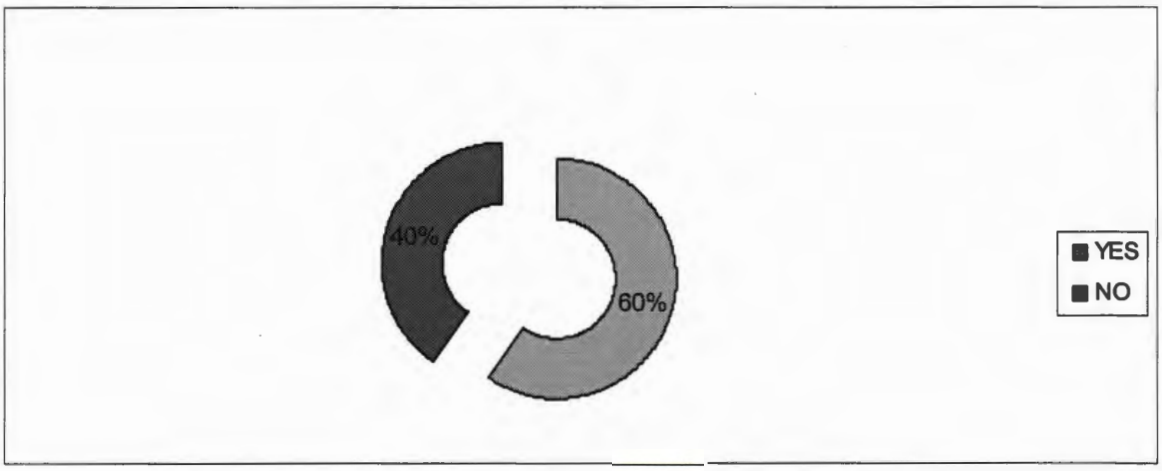
could not serve any purpose. Only responses from respondents who made use of debt were analysed. Therefore, for the reason stated before, asking this question enabled the researcher to determine who should participate in the survey. The rate of response to the survey is summarised in Table 8.1 below (also refer to Table 7. 1, p. 145).

Table 8.1 Size of the sample and the extent of non- response

Sample Category	**Number**	**%**
Initial sample	171	100
Unavailable	25	15
Discarded	59	34
Total sample loss	**84**	**49**
Usable sample	**87**	**51**

From this table, it can be noted that 25 respondents were unavailable for the survey and this made 146 respondents available. Out of the 146, 59 did not make use of debt leaving 87 respondents available for interviews. The responses of the respondents available for survey to question one (87 respondents) are presented in Figure 8.1 that follows.

Figure 8.1 Responses on the use of debt



Comment

The responses to this question indicated that 40% of the respondents available for data collection did not make use of debt. Of that same number available for the survey, 60% made use of debt in their operations. This showed that, even though small manufacturing firms might have difficulties in securing debt, a substantial number of them made use of it. The percentage of respondents that did not use debt (40%) did not mean that they were unable to secure debt, but they might not have been willing to use debt due to unfavourable economic conditions. The reason for not using debt might be because these business people were risk averse as suggested by Coleman (2000) who argued that some business people are more risk averse than others and would therefore not use debt in their business activities.

The following section focuses on Section B of the questionnaire which was on biographic information.

8.2.2 Section B: Biographic Information

This section identified and discussed biographic factors related to the small manufacturing firms and the respondents answering on behalf of the firms. Questions such as the status of the respondent, gender of the respondent, age of the respondent and the firm were discussed in this section of the study. Biographical data was required to obtain basic information about the respondent. It provided identification material about the respondent and helped the analysis of subgroups to provide a method for identifying differences in responses of subgroups (Proctor, 2000:157). The responses to question 2 to 5 are examined below.

Question 2: This question related to the gender of the respondents. The question was necessary to enable the researcher to obtain information on whether the respondents were females or males. This assisted in establishing if there was any relationship between debt accessibility and gender of the respondent who could either be a manager or owner of the business. Table 8.2 below shows the distribution of the respondents based on gender.

Table 8.2 Gender of respondents

Gender of respondents	Frequency	Percentage
Male	52	60
Female	35	40
Total	87	100

Comment

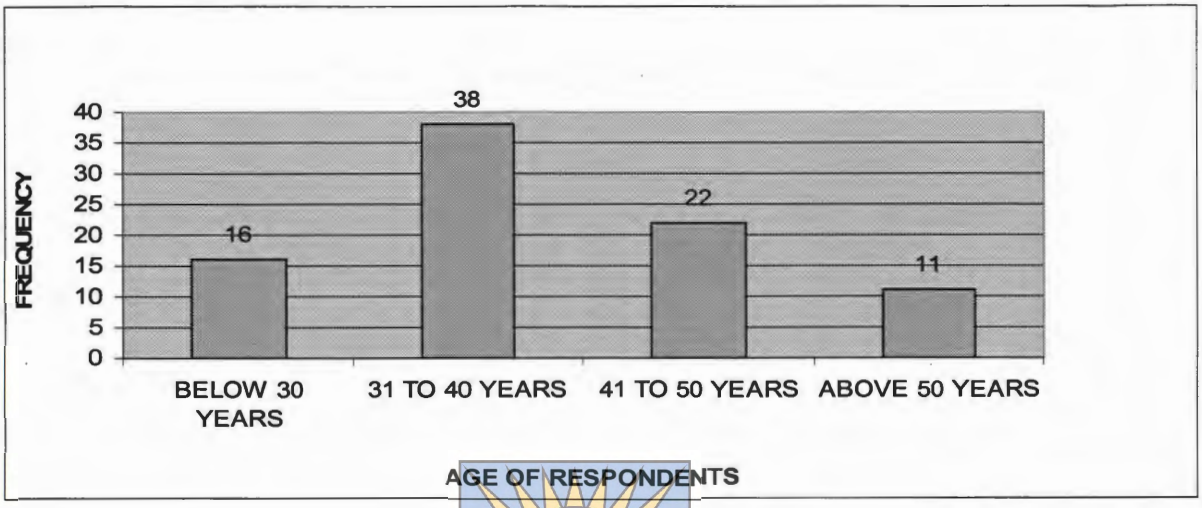
As highlighted in table 8.2 above, 60% of the respondents were males whilst 40% were females. The reason for having more males operating small businesses might have been because it is still widely believed that men are the providers of the family, therefore, they start businesses to fend for the family. The other possible reason for more men than women using debt might be because women are afraid to use debt (risks) so they were not part of the participants.

This result is consistent with international studies on gender and small businesses. Coleman (2000) in a study of 'Credit: A Comparison of Men- and Women- Owned Small Businesses' found that women businesses constituted almost one third of all small businesses implying that the remaining two thirds were owned by men. Women owned fewer businesses maybe because of lack of business knowledge which affects their ability to start businesses. When it comes to marketing and communications, men were more effective as they can meet with clients and suppliers informally to discuss business which women might not be able to do. Women may not network as effectively as men and as a result, they may not have the same access to sources of information and capital as men.

The next question required the respondent to state his/her age.

Question 3: This question related to the age of the respondent. By knowing the age of the owner/respondent, the researcher was able to deduce information as to whether the age of the owner was related to the performance of the firm. It also assisted in finding out whether accessibility to debt was related to the age of the owner. Figure 8.2 below illustrated the age distribution of the respondents.

Figure 8.2 Age of respondents



Comment

Of the 87 respondents who participated in the survey, 16 were aged below the age of 30, 38 were from 31 to 40 years of age, 22 were [illegible] 50 years and 11 were above 50 years. This indicated that the majority of the participants/small business owners were aged between 31 and 40 years. Only 16 were below 30 years of age which indicated the dependency of young people on being employed by someone. This number was very small considering that the majority of the active working population was within this age group.

This result is consistent with a study by Fatoki (2006) who also established that most small manufacturing business owners were aged between the 31 and 40 year age group which consisted of 48%. The result was also supported by Foxcroft, Wood, Kew, Herrington & Segal (2002) who stipulated that the levels of entrepreneurial activity are highest between the 35 to 45 age group for both men and women. Question 4 below examines the position held by the respondent in the firm.

Question 4: What position do you hold in the firm? The question was necessary in order to enable the researcher to obtain information on the status of the respondents, thus, whether they were owners or managers of the firm. Table 8.3 presents the position of the respondents.

Table 8.3 Position of respondents

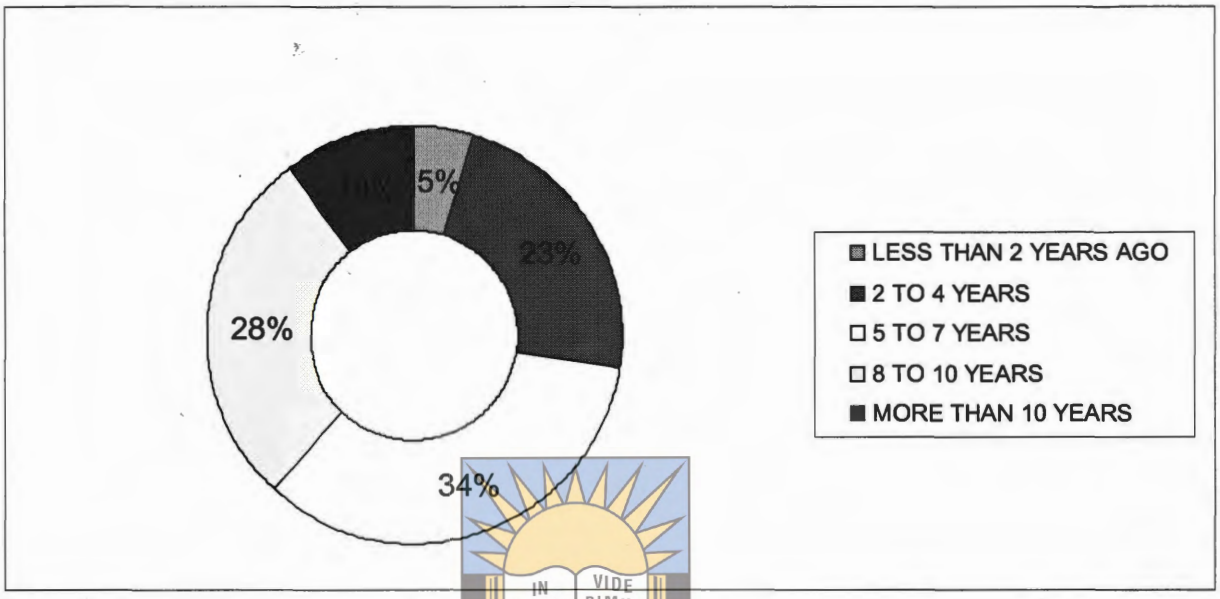
Status of respondent	Frequency	Percentage
Owner	62	71
Manager	25	29
Total	87	100

Comment

Of the respondents, 71% were the owners of the manufacturing firms whilst 29% were managers. This result indicated that owners of small manufacturing firms were directly involved in the activities and daily operations of their businesses. The reason for direct involvement might be because they did not have adequate funds to employ qualified and experienced personnel whom they trust and who were competent enough to manage the firm. Besides, the firms were small, such that the owner could manage it him/herself. Question 5 below asked about the age of the firm, thus the period it has been in operation.

Question 5: When did you start operating your business? This question allowed the researcher to determine the sustainability of small manufacturing firms in Bulawayo. It also assisted in establishing if firms that have been in operation for a long period of time accessed debt more easily than those that have been operating for a short period of time.

Figure 8.3 Period in operation



Comment

The responses showed that the majority of [illegible] manufacturing firms (72% of the respondents) had been in operation for more than five years. This showed that, regardless of the economic hardships faced by the business people in Zimbabwe, these firms have managed to survive. A small percentage of firms that were starting up portrayed a lack of investor confidence from the prospective investors. Apart from lack of investor confidence caused by hostile economic conditions, new small businesses may face difficulties in obtaining debt as they have a bleak future due to declining economic conditions in Zimbabwe.

Section 8.2.3 discusses questions in Section C of the questionnaire which related to the effect of debt on the value of a small manufacturing firm.

8.2.3 Section C: The effect of debt on profitability/value of a firm

This section of the study pertained to the primary hypothesis of this study which stated that:

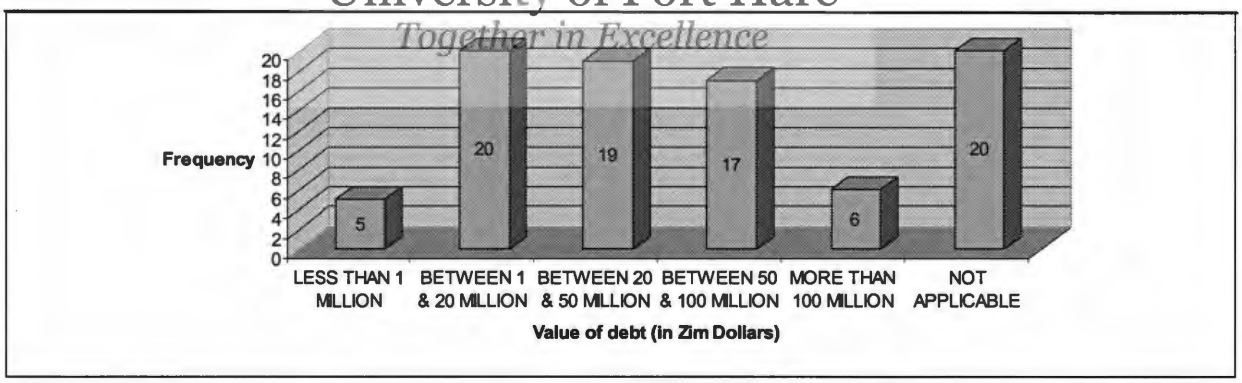
> There is a negative relationship between debt usage and the value of a small manufacturing firm.

Questions 6 to 19 in the questionnaire assisted in providing information used to test this hypothesis. The data was analysed and then used in testing the highlighted hypothesis. Ratios

such as return on assets (ROA) (refer to sec 6.3.1, p. 116) also known as return on investment (ROI), return on equity (ROE) (refer to sec 6.3.1, p. 117) and debt ratio (refer to sec 6.3.1, p. 116) were used in determining the effect of debt on profitability of small firms. Responses to these questions are presented below. The following question required information about the amount of debt being used by small firms that participated in the survey.

Question 6: What is the value (amount) of debt in your capital structure (long-term capital)? This question allowed the researcher to determine the amount of long-term debt that was used by small firms. It was necessary because data generated from the survey was used to examine the effect of long-term debt on profitability of a small manufacturing firm. The reason for separating long-term debt from total debt was to find the effect of each of the components of debt on profitability of small firms. Figure 8.4 below presents the amount of long-term debt being employed by the respondents.

Figure 8.4 Long-term debt being used [illegible] manufacturing firms



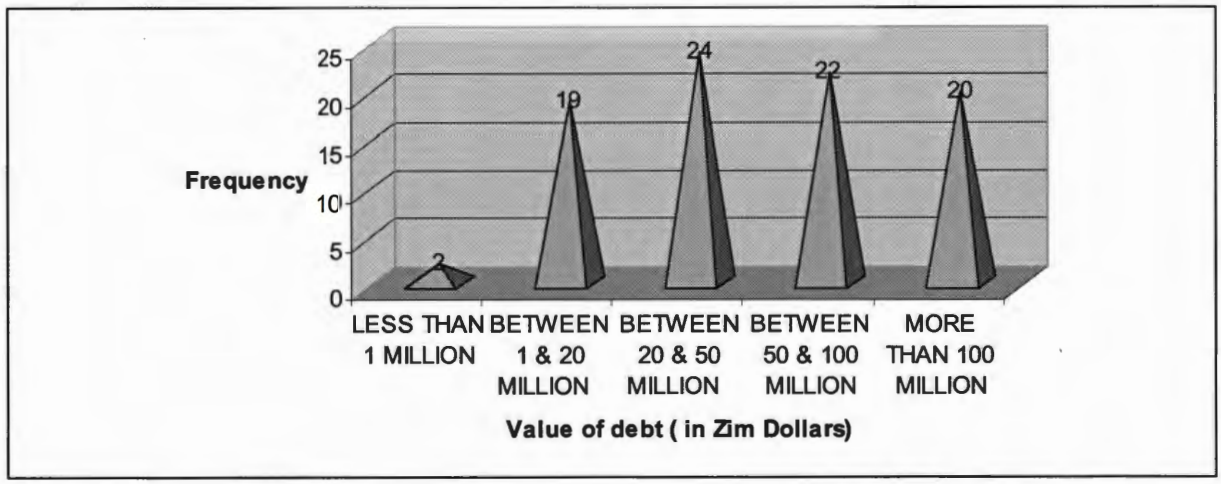
Comment

Only 5 respondents made use of long-term debt that had a value of less than 1 million dollars. The exchange rate of the Zimbabwean Dollar to the US Dollar and SA Rand at 31 December 2006 was 250 and 35.72 respectively (RBZ, 2007). The range of between 1 and 20 million had 20 respondents whilst the range of between 20 and 50 million dollars had 19 respondents. Ranges of between 50 and 100 million dollars and more than 100 million dollars had 17 and 6 respondents respectively. Out of 87 respondents who participated in the survey, 20 of them did not make use

of long-term debt. The responses indicated that several firms that participated in the survey employed long-term debt with a value of between 1 and 100 million dollars.

Question 7: What is the value (amount) of debt in your total capital (long-term debt plus short-term debt)? After determining the amount of long-term debt by small firms, it was also important for the researcher to examine total debt being used in small manufacturing firms. Determining total debt assisted the researcher in the calculation of debt ratios which was one of the components of the suggested regression equations (refer to equation 6.1, 6.2 and 6.3). Also by knowing the effect of long-term debt and total debt on the profitability of a small firm, the researcher could simply deduce the impact of short-term debt on profitability of small firms. If long-term debt leads to a positive leverage and total debt leads to negative leverage, it can be deduced that short-term debt has a negative effect on profitability. If long-term debt and total debt both lead to negative or positive leverage, it can be deduced that short-term debt has the same effect as long-term debt. Figure 8.5 that follows illustrated the responses of participants regarding total debt in their capital.

Figure 8.5 Value of debt in the capital structure



Comment

The distribution of total debt among the respondents followed the same pattern as for long-term debt. As portrayed in figure 8.5 above, a very small percentage of respondents (2.3%) used debt that was less than a million dollars. Many of them had debt worth more than 1 million dollars and the largest category of respondents used total debt of between 20 and 50 million dollars.

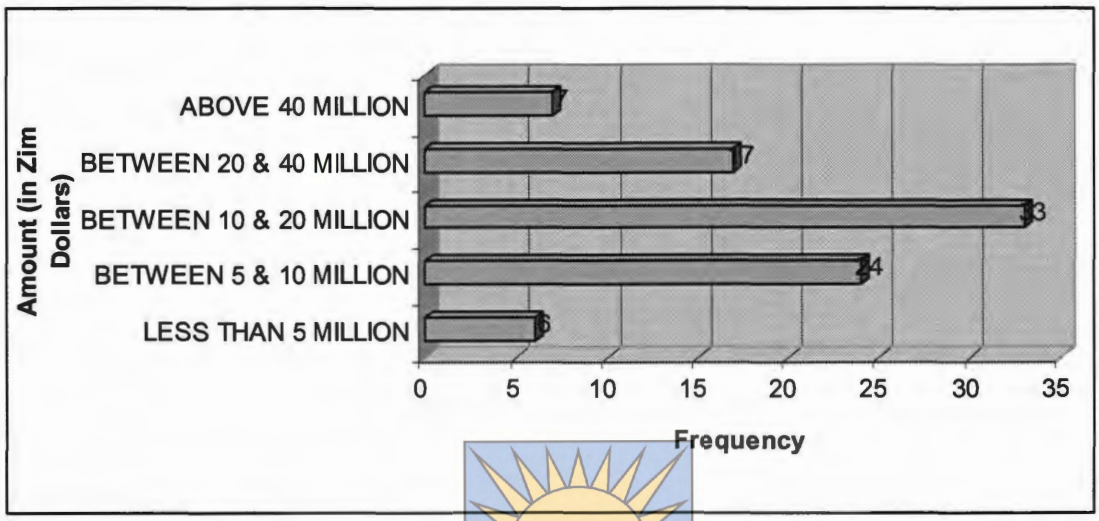
Deducing from the responses to this question and question 6 on page 156, it was concluded that the main source of debt for small manufacturing firms was short-term debt. Short-term debt was determined by subtracting long-term debt from total debt. Only 6 respondents used long-term debt that was more than 1 hundred million (refer to figure 8.4, p.156) but when it comes to total debt, 20 respondents made use of debt that is worth more than 1 hundred million dollars.

These results are consistent with studies by Esperança, Gama and Gulamhussen (2003); Cook and Nixson (2000) and Hamilton and Fox (1998). These studies established that small firms had a high reliance on short-term financing through the banking sector. The reason for difficulties in accessing long-term debt or accessing it in smaller amounts might be because several small firms lack collateral and a good credit history which inhibits accessibility of debt. The result indicated that small manufacturing firms used more short-term debt which might be caused by the easier accessibility of short-term debt. It was easier to access short-term debt than long-term debt from financiers probably because it was less risky to extend short-term debt to firms faced with uncertain futures compared to long-term [illegible] because short-term debt is repaid over a short period of time and the amounts are also usually smaller than for long-term.

This deduction supported the intuition that lenders are willing to issue short-term debt rather than long-term debt because of the time preference concept (refer to sec 4.3.1.1, p. 83). Apart from the time preference and risk concepts, short-term debt may be a result of hostile economic conditions and a specific legal system. Question 8 below focuses on interest being paid by small manufacturing firms.

Question 8: How much interest did you pay in the previous year? For the researcher to be able to determine ROE, he needed to know the amount of interest being paid by the small firms in order to determine the earnings after interest and tax (net profit/income). Interest is a component in the calculation of return on ROE which is the single ratio small business owners use to determine profitability of their firms. Respondents were not directly asked to give their return on equity as their calculation of these ratios might differ thereby making the ratios incomparable. Therefore, to ensure that ratios were comparable, they had to be calculated in the same way. Interest paid was subtracted from the operating profit in order to come up with the profit before tax figure. Figure 8.6 presents the responses of the participants with regards to the value of interest paid on debt.

Figure 8.6 Interest paid on debt

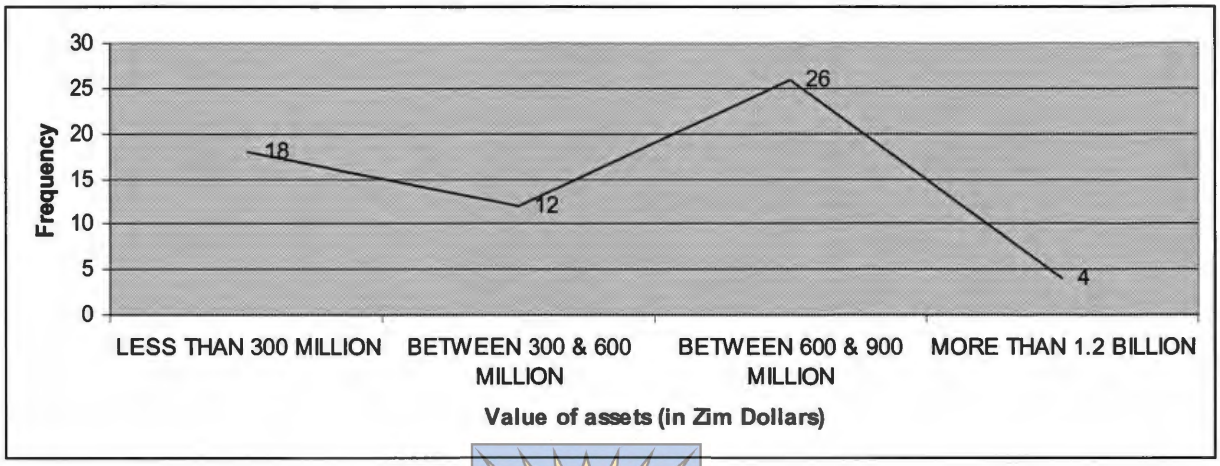


Comment

Of the respondents, 6 paid interest of les[illegible]ion dollars, 24 paid interest of between 5 and 10 million dollars, 33 paid interest between 10 and 20 million dollars, 17 paid interest of between 20 and 40 million dollars whilst only 7 respondents paid interest that was above 40 million dollars. It should hereby be noted that these figures are relative considering the inflation and interest rates that were prevailing in Zimbabwe. The majority of participants in this survey indicated that they paid interest that ranged from 10 to 20 million dollars. Question 9 presents responses relating to the value of capital.

Question 9: What is the total value of your capital (long-term liabilities plus current liabilities)? The responses to this question enabled the researcher to determine whether the use of debt led to positive or negative leverage through the calculation of return on assets. The information was used to determine ROA which was compared to before-tax interest on debt. For the study, value of capital was used to mean the same as total value of assets. This was based on the accounting equation which states that capital should equal the assets (Hermanson, Edwards and Maher, 1998:22). In other words capital employed in a business (sources of funds) should equal use of the funds (assets of a business). Capital was used to determine return on equity acting as the denominator in the formula. The results of the question are presented in figure 8.7 below.

Figure 8.7 Value of assets

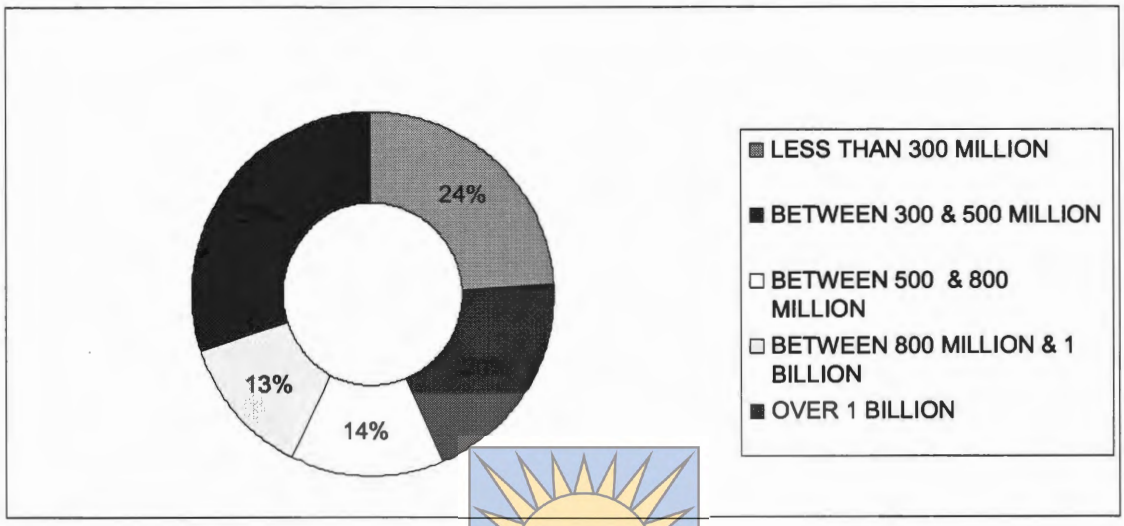


Comment

The responses to this question showed that a large number of small manufacturing firms had assets/capital worth between 600 million and 1.2 billion dollars. There are 18 firms that had assets/capital with a value that was less than 300 million dollars and 12 firms with assets/capital that totalled between 300 and 600 million dollars. The ranges of between 600 and 900 million dollars, 900 million and 1.2 billion dollars and above 1.2 billion dollars numbered 26, 27 and 4 respondents respectively. Using value of assets to determine leverage, the higher the value of assets, the higher should be the required operating profit (earnings before interest and tax) to attain a positive leverage. To have a positive leverage, the ROA should be greater than the before-tax interest on debt (refer to 3.3.3.3, p. 58). Question 10 asked respondents to state their operating profit for the previous financial period.

Question 10: What was your operating profit for the 2006 financial year (profit before interest and tax)? It is only from the operating profit that return on assets and return on equity could be determined. Without the profit figure, the primary objective of the study could not be achieved. The distribution of the responses regarding the operating profit for 2006 financial year was presented by figure 8.8 below.

Figure 8.8 Operating profit for 2006 financial year (In Zim Dollars)



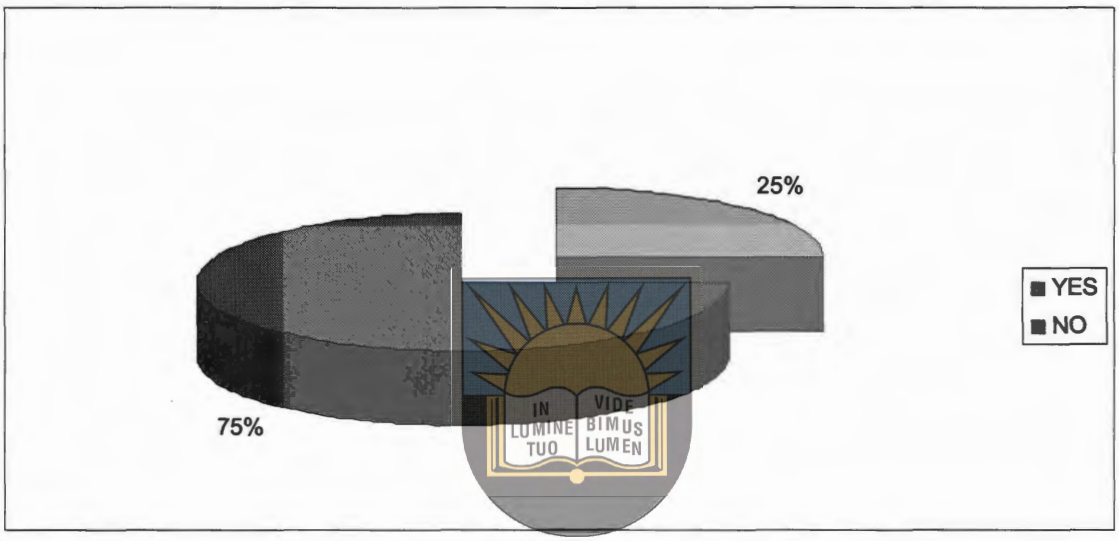
Comment

From the responses obtained, 24% generated operating profits that were below 300 million dollars. The other 76% generated operating profits that were more than 300 million dollars. Of the 76% that generated profits of more than 300 million dollars, 20% had profits between 300 and 500 million dollars, 14% had between 500 and 800 million dollars, 13% had between 800 million and 1 billion dollars whilst 29% generated operating profits that were above 1 billion dollars. The following question examines the responses on financing of fixed assets with short-term debt.

Question 11: Do you finance fixed assets with short-term debt? This question was important as it gave clues to the causes of negative leverage. For firms to employ debt effectively, they should follow the matching concept, that is, the type of finance to be used for the purchase of an asset should be aligned to the lifespan of the asset. It is an unwise business practice to finance long-term assets with short-term funds. A good practice is to finance current assets with short-term debt and fixed assets with long-term debt (refer to sec 3.5, p. 66 for matching concept). This is because fixed assets financed by short-term debt could only generate profits/income after a longer period, for example 3years. This means that in a period of 3 years, no profits are to be realised and to aggravate the situation, in the extreme circumstances, an overdraft (short-term debt) can be recalled by the bank at any time within 12 months. Therefore, negative leverage can result from usage of short-term debt to finance fixed assets. The responses to this question therefore gave

some answers as to how small business owners used their funds. Figure 8.9 below presents the responses as to how the firms used their short-term debt.

Figure 8.9 Financing of fixed assets with short-term debt



Comment

From the figure, it was noted that 25% of the respondents used their short-term debt to finance fixed assets whilst 75% did not. It should be noted here that, at times these people used short-term debt to finance fixed assets not because they did not have knowledge of how to use debt, but they did not have any other source of funds besides short-term debt. They disclosed that the lack of accessibility to long-term debt therefore forced them to use short-term debt to finance fixed assets. The responses also show that small business firm-owners had "know how" of how to use long-term debt as shown by the percentage of respondents who did not finance fixed assets with short-term debt. Regardless of difficulties in securing long-term debt, that is relatively cheap, they did not use short-term debt to fund the purchasing of fixed assets. Short-term debt is more expensive compared to long-term debt. Cost of debt is cheaper for larger quantities taken for longer periods. This intuition however, is inconsistent with literature which says that long-term debt is more expensive than short-term debt (refer to sec 4.3.1.1, p. 83). The following question is an inquiry into the use of long-term debt.

Question 12: Do you finance current assets with long-term debt? Using the same intuition as in question 11, it was important to establish whether small business owners use long-term debt to

finance the purchase of current assets. Using the matching concept, current assets should be financed by short-term debt whilst long-term debt should be used to finance the purchase of fixed assets. It was relevant to identify if small businesses were using long-term debt to finance current assets. This would help in identifying solutions to debt finance problems and factors that affect the optimal benefits of using debt. Figure 8.10 that follows presents the responses that were given by the participants.

Figure 8.10 Financing of current assets with long-term debt

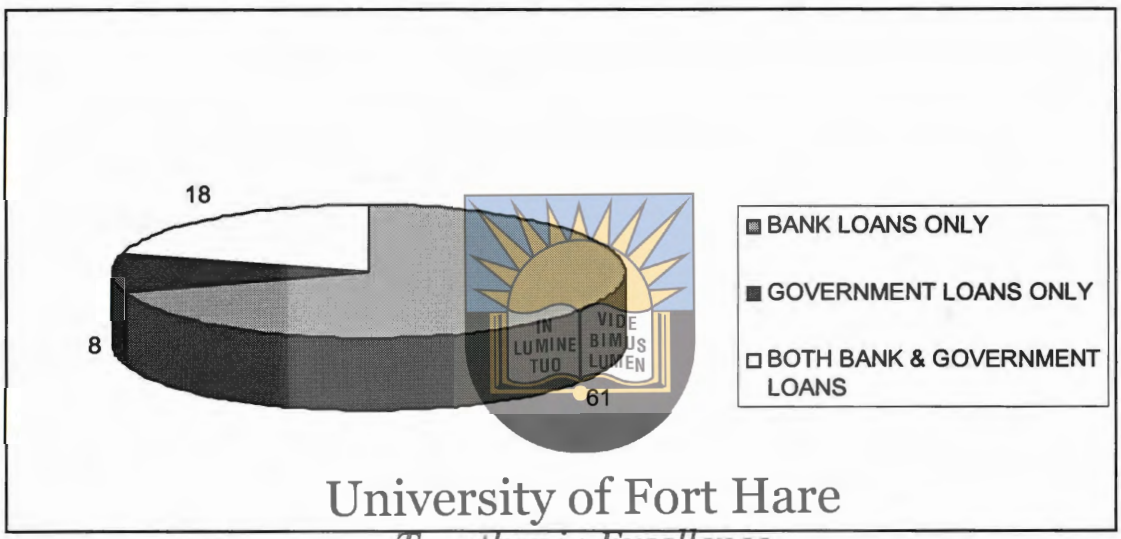
Comment

Of the 87 participants, 5 of them agreed that they used long-term debt to finance current assets. This was bad business practice as current assets should be financed by short-term debt as proposed by the matching concept. The other 82 participants did not use long-term debt to finance their current assets. Question 13 required information on the type of loan being used.

Question 13: This question was about the type of loan being utilised. There were mainly two types of loans that small manufacturing firms could use for their business. These included the bank loans and the government loans. The government debt is issued through banks and some other financial institutions such as the Small Enterprise Development Company (SEDCO). The difference between the two is that the interest on government debt is concessionary that is, it is fixed and pegged below the market rate (current rate 50%) whilst interest on bank loans is pegged at the market rate. Knowing the firms that were using government debt and bank debt was

necessary when it came to determining leverage. For firms using bank debt, ROA was compared to the market rate whilst for firms using government debt, the concessionary rate was used to determine if leverage was positive or negative. Figure 8.11 below presents the proportion of firms using bank debt and government debt.

Figure 8.11 Type of loan/s



Comment

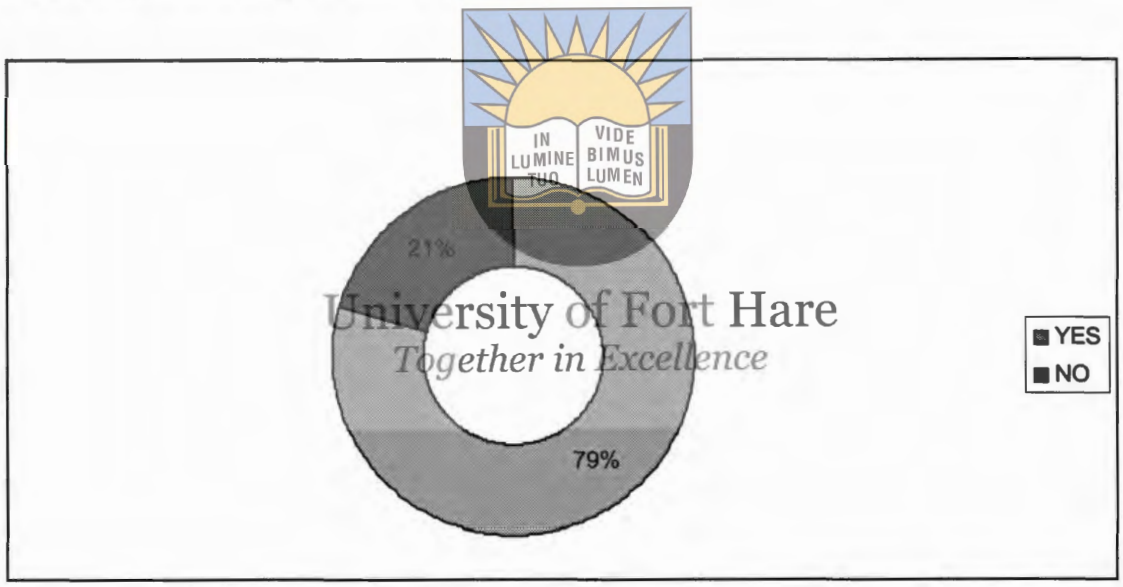
Small business owners used bank loans, government loans or a combination of the two. From the participants, 61 used bank loans only, 8 used government loans only whilst 18 used a combination of the two. Though the government is offering debt to small business owners, especially the manufacturing sector, banks are still the primary source of debt for small firms. The reason might be that government funds are not enough to fund all the small manufacturing firms that are willing to use it. Of the 87 respondents, only 30% (26 respondents) managed to access government debt whilst 91% (79 respondents) made use of bank debt.

These findings were in line with literature which says that small firms depend heavily on bank financing. Osteryoung, Derek, & Leslie (1997) supported the argument that small firms used higher debt levels from banks. They may use higher debt levels to compensate for their more limited access to equity capital. This strategy has the effect, of course, of reducing liquidity and increasing risk, though potentially providing the tax advantage of deductible interest payments.

The next question was posed to establish whether respondents were aware of their return on investment/assets.

Question 14: Are you aware of your return on investment (Earnings before interest and tax / total assets)? Though the researcher could determine the return on investment for each entity, it was also important to identify if small business owners had knowledge of their returns. If owners had no idea of what their returns were (EBIT/TA), they could experience negative leverage without knowing it. The responses to this question are presented in figure 8.12 below.

Figure 8.12 Knowledge of return on investment



Comment

A considerable number of respondents did not know their return on investment. Though the majority of respondents (79%) indicated that they were aware of their return on investment the 21% should not be left unattended to. These small business owners who had little or no knowledge of accounting and finance should be educated about it as ignorance about accounting and finance is a recipe for disaster. Education regarding understanding of basic accounts and financing options should be offered to the small business owners. Question 15 that follows was also an awareness question asking whether respondents knew if they had positive or negative leverage.

Question 15: Does your return on investment exceed the interest rate you pay on debt? This question related to leverage, that is, if respondents' answer was yes, they would have positive leverage while if their answer was "no" there would be negative leverage. Their responses were then compared to the results that were generated by calculating ROA and comparing it with the before-tax interest on debt. The responses on the awareness of leverage are explained below.

Comment

The responses to question 15 revealed that only 1 respondent enjoyed positive leverage. The figure also showed that 68 respondents, which is equivalent to 78% experienced a negative leverage whilst 18 (21%) were not quite sure as to whether they had positive leverage or not. The reason for them not being aware of their leverage might be because they did not know their before-tax interest on debt (interest rate) or they did not know their ROI. The result implied that there are some business owners who do not know their leverage because they do not have adequate accounting and financial knowledge and these need to be educated so that they do not make uninformed financial decisions. The [illegible]ng question asked the respondents if they knew the interest they pay on debt.

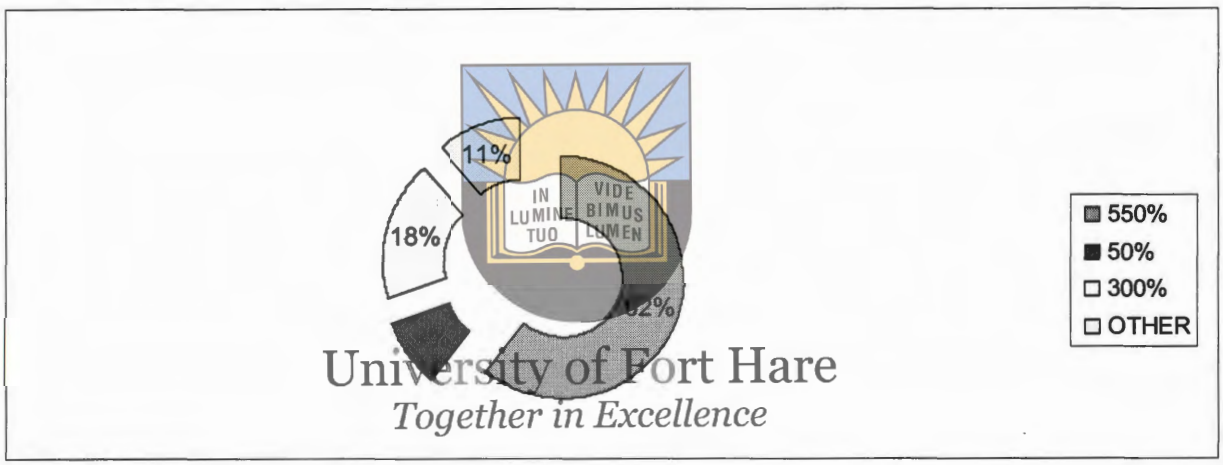
Question 16: Are you aware of the interest rate you are paying on short-term and long-term loans? It was possible that some people could not have known the rate of interest they were paying on the debt they were using. It was important to determine their level of knowledge regarding the interest they paid. Some people could not differentiate the interest paid on short-term debt and that paid on long-term debt. The comment below is on the responses that were given by the participants.

Comment

From the responses obtained during fieldwork, all the respondents indicated that they knew the rate of interest that was used on short-term debt. This meant that the small manufacturing firm's owners were well educated in terms of interest rates being used for their debt. For long-term debt, only 1 person indicated that he/she did not know the interest rate being used for his/her long-term debt. This can be a result of complacency of the owner as interest rates being charged on one's debt ought to be known by the borrower. The question that follows required respondents to state the rate of interest they were paying.

Question 17: State the interest rate on long and short-term debt. There is a possibility for respondents to just agree that they knew the interest rates that were used whilst they would not actually be able to disclose the rate. Therefore to ascertain the reliability of responses to question 16, respondents had to state the rates they were paying. The question was divided into two parts, the first being on short-term debt whilst the second was on long-term debt. Responses to the first part of the question are presented in figure 8.13 below.

Figure 8.13 Interest rates on short-term debt



Comment

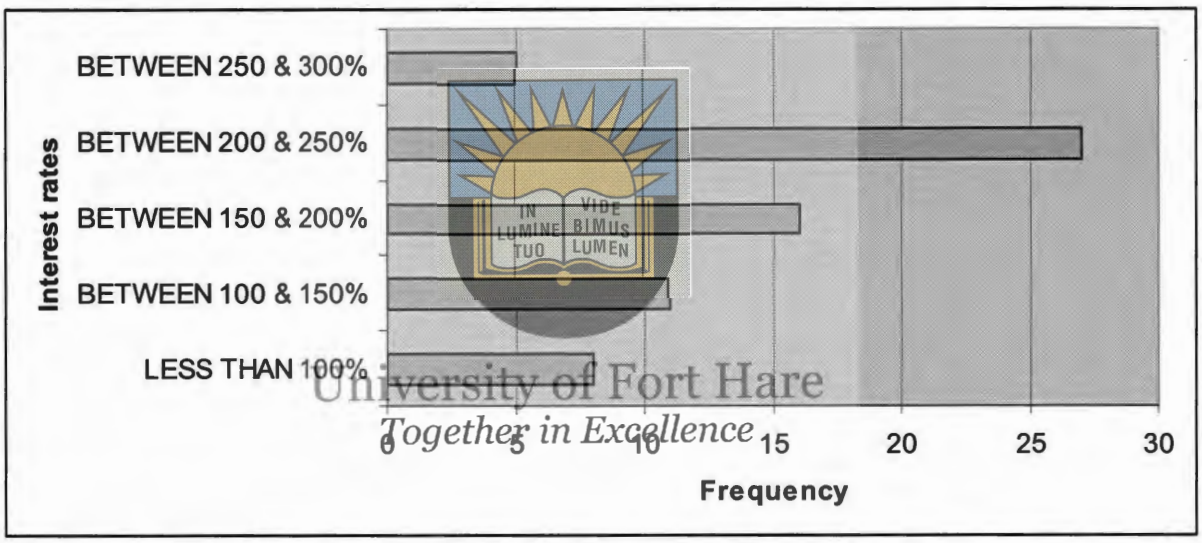
As suggested above, some respondents (11%) disclosed that they knew the interest rate being used to calculate their interest whilst they did not. This is shown by the fact that these respondents mentioned interest rates varying from 300% and 50%. The possibility does exist that the respondents representing the 11% made use of debt other than bank debt. For respondents who mentioned both rates, an average was calculated which is 175%. This rate only applied to respondents who used both bank and government debt. A fairly large percentage (89%) of respondents was aware of the rates their debt was being charged at.

The researcher used an assumption that any respondent who mentioned any of the three rates; 50%, 175% and 300% would be right based on the interview done with three different commercial banks in Zimbabwe (ZB Bank, Barclays and CBZ). During the interviews, it was discovered that the basic interest rates charged to small firms was the same with the difference coming as a result of extra costs such as interest premiums, establishment, handling and

maintenance fees. Basic interest rates refer to the interest rate excluding other extra costs such as establishment and handling costs.

Part two of question 17 related to interest rates on long-term debt. This question also sought to ascertain if respondents knew the interest rates that were applied to their long-term debt. Responses to this question are presented in figure 8.14 below.

Figure 8.14 Interest rates on long-term debt



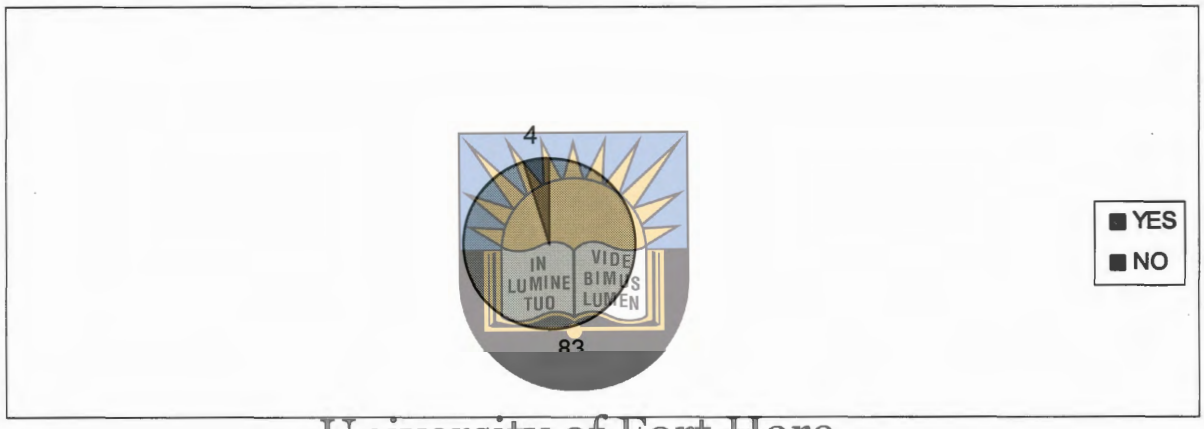
Comment

Unlike interest rates on short-term debt, interest rates on long-term debt were widely diversified. Of the respondents who indicated that they use long-term debt, 8 paid an interest rate below 100%, 11 paid the rate between 100% and 150%, 16 paid between 150% and 200%, 27 paid between 200% and 250% and lastly 5 respondents paid interest rates between 250% and 300%. No respondent indicated that he/she paid an interest rate that was more than 300%. The majority of the respondents paid interest rates on long-term debt that varied between 200% and 250%. The reason for this diversity in answers might be because of the fluctuations in interest rates caused by hyper-inflation. This therefore means that SMFs that obtained debt at different times are likely to pay different interest rates for the debt. Question 18 is about the knowledge of the tax rate.

Question 18: Are you aware of your firm's tax rate? This was a very crucial question since the primary advantage of debt is its tax advantage. So without knowing the tax rate, business people

would not be able to determine the tax advantage of their debt. Business people should be able to determine the advantages they are getting as a result of using debt so that they could make calculated decisions. For them to know the advantages of debt, they should know the tax rate applying to their business. Figure 8.15 that follows presents the responses of the participants on their knowledge for the tax rate.

Figure 8.15 Knowledge of firm's tax rate

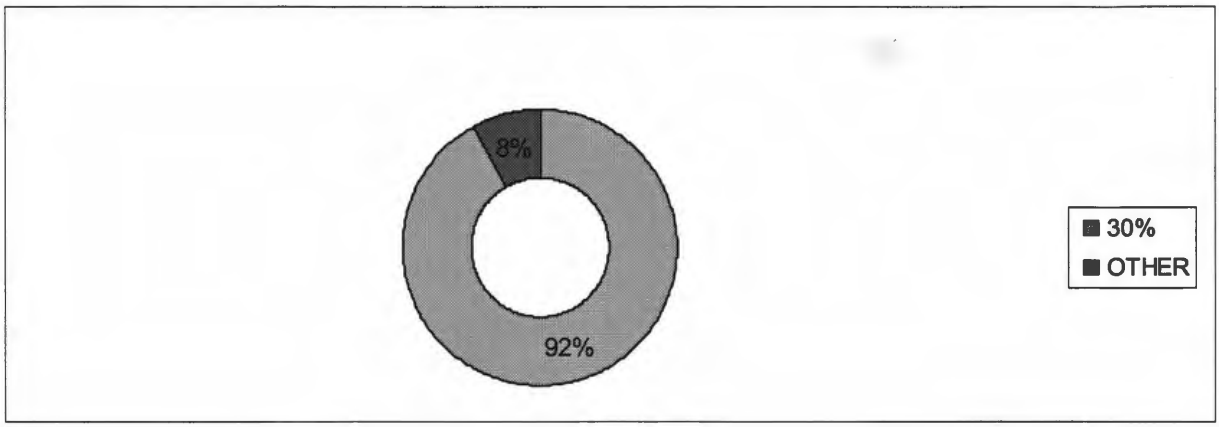


Comment

Of the responses, only 4 respondents did not know their tax rate. The other 83 indicated that they were aware of the tax rate that applied to them. For firms using debt, it is expected of them to know the tax rate applying to them so that they know the benefit they could derive from using debt. If not, they would have to engage the services of a specialist which might be expensive for them. The following question is on the tax rate that is used for small manufacturing firms.

Question 19: At what rate is your business taxed? Just like on the interest rate, some respondents could indicate that they know the tax rate but will not be able to disclose it. The responses to this question were used to ascertain if responses to question 18 were correct. The responses to this question are presented in figure 8.16 that follows.

Figure 8.16 Disclosure of the tax rate



Comment

As shown in figure 8.16, 8% of the respondents did not know the tax rate applying to them. This was because they mentioned a tax rate different from 30% which is the rate at which these small manufacturing firms are taxed. All these firms were taxed at 30% as they are located in a city and no firm manufactured for exportation of 50% of its produce. This was consistent with the responses to 16 and 17 whereby respondents indicated that they knew their interest rates but failed to disclose it. In this case, 95% (83 respondents) indicated that they knew the tax rate but 92% in fact (80 respondents) knew the actual rate. This then supports the intuition that some respondents gave responses that they thought the researcher was looking for or responses that would not embarrass themselves.

The information gathered from question 6 to 19 was used to test the primary hypothesis of the study. From the information, the following ratios were determined:

- Return on assets / Return on investment
- Return on equity
- Debt ratio

These ratios were used to determine whether the use of debt would lead to positive leverage or not. Besides that, the information related to the components of the estimated regression equation that was used to test the hypothesis (refer to equation 6.1, p. 119). The components included debt ratio and profitability ratio as measured by return on equity. ROA was used to determine whether leverage would be positive or negative. The discussion of these components will now follow.

❖ **Return on Assets (ROA)**

ROA was calculated by dividing the firms' operating profit (earnings before interest and taxes) by total assets. This ratio is often referred to as Return on Investment (ROI). It measures the overall effectiveness of management in generating profits with its available assets (Gitman, 2006:68) (also refer to 6.3.1). In determining whether the use of debt (leverage) is positive, this percentage is compared to the before-tax interest rate on debt. If it is greater than the before-tax interest rate on debt, it means that profitability of a firm is being magnified consequently creating positive leverage.

For this study, the average ROA, calculated by dividing the total of all the ROAs for each firm that participated in the survey by the number of these participants, was 69.8% which was calculated as follows:

Totals of ROA for all firms = 60.719

Number of firms = 87

Average ROA = 60.719 ÷ 87

= 0.6979

= *69.8%* (refer to Addendum 5 for data used)

This figure had two meanings. This is caused by different interest rates being paid by small manufacturing firms. Firms that were using government debt (8 firms), were the only ones that were enjoying positive leverage. This is because the average Return on Assets, 69.8% was greater than the before-tax interest paid on that debt which was 50%. For firms that used bank debt or a combination of bank and government debt, negative leverage resulted.

Small manufacturing firms should therefore strive to use equity to finance their activities rather than debt. This result portrayed that using debt did not bring any benefits to small manufacturing firms. Firms enjoying positive leverage archived this because the government was subsidising their cost of debt. The government was therefore, incurring the losses on behalf of the firms.

❖ **Return on Equity**

This refers to the return earned on the ordinary shareholders' investment in the firm (Gitman, 2006:69). This ratio is also expressed as a percentage and calculated by dividing net earnings

(profit after interest and tax) by owner's capital. The net earnings were calculated by subtracting interest and tax from operating profit. This figure was then divided by shareholders capital. The average ROE for this study was 41.5% and was calculated as follows:

Totals of ROE for all firms = 36.115
Number of firms = 87
Average ROE = 36.115 ÷ 87
= 0.4151
= 41.5% (refer to Addendum 5 for data used)

This average ROE implied that for every dollar of capital invested, the return to owners of the firm was 41.5 cents. The calculated ROEs were used in the estimated equation to test the primary hypothesis of the study.

❖ **Debt ratio**

Debt ratio measures the proportion of total assets financed by a firm's creditors. The higher this ratio, the greater the amount of debt used to generate profits (Gitman, 2006:64). Debt ratio was calculated by dividing total debt by total assets. For the study at hand, the average debt ratio for the respondents was 0.17 (17%) and this average was calculated as follows:

Totals of debt ratios for all firms = 12.3621
Number of firms = 87
Average debt ratio = 12.3621 ÷ 87
= 0.14209
= 14% (refer to Addendum 5 for data used)

This implied that for every dollar's worth of assets in a firm, 14 cents came from debt whilst the remainder was equity. Though small manufacturing firms in Zimbabwe made use of debt, their debt ratios were very low, thus very few assets were financed by debt. This should not imply that all firms use low levels of debt as 14% is just an average. There are some firms that had high debt ratios and some very low ratios as indicated by the highest ratio of 0.7 and the lowest ratio of 0.004 (refer to addendum 5).

The average debt ratio may be low due to unwillingness of small business owners to use debt in their operations as it might dilute the control of their firms. Debt to small firms was also expensive as there is high transaction costs involved when debt is being extended. The other reason could be that insufficient debt funds are being extended to small manufacturing firms. Cook and Nixson (2000) support these intuitions adding that debt is limited to small firms because banks would want to reduce their risks of lending to small firms. The following discussion focuses on the testing of the primary hypothesis.

- **HYPOTHESIS TESTING**

Hypothesis testing refers to the determination of whether the hypothesis is accepted or rejected. This section tested the primary hypothesis (null hypothesis) of the study which stated that there is a negative relationship between debt usage and the value of a small manufacturing firm. Before the tests were implemented a test of the model to determine its significance was done. The model was as follows:

$P = \alpha + \beta_1$ Debt [illegible] (refer to equation 6.1)

The tests were administered to determine if the model measured a real life scenario. Table 8.4 below shows the results of the test.

Table 8.4 Significance of the model on the impact of debt on profitability

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	34.55659	11.51886	34.78	<.0001
Error	83	27.48695	0.33117		
Corrected Total	86	62.04355			

This study used a 95% confidence level to determine the significance of the tests. This means that for the tests to be accepted, the P values had to be less than 0.05. The P value (Pr>F) for the model was <.0001 which is less than 0.05, indicating that the model was statistically significant.

Correlation testing was also done to determine if there was a relationship between variables. An extract of the correlation testing is highlighted in table 8.5 that follows.

Table 8.5 An Extraction on Pearson Correlation testing

	Return on Equity	Debt
Return on Equity	1.00000	-0.12836 0.2361
Debt	-0.12836 0.2361	1.00000

The correlation testing used obtained a figure 0.12836 which portrayed a weak relationship between profitability and amount of debt in the capital structure of small firms in Bulawayo. A relationship of 12.8% obtained portrays a weak relationship between profitability and debt. The regression results of the model were discussed in the section that follows. Table 8.6 below is an extract of the regression procedure used to [illegible] primary hypothesis.

Table 8.6 Parameter Estimates for the Regression Results

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	0.50808	0.11967	4.25	<.0001
DEBT	1	-0.00092595	0.00077596	-1.19	0.2361

Table 8.6 above is an extract of the regression results used to test the impact of debt on the profitability of small manufacturing firms. The parameter estimate for the equation to determine the impact of debt on profitability of small manufacturing firms in Bulawayo was -0.00077596. Since the parameter was negative, it implied that the variables (debt and profitability) had a negative relationship which means that if the amount of debt in a firms' capital increases, the profitability of the firm would be decreasing (refer to sec 6.4.1.1, p. 121 for an explanation of parameter estimates). Though the parameter estimate was negative, it was statistically insignificant, that is, a dollar increase in the value of debt would lead to a decrease in profitability that is very small and insignificant at a 5% confidence interval. The significance level was

measured by P value (Pr > |t|) which in this case was 0.2361 which is greater than 5%. For the relationship to be statistically significant, the P value should be less than 5%. The P value in this case therefore meant that the chances of rejecting the null hypotheses if it was correct were 23.6%. The null hypothesis which stated that there is a negative relationship between the amount of debt in the capital structure and value (profitability) therefore could not be rejected.

Even when the Return on Equity was regressed against short-term debt and long-term debt, the relationship still remained statistically insignificant. The estimated regression equation for these variables was as follows:

$$P = \alpha + \beta_1 \text{Short-term debt} + \beta_2 \text{Long-term debt} + \varepsilon_1 \text{ (refer to equation 6.2)}$$

The results of the regression analysis when ROE was regressed against short-term debt and long-term debt using equation 6.2 are presented in figure 8.7 and 8.8 respectively.

Table 8.7 Regression extracts on short-term debt and profitability

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	0.50700	0.12522	4.05	<.0001
Short-term debt	1	-0.00132	0.00123	-1.07	0.2885

Table 8.8 Regression extracts on long-term debt and profitability

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	0.48932	0.10579	4.63	<.0001
Long-term debt	1	-0.00242	0.00178	-1.36	0.1776

The result is the same as the test for the relationship between profitability and total debt. The impact of short-term debt on profitability is the same as for long-term debt. Short and long-term debt had a negative relationship with profitability. This means that the use of either short-term debt or long-term debt leads to negative leverage as shown by the parameter estimates which are negative. Though the relationship is negative, it is statistically insignificant since the P values of

both short and long-term debt are above 5%. It should be noted here that though this relationship between debt and profitability is statistically insignificant, it does not mean that it does not have an economic significance. This statistical insignificance might have been caused by the type of data that was collected and the way it was collected or an error in the entering of data to spreadsheets.

These results are consistent with several studies that were done in developing countries. These studies found a negative relationship between debt usage and profitability of small firms. Such studies include Fatoki (2006), Kahle & Shastri (2004), Raj & Sutthisit (2003) and Zou and Xiao (2006). The use of debt was found to reduce the profitability of small firms, in other words, a negative leverage was experienced.

The findings of this study however, did not support the theoretical foundation of this study as was put forward by Modigliani and Miller in 1958 and corrected in 1963. The theory suggests that the use of debt leads to an increase in the [illegible] a firm by reducing the cost of capital and magnifying returns to owners. The inconsistancy can be attributed to high interest rates prevailing in Zimbabwe and high cost of debt as suggested by Hutchison and McDill (1999). Their study (Hutchinson and McDill) concluded that small firms pay high costs for funds because of high risk embedded in their operations. Section 8.2.4 focuses on information relating to accessibility of debt to small firms.

8.2.4 Section D: The effect of size and product on access to debt finance

This section of the study focused on questions relating to the secondary null hypotheses which stated that:

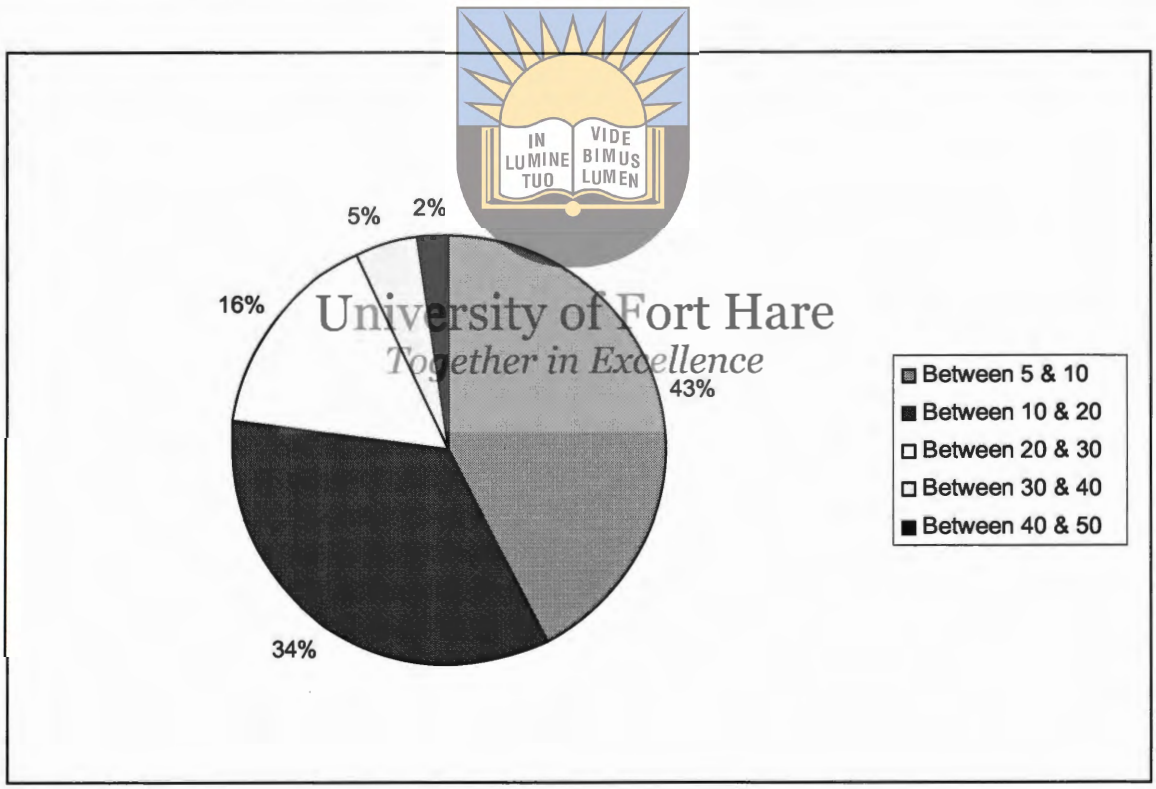
- The size of the small manufacturing negatively affect its ability to access debt finance and;
- The type of product manufactured by a small manufacturing has a negative effect on its ability to access debt finance.

Questions 20 to 26 assisted in providing information used to test these hypotheses. The data was analysed and then used to test the hypotheses. All the questions in this section pertained to accessibility of debt to small manufacturing firms. Responses to these questions had furthermore

been analysed. The following question focused on the number of employees a firm had to determine its size.

Question 20: How many employees did your firm employ? This question assisted in determining the size of the firm. Only firms with less than 50 employees were considered for this study. In order to have a better analysis of the size of the firms, the numbers of employees were sub-divided into several groups. The responses gathered from the participants were presented in figure 8.17 below.

Figure 8.17 Number of employees



Comment

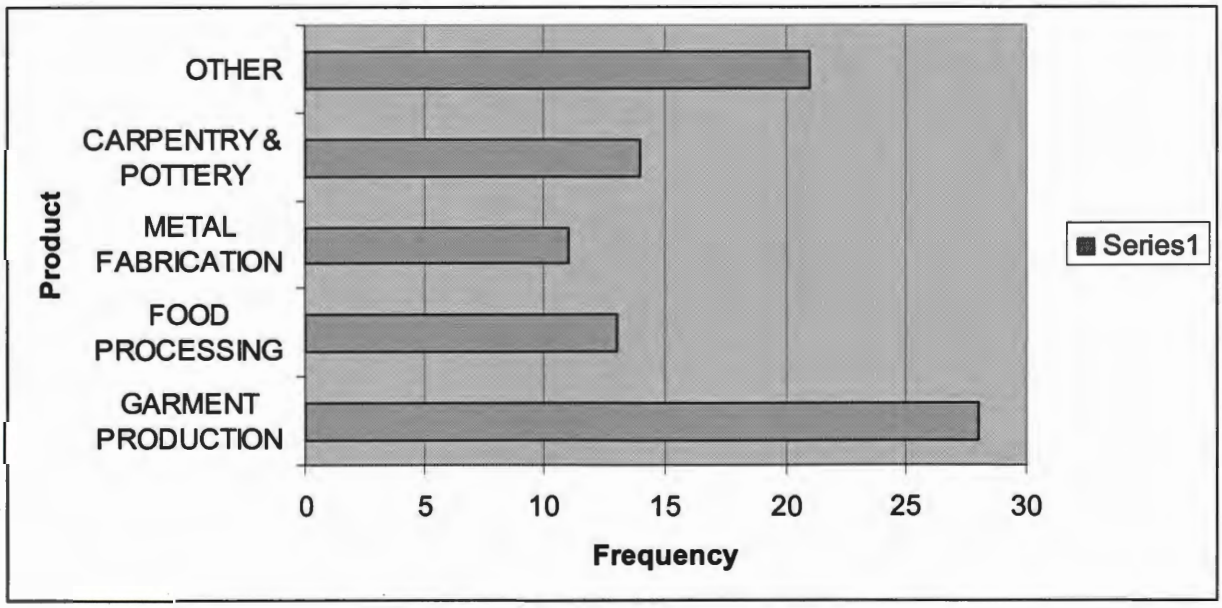
From the responses, only 2% of the firms employed more than 40 employees. Firms employing between 30 and 40 employees constituted 5% whilst those employing between 20 and 30 constituted 16%. Firms employing between 10 and 20 and 5 and 10 employees constituted 34% and 43% respectively. Firms that employed more than 20 employees comprised only 23% (2%+5%+16%) of the respondents. This then portrayed the inability of small firms to generate enough job opportunities for the unemployed. The majority of firms employed less than 10

employees which only reduced unemployment with a very small margin. The ability of small manufacturing firms to create employment opportunities is therefore over-emphasised. Though they made use of human labour, the numbers that were employed were minimal. This was complimented by the responses to this question.

This result was consistent with empirical studies on the contribution of small manufacturing firms to employment. Kesper (2001) in a study of manufacturing small firms and their contribution to employment established that small manufacturing firms do not really create many employment opportunities. Question 21 that follows is on the product being manufactured by the respondents.

Question 21: What does your firm manufacture? This question allowed the researcher to identify the products being manufactured by the firms and link it to the levels of debt accessibility. To achieve this, product type was compared to the debt ratios of those firms. Firms were categorised into five groups, that is garment production, food processing, metal fabrication, carpentry and pottery and finally all other manufacturing products not covered in the four groups. Responses to this question are displayed in figure 8.18 below.

Figure 8.18 Product manufactured



Comment

From figure 8.18, it is clear that garment production constituted the largest portion of the small manufacturing sector in Bulawayo. This category had 28 respondents and a combination of carpentry and pottery had 14 respondents whilst food processing and metal fabrication had 13 and 11 respondents respectively. The 'OTHER' category had 21 respondents. The garment production included all activities that had to do with clothing, whether protective or uniforms. The 'OTHER' category included among others; manufacturing of durawall blocks, bricks, stationery, candles, floor polish and plastics. Average debt ratios of these categories were calculated in order to determine if product type is related to accessibility of debt.

For the first category, which is garment production, an average debt ratio of 0.148178571 was found. For food processing, metal fabrication, carpentry and pottery and other, the average debt ratios were 0.127694728, 0.150516172, 0.132628833 and 0.144761905 respectively (refer to Addendum 5 for data used for calculations). The calculation of these ratios was as follows:

- ***Garment production:***

  Total debt ratios = 4.149

  Number of firms in the category = 28

  Average 4.149 ÷ 28

  =***0.148178571*** (refer to Addendum 5 for data used)

- ***Food processing:***

  Total debt ratios = 1.66

  Number of firms in the category = 13

  Average 1.66 ÷ 13

  =***0.127694728*** (refer to Addendum 5 for data used)

- ***Metal fabrication:***

  Total debt ratios = 1.655677892

  Number of firms in the category = 11

  Average = 1.655677892 ÷ 11

  =***0.150516172*** (refer to Addendum 5 for data used)

- ***Carpentry and pottery:***

  Total debt ratios = *1.856803662*

  Number of firms in the category = *14*

  Average = *1.856803662 ÷ 14*

  =*0.132628833* (refer to Addendum 5 for data used)

- ***Other:***

  Total debt ratios = *3.04*

  Number of firms in the category = *21*

  Average = *3.04 ÷ 21*

  =*0.144761905* (refer to Addendum 5 for data used)

These ratios indicated some differences in terms of debt access but these differences were tested later in this section to determine if they were statistically significant. The reason why the majority of respondents were engaged in garment manufacturing could be due to the fact that Zimbabwe is an agro-economy with cotton growing as one of the main farming activities. This allows the availability of cloth in abundance.

To determine if there was any relationship between accessibility of debt and the product manufactured, the proportions of respondents who obtained debt from each category of product were calculated and are presented in table 8.9 below.

Table 8.9 Summary of debt accessibility based on products manufactured

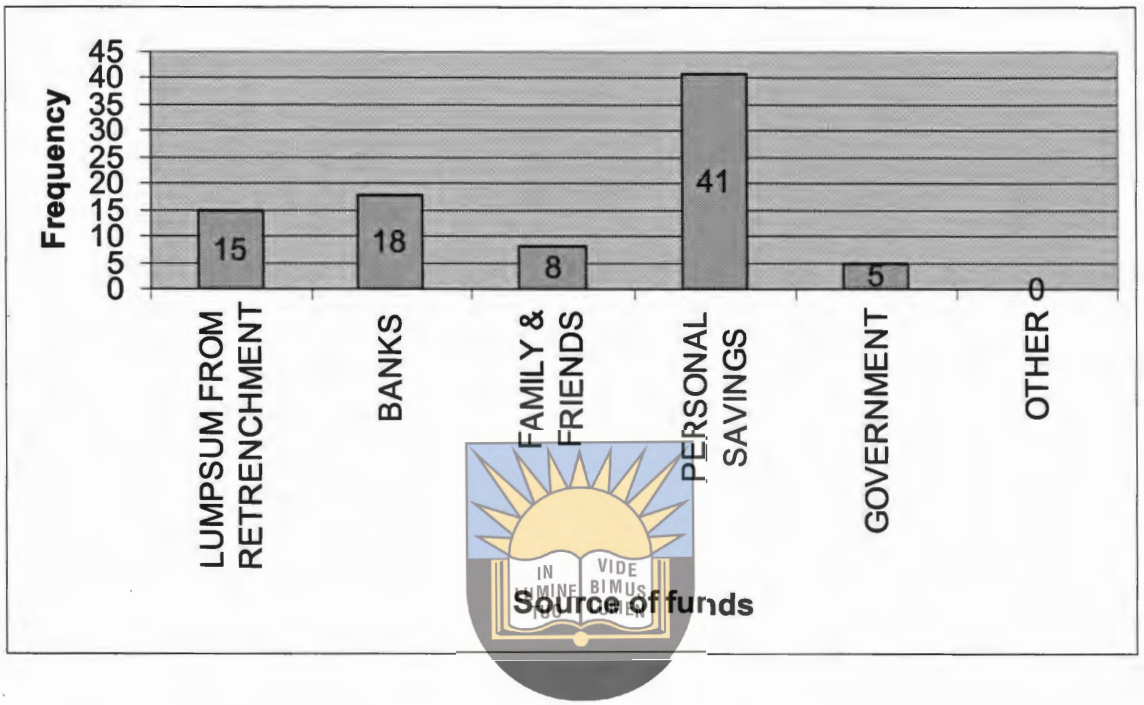
Product group	Number in sample	Number of firms that accessed debt	Number of firms that did not use debt	Number of firms unavailable for interview	Percentage of firms that accesses debt
Garment manufacturing	43	28	7	8	65%
Food processing	50	13	34	3	26%
Metal fabrication	24	11	8	5	46%
Carpentry and pottery	18	14	2	2	78%
Other	36	21	8	7	58%
Totals	**171**	**87**	**59**	**25**	

Comment

Table 8.9 indicated that there was a relationship between debt accessibility and type of product manufactured. This is portrayed by the wide variability between the percentages of respondents who obtained debt categorised by type of products manufactured. From the table, the highest number of respondents who obtained debt was from the carpentry and pottery category followed by garment manufacturing with 65% which is followed by the 'other' category with 58%. Metal fabrication and food processing had the lowest percentages (46% and 26% respectively). The following question asked for the primary source for initial investment.

Question 22: What was the main source of finance for your initial investment? The responses to this question shed light regarding the availability of funds to small manufacturing firms. The responses to this question were presented in figure 8.19.

Figure 8.19 Main source of funding for initial investment



Comment

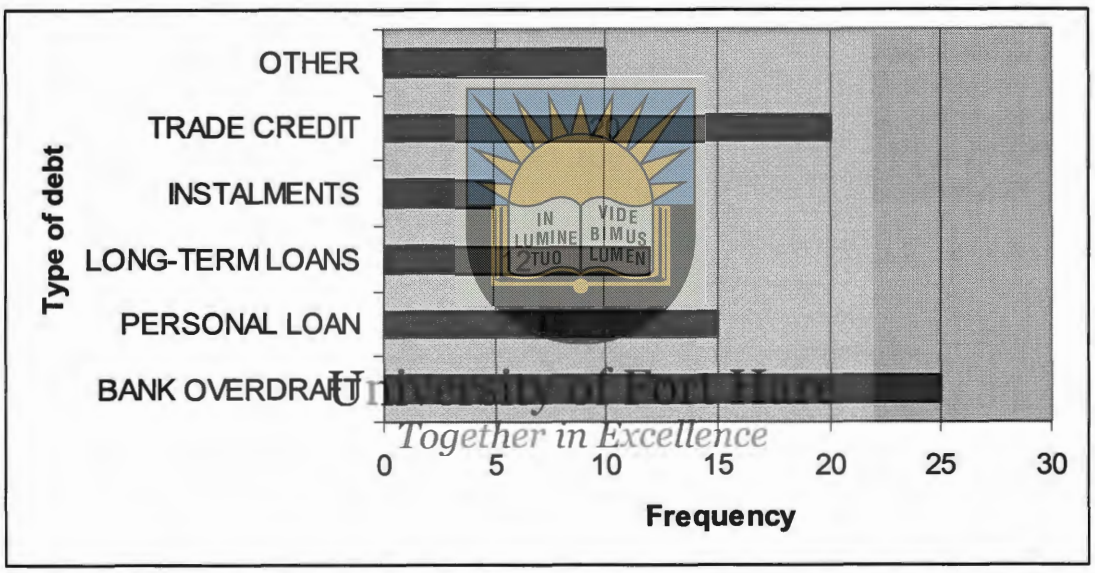
The responses presented in figure 8.19 clearly indicated that the major source for the respondents' initial investment (41) came from personal savings. Banks provided the second largest contribution to start ups with 18 respondents indicating that they used bank debt as their main source for initial investment. This was followed by a lump sum from retrenchment, family and friends and lastly government loans and grants with 15, 8 and 5 respondents respectively. This indicates that though debt might be difficult to access, it can still be accessed by small manufacturing firms as was portrayed in figure 8.19 above.

These findings are consistent with Hamilton and Fox (1998) who also established that the primary source of initial investment for small firms is personal savings then followed by financial institutions. Family also plays a crucial role in financing of initial investment. Cook and Nixson (2000) who conducted a study of finance on small and medium-sized enterprise development also established that small firms usually start with small amounts of capital drawn from personal savings of the owner followed by borrowings from friends and relatives. The firm survival over time would then widen the financial sources as lenders would have realised that the business is sustainable.

Question 23 relates to the type of debt that is frequently used by small manufacturing firms.

Question 23: What type of debt do you frequently use? It is relevant to know which type of debt is widely used by small manufacturing firms. This information will also aid to determine the reasons why it is frequently being used. Figure 8.20 presents responses that were given regarding this question.

Figure 8.20 Frequently used type of debt



Comment

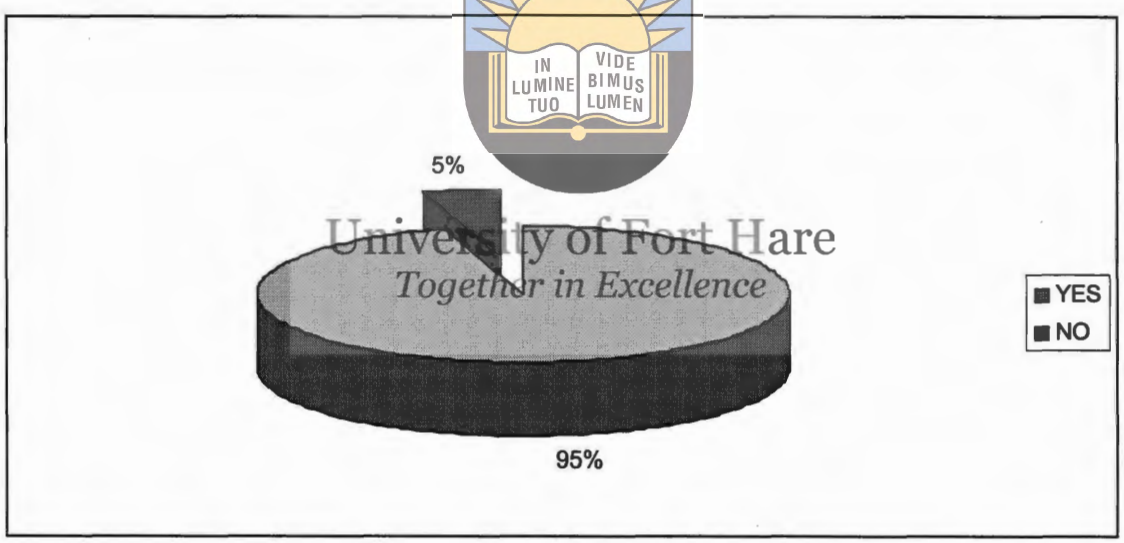
The majority of the respondents used bank overdrafts (35 respondents), then followed by personal loans with 21 respondents, long-term loans had 16 respondents, instalment loans had 5 respondents and then the other 10 respondents used other types of debt. The category 'other' included among others, credit cards, bankers' acceptances and factoring. Due to economic instability, the majority of banks are not offering the revolving credit facility.

This result was consistent with the study on small manufacturing firms by Fatoki (2006) which indicated that the majority of small manufacturing firms used bank overdrafts as the main type of debt. The result also indicates that apart from bank overdrafts, small manufacturing firms also widely used trade credit. Trade credit usually occurred from ordinary business transactions between small firms and their suppliers. What makes trade credit so popular is that it is a free

source of funds, especially if payment is made within the stipulated period. This result is also consistent with empirical research on financing sources of small firms. Danielson and Scott (2004) found that trade credit is a critical source of funding for small firms as the money and capital markets often pose an insurmountable barrier. The next question probed extra costs that are paid by borrowers using bank loans.

Question 24: Do you pay any other costs for debt besides the interest? This question tried to establish why some small firms avoid using debt in financing their business activities. Responses to this question are presented in figure 8.21 below.

Figure 8.21 Payment of extra debt costs



Comment

Only 5% of the respondents said they did not pay extra costs apart from interest on loan. It might be that they pay extra costs but the costs are embedded in one figure, for example, they might be told that the interest they should pay is 305% and 5% will be for other services such establishment services. The majority, 95% indicated that they pay extra costs on debt besides interest costs. In most instances, small firms pay more extra costs compared to their larger counterparts.

This is consistent with previous studies that were done on cost of debt to small firms. Stanger (2007) also aired that small firms pay extra costs that are higher than larger firms. The fees

identified include establishment fees, overdraft fees, loan fees and credit card fees. These fees are continuously increasing making debt expensive for small firms thereby prohibiting them from using it. Question 25 asks respondents to state the type of extra costs they pay.

Question 25: If your answer to question 24 is yes, what is the nature of these costs? This question allowed the researcher to determine whether the respondents knew about the extra costs they were paying. It also allowed him to determine other costs that increase the actual cost of debt. The types of extra costs mentioned by respondents were presented in table 8.10 that follows.

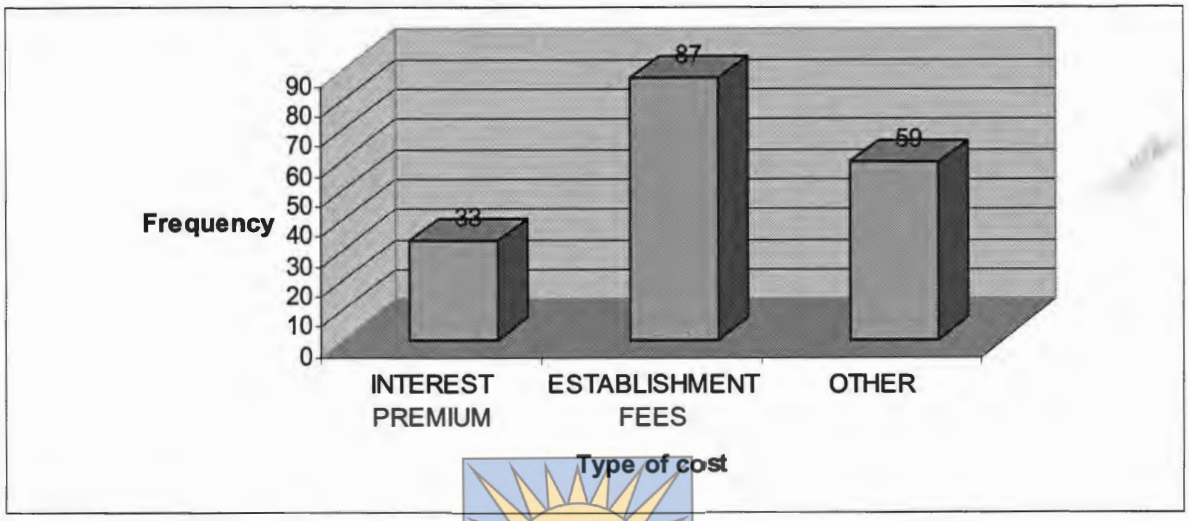
Table 8.10 Disclosing of extra costs paid by the respondents

Type of cost	Frequency
Interest premiums	33
Establishment fees	83
Other	59

Comment

Responses to this question showed that 33 respondents paid interest premiums on debt. For establishment fees, all the respondents who said they paid extra costs indicated that they incur that cost. There are also other costs which the respondents pay as portrayed by 59 respondents showing that they incur other costs beside interest premiums and establishment fees. Four respondents did not answer this question as it was not applicable to them. These results are graphically presented in figure 8.22 below.

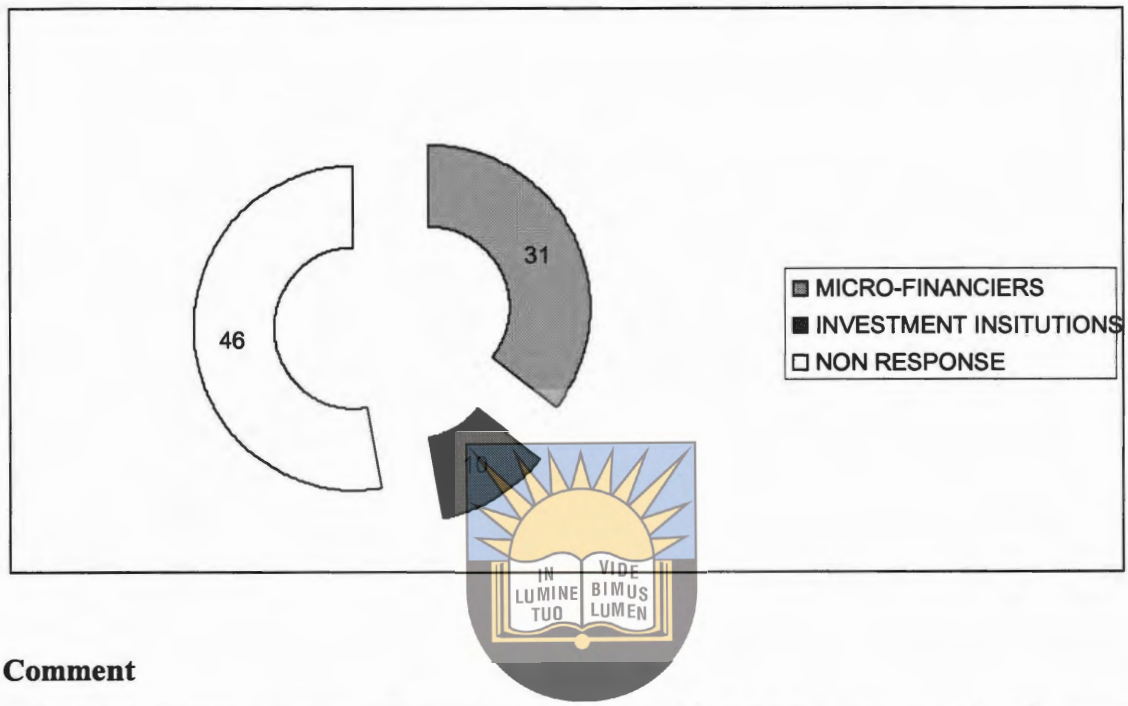
Figure 8.22 Disclosure of extra debt costs



The results clearly highlight the claim that small firms pay extra costs when accessing debt. The payment of extra costs increases the cost of debt. This result is consistent with previous studies that were conducted. Berry, Von Blottnitz, Cassim, Kesper, Rajaratnam & Van Seventer (2000:71) in a study of the economics of small and medium sized firms found that small firms pay extra costs on their borrowing from commercial banks because they are considered high credit risks. The following question asked about the other sources of debt that are available to small manufacturing firms.

Question 26: What other source/s of debt do you use besides banks? The responses to this question enlightened the researcher in knowing other sources of debt available to small manufacturing firms. The distribution of these respondents is portrayed in figure 8.23 below.

Figure 8.23 Other sources of debt



Comment

This question was responded to by 41 respondents. Most of the responses to this question (31) indicated micro-financiers as a source of immediate debt. The other 10 said they make use of debt from investment institutions. The discussion that follows focused on the testing of the two secondary hypotheses of the study.

➢ HYPOTHESIS TESTING

This section discussed the result of the hypotheses testing to determine whether size of a firm and the product it manufactures have an effect on debt accessibility to small manufacturing firms. These were the secondary hypotheses of this study (refer to 1.5, p. 6).

- **Significance of the model**

The model (estimated regression equation) formulated for the secondary hypotheses was significant, thus it was valid. The model formulated is as follows (also refer to sec 6.4.1.1, p. 122):

$$D = \alpha - \beta_1 \text{Size} + \beta_2 \text{Asset} + \varepsilon_1 \text{ (refer to equation 6.2, p. 122)}$$

The regression procedure tests established that this model could be used to test the effect of firm size and products manufactured on the accessibility of debt. Table 8.11 below is an extract of the regression procedure and it tests the significance of the model formulated (refer to Addendum 3(a)).

Table 8.11 Extract of the regression procedure on significance of the model

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	287090	143545	13.32	<.0001
Error	84	905203	10776		
Corrected Total	86	1192293			

The result of the tests for the model showed that the model is significant and valid since the P value (Pr > F) is <.0001 which is less than 5%. Correlation testing was done to determine if there was a relationship between variables. An extract of the correlation testing is highlighted in table 8.12 that follows (refer to Addendum 3(b)).

Table 8.12 Pearson Correlation Test

	DEBT RATIO	**NUMBER OF EMPLOYEES**	**PRODUCT TYPE**
DEBT RATIO	1.00000	0.68045 <.0001	-0.00621 0.9545
NUMBER OF EMPLOYEES	0.68045 <.0001	1.00000	0.19090 0.0765
PRODUCT TYPE	-0.00621 0.9545	0.19090 0.0765	1.00000

Between size of a firm and debt accessibility, a correlation value of 0.68045 (68%) was measured which showed a strong relationship between the two variables. The relationship between debt

accessibility and products manufactured had a correlation value of 0.00621 which is 0.6%. This shows a weak relationship between these variables. The regression results of the model are discussed in the section that follows.

- **Regression results**

To aid the discussion of the findings from the use of the model, a part of the regression procedure was extracted. This extract will show the parameter estimates and P values which were important in determining the effect of firm size and product manufactured on debt accessibility to small manufacturing firms. The extract that follows presents some of the results (refer to Addendum 3(b)).

Table 8.13 Parameter estimates of the regression test

Variable	Degree of Freedom	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	24.78775	27.24104	0.91	0.3655
Number of employees	1	6.43470	1.24677	5.16	<.0001
Product	1	-7.46370	7.11282	-1.05	0.2970

Table 8.13 presents an extract of the regression tests done on the effect of firm size and firm product on the accessibility of debt. The parameter estimate for firm size as measured by the number of employees was 6.43470 which show that the size of a firm had a positive effect on the accessibility of debt. As the size of the firm increases, so does its chances of obtaining debt. The effect of size on debt accessibility was statistically significant as shown by a P value that is less than 5% (0.0001).

Though the product being manufactured by a firm had an effect on accessibility of debt, it was statistically insignificant. The parameter estimate and P value for product type was -7.46370 and 0.2970 (29.7%). This implies that the product manufactured affects the access of debt but with a percentage that is statistically insignificant.

From these tests, it can therefore be concluded that the size of a firm has a significant positive impact on debt accessibility whilst the product manufactured has an insignificant negative impact on debt accessibility. The first secondary null hypothesis which states that the size of the small manufacturing firm does not affect its ability to access debt finance from well established financiers was rejected.

The second secondary null hypothesis which stated that the product manufactured by small manufacturing firms had a negative effect on its ability to access debt was therefore accepted.

These findings are consistent with several studies that established that the size of a firm has a great influence on its accessibility to debt. Several studies conducted have concluded that the size of a firm affects debt accessibility to small firms, especially from banks. Such studies include Biggs & Srivastava (1996), Hutchinson and McDill (1999), Schiffer & Weder (2001), Kumar & Francisco (2005), Raj & Sutthisit (2003), Esperança, Gulamhussen & Gama, (2003), Kahle and Shastri (2004) and Abor & Biekpe (200[illegible]hese studies indicated a positive relationship between debt issued and firm size.

8.3 SUMMARY

This chapter provided results on a question to question basis for the total sample. Using the ratio analysis, it was discovered that small firms using debt in Zimbabwe had negative leverage. This is because their average ROA was lower than the before-tax interest on debt. By using regression equations, this was confirmed and the researcher therefore failed to reject the primary hypothesis which stated that there is a negative relationship between debt and profitability. The second secondary null hypothesis which stated that the product manufactured by a small manufacturing firm had a negative effect on its accessibility to debt, could also not be rejected because of the regression testing. Though the parameter estimates of these hypotheses indicated a relationship between the variables, their relationship was found to be statistically insignificant. The only hypothesis that was rejected was the first secondary null hypothesis which stated, "the size of the SMF does not affect its ability to access debt finance from well established financiers". The study established that there was a negative relationship between profitability of a firm and the amount of debt it its capital structure. No significant relationship was found between the product manufactured by a firm and its accessibility to debt finance. On the contrary, a significant and

positive relationship was found between firm size and its access to debt. As the size of the firm increases, so does its ability to obtain debt.

The next chapter will provide conclusions and recommendations based on the findings discussed in this chapter. Conclusions related to the primary and secondary hypotheses will be discussed. Furthermore, recommendations to improve financial performance and access to debt will be highlighted.

CHAPTER NINE

CONCLUSIONS, RECOMMENDATIONS AND AREAS FOR FURTHER RESEARCH

9.1 INTRODUCTION

The primary objective of this research study was to investigate the impact of the use of debt on the value of small manufacturing firms in Bulawayo, Zimbabwe. From this primary objective, a primary hypothesis was formulated which stated that there was a negative relationship between debt and the value of small manufacturing firms. The secondary objectives included determination of whether the size of the firm and product manufactured by a small firm have a negative effect on debt accessibility. Two secondary null hypotheses emanated from these objectives. The first one stated that the size of the small manufacturing firm had a negative effect on the accessibility of debt. The second one stated that the product manufactured by a small manufacturing firm had a negative effect on debt accessibility to small firms. The conclusions of this study were explained in relation to each of these hypotheses. The conclusions were also compared with empirical studies to ascertain their consistency. Recommendations and areas for further studies will be suggested. Section 9.2 below focuses on the conclusions reached.

9.2 CONCLUSIONS

This section discussed the conclusions to the hypotheses as a result of regression analysis. The sequence will follow from the primary hypothesis, first secondary hypothesis and lastly the second secondary hypothesis.

9.2.1 Primary hypothesis: There is a negative relationship between use of debt and value of small manufacturing firms

The purpose of the study was to establish if the use of debt leads to positive or negative leverage. To determine whether leverage was positive or negative, ratio analysis was used. The results of ratio analysis indicated that use of debt by small manufacturing firms results in negative leverage.

Statistically, the primary hypothesis was tested with the aid of questions 6 to 19 in the research instrument. The results obtained confirmed the null hypothesis postulated namely that there was a negative relationship between debt usage and the value of a small manufacturing firm in Bulawayo, Zimbabwe. Though the parameter estimate for the estimated regression equation portrayed a negative relationship between debt usage and value of a firm, the relationship was

found to be statistically insignificant. This conclusion is consistent with the results of Zhengfei, Lansink and Alfons, (2006) on the impact of debt on and the value of a firm. This study did not find any significant relationship between debt and value of a firm. The result on the primary hypothesis, however, is inconsistent with the capital structure theory by Modigliani and Miller (1963) which formed the basis for this study. The theory argues that firms can use debt to lower their cost of capital and maximise the firm's value. The findings of the first secondary hypothesis are discussed in the next section.

9.2.2 First Secondary Hypothesis: The size of the small manufacturing has a negative effect on its ability to access debt finance from well established financiers

Questions in sections C and D in the research instrument (questionnaire) gave responses that were used to test the first and second secondary hypotheses. The debt ratio, representing debt accessibility came from section C (questions 6 to 19). Using regression analysis, it was found that the size of a firm had a significantly positive effect on accessibility of debt. This means that an increase in the size of a firm led to an increase in its ability to access debt easier. The result also indicated that small manufacturing firms have difficulties in accessing adequate debt. This is shown by the low debt ratios that were generated as a result of ratio analysis.

The funding of small firms by banks is limited and banks usually charge significant premiums on debt interest. Interest leveled on loans for small firms is often high, simply because of the perception that they are more likely to fail and therefore are more risky. Banks mostly lend to large firms because they meet the required asset base that small firms do not meet. The other reason for limited bank loans to small manufacturing firms is that administrative costs of maintaining smaller loans are relatively higher than for bigger loans. Small firms also lack detailed information required by banks to acquire a loan. All these conclusions were supported by the analysis of the data gathered from respondents.

This result is consistent with several studies in both developed and developing economies. These studies found that the size of a firm affects their accessibility to debt finance (Biggs & Srivastava, 1996), (Schiffer & Weder, 2001), (Kumar & Francisco, 2005) and (Raj & Sutthisit, 2003). Access to debt finance is closely related to firm size and small firms tend to receive far less

formal credit compared to larger firms. Small firms have much lower leverages and this can be due to inaccessibility. Size seems to be a major discriminatory factor for access to financing, particularly long-term credit according to Esperança, Gulamhussen & Gama, (2003). The reason cited for this inaccessibility of debt due to size is high risk because of lack of collateral, unknown financial background and a lack of economies of scale (Biggs & Srivastava, 1996:5). By demanding collateral, creditors transfer the monitoring costs inherent to debt to the small business owners. During credit negotiations, creditors weigh the collateral value much more than the prospects of the firm to be successful.

9.2 3 Second Secondary Hypothesis: The product offered by the small manufacturing firm has a negative effect on its ability to access debt

Like for the first secondary hypothesis, information used to test the second secondary hypothesis came from sections C and D of the research instrument. Debt accessibility (debt ratio) was determined by information gathered from question 6 to 19. The result of this hypothesis portrays that there is an insignificant negative relationship between product manufactured and debt accessibility.

Though an insignificant negative effect of product on debt accessibility was found, the results are inconsistent with Clark (1998) who argues that the type of product being manufactured by a firm affects its accessibility to debt financing. Terms of lending to small business borrowers were found to vary by industry (product) thus the amount of loan and interest rates. Term of maturity for the small business loans also depended on the industrial sector of the borrower and his/her products. Section 9.3 will discuss the recommendations to small businesses and the government based on the findings of the study.

9.3 RECOMMENDATIONS

This section focuses on recommendations to the small manufacturing sector as to how they can improve their business performance. Apart from the small manufacturing sector, some recommendations are directed to the government and its different ministries to assist it in its efforts to improve performance of the economy as a whole. The reason why some

recommendations are aimed at government is the ability to control the economy as no individual small firm can do much to change the environment. Governments have an interest in the performance of small firms because the prosperity of small firms is prosperity for the economy and its citizens. The recommendations are a result of the deduction from the findings of this study.

9.3.1 Use of debt

Selection of debt as a source of capital finance should be done in line with the costs and benefits associated with its use (debt). Costs such as interest charges, bankruptcy costs and agency costs should be weighed against the tax benefits of debt. The initial phase to assess the impact of using debt on firms' returns should start by comparing expected ROA to the estimated cost of debt. If the return on assets is higher than the before-tax interest on debt (interest rate), small business owners/managers can then go on to assess any other costs presented as a result of using debt. The reason for not using debt when the before-tax interest on debt is higher than the return on assets is that the use of debt would lead to a decrease in value/profitability (negative leverage) (refer to sec 3.3.3.3, p. 59) of a firm if sales decline. This can lead to bankruptcy because the firm will not be able to repay its debts.

9.3.2 Debt accessibility

To increase the accessibility of loans to them, small business owners can pool their resources together and approach banks as a single entity such as cooperatives. This can only be possible if there is mutual trust between members. A thorough market analysis to determine the marketability of products can also assist in the reduction of risks associated with small firms. Market analysis can as well be done by combining resources and by doing so perform the analysis together. Apart from pooling together of resources, small business owners/managers should be able to thoroughly analyse the industry in which they are operating. The analysis of the extent of competition among firms in the same industry helps small business owners to invest in best investments whilst reducing the risks of business. Small businesses can also merge, especially in areas where the market is large and demand is inelastic. Inelastic demand refers to no change in demand resulting from a change in price of a product (Lipsey & Harbury, 2004: 64). An example is in confectionary (bread baking) where the market is large. Small firms can then merge and by so doing increase the collateral base, increase the value of the firm, reduce

competition and enjoy economies of scale. Merging can also make accessibility to debt much easier as compared to a single small manufacturing firm.

Besides the pooling of resources and merging, government should also make sure that the loan facility made to assist small firms reaches the beneficiaries in as short a period as possible. Only a small percentage (29%) of all small manufacturing firms that participated in the survey made use of government funds. The government should also have awareness campaigns as to how and who can apply for the funds, the conditions for the funds and how an application for funding is evaluated. By doing that, small manufacturing firm owners would know what to do and how to do it, thereby eliminating some unnecessary work.

The other way to help SMFs access debt finance is to establish independent committees and funds that deal with small firms. These committees would define the criteria SMFs would have to meet in order to qualify for access to the fund. The criteria should be clear and well laid out to avoid uproar from SMFs that do not [illegible] criterion. An assembly of experts and non-governmental organisations should be responsible for monitoring and evaluating the needs of the SMFs to improve the use and disbursement of these funds and reduce the red tape.

9.3.3 Creation of a secondary security exchange

If the firms cannot merge to enjoy favourable leverage, alternatives to fund raising should be searched. Since the majority of these firms are so small that they cannot obtain funds from the public through a public share issue on the Zimbabwe Stock Exchange, a secondary stock exchange for small firms should be established. This is a duty for the government and the SMMEs Ministry since the small firms cannot do it themselves. This option was mentioned by the government but it needs to be implemented as soon as possible in order to assist the firms that are already in viable businesses. If implemented, small firms should therefore make use of this facility.

9.3.4 Awareness on the use of debt

It's the duty of the government to teach small business owners about the effects of debt on the profitability of their firms. Studies can be done and findings generated but if the small business owners do not know about the studies and findings they cannot utilise the recommendations

suggested. Government should take the first step in educating the small business owners so that their businesses can become successful in the near future. Based on the results of this study, owners of small firms should be taught that debt should be the last resort when it comes to financing investments because of its negative impact on the small firm's profitability. Instead of using debt, small manufacturing firms (SMFs) can utilise their profits, loans from family and friends, leasing and factoring facilities to fund their investments. They should also be taught about the appropriate financing option available for their investments. This is because some of them fund long-term assets with short-term funding whilst sum fund short-term assets with long-term funds which is financially inappropriate using the matching concept.

9.3.5 Small firms should thrive on growth

For small firms not to have many hitches when it comes to financing, they should work on growth in terms of asset size and number of employees. The study found that the size of the firm is positively related to accessibility of debt. Therefore, the bigger the size of the firm, the easier they are able to obtain debt financing from financial institutions. Small firms should not only look at their profitability but also opportunities available for growth and should utilise any opportunity that comes by. They should utilise their profits to invest in other opportunities that come by with the intention of growing their businesses so as to acquire debt more easily. Besides promoting debt accessibility, this will also lead to economic growth and prosperity.

9.3.6 Education and training

The results generated also show that there is lack of knowledge when it comes to financing of business activities. Several responses from the survey gave evidence to this. These include knowledge on ROI, knowledge on interest rates and knowledge of the tax rate. Some respondents claimed that they know the interest and tax rates applying to them but when asked to state them, they stated the incorrect rates. This was established by asking respondents to disclose the tax rates that apply to them. There is need for small business owners to know and understand the basics of accounting and finance as these are some of the crucial areas in the operation of a business. Without financing and accounting basics, business people are bound to make uncalculated financial decisions which might be detrimental to the firm. It is important for the owners to understand the basics because the majority is not able to employ qualified personnel or hire personnel from professional bodies due to limitations in funds.

To improve the financial and accounting knowledge, these small business owners should attend short courses that are offered to small business owners. The government can also come up with plans to offer financial management training to small business owners. These will assist in development of small business owners and improve their business performance. By understanding the basics of finance and accounting, small business owners will not lose money through employees who are dishonest. It is possible for some dishonest employees to embezzle money from their employees by altering figures knowing that their employers will not find it out. This then points to the necessity of business owners to have a basic knowledge of finance and accounting.

In line with education and training, government can also employ experienced people to teach prospective business people on how to write business proposals that sell. Several SMFs fail to obtain debt finance not because their businesses look doomed but because their proposals do not actually portray their intended business. Training in this aspect can therefore increase the number of firms accessing debt. In-order to fina activities, government can setup special funds that are meant for specific training. It can also assist in this aspect by encouraging and initiating small business associations and consultancy programmes.

9.3.7 Long-term funding

Several small firms use short-term debt in their financing - overdrafts to be specific (according to the findings of this study), which is usually expensive. The loans that are offered by government are also supposed to be repaid in 6 months, which is relatively short. Instead of offering loans with a high concession, government can alternatively offer long-term loans at prevailing market rates. This can give SMFs time to stabilise and concentrate on the business rather than thinking about repayment of loans. Offering of short-term loans do not promote investments that have longer payback periods even if they are lucrative. Banks perceive small firms to be risky and therefore offer them short-term debt and to counteract that challenge, government should chip in and offer long-term debt financing to small firms. It should be reiterated here that long-term debt is relatively cheap, therefore accessibility of long-term debt can improve on the impact of debt on profitability.

9.3.8 Tax incentives

Since the study established that the use of debt, either short-term or long-term did not lead to positive leverage, the small business owners and the government should look at other ways that can lead to an increase in the value of firms. This is because the tax advantages of debt are being outweighed by the costs associated with it. To promote the prosperity of the small businesses, government should offer some financial incentives to promote entrepreneurship. Currently, the government is giving tax incentives to small manufacturing firms located in growth points. Instead of paying 30% tax rate, they pay 10% during the first 5 years of operation (refer to sec 2.8.1, p. 37). Small manufacturing firms that export 50% or more of its outputs are taxed at 20%. These types of incentives should be offered to all small manufacturing firms regardless of their location.

9.3.9 Creation of a fair business environment

From the findings of this study, it was found that all SMFs that are making use of cheap government debt are enjoying positive leverage whilst SMFs that are making use of other sources of debt have negative leverage. This is unfair to all firms that do not enjoy the benefits of government debt. The government should therefore, substitute finance subsidies for other types of non-financial assistance such as training and red tape reduction. Not providing financial assistance to some firms in the same sector creates an environment for fair competition to all participants. If the government feels that it has a responsibility to offer financial assistance, it should give it at the market rate and reduce extra costs that are incurred by small business owners. Besides being unfair, offering cheap debt also leads to less innovation, less competition, slow growth and few new job creations. By creating a fair playing ground, the government can promote fair competition and growth which can in turn lead to growth and more contributions to unemployment reduction and economic growth.

9.3.10 Youth development schemes

The government can also promote small firms' growth by initiating youth development schemes, thereby "catching them young". By instilling a business mentality into youths, the economy can have a bright future as the youths will grow up to be good business people because of experience. One way in which the government can implement this is by making business subjects compulsory at secondary schools and encourages schools to start business projects led by students. By this,

students will obtain first hand experience in business as they will know what the practical business entails. Instilling a business mind in youths leads to a business oriented society which will in turn increase the number of start-ups, growth and prosperity of small firms. By instilling the business mind in youths, they will be better writers of business proposals and all business concepts. A good business proposal can assist in acquiring of funding from financial institutions. The following section focuses on areas that need some further researches.

9.4 AREAS FOR FURTHER RESEARCH

Although the research shed some light into debt financing for small firms in Zimbabwe, it needs to be complemented with more studies. More studies need to be done so that the findings would be of more value. Research also needs to be done on other sectors of the economy such as retail, mining and agriculture. Besides the use of debt, not much was obtained regarding the effect of product type and debt accessibility. The researcher only managed to find one study that encompassed the effect of product manu[illegible]on debt accessibility. A lot has to be done in order for people to have a better understanding of this relationship.

9.5 SUMMARY

This chapter discussed the conclusions, recommendations and areas that need further research. The conclusions support the primary null hypothesis that the use of debt in a firms' capital has no impact on the value/profitability of small manufacturing firms. The findings rejected the first secondary null hypothesis. It was found that the size of the firm affects its accessibility to debt. The second secondary null hypothesis could not be rejected thus, no significant relationship between the product type and debt accessibility was found. To reduce the cost of debt and increase accessibility, it was suggested that small firms make use of mergers and pooling of resources. Government should also strive to make their small firm's policies practical so that it enjoys the benefits of the prosperity of this sector. Finally, the areas for further research were discussed.

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ADDENDUM 1

Questionnaire

University of Fort Hare
Together in Excellence

I am Obert Matarirano, a Master of Commerce student in the Department of Business Management at the University of Fort Hare. I am currently conducting a study on the impact of debt on the value of small manufacturing firms in Bulawayo, Zimbabwe. Would you please complete this questionnaire as honestly and constructively as possible. No answer is correct or wrong. The information received in this research will be used for academic research purposes only. Your responses will be kept in strict confidentiality. The success of this study depends on your co-operation.

(For multiple choice questions, please mark with an X)

SECTION A: USE OF DEBT

Do not fill in this column

1. Do you make use of debt (interest bearing funds) for your business operations?	Yes	
	No	

SECTION B: BIOGRAPHICAL INFORMATION

2. Gender	Male	
	Female	
3. Age	.....	

4. What position do you hold in the firm?

Manager	
Owner	

5. When did you start operating your business? .....

SECTION C: THE EFFECT OF DEBT ON PROFITABILITY/VALUE

6. What is the value (amount) of debt in your capital structure (long-term capital)? .....

7. What is the value (amount) of debt in your total capital (long-term debt plus short-term debt)? .....

8. How much interest did you pay in the previous year? .....

9. What is the total value of your capital (long-term liabilities plus current liabilities)? .....

10. What was your operating profit for the 2006 financial year (earnings before interest and tax) .....

11. Do you finance fixed assets with short-term debt?

Yes	
No	

12. Do you finance current assets with long-term debt?

Yes	
No	

13. Please indicate the type of loan/s you use.

Bank loan	
Government loan	
Both	

14. Are you aware of your return on investments (Earnings before interest and tax / total Assets)?

Yes	
No	

15. Does your return on investment exceed the interest rates you pay on debt?

Yes	
No	

16. Are you aware of the interest rate you are paying on:

[i] Long-term loans (bank loans, personal loans, mortgage loans)

Yes	
No	

[ii] Short-term debt (bank overdrafts)

Yes	
No	

17. If the answer in question 16 is yes, please indicate:

[i] Your interest rate on long-term debt .....

[ii] Your interest rate on short-term debt .....

18. Are you aware of your firm's tax rate?

Yes	
No	

19. If the answer to question 18 is "yes" please state the rate .....

SECTION D: THE EFFECT OF SIZE AND PRODUCT ON ACCESS TO DEBT FINANCE

20. How many employees does your firm employ? .....

21. What does your firm manufacture? .....

22. What was your main source of finance for your initial investment?

Lump sum from retrenchment	
Financial institution	
Family and friends	
Personal savings	
Government	
Other	

If other, please specify .....

23. What is the type of debt you frequently use?

Bank overdraft	
Personal loan	
A bank loan	
Mortgage bond	
Trade credit	
Other	

If other, please specify .....

24. Do you pay any other costs for debt besides the interest?

Yes	
No	

25. If yes, what are they?

Interest premium	
Handling fees	
Other	

If other, please specify .....

26. What other source/s of debt do you use besides banks? .....

Thank you for your time and your participation is highly appreciated.

University of Fort Hare
Together in Excellence

ADDENDUM 2(a)

Regression Analysis results

Dependent Variable: roe

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.00012076	0.00012076	0.00	0.9876
Error	28	13.82155	0.49363		
Corrected Total	29	13.82167			

Root MSE	0.70259	R-Square	0.0000
Dependent Mean	2.01667	Adj R-Sq	-0.0357
Coeff Var	34.83896		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	2.02500	0.54795	3.70	0.0009
debtratio	1	-0.00020126	0.01287	-0.02	0.9876

CORR[illegible] ANALYSIS

Simple Statistics

Variable	N	Mean	Std Dev	Sum	Minimum	Maximum
roe	30	2.01667	0.69037	60.50000	0.90000	4.00000
debtratio	30	41.40000	10.13903	1242	10.00000	60.00000

Pearson Correlation Coefficients, N = 30
Prob > |r| under H0: Rho=0

	roe	debtratio
roe	1.00000	-0.00296 0.9876
debtratio	-0.00296 0.9876	1.00000

ADDENDUM 2(b)

REGRESSION ANALYSIS

Dependent Variable: **debtassratio**

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	1721.31762	860.65881	18.44	<.0001
Error	27	1259.88238	46.66231		
Corrected Total	29	2981.20000			

Root MSE	6.83098	R-Square	0.5774
Dependent Mean	41.40000	Adj R-Sq	0.5461
Coeff Var	16.49996		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	19.04825	5.00054	3.81	0.0007
firmsize	1	0.67141	0.11118	6.04	<.0001
firmsindustry	1	-0.39745	0.91338	-0.44	0.6669

CORRELATION ANALYSIS

Simple Statistics

Variable	N	Mean	Std Dev	Sum	Minimum	Maximum
debtassratio	30	41.40000	10.13903	1242	10.00000	60.00000
firmsize	30	35.06667	11.41666	1052	8.00000	50.00000
firmsindustry	30	3.00000	1.38962	90.00000	1.00000	5.00000

Pearson Correlation Coefficients, N = 30
Prob > |r| under H0: Rho=0

	debtassratio	firmsize	firmsindustry
debtassratio	1.00000	0.75791 <.0001	-0.08077 0.6714
firmsize	0.75791 <.0001	1.00000	-0.03478 0.8552
firmsindustry	-0.08077 0.6714	-0.03478 0.8552	1.00000

ADDENDUM 3(a)

The SAS System

The REG Procedure
Model: MODEL1
Dependent Variable: ROE

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	34.55659	11.51886	34.78	<.0001
Error	83	27.48695	0.33117		
Corrected Total	86	62.04355			

Root MSE	0.57547	R-Square	0.5570
Dependent Mean	0.41511	Adj R-Sq	0.5410
Coeff Var	138.62958		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	0.49131	0.08558	5.74	<.0001
LONGTERMDEBT	1	-0.51884	0.05160	-10.06	<.0001
DEBT	1	0.51795	0.05170	10.02	<.0001
SHORTTERMDEBT	1	-0.51908	0.05182	-10.02	<.0001

Correla[illegible] ROE and DEBT

[illegible] DEBT

Simple Statistics

Variable	N	Mean	Std Dev	Sum	Minimum	Maximum
ROE	87	0.41511	0.84937	36.11500	0.02000	7.00000
DEBT	87	100.40230	117.74494	8735	6.00000	800.00000

Cronbach Coefficient Alpha

Variables	Alpha
Raw	.740809
Standardized	.294525

Cronbach Coefficient Alpha with Deleted Variable

	Raw Variables		Standardized Variables	
Deleted Variable	Correlation with Total	Alpha	Correlation with Total	Alpha
ROE	-.128360	.586021	-.128360	.
DEBT	-.128360	.747180	-.128360	.

Pearson Correlation Coefficients, N = 87
Prob > |r| under H0: Rho=0

	ROE	DEBT
ROE	1.00000	-0.12836 0.2361
DEBT	-0.12836 0.2361	1.00000

The REG Procedure
Model: MODEL1
Dependent Variable: ROE

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	1.32346	0.66173	0.92	0.4043
Error	84	60.72009	0.72286		
Corrected Total	86	62.04355			

Root MSE	0.85021	R-Square	0.0213
Dependent Mean	0.41511	Adj R-Sq	-0.0020
Coeff Var	204.81331		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	0.49380	0.12644	3.91	0.0002
LONGTERMDEBT	1	-0.00229	0.00274	-0.83	0.4071
SHORTTERMDEBT	1	-0.00012408	0.00189	-0.07	0.9479

Dependent Variable: ROE

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	1.32035	1.32035	1.85	0.1776
Error	85	60.72319	0.71439		
Corrected Total	86	62.04355			

Root MSE	0.84522	R-Square	0.0213
Dependent Mean	0.41511	Adj R-Sq	0.0098
Coeff Var	203.61017		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	0.48932	0.10579	4.63	<.0001
LONGTERMDEBT	1	-0.00242	0.00178	-1.36	0.1776

The REG Procedure
Model: MODEL1
Dependent Variable: ROE

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.82170	0.82170	1.14	0.2885
Error	85	61.22185	0.72026		
Corrected Total	86	62.04355			

Root MSE	0.84868	R-Square	0.0132
Dependent Mean	0.41511	Adj R-Sq	0.0016
Coeff Var	204.44448		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	0.50700	0.12522	4.05	0.0001
SHORTTERMDEBT	1	-0.00132	0.00123	-1.07	0.2885

ADDENDUM 3(b)

The CORR Procedure

3 Variables: DEBTRATIO NOOFEMPLOYEES PRODUCTTYPE

Simple Statistics

Variable	N	Mean	Std Dev	Sum	Minimum	Maximum
DEBTRATIO	87	100.40230	117.74494	8735	6.00000	800.00000
NOOFEMPLOYEES	87	15.05747	9.14655	1310	5.00000	44.00000
PRODUCTTYPE	87	2.85057	1.60326	248.00000	1.00000	5.00000

Cronbach Coefficient Alpha

Variables	Alpha
Raw	0.710247
Standardized	0.460809

Cronbach Coefficient Alpha with Deleted Variable

Deleted Variable	Raw Variables: Correlation with Total	Raw Variables: Alpha	Standardized Variables: Correlation with Total	Standardized Variables: Alpha
DEBTRATIO	0.457547	0.121940	0.307293	0.320595
NOOFEMPLOYEES	0.483050	-.000338	0.476198	-.012492
PRODUCTTYPE	0.008294	0.138144	0.107333	0.649063

Pearson Correlation Coefficients, N = 87
Prob > |r| under H0: Rho=0

	DEBTRATIO	NOOFEMPLOYEES	PRODUCTTYPE
DEBTRATIO	1.00000	0.68045 <.0001	-0.00621 0.9545
NOOFEMPLOYEES	0.68045 <.0001	1.00000	0.19090 0.0765
PRODUCTTYPE	-0.00621 0.9545	0.19090 0.0765	1.00000

The REG Procedure
Model: MODEL1
Dependent Variable: DEBTRATIO

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	287090	143545	13.32	<.0001
Error	84	905203	10776		
Corrected Total	86	1192293			

Root MSE	103.80860	R-Square	0.2408
Dependent Mean	100.40230	Adj R-Sq	0.2227
Coeff Var	103.39265		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	24.78775	27.24104	0.91	0.3655
NOOFEMPLOYEES	1	6.43470	1.24677	5.16	<.0001

PRODUCTTYPE	1	-7.46370	7.11282	-1.05	0.2970

The REG Procedure
Model: MODEL1
Dependent Variable: NOOFEMPLOYEES

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	262.19055	262.19055	3.21	0.0765
Error	85	6932.52210	81.55908		
Corrected Total	86	7194.71264			

Root MSE	9.03101	R-Square	0.0364
Dependent Mean	15.05747	Adj R-Sq	0.0251
Coeff Var	59.97692		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	11.95300	1.98380	6.03	<.0001
PRODUCTTYPE	1	1.08907	0.60741	1.79	0.0765

ADDENDUM 4(a)

(a) Ratios used for regression analysis to test if there in any relationship between profitability and return on assets.

ROE	Debt to Assets (%)
2.0	43
3.0	47
4.0	52
3.0	42
2.5	43
2.1	30
1.9	10
1.8	49
1.3	43
2.0	30
2.0	40
1.7	32
1.8	43
1.6	45
1.9	48
1.5	41
2.0	33
1.4	28
1.9	40
2.1	41
2.2	53
0.9	60
2.9	37
1.0	42
2.8	53
1.1	46
2.7	29
1.3	59
2.6	43
1.5	40

ADDENDUM 4(b)

Debt to Assets (%)	Firm size (No of employees)	Products manufactured
43	40	4
47	42	3
52	45	2
42	42	1
43	40	4
30	25	3
10	8	4
49	50	5
43	45	3
30	40	5
40	40	4
32	25	3
43	30	2
45	45	1
48	40	2
41	10	4
33	15	5
28	18	3
40	30	1
41	39	1
53	49	4
60	49	3
37	30	1
42	40	5
53	42	2
46	28	2
29	28	3
59	46	5
43	38	4
40	33	1

ADDENDUM 5

PRODUCT MANUFACTURED	RESPONDENT	DEBT RATIO	ROE	ROA
Garment	1	0.1	0.21	0.5
Garment	2	0.1275	0.24	0.35
Garment	3	0.15	0.08	0.125
Garment	4	0.2	0.15	0.3
Garment	5	0.2	0.33	0.5
Garment	6	0.2	0.23	0.33
Garment	7	0.5	0.04	0.1
Garment	8	0.13	0.06	0.1125
Garment	9	0.25	0.08	0.12
Garment	10	0.2	0.12	0.18
Garment	11	0.1	0.06	0.1
Garment	12	0.0875	0.03	0.045
Garment	13	0.08	0.17	0.25
Garment	14	0.04	0.1	0.16
Garment	15	0.03	0.13	0.2
Garment	16	0.2	0.5	0.8
Garment	17	0.06	0.7	1
Garment	18	0.004	0.28	0.4
Garment	19	0.25	3.8	5.5
Garment	20	0.02	0.47	0.67
Garment	21	0.02	0.41	0.6
Garment	22	0.2	0.2	0.3
Garment	23	0.07	0.35	0.53
Garment	24	0.13	0.24	0.38
Garment	25	0.1	0.31	0.5
Garment	26	0.1	0.16	0.25
Garment	27	0.5	0.06	0.1
Garment	28	0.1	0.42	0.6
Food Processing	29	0.07	0.3	0.45
Food Processing	30	0.022	0.23	0.33
Food Processing	31	0.386	0.16	0.22
Food Processing	32	0.06	0.18	0.26
Food Processing	33	0.05	0.11	0.17
Food Processing	34	0.02	0.03	0.05
Food Processing	35	0.08	0.18	0.25
Food Processing	36	0.2	0.22	0.41
Food Processing	37	0.06	0.03	0.05
Food Processing	38	0.04	0.28	0.4
Food Processing	39	0.25	0.07	0.15
Food Processing	40	0.07	0.18	0.27
Food Processing	41	0.352	0.02	0.16
Metal Fabrication	42	0.1696	7	10

Metal Fabrication	43	0.0297	0.36	0.6
Metal Fabrication	44	0.06	0.41	0.6
Metal Fabrication	45	0.007	0.17	0.24
Metal Fabrication	46	0.2	0.4	0.6
Metal Fabrication	47	0.18	0.33	0.5
Metal Fabrication	48	0.13	1.42	2.11
Metal Fabrication	49	0.7	0.035	0.06
Metal Fabrication	50	0.11	0.11	0.2
Metal Fabrication	51	0.05	0.48	0.7
Metal Fabrication	52	0.02	0.18	0.25
Carpentry and Pottery	53	0.08	0.6	0.9
Carpentry and Pottery	54	0.3363	0.11	0.16
Carpentry and Pottery	55	0.04	0.17	0.25
Carpentry and Pottery	56	0.1	1.2	1.75
Carpentry and Pottery	57	0.013	0.09	0.13
Carpentry and Pottery	58	0.04	0.23	0.34
Carpentry and Pottery	59	0.03	0.03	0.05
Carpentry and Pottery	60	0.2	0.1	0.17
Carpentry and Pottery	61	0.12	0.05	0.08
Carpentry and Pottery	62	0.3763	0.12	0.2
Carpentry and Pottery	63	0.3762	0.38	0.55
Carpentry and Pottery	64	0.02	0.05	0.08
Carpentry and Pottery	65	0.2	0.38	0.6
Carpentry and Pottery	66	0.025	0.28	0.4
Other	67	0.2	0.15	0.24
Other	68	0.03	0.48	0.7
Other	69	0.25	0.18	0.28
Other	70	0.01	0.7	1.05
Other	71	0.02	0.34	0.6
Other	72	0.03	0.14	0.29
Other	73	0.1	0.19	0.3
Other	74	0.03	0.13	0.18
Other	75	0.25	0.06	0.1
Other	76	0.15	0.93	1.5
Other	77	0.006	0.34	0.5
Other	78	0.3	0.5	0.75
Other	79	0.3	0.23	0.9
Other	80	0.07	0.82	0.8
Other	81	0.5	0.4	1.3
Other	82	0.4	0.65	2
Other	83	0.02	0.77	0.3
Other	84	0.03	0.9	0.15
Other	85	0.04	0.8	3.2
Other	86	0.3	0.5	5
Other	87	0.004	0.3	0.9

ADDENDUM 6

University of Fort Hare
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TO WHOM IT MAY CONCERN

You are hereby kindly requested to provide access to Matarirano Obert, student number 200205080, who is currently registered as an M. Com student in the Department of Business Management.

Mr. Matarirano is currently busy with research for his masters degree. The title of his research project is as follows:

"An investigation into the impact of debt on value of small manufacturing firms in Bulawayo, Zimbabwe"

Since it is imperative that Mr. Matarirano is provided with the necessary access to interview respondents, your assistance in this regard is much appreciated. It is furthermore the intention of the Department to make the research results available to you on request.

If you have any further queries, please do not hesitate to call.

Kind regards

Dr. G. Herbst
Head of Department and Senior Lecturer
Department of Business Management

Tel: +27 40 602 2248
E-mail: gherbst@ufh.ac.za

ADDENDUM 7

University of Fort Hare
Together in Excellence

Department of English
Faculty of Social Sciences
and Humanities
University of Fort Hare
Private Bag X1314
Alice
5400

05 December 2007

To Whom It May Concern

Dear Sir/Madam

RE: EDITING OF MASTERS DISSERTATION

I, Mrs. R. Scott, would hereby like to confirm that I have undertaken the task of editing Mr. O. Matarirano's Masters Dissertation.

If there are any queries relating to this please contact me.

Yours faithfully

Mrs. R. Scott
Deputy HOD: APR

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